

Staff Report PLANNING AND DEVELOPMENT DEPARTMENT

To: Council

From: Phil Armstrong, Dir. of Planning and Development File: 3390-20 - McCarthy 2023

Subject: Development Variance Permit – McCarthy 2023 Date: March 21st, 2023

RECOMMENDATION

THAT based on the March 21st, 2023 Staff Report *Development Variance Permit – McCarthy 2023* submitted by the Director of Planning and Development Council DIRECT staff to proceed with the public notice process for DVP 2023-01 as per the *Local Government Act* for the property described as Lot 4, Block 12, Section 12, Township 27, Range 22, West of the 5th Meridian, Kootenay District Plan 9503 (PID 007-271-727/ 527 – 11th ST S).

CAO COMMENTS

I support the recommendation. This form of residential development is an exemplary alignment not only to existing public policy but also to current societal trends and needs.

BACKGROUND

The owner of 527 11th ST S is proposing to construct a Detached Secondary Residential Dwelling (DSRD). The property is zoned Twin Residential Sensitive - R2A and this is an accessory use in this zone. The built form of the DSRD is that of a two-car garage on the first storey, and a two bedroom suite on the second storey. This is referred to as a "carriage house." Two variances to the Town of Golden Zoning Bylaw 1294, 2011 are being sought.



Existing House / Front Yard

Variances can solely be granted by Council and the first step is to authorize notification for this to occur.

When Council considers a development variance permit, it has been traditional practice to allow in- person representations similar to a public hearing; however, technically, when Council considers granting a variance there is a requirement for notification, but there is <u>no</u> requirement to invite written or in person representations.

DISCUSSION

The owner of 527 11th ST S has submitted plans for a DSRD which is an accessory use under the Zoning Bylaw. The owner is proposing two variances in order to obtain and ensure compliance with the Zoning Bylaw requirements.

The purpose of the Twin Residential Sensitive—R2A is to provide for the; for residential development of Single Detached Dwellings, Duplex and Secondary Residential Dwellings in areas prone to high groundwater level and provides opportunities for residential infill." The proposed DSRD is in alignment with the stated purpose of the zone.

The surrounding properties are conforming single detached dwellings.

When an additional dwelling unit is under consideration on a lot where a structure is already present, the resultant increase in parking demand must be examined. Two parking stalls for the principle residence are provided for within the garage portion of the proposed DSRD and there is space for another stall adjacent to it that will satisfy the zoning bylaw requirement for one additional parking stall for a DSRD.



The proposed variances are as follows:

- Section 6.2.2(a) Accessory Buildings and Structures

 To allow a total Ground Floor Area of 78.9 m², where the lesser of 65 m² or 50% of the Ground Floor Area of the Principal Building is required.
- Section 9.5.3(c) Secondary Residential Dwellings

 To allow for a Porch, a Deck, and an Amenity Space to face the Rear Lot Line, where Porches, Decks and Amenity Spaces are required to face the Front Lot Line.

The proposed DSRD is otherwise in compliance with the zoning bylaw.



Renderings of proposed DSRD

For full site context and design, please refer to the enclosed draft development variance permit 2023-01 and the drawings.

Analysis, site context and variances

The increase in size of the DSRD is being proposed to facilitate additional practical and useful living area on the second storey.

A proposed increase in ground floor area of 78.9m² when examined in the context of the permissible 65m² represents a numeric difference of 13.9m² or approximately 150 sq. ft.

With regards to the amenity space (typically decks and balconies) facing the lane, research undertaken by the department did determine that decks and balconies facing the laneway represents accepted practice in other jurisdictions with the presence of the laneway space representing a practical buffer for adjacent dwellings in a typical residential setting, among other rationales.

Community and historical context

The addition of the DSRD into existing housing stock has been largely positive. This is perhaps best summarized as per the Town of Golden Affordable Housing Strategy (2021) / Strategies and Actions – Section 6;

"6. Refine and promote the detached secondary residential dwelling housing form

The Town of Golden introduced "Detached Secondary Residential Dwellings" (DSRDs) for the first time in 2012 upon the adoption of the new Zoning Bylaw. DSRDs include carriage homes or garden suites, allowing for slightly larger ground-oriented building forms that can be appropriate for young families with children. DSRDs work well on lots that have access to a rear lane; however, some new builds have created shadowing and privacy issues to adjacent properties.

The Town and the broader community have had an opportunity to review and reflect on the gradual introduction of approximately 10 DSRDs with respect to form and fit into existing residential neighbourhoods. Some lessons learned include that nearly every DSRD has require a variance (e.g., height, setback, floor area, lot size). Exploring refinement to the Zoning Bylaw is warranted in order to avoid numerous variance applications, saving the time of both staff and the

applicants. It may also be worth exploring design guidelines (such as a development permit area) to provide direction to builders on ways to ensure sensitive design features that work well with adjacent properties towards complementing and enhancing the existing neighbourhood character."

Since the publication date of the Affordable Housing Strategy, two additional DSRDs have been considered for variances, including the one referenced in this report.

Prior to the publication of the Affordable Housing Strategy policy guidance to staff was set forth in the Town of Golden Official Community Plan Bylaw No. 1222, 2008 (OCP). This direction is referenced below in the "Strategic Lens" section of this report.

While a review and refinement of the existing zoning bylaw regulations may be warranted, the measured pace of DSRD proposals does suggest that a site-specific approach may represent the best use of staff resources. While broader policy viewpoints may vary, the current practice and approach does ensure that stakeholders have input and comment into the decision making process.

In closing, staff are recommending authorization to proceed with public notification for DVP2023-01. This is based on the proposal being in overall alignment with the Zoning Bylaw, Affordable Housing Strategy and Official Community Plan.

DECISION FACTORS

Council Context

Strategic Lens

-Official Community Plan Bylaw No. 1222, 2008.

- ✓ OCP Housing Section Goal to ensure the provision of a range of housing types, tenures and densities, which meet the diverse needs of individuals and families of varying needs, income levels and age groups.
- ✓ Golden provides a variety of housing options and densities for a diverse population.
- ✓ To provide affordable and attainable housing opportunities.
- ✓ To encourage growth and development as **infill** in existing developed areas.
- -Affordable Housing Strategy promotes secondary suites. Full document available at www.golden.ca/housing

Climate Change (Mitigation/Adaptation Relevance)

-Allowing secondary suites implements smart growth principles.

Communication (Scope and Tactical Outputs)

-A notification sign has been posted on the property and should Council approve notification, letters will be mailed and hand delivered to a 100m radius from the property.

Financial (All Term Budget Impacts/Asset Management Impacts/Practicality)

-Application fees have been paid.

Administration Context

Administrative (Policy/Procedure Relevancy, Work Plan Impact)

-Part of the Director's work plan to process development and variance applications.

OPTIONS

- 1) **AUTHORIZE** public notification on the draft permit.
- 2) **PROPOSE** changes to the draft permit.
- 3) **REFUSE** to authorize public notification.

Respectfully Submitted,

Phil Armstrong MCIP, RPP

Director of Planning and Development

Report prepared by Colin MacPhee – Planning and Development Technician

Enclosure

➤ Draft DVP 2023-01 McCarthy, which includes the drawings.



Development Variance Permit No. 2023-01

1. This Development Variance Permit is issued to:

Mr. Ryan McCarthy 428 Memorial DR NW Calgary AB T2N 3C3

2. This Development Variance Permit applies to:

Civic Addresses: 527 11 ST S

Parcel Identifier(s): PID 007-271-727

Legal Description: Lot 4, Block 12, Section 12, Township 27, Range 22, West of the 5th

Meridian, Kootenay District Plan 9503

- **3.** This Development Variance Permit is issued subject to compliance with all of the Bylaws of the Town of Golden applicable thereto, except as specifically varied by this permit.
- **4.** This Development Variance Permit varies the Town of Golden Zoning Bylaw 1294, 2011 as described below and depicted on Schedule A.
- Section 6.2.2(a) Accessory Buildings and Structures

To allow a total Ground Floor Area of 78.9 m², where the lesser of 65 m² or 50% of the Ground Floor Area of the Principal Building is required.

