

CONSTRUCTION NOTES

- GENERAL**
- This building is designed under part 9 of the current British Columbia Building Code.
 - Structural members and their connections shown on the drawings require design and review by structural engineer at the discretion of the Local Building Authority except as provided in Part 9 of B.C.B.C. This may include the requirement for a field inspection to ensure that structural building components are correctly installed. If required, such reviews shall be for the account of the builder. The builder shall ensure that the construction complies with all national, provincial, and local regulations.
 - The builder shall install all materials, equipment, and components in accordance with the manufacturer's instructions and accepted methods of good building practice.
 - It shall be the responsibility of the builder to determine the snow load, rain load, wind load, and soil conditions in the area in which the residence is being built, and to make adjustments in the size of structural members to compensate for additional loading.
 - The builder shall verify all dimensions, materials and conditions shown on the drawings. Any variances within the drawings or specifications, or form conditions found on the job site shall be approved by structural engineer.
 - Dimensions shall in all cases take precedence to scale.
 - All work and materials to conform to standards and requirements of B.C.B.C. (part 9) and municipal bylaws.
 - All drawings must be approved by municipal authorities having jurisdiction before starting construction.
 - Starting work shall imply acceptance and shall mean acceptance of all specifications, dimensions and requirements as well as all surfaces and conditions as being suitable to receive said work.
 - It is the responsibility of the builder to verify all dimensions and structure before proceeding with construction, and to report all errors or omissions to Structural Engineer before taking remedial action. Failure to report errors and omissions will absolve Structural Engineer with the construction of this home.
 - Contractor or builder shall ensure that any concentrated load or any which may arise during or after construction, whether or not it has been specifically detailed, shall be supported according to good practice and that the method of support as well as all members supporting such loads shall first be approved by the authority having jurisdiction and/or a professional engineer and shall conform to the current B.C.B.C.
 - All glazing to be sealed units in vinyl or wood frames or thermal y broken aluminum.
 - All exterior doors to be solid core and weather stripped.
 - All finishes and color selections to be approved by owner.
 - See owner for provision of alarm, intercom & exterior lighting systems.
 - Install CSA approved smoke alarms on all finished floors.
 - All notes contained on all drawings of this plan apply to all other drawings of this plan.
 - DO NOT SCALE DRAWINGS.
 - Dimensions to be taken from outside face of sheathing to centerline of interior partitions U,N,O.

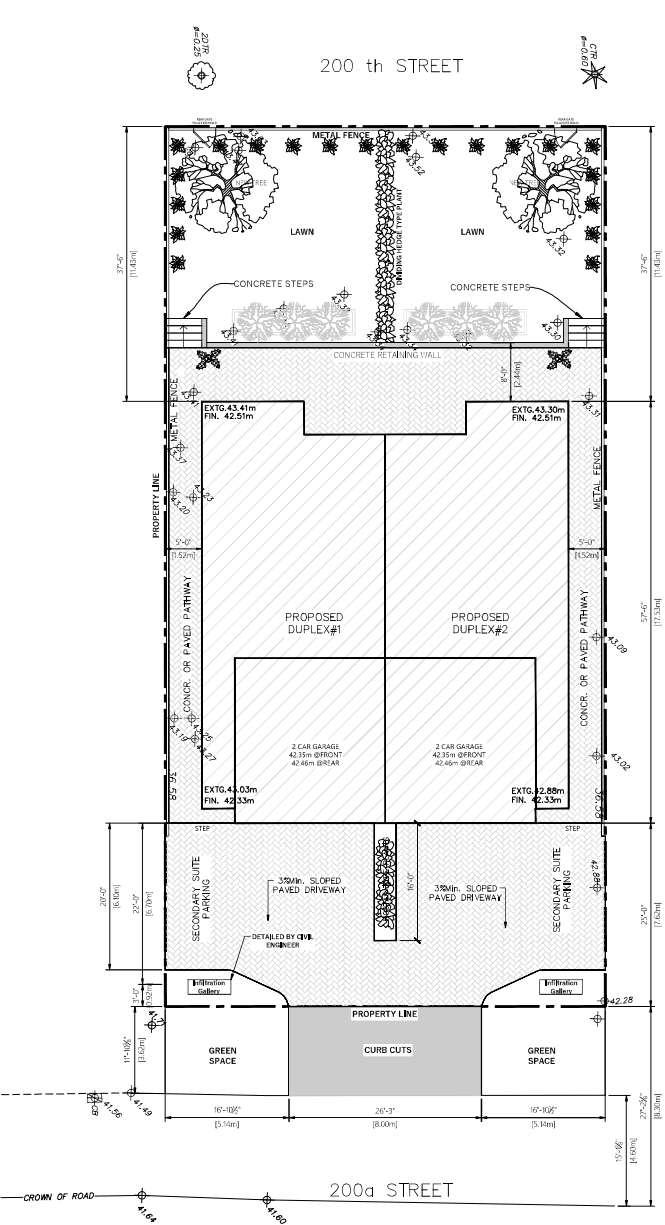
- THE BUILDING SITE**
- Lot geometry and topographical information has been obtained from the client. As we rely on this information, we are not responsible for any errors which occur as a result of the use of the Survey Plan. It is the builder's responsibility to ensure that site data is correct. All dimensions shown on the site plan and the location of any easements or are to be approved by building authorities before commencing construction.
 - Grade is to slope a minimum of 2 percent away from the structure for surface water run-off. The builder is responsible for required swales, and to ensure that elevations shown on the site plan are accurate before excavation takes place. This is extremely important to ensure that existing overhead water flow patterns are maintained.
 - Any retaining walls required are to be built according to good practice, and are entirely the responsibility of the builder.
 - The Designer shall not be responsible for site conditions such as soil bearing capacity, depth of frost lines, water tables, underground springs, buried structures, or buried organic material, foundations slippage due to clay or other materials, or foundation cracking due to siting a home on uneven bearing.