• Section 9.5.3(c) – Secondary Residential Dwellings

To allow for a Porch, a Deck, and an Amenity Spaces to face the Rear Lot Line, where Porches, Decks and Amenity Spaces are required to face the Front Lot Line.

- 5. If the proposed development authorized by this Permit has not been completed within two years after the date of the Council resolution authorizing this Permit, this Permit shall lapse.
- **6.** This variance permit only applies to the proposed development.
- 7. This Development Variance Permit is not a Building Permit.

Issued on this	day of	, 2023.	
Corporate Officer			

McCarthy Suite

Schedule A

Project Description

McCarthy Suite Ryan McCarthy 527 11th St. S, Golden BC, V0A 1H0 General Contractor

Higginson Construction LTD. 250-344-8315 **Golden BC** higgconstruction90@gmail.com

> **Licensed Builder Jason Higginson**

Project Engineer

COVER SHEET

SETBACK PLAN MAIN FLOOR PLAN

SECOND FLOOR PLAN

ROOF DIRECTION PLAN EXTERIOR ELEVATIONS

WINDOW & DOOR ELEVATION SCHEDULE

3D PERSPECTIVE VIEWS

SECTIONS SECTIONS

STRUCTURAL NOTES

MAIN FOUNDATION PLAN

FOUNDATION ISOMETRIC VIEWS

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE AS SPECIFIED AND IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, LAWS, PERMITS AND THE CONTRACTED DOCUMENTS. 2. THE CONTRACTOR/BUILDER SHALL BE RESPONSIBLE FOR THE ACCURATE PLACEMENT OF ALL NEW CONSTRUCTION ON THE SITE.

3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE THE CONTRACTED WORK. SHOULD A DISCREPANCY APPEAR IN THE CONTRACT DOCUMENTS OR BETWEEN THE CONTRACT DOCUMENTS AND THE EXISTING CONDITIONS,

THE SPECIFICATIONS SHALL TAKE PRECEDENCE.

5. NO PORTION OF THE WORK REQUIRING A SHOP DRAWING OR SAMPLE SUBMISSION SHALL BE COMMENCED UNTIL THE SUBMISSION HAS BEEN REVIEWED BY THE DESIGNER. ALL PORTIONS OF WORK STEMMING FROM THIS SUBMISSION SHALL BE IN ACCORDANCE WITH THE REVIEWED

SHOP DRAWINGS AND SAMPLES. 6. ALL DRAWINGS ARE NOT TO BE SCALED.

ALL DIMENSIONS GIVEN TAKE PRECEDENCE OVER ANY INTERPRETATION OF SCALE. ALL DIMENSIONS ARE MEASURED TO THE FACE OF STUDS OR FACE OF ICF-CONCRETE FORMS. 7. CONTRACTOR TO PROVIDE ALL NECESSARY BLOCKING, BACKING, AND FRAMING FOR LIGHT FIXTURES, ELECTRICAL UNITS, A.C. EQUIPMENT, RECESSED ITEMS, AND ALL OTHER FRAMING ITEMS AS REOUIRED.

8. WHERE LARGER STUDS OR FURRING IS REQUIRED TO COVER PIPING AND CONDUITS, THE LARGER STUD SIZE OR FURRING SHALL EXTEND THE FULL SURFACE OF THE WALL WIDTH AND

9. PROVIDE ALL ACCESS PANELS AS REQUIRED BY GOVERNING CODES TO ALL CONCEALED SPACES, VOIDS, ATTICS ETC.

10. ALL PRE-ENGINEERED TRUSSES & FLOOR JOISTS ARE TO BE REVIEWED BY ENGINEER PRIOR TO ORDERING OF PRODUCT.

11. THE CONTRACTOR MUST KEEP ALL OPERATIONS THAT PERTAINS TO THE CONSTRUCTION OF THE PROJECT CONFINED TO THE AREAS PERMITTED BY THE OWNER.

12. THE JOB SITE SHALL BY MAINTAINED IN A CLEAN AND ORDERLY CONDITION AT ALL TIMES. ALL DEBRIS, LITTER SHALL BE CLEANED DAILY TO ACHIEVE THIS. EACH CONTRACTOR AND SUBCONTRACTOR IMMEDIATELY UPON COMPLETION OR EACH PHASE OF THE CONTRACTED

WORK SHALL REMOVE ALL TRASH AND DEBRIS STEMMING FROM HIS/HER OPERATIONS. 13. ALL MATERIALS STORED ON THE SITE SHALL BE PROPERLY STACKED AND PROTECTED TO PREVENT DAMAGE OR DETERIORATION. IF THESE MEASURES ARE NOT ADHERED TO, REJECTION

OF THE WORK CAN BE APPLIED. 14. SHOULD ERRORS AND OMISSIONS BE NOTICED ON THIS DRAWING SET, THEY ARE TO BE REPORTED TO THE CONTACT AT LIGNUM DESIGN LTD. WITHIN 24 HOURS FOR FURTHER INSTRUCTION. FAILURE TO REPORT DISCREPANCIES WITHIN 24 HOURS RELIEVES LIGNUM DESIGN LTD. OF THE CONSEQUENCES THAT MAY/MAY NOT OCCUR. 15. THIS DRAWING SET IS THE PROPERTY OF LIGNUM DESIGN LTD. AND CANNOT BE

REPRODUCED OR COPIED WITHOUT OUR WRITTEN CONSENT. 16. IT IS THE RESPONSIBILITY OF THE CONTRACTOR/CLIENT TO READ AND UNDERSTAND ALL PUBLISHED NOTES THAT ARE BOUND IN THIS DOCUMENT. ALL INFORMATION IS IMPORTANT AND IS IMPERATIVE TO A SUCCESSFUL BUILD.

17. THESE DRAWINGS ARE TO BE SUBMITTED TO GAIN POSSESSION OF A PERMIT TO BUILD THIS PROJECT. IT IS TO BE UNDERSTOOD THAT THESE DOCUMENTS; EVEN THOUGH ENGINEERED ARE NOT DEEMED TO BE CONSTRUCTION DOCUMENTS UNTIL APPROVAL FROM THE LOCAL BUILDING DEPARTMENT IS RECEIVED. IF/WHEN APPROVAL IS GIVEN BY THE LOCAL BUILDING DEPARTMENT, THESE DRAWINGS SHALL BE DEEMED FOR CONSTRUCTION.

18. THESE DOCUMENTS ARE DESIGNED TO THE MOST RECENT EDITION OF THE INTERNATIONAL BUILDING CODE BUT IN ORDER TO GAIN POSSESSION OF A PERMIT TO BUILD, THESE DOCUMENTS SHALL CONFORM TO ALL APPLICABLE NATIONAL, PROVINCIAL AND/OR LOCAL BUILDING CODES. THE BUILDING/CONTRACTOR AND ALL SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND REQUIRED APPROVALS. IF ANY PORTION OF THESE DRAWINGS ARE TO BE CHANGED IN ORDER TO GAIN POSSESSION OF A PERMIT TO BUILD, IT IS THE CONTRACTORS/CLIENTS RESPONSIBILITY TO NOTIFY THE DESIGNER BEFORE COMMENCING WITH

19. THE STRUCTURAL ELEMENTS OF THIS DOCUMENT SET ARE REVIEWED AND STAMPED BY A PROFESSIONAL ENGINEER AND THEREFORE THE PROFESSIONAL ENGINEER HAS TAKEN ALL RESPONSIBILITY. IF WORK REGARDING THIS PROJECT STARTS PRIOR TO RECEIVING THE STAMPED ENGINEERED SET OF CONSTRUCTION DOCUMENTS, ANY DEVIATION FROM THE SPECIFIED DRAWINGS AND DETAILS SUPPLIED BY THE PROFESSIONAL ENGINEER BECOMES THE RESPONSIBILITY OF THE CONTRACTOR/CLIENT AND NOT THE PROFESSIONAL ENGINEERS.



IT'S LIGHT, STRONG, GREEN AND SEXY.

AND ANY SITE DIMENSION OR THE SPECIFICATION. THIS MUST BE REPORTED BEFORE ANY OF THE WORK SHOWN ON THIS DRAWING IS COMMENCED.

THE CONTENTS OF THIS DRAWING IS THE COPYRIGHT OF LIGNUM DESIGN LTD. AND MUST NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THEIR WRITTEN APPROVAL

DO NOT SCALE FROM THIS DRAWING.

BEEING GIVEN AND RECEIVED.

| IFR C | 2022.09.22 | MB | | 2022.10.21 | MB |

| JOB NUMBER :

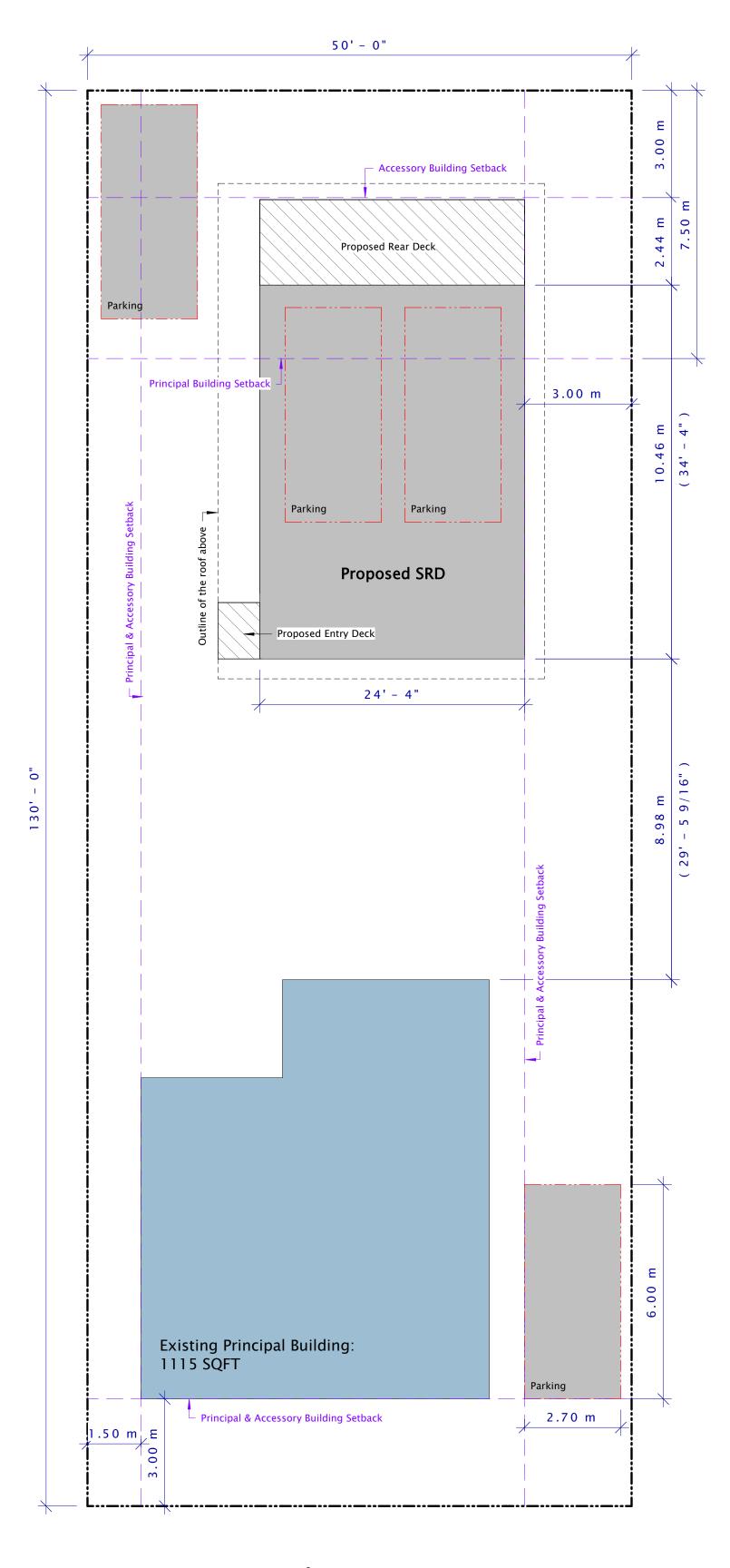
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COVER SHEET

SHEET NO.:





11th St. S

527 11th St. S Golden BC

ZONE – R2A (TWIN RESIDENTIAL SENSITIVE)

MINIMUM LOT AREA: $600M^2$ (6,458.35 SQFT)

527 11th St. S AREA: 6500 SQFT

MAXIMUM LOT COVERAGE: 40% PROPOSED LOT COVERAGE: 30%

MAXIMUM ACCESSORY BUILDING HEIGHT: NOT EXCEED PRINCIPAL or 7.5m

PROPOSED ACCESSORY BUILDING HEIGHT: 7.5m



DO NOT SCALE FROM THIS DRAWING, ONLY FIGURED DIMENSIONS ARE TO BE USED.

USE THESE DRAWINGS ONLY IN CONJUCTION WITH THE ARCHITECTURAL & STRUCTURAL DRAWINGS OF SHOWN

WHERE DISCREPANCY OCCURS BETWEEN THIS DRAWING AND ANY SITE DIMENSION OR THE SPECIFICATION, THIS MUST BE REPORTED BEFORE ANY OF THE WORK SHOWN ON THIS DRAWING IS COMMENCED.