- EXCAVATION**
- The topsoil and vegetable matter in all unexcavated areas under the building shall be removed.
 - Excavations for footing shall extend to undisturbed soil.
 - The bottom of excavations shall be kept from freezing throughout the entire period.
 - Excavations shall be kept free of standing water.
 - In localities where termites are known to occur, all stumps, roots, and other debris shall be removed from the soil to a depth of not less than 300mm (12") in unexcavated areas under the building.
 - Where excavations are deep, appropriate safety precautions should be taken to ensure that sliding soil does not endanger workers, (to comply with Worker's Compensation Board rules)

- FOUNDATIONS**
- Footings have been designed assuming a soil bearing capacity of 2000 p.s.f. If a lesser soil bearing capacity is encountered, it shall be responsibility of the owner to ensure that footings are redesigned by a professional engineer to suit actual soil conditions.
 - Footings shall be placed on undisturbed soil, free of organic material, and solid in composition, at an elevation below the frost line.
 - The soil in trenches beneath footings for sewers and water rains shall be compacted by tamping up to the level of the footing base or shall be filled with concrete having a strength of not less than 10 Mpa.
 - When step footings are used, the vertical rise between horizontal portions shall not exceed 600mm (2'-0"). The horizontal distance between the risers shall not be less than 600mm (2'-0").
 - Reinforcing of concrete must be designed by an Engineer.
 - For seismic upgrading, all reinforcing must be designed by an Engineer.
 - Backfill shall be placed to avoid damaging the foundation wall, the drainage tile, externally applied insulation, and the waterproofing of the wall. Backfill shall not be placed against the foundation wall until the concrete has reached its specified 28 day strength and until the structural floor framing is in place including the plywood subfloor.
 - Backfill shall be graded to prevent drainage toward the foundation after setting. Minimum slope away from the building shall be 2 percent.
 - Backfill within 600mm (2'-0") of the foundation wall shall be free of deleterious debris and boulders larger than 250mm (10") diameter.
 - Waterproofing and damp proofing as per Sec.8.13.1.3 (1) BCBC 2018.

- CONCRETE**
- Concrete shall conform to Section 9.3.1.1 of the BCBC 2018.
 - Concrete shall have a minimum compressive strength of 25 MPa after 28 days except concrete used for garage and carport floors and exterior stairs shall have a minimum compressive strength of 32 MPa at 28 days.

- WOOD FRAME CONSTRUCTION**
- The design of structural floor members (joists and beams) is based on the assumption that said components are manufactured lumber. Builder is to provide engineered drawings for the design of each floor system.
 - Notching or drilling of framing members shall comply with section 9.23.5 of the B.C. Building Code 2018 Edition.
 - Beams shall have even end bearing and shall have not less than 89mm (3-1/2") length of bearing at end supports.
 - Individual members of a built up beam shall be nailed together with a double row of nails not less than 89mm (3-1/2") in length, spaced not more than 450mm (18") apart in each row, with the end nails located 100mm (4") to 150mm (6") from the end of each place.
 - All load bearing interior or exterior lintels to be 2x2x10 #2 or better Douglas fir unless otherwise specified.
 - The width or diameter of a wood column shall be not less than the width of the supported member.
 - Built up wood columns shall consist of not less than 38mm (1-1/2") thick full length members bolted together with not less than 10mm (3/8") diameter bolts spaced not more than 450mm (18") apart, or nailed together with not less than 76mm (3") nails spaced not more than 300mm (12") apart. Wood columns shall be separated from concrete in contact the ground by min. 3 mil polyethylene film or type 'S' roll roofing.
 - All wood and concrete contacts shall be damp proofed with an approved sill gasket and anchored with 1/2" anchor bolts @ 6'-0" O.C. max. Use pressure treated wood at all contacts with concrete.
 - Floor joists shall have not less 38mm (1-1/2") of ending bearing.
 - Non-load bearing interior walls parallel to floor joists, which support kitchen cabinets shall be supported by double floor joists beneath the wall.
 - Non-load bearing walls parallel to floor joists shall be supported by joists beneath the wall or by 38mm x 89mm (2x4) blocking spaced not more than 1,2m (4'-0") O.C.
 - All structural members beyond part 9 of the building code: Trusses, parallel & timber stand beam sizes, and hangers must be designed by a professional engineer. Additionally, floor joist spans are based on the assumption that: 5/8" T&G plywood subfloor is glued and nailed to floor joists in all locations, and 2"x2" cross-bridging is installed at 6'-10" O.C max and 1"x3" strapping is installed where GWB not used below.



SITE PLAN
SCALE: 1/8"=1'-0"

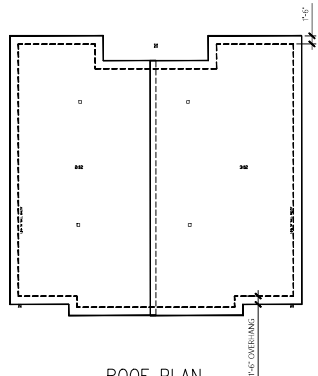
GENERAL INFORMATION
CONTRACTOR TO VERIFY ALL DIMENSIONS AND TO ADJUST IF REQUIRED.
DESIGNER NOT RESPONSIBLE FOR ANY ERRORS FOUND ON PLAN.
ALL WORKS SHALL CONFORM TO 2018 BC BUILDING CODE INCLUDING BOOK 11 FOR PLUMBING SERVICES AND 9.32 and 9.36 OF PART 9. 2014 BC BUILDING CODE AND CITY OF LANGLEY ZONING BYLAW.
MECHANICAL VENTILATION, PLUMBING AND ELECTRICAL AS PER CODE. INSTALL RADIANT HEATING SYSTEM.
*THIS PLAN MUST BE CHECKED BY A STRUCTURAL ENGINEER IF REQUIRED BY CITY. A SOILS TEST MAY BE REQUIRED.

NOTE: OWNER/BUILDER TO CHECK & VERIFY WITH SERVEYOR TO LAY HOUSE ON LOT BEFORE CONSTRUCTION. IF ANY ADJUSTMENT HAS TO BE DONE, IT SHOULD BE NOTIFIED TO AND APPROVED BY DRAFTPAD DESIGNS

EXISTING GRADES TO BE MAINTAIN

SITE DATA
CIVIC ADDRESS: 4885 206th St Langley, BC V3A 6J8
LEGAL: LOT 182, PLAN W496277, SECTION 36, TOWNSHIP 2, NEW WESTMINSTER LAND DISTRICT