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PLACE RESERVED FOR SEAL

1cCarthy Suite

 Rev.No. Rev. Stage
 Rev. Date
 Initials

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 IFR B
 2022.07.14 MB

 2
 IFR C
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 2022.10.21 MB

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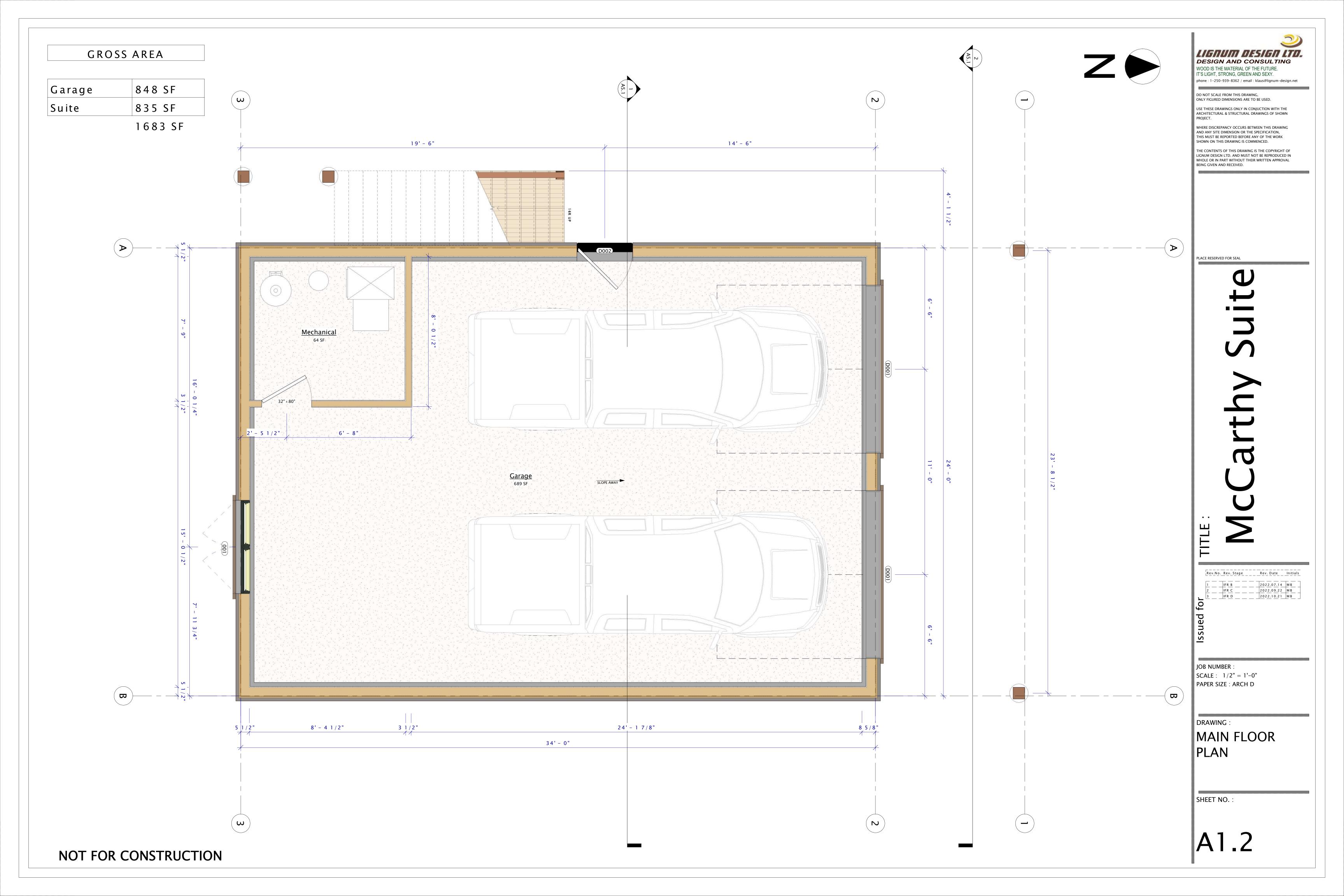
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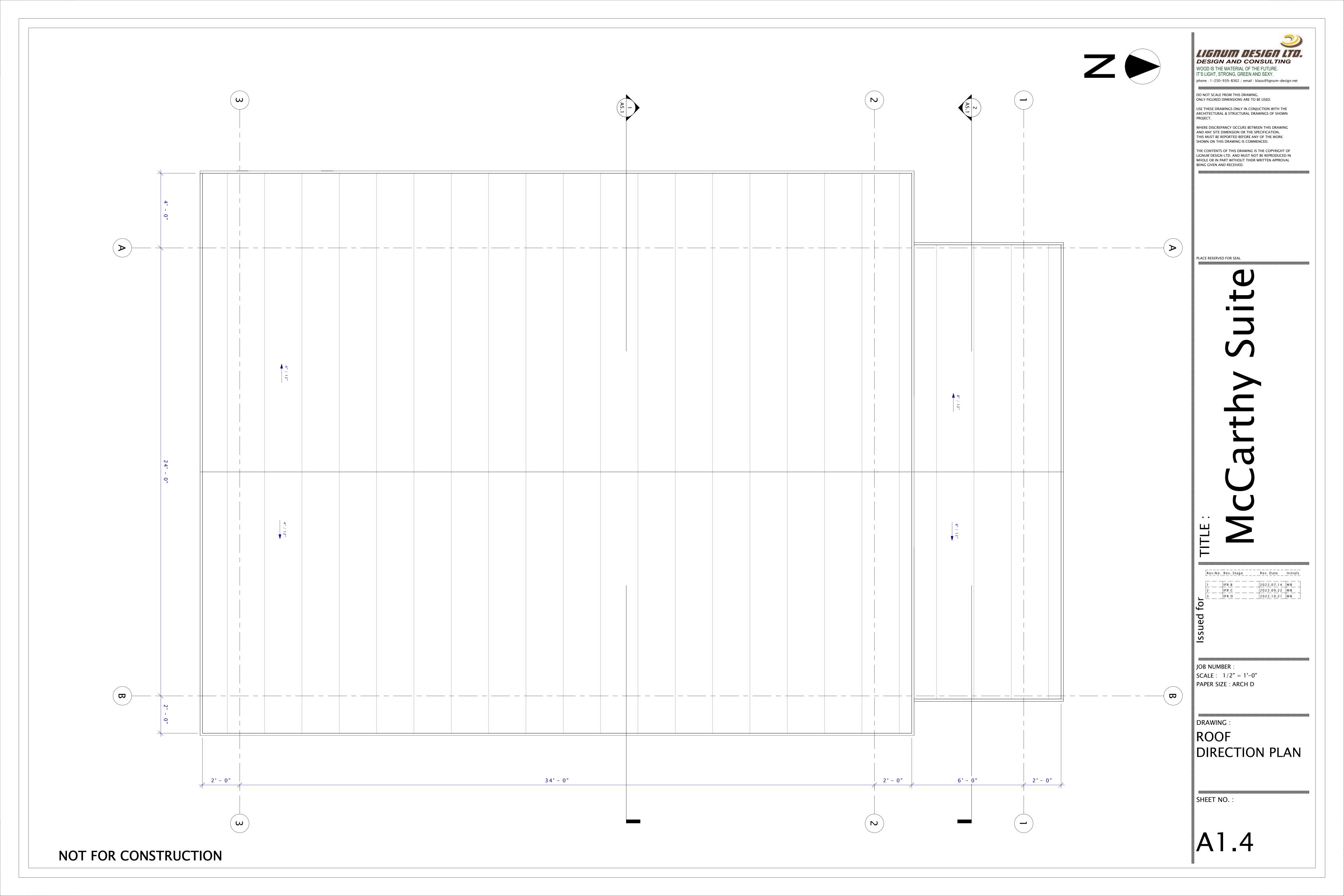
SETBACK PLAN

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DO NOT SCALE FROM THIS DRAWING, ONLY FIGURED DIMENSIONS ARE TO BE USED.

USE THESE DRAWINGS ONLY IN CONJUCTION WITH THE ARCHITECTURAL & STRUCTURAL DRAWINGS OF SHOWN PROJECT.

WHERE DISCREPANCY OCCURS BETWEEN THIS DRAWING AND ANY SITE DIMENSION OR THE SPECIFICATION, THIS MUST BE REPORTED BEFORE ANY OF THE WORK SHOWN ON THIS DRAWING IS COMMENCED.

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PLACE RESERVED FOR SEAL

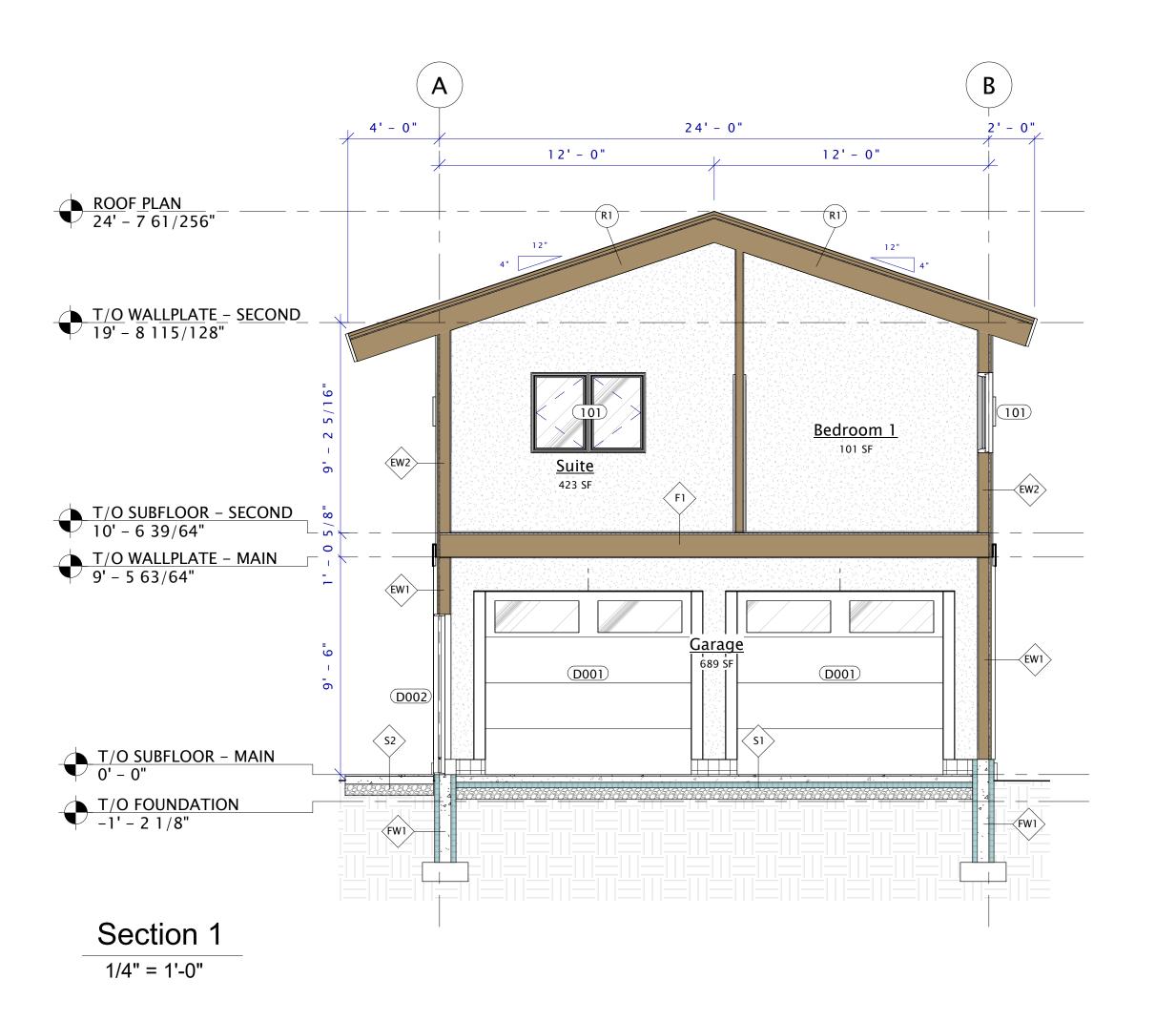
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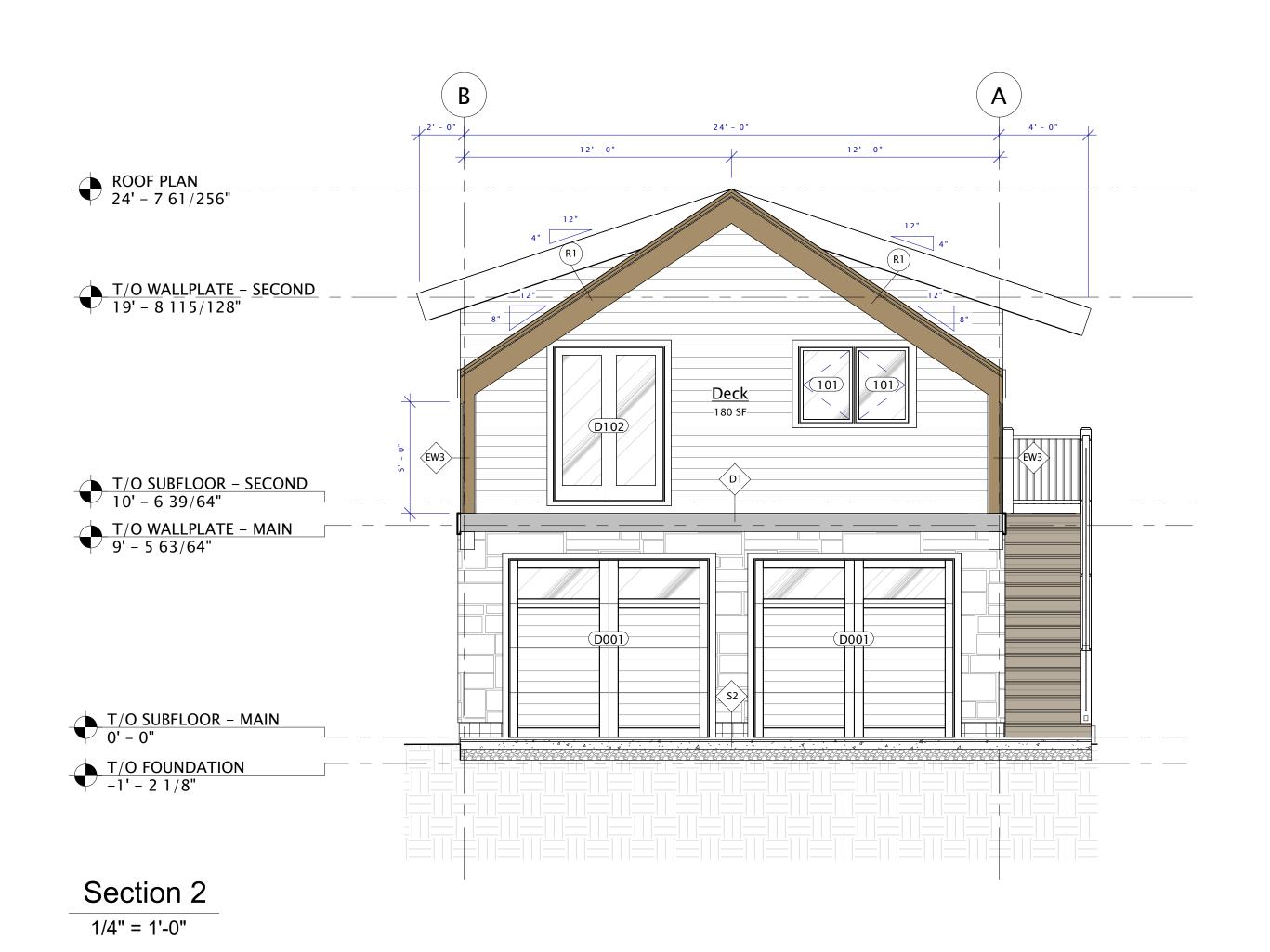
DRAWING :

3D PERSPECTIVE VIEWS

SHEET NO. :

A4.1





DESIGN AND CONSULTING
WOOD IS THE MATERIAL OF THE FUTURE.
IT'S LIGHT, STRONG, GREEN AND SEXY.
phone: 1-250-939-8362 / email: klaus@lignum-design.net

DO NOT SCALE FROM THIS DRAWING, ONLY FIGURED DIMENSIONS ARE TO BE USED.

USE THESE DRAWINGS ONLY IN CONJUCTION WITH THE ARCHITECTURAL & STRUCTURAL DRAWINGS OF SHOWN

WHERE DISCREPANCY OCCURS BETWEEN THIS DRAWIN AND ANY SITE DIMENSION OR THE SPECIFICATION, THIS MUST BE REPORTED BEFORE ANY OF THE WORK SHOWN ON THIS DRAWING IS COMMENCED.

THE CONTENTS OF THIS DRAWING IS THE COPYRIGHT OF LIGNUM DESIGN LTD. AND MUST NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THEIR WRITTEN APPROVAL BEING GIVEN AND RECEIVED.