ZONING:	RST OR TO BE REZONED
SITE AREA:	7200 SQ. FT.
F.S.R. ALLOWABLE:	4 OF LOT (8400 SQ. FT.)
PROPOSED FAR:	1875.63 SQ. FT. (1st FLOOR) 2248.84 SQ. FT. (2nd FLOOR) 2248.84 SQ. FT. (UPPER LEVEL)
TOTAL FAR:	6373.31 SQ. FT.
SITE COVERAGE ALLOWABLE:	0.45 (3240 SQ. FT.)
PROPOSED:	3200 SQ. FT.
1st FLOOR:	1875.63 SQ. FT.
GARAGE:	800 SQ. FT.
TOTAL 1st FLOOR:	2775.63 SQ. FT.
2nd FLOOR:	2248.84 SQ. FT.
3rd FLOOR:	2248.84 SQ. FT.
TOTAL ALL 3 FLOORS:	7273.31 SQ. FT.
DECK AREA ALLOWABLE:	NA SQ. FT.
FRONT PORCH/REAR PATIO:	435 SQ. FT.
OPEN DECK AT REAR:	580 SQ. FT.



ROOF PLAN
SCALE: 3/32"=1'-0"

General Notes

No.	Revision/Issue	Date

Plan Title and Address
2288 WILLOUGHBY COURT,
LANGLEY, BC
PH: 778-551-1023
E: drafthead@draftpad.com
www.draftpad.com

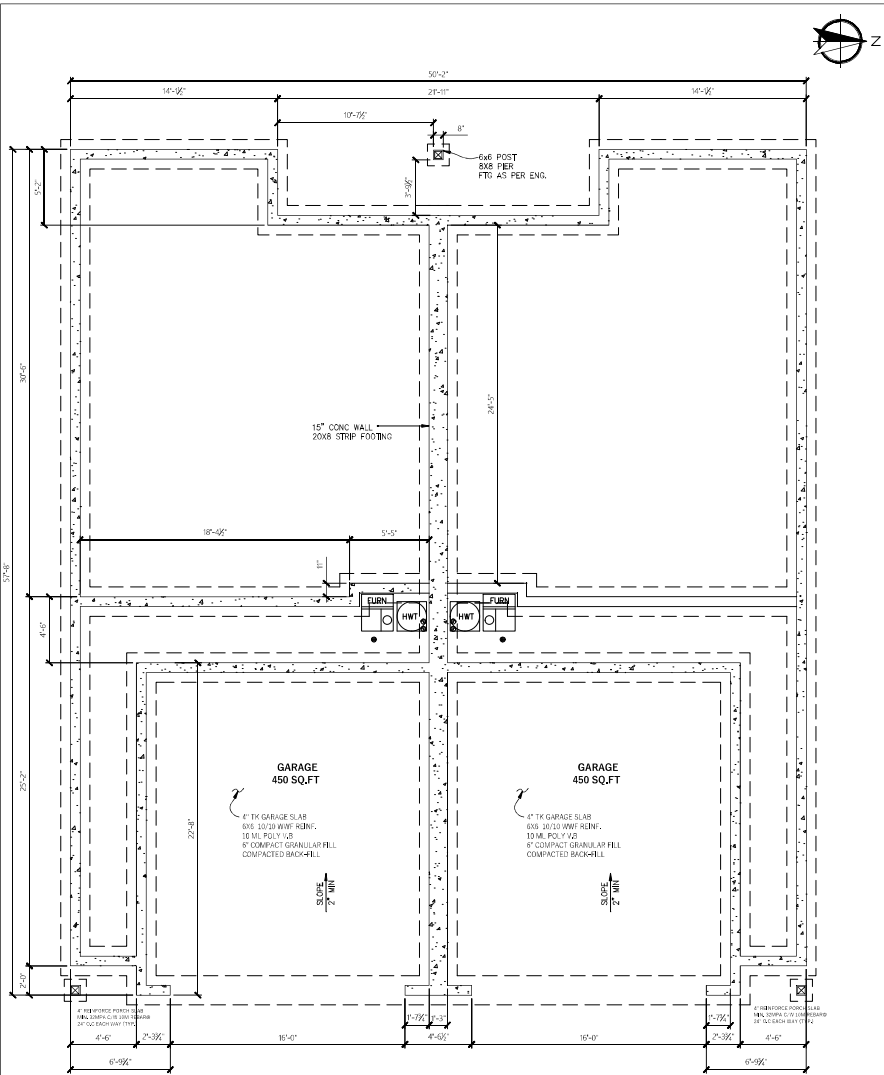
Project Name and Address
DUPLEX BUILD FOR
MANDEEP DANDIWA
4565 200th St
LANGLEY, BC
V3A 6J8