PLACE RESERVED FOR SEAL

AcCarthy Suite

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JOB NUMBER : SCALE : 1/4" = 1'-0" PAPER SIZE : ARCH D

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SECTIONS

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. GENERAL STRUCTURAL NOTES

A. ALL ELEVATIONS AND HEIGHTS GIVEN ARE FROM THE FINISHED FLOOR DATUM ELEVATION, WHICH IS SET AT 0'-0". B. DO NOT SCALE DRAWINGS, CONTACT AOR OR EOR FOR DIMENSION CLARIFICATIONS PRIOR TO

CONSTRUCTION. C. VERIFY ALL OPENINGS, BUILDING DIMENSIONS, COLUMN GRID LOCATIONS AND DIMENSIONS WITH OWNER PRIOR TO POURING OF ANY CONCRETE FOUNDATIONS OR CONSTRUCTION. D. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS UNLESS SUCH CHANGES ARE AUTHORIZED IN WRITING TO THE STRUCTURAL ENGINEER OF

E. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE SHORING AND/OR TEMPORARY STRUCTURAL STABILITY FOR ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION. THE STRUCTURE SHOWN ON THE DRAWINGS HAS BEEN DESIGNED FOR FINAL CONFIGURATION.

F. NOTCHING AND/OR CUTTING OF ANY STRUCTURAL MEMBER IN THE FIELD IS PROHIBITED, UNLESS PRIOR CONSENT IS GIVEN BY THE STRUCTURAL ENGINEER OF RECORD. G. IT IS NECESSARY THAT THE STRUCTURAL DRAWINGS BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS TO HAVE A COMPLETE SCOPE OF WORK INVOLVED IN THIS

2. FOUNDATIONS AND SLABS ON GRADE

A. ALL FOOTING AND FOUNDATION DESIGNS ARE BASED ON AN ALLOWABLE SOIL BEARING CAPACITY OF 100 KPa. IF THE SITE HAS A LOWER BEARING CAPACITY THAN LISTED, THEN FOUNDATION PLAN WILL NEED TO BE REDESIGNED. B. A MINIMUM FROST DEPTH OF 1200mm FROM LOWEST ADJACENT FINISH GRADE TO BOTTOM OF FOOTING SHALL BE MAINTAINED FOR ALL EXTERIOR FOOTINGS, CONTRACTOR SHALL COORDINATE AND VERIFY.

C. ALL CONTINUOUS SPREAD AND ISOLATED FOOTINGS SHALL BE FOUNDED ON APPROVED ENGINEERED STRUCTURAL FILL PLACED PER THE GEOTECHNICAL RECOMMENDATIONS. D. IT IS RECOMMENDED THAT ALL GRADING, EXCAVATION, PLACEMENT OF STRUCTURAL

FILL AND INSTALLATION OF FOUNDATIONS BE PERFORMED UNDER THE INSPECTION AND TESTING OF A QUALIFIED GEOTECHNICAL CONSULTANT (EXP SERVICES) DURING THE CRITICAL STAGES OF CONSTRUCTION. E. VERIFY LOCATIONS FOR STEP FOOTINGS AND FOUNDATION WALLS BASED ON SITE

FINISHED GRADE, ALL FOOTING STEPS SHALL BE A MAXIMUM OF (2) VERTICALLY TO F. FOR ANY PIPING OR OTHER SITE RELATED UTILITIES RUNNING ALONGSIDE OR

PENETRATING THROUGH THE FOUNDATIONS OR STEMWALLS. G. ALL CONCRETE SLABS SHALL HAVE REINFORCING PER PLANS & CONTROL JOINTS @ 3.0m O.C. SPACING MAX. AND SHALL BE FOUNDED ON MATERIALS COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY A STANDARD PROCTOR AT OPTIMUM MOISTURE AND PLACED IN 8" LIFTS. H. SLAB SAWN CONTROL & CONSTRUCTION JOINTS SHALL BE MADE AS SOON AS

POSSIBLE WITHOUT DAMAGE TO THE SURFACE. FILLING OF SAWN JOINTS WHERE REQUIRED SHALL BE DELAYED AS LONG AS POSSIBLE TO ALLOW MAXIMUM SHRINKAGE TO OCCUR IN SLABS. I. ALL STRUCTURAL FILL BELOW FOOTINGS SHALL EXTEND OUT PAST FOOTINGS AT A

SLOPE OF 1 HORIZONTAL TO 2 VERTICAL TO COMPETENT SOILS. J. PROVIDE ADEQUATE TEMPORARY BRACING OF FOUNDATION RETAINING WALLS DURING BACKFILL PRIOR TO INSTALLATION OF MAIN FLOOR FRAMING. WALL DESIGNS ARE BASED ON TOP OF WALL RESTRAINED BY FINISHED FLOOR SYSTEM. K. PROVIDE ADEQUATE DRAINAGE BEHIND ALL WALLS TO ALLEVIATE ANY STANDING

L. MINIMUM CONCRETE SLAB THICKNESS IS 100mm

3. CONCRETE

A. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO REQUIREMENTS SET FORTH IN CSA-A23.1. B. THE MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS: ALL FOOTINGS FOUNDATIONS AND STEM WALLS = 25 MPa AND ALL SLARS ON GRADE = 32 MPa C. CONCRETE MIX DESIGN SHALL NOT EXCEED A WATER/CEMENT RATIO OF 0.50. APPROVED ADMIXTURES MAY BE USED TO INCREASE THE WORKABILITY OF THE CONCRETE UPON WRITTEN APPROVAL OF THE OWNER.

CEMENT, ASTM 150. CONCRETE SHALL BE NORMAL WEIGHT WITH MAX. AGGREGATE OF ¾" AND CONFORMING TO ASTM C33.

E. ALL EMBEDDED ANCHOR BOLTS SHALL BE A36 OR A307 STEEL W/ 175mm MIN. EMBEDMENT. ANCHOR BOLTS TO BE WITHIN 300mm OF SILL PLATE ENDS, WITH A MIN. OF TWO PER WALL AND NO CLOSER THAN 150mmFROM CONCRETE WALL CORNERS. REFER TO FOUNDATION PLAN FOR SPECIFIC ANCHOR BOLT PLAN. F. WET SETTING OF REINFORCING BARS IN FOOTINGS AND WALLS IS NOT ALLOWED. G. PROTECT ALL CONCRETE FROM DRYING AND PREMATURE CURING DURING EXTREME WEATHER CONDITIONS. IT IS NOT PERMITTED TO ADD ANY POTABLE WATER TO MIXTURE ON-SITE.

H. BLOCK-OUT ALL STEM WALLS @ ENTRIES AS REQUIRED. I. CONCRETE FORM WORK TO BE OF ADEQUATE STRENGTH AND BRACED TO PREVENT DEFORMATION

J. PROTECT ALL CONCRETE FROM FREEZING.

K. ALL LOWER LEVEL AND RETAINING WALLS WHICH HAVE FILL HEIGHTS HIGHER THAN AN INTERIOR FLOOR LEVEL SHALL HAVE AN APPROVED WATERPROOFING MEMBRANE APPLIED. L. STAIN & TEXTURE OF EXPOSED CONCRETE SURFACES PER OWNER'S DIRECTION, IF APPLICABLE. M. AT CORNERS AND WALL INTERSECTIONS, PROVIDE VERTICAL BAR AND LAP THE REINFORCING N. ALL REENTRANT CORNERS SHALL HAVE ADDITIONAL REINFORCEMENT.

*SOIL BEARING CAPACITY ASSUMED TO BE 100kPa

4. REINFORCING STEEL

D 4 STRUCTURAL SLARS = 25mm

A. ALL ARRANGEMENT AND DETAILING OF REINFORCING STEEL, INCLUDING BAR SUPPORTS AND SPACERS, SHALL BE IN ACCORDANCE WITH THE LATEST ACI 315 DETAILING MANUAL B. REINFORCING STEEL 400MPa GRADE MUST COMPLY WITH THE CSA-630.18 STANDARD "CARBON STEEL BARS CONCRETE REINFORCEMENT". CURRENT EDITION. C. DIMENSIONS OF REINFORCING ARE TO BAR CENTERLINES U.N.O. IN DRAWINGS.

D. MINIMUM CLEAR PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS: D.1. CONCRETE PLACED DIRECTLY AGAINST EARTH = 75mm D.2. FORMED SURFACES AND EXPOSED TO EXTERIOR (15M BARS OR SMALLER) = 50mm D.3. INTERIOR FACE OF WALLS = 37.5mm

D.5. ELEVATED SLABS, BEAMS & COLUMNS = 37.5mm E. DEVELOPMENT LENGTH (INCH) FOR VERTICAL BARS WITHOUT EPOXY COATING:

				Bar size		
f'c (MPa)	10M	15M	20M	25M	30M	35M
20	17	26	34	53	64	74
25	16	23	31	48	57	66
30	14	21	28	43	52	61
35	13	20	26	40	48	56

MULTIPLY THESE VALUES BY 1.3 FOR HORIZONTAL REBARS

MULTIPLY THESE VALUES BY 1.5 FOR EPOXY COATED REBARS MULTIPLY THESE VALUES BY 1.3 FOR LOW-DENSITY CONCRETE

F. STAGGER SPLICES IN WALLS SO THAT NO TWO ADJACENT BARS ARE SPLICED IN THE SAME G. REINFORCING SHALL BE CONTINUOUS THROUGH ALL COLD JOINTS. H. PROVIDE CORNER BARS W/ 450mm LEGS AT CORNERS AND INTERSECTING WALLS AND

FOOTINGS, SIZE AND PLACEMENT TO MATCH HORIZONTAL REINFORCEMENT. I. U.N.O. ON PLANS PROVIDE 15M HORIZONTALS AT TOP OF WALL, CONT. IN FOOTINGS, AND ABOVE ALL OPENINGS. PROVIDE 15M HORIZONTALS AT ALL INTERSECTING FLOORS AND ROOF LEVELS, BOTTOM OF ALL WINDOWS AND AT 3.0m O.C. MAX. J. U.N.O. ON PLANS PROVIDE 15M VERTICALS AT 400mm O.C. W/ STANDARD HOOK EXTENDING

INTO FOOTING AT EACH SIDE OF WALL OPENING AND AT EACH END OF WALLS. K. ALL REINFORCEMENT SHALL BE COLD BENT, UNLESS OTHERWISE PERMITTED BY THE BUILDING OFFICIAL AND ENGINEER OF RECORD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE OR MASONRY SHALL NOT BE FIELD BENT. UNLESS PERMITTED BY THE BUILDING OFFICIAL AND ENGINEER OF RECORD.

L. PROVIDE FOUNDATION HOLDOWNS AT ALL SHEAR WALL LOCATIONS PER PLAN, IF APPLICABLE, RE- FOUNDATION PLAN. M. ALL EXPANSION BOLTS INTO CONCRETE SHALL BE KWIK BOLT KB3 BY HILTI WEDGE ANCHORS OR APPROVED EQUIVALENT. INSTALL ANCHORS IN CONFORMANCE WITH ALL MANUFACTURER'S RECOMMENDATIONS.

5. WOODFRAMING

A. ALL WOOD CONSTRUCTION SHALL CONFORM TO REQUIREMENTS SET FORTH IN CSA 086:14 "ENGINEERING DESIGN IN WOOD". B. ALL STRUCTURAL LUMBER SHALL BE DOUGLAS FIR LARCH (DF/L) #1 OR BETTER, U.N.O. ALL INTERIOR NON-LOAD BEARING WALLS CAN BE DF/L STUD GRADE. ALL STRUCTURAL LUMBER SHALL BE MARKED AND GRADED BY AN APPROVED GRADING INSPECTION AGENCY. C. ALL STRUCTURAL WOOD FRAMING AND CONNECTIONS SHALL MEET THE REQUIRMENTS` PROVIDED IN THE INTERNATIONAL BUILDING CODE, CHAPTER 23, TABLE 2304.9.1, TYPICAL.

D. PNEUMATIC NAILING SHALL BE PLAIN SHANK, COATED OR GALVANIZED: D.1. 8D = 0.131" DIA. X 2 ½" MIN. LENGTH D.2. 10D = 0.148" DIA. X 3" MIN. LENGTH D.3. 16D = 0.135" DIA. X 3 ½" MIN. LENGTH

E. HAND NAILING SHALL BE SINKERS, COATED: E.1. $8D = 11 \frac{1}{2} GA$. X 2 3/8"

E.2. 10D = 11 GA. X 2 7/8"

2304.9.5.

E.3. 16D = 9 GA. X 3 $\frac{1}{4}$ " F. ALL METAL HANGERS AND CONNECTIONS ARE NOTED AS 'SIMPSON STRONG-TIE' AND SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, U.N.O. AN APPROVED EQUIVALENT MAY BE USED INSTEAD WITH PRIOR APPROVAL FROM THE STRUCTURAL EOR. G. ALL LAMINATED VENEER LUMBER SHALL BE I-LEVEL MICROLLAM LVL AND SHALL HAVE THE FOLLOWING MINIMUM SECTION PROPERTIES: FB = 4805 PSI, FV = 530 PSI,E = 1, 900,000 PSI.

H. ALL PLATES AND WOOD INSTALLED WITHIN 1" OF CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR LARCH (DF/L) OR HAVE SUFFICIENT WEATHER RESISTANT

SUBSTITUTIONS ARE ALLOWED WITH PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL

I. PROVIDE WET USE ADHESIVES. J. MAXIMUM LUMBER MOISTURE CONTENTS SHALL BE 15%. K. ALL FRAMING DETAILS SHALL BE IN ACCORDANCE WITH THE ADOPTED CODE. L. PROVIDE SOLID BLOCKING BELOW ALL BEARING WALLS AND POSTS. PROVIDE BLOCKING @ 24" O.C. @ JOISTS PARALLEL WITH BEARING WALLS ABOVE.

M. MINIMUM HEADER AT BEARING WALL TO BE 2 PLY 2x8 W/ 1-2X TRIMMER AND 1-2X KING STUD, U.N.O. HEADERS WITH LARGER LOADING WILL BE CALLED OUT IN PLANS. N. BLOCK AND NAIL ALL HORIZONTAL PANEL EDGES AT SHEAR WALLS.

O. ALL EXTERIOR WALLS TO BE 2X6 @ 16" O.C., ALL LOAD BEARING INTERIOR WALLS TO BE 2X6 @ 12" O.C. AND ALL INTERIOR NON-LOAD BEARING PARTITIONS TO BE 2X4 @ 16" O.C. STUD WALLS (U.N.O.)

P. PROVIDE STEEL STRAPS AT PIPES IN STUD WALLS AS REQUIRED BY THE ADOPTED CODE. Q. OVER-FRAMING SHALL BE DONE SUCH THAT VERTICAL LOADS ARE TRANSFERRED TO MAIN STRUCTURE BELOW BY DIRECT BEARING AT SPACING NOT TO EXCEED 24" O.C. R. ALL WINDOW SIZES IN EXTERIOR WOOD WALLS ARE NOMINAL; VERIFY ACTUAL OPENINGS / WITH WINDOW MANUFACTURERS, RE: ARCH.

S. ALL ROOF OPENINGS GREATER THAN 12"x12" SHALL BE FRAMED IN OPENINGS. T. ALL ROOF & FLOOR OPEN WEB WOOD TRUSSES & JOISTS ARE CONSIDERED A 'DEFERRED' SUBMITTAL. SHOP DRAWINGS & STRUCTURAL CALCULATIONS SHALL BE PROVIDED BY THE MANUFACTURER, AND STAMPED & SIGNED BY A LICENSED ENGINEER IN THE PROVINCE IN WHICH THE PROJECT IS LOCATED. ALL FLOOR & ROOF TRUSSES AND JOISTS MUST BE DESIGNED FOR LOADS SHOWN UNDER 'DESIGN INFORMATION AND LOADS USED'. COORD. ALL FLOOR LOCATIONS w/ HIGHER LOADING (CORRIDORS) W/ ARCHITECTURAL PLANS, TYP. ALL ADDITIONAL LOADS FROM MECH. & ARCH. MUST BE COORD. & DESIGNED FOR ALSO, RE: ARCH. / MECH. FINAL DOCUMENTS MUST BE SUBMITTED TO THE STRUCTURAL EOR FOR ALL FASTENERS IN PRESSURE TREATED WOOD MUST MEET THE REQUIREMENTS OF IBC

WALL SCHEDULE

FOUNDATION WALLS

INSULATED CONCRETE FORM (ICF) w/ 6" CORE

R22 6" CORE ICF BLOCK (SPEC. TBD BY OWNER/CONTRACTOR) 6" POURED CONCRETE (MIN. 25MPA @ 28 DAYS)

(1) 10M HORIZONTAL REBAR @ EACH CORE OF ICF BLOCKS • (2) 10M CONTINUOUS HORIZONTAL REBAR @ TOP & BOTTOM OF WALL (1) 10M VERTICAL REBAR @ 16" O.C. BENT & ALTERNATE @ FOOTING

WATERPROOFING MEMBRANE ADHERED TO EXTERIOR SIDE OF FOUNDATION WALL SIDING ABOVE GRADE

HEIGHT: REFER TO ISOMETRIC FOUNDATION PLANS

8" POURED CONCRETE

8" POURED CONCRETE (MIN. 25MPA @ 28 DAYS)

(1) 10M HORIZONTAL REBAR @ 32" O.C. (2) 10M CONTINUOUS HORIZONTAL REBAR @ TOP & BOTTOM OF WALL • (1) 10M VERTICAL REBAR @ 16" O.C. BENT & ALTERNATE @ FOOTING

HEIGHT: REFER TO ISOMETRIC FOUNDATION PLANS

EXTERIOR WALLS

2x8 WALL ASSEMBLY; w/ STONE VENEER

1/2" GYPSUM WALL BOARD

CODE COMPLIANT VAPOUR BARRIER 2x8 SPF No.1/No.2 FRAMED WALL @ 16" O.C. CAVITY INSULATED w/ R28 BATT INSULATION 1/2" EXTERIOR GRADE PLYWOOD

GALVANIZED METAL LATH MORTAR LAYER 2" STONE VENEER

GROUT JOINTS (IF APPLICABLE) PRE-FABRICATED METAL LATH FLASHING MIN. 6" UP & BEHIND WALL

HEIGHT: REFER TO ELEVATIONS

HOUSEWRAP MEMBRANE

2x8 WALL ASSEMBLY; w/ SIDING

 1/2" GYPSUM WALL BOARD CODE COMPLIANT VAPOUR BARRIER 2x8 SPF No.1/No.2 FRAMED WALL @ 16" O.C. CAVITY INSULATED w/ R28 BATT INSULATION 1/2" EXTERIOR GRADE PLYWOOD HOUSEWRAP MEMBRANE

STRAPPING & SIDING **HEIGHT: REFER TO ELEVATIONS**

POURED CONCRETE SLABS

4" CONCRETE SLAB (20MPa @ 28 DAYS)

CODE COMPLIANT VAPOUR BARRIER

3" RIGID INSULATION (MIN. R10)

6" COURSE CLEAN GRANULAR FILL

• _6" GRID WELDED WIRE MESH

POURED CONCRÉTE SLAB, 4" w/ RIGID INSULATION, 2"

NATIVE SOIL OR COMPACTED ENGINEERED FILL

INTERIOR WALLS

2x6 FRAMED PARTITION

 1/2" GYPSUM WALLBOARD 2x6 SPF No. 1/No.2 FRAMED WALL @ 16" O.C. CAVITIES INSULATED w/ 3" ROCKWOOL SAVE'n'SOUND

HEIGHT: VARIES WITH FLOOR LEVEL

1/2" GYPSUM WALLBOARD

2x6 FRAMED PARTITION - LOAD BEARING

1/2" GYPSUM WALLBOARD / 2x4 SPF No. 1/No.2 FRAMED WALL @ 16" O.C.

 CAVITIES INSULATED w/ 3" ROCKWOOL SAVE'n'SOUND SINGLE BOTTOM PLATE & DOBLE TOP PLATE 1/2" GYPSUM WALLBOARD

HEIGHT: VARIES WITH FLOOR LEVEL

2x4 FRAMED PARTITION

1/2" GYPSUM WALLBOARD 2x4 SPF No. 1/No.2 FRAMED WALL @ 16" O.C. CAVITIES INSULATED w/ 3" ROCKWOOL SAVE'n'SOUND

 1/2" GYPSUM WALLBOARD HEIGHT: VARIES WITH FLOOR LEVEL

PLACE RESERVED FOR SEAL

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DESIGN AND CONSULTING

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JOB NUMBER: SCALE: 1/4'' = 1'-0''PAPER SIZE: ARCH D

DRAWING:

STRUCTURAL NOTES

SHEET NO. :

3/4" EXTERIOR GRADE PLYWOOD SHEATHING P.T. DIMENSIONAL LUMBER

SCREENED IN PORCH FLOOR ASSEMBLY

FLOOR LEGEND

FLOOR FINISH (SPEC TBD)

3/4" EXTERIOR GRADE PLYWOOD SHEATHING

• 11 7/8" PRE-ENG I-JOISTS (REFER TO SHOP DWGS)

CAVITES FILLED w/ 3" ROCKWOOL SAFE'n"SOUND

1/2" GYPSUM CEILING FASTENED TO STRAPPING

FRAMED FLOORS

MAIN FLOOR ASSEMBLY

ROOF LEGEND

INSULATED ROOF ASSEMBLY OVER TIMBER FRAME

- ICE & WATER SHEILD
- 1/2" EXTERIOR GRADE PLYWOOD SHEATHING HORIZONTAL STRAPPING
- VERTICAL STRAPPING 9" POLYISTYRENE INSULATION ICE & WATER SHEILD (VAPOUR BARRIER)
- TIMBER FRAMING

UNINSULATED ROOF ASSEMBLY OVER TIMBER FRAME

 ROOFING ICE & WATER SHEILD

2x8 T&G

- 1/2" EXTERIOR GRADE PLYWOOD SHEATHING HORIZONTAL STRAPPING
- VERTICAL STRAPPING
- 9" FRAMING LAYER

2x4 HORIZONTAL STRAPPING 2x4 VERTICAL STRAPPING

 ICE & WATER SHEILD • 1/2" EXTERIOR GRADE PLYWOOD SHEATHING

INSULATED ROOF ASSEMBLY OVER TRUSSES

- R50 BLOWN IN INSULATION RRE-ENGINEERED TRUSSES
- ICE & WATER SHEILD (VAPOUR BARRIER) 1/2" GYPSUM CEILING

UNINSULATED ROOF ASSEMBLY OVER TRUSSES

- ROOFING 2x4 HORIZONTAL STRAPPING
- 2x4 VERTICAL STRAPPING \ ICE & WATER SHEILD
- 1/2" EXTERIOR GRADE PLYWOOD SHEATHING PRE-ENGINEERED TRUSSES SOFFIT

TIMBER FRAMING

NOT FOR CONSTRUCTION