Revision Title
SITE PLAN

Date
25-JUL-2023

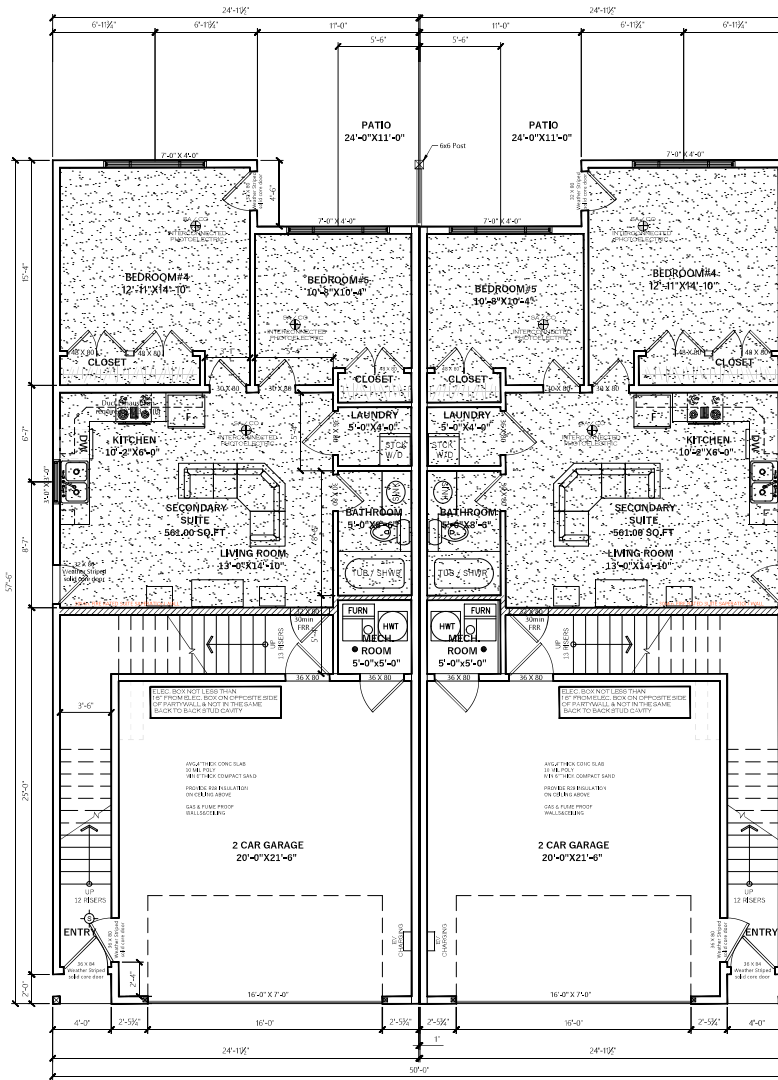
Scale
1/8"=1'-0"

Sheet
1



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

1st FLOOR AREA: 1875.62 SQ.FT
GARAGE AREA: 900 SQ. FT
TOTAL: 2775.62 SQ.FT
2nd FLOOR AREA: 2246.94 SQ.FT
STAIRS: 96 SQ.FT
NET UPPER FLOOR: 2246.94 SQ.FT
3rd FLOOR AREA: 2246.94 SQ.FT
STAIRS: 84 SQ.FT
NET UPPER FLOOR: 2162.94 SQ.FT
REAR PATIO: 425 SQ.FT
OPEN DECK: 580 SQ.FT
1st FLOOR: 1875.62 SQ.FT (INCLUDING GARAGE)
2nd FLOOR: 2246.94 SQ.FT
3rd FLOOR: 2246.94 SQ.FT
TOTAL: 6368.50 SQ.FT



1st FLOOR PLAN

SCALE: 1/4" = 1'-0"
FLOOR AREA: 1875.62 SQ.FT.
GARAGE: 900 SQ.FT
TOTAL AREA: 2775.62 SQ.FT
OPEN AREA: 0 SQ.FT

TRUSS AS PER MANUFACTURER'S
DIMENSIONS. TRUSS: 400 TO 1000 SERIES.
FLOOR TO CEILING: 8'-0" ON 1st FLOOR
ON 2nd FLOOR TRUSSES.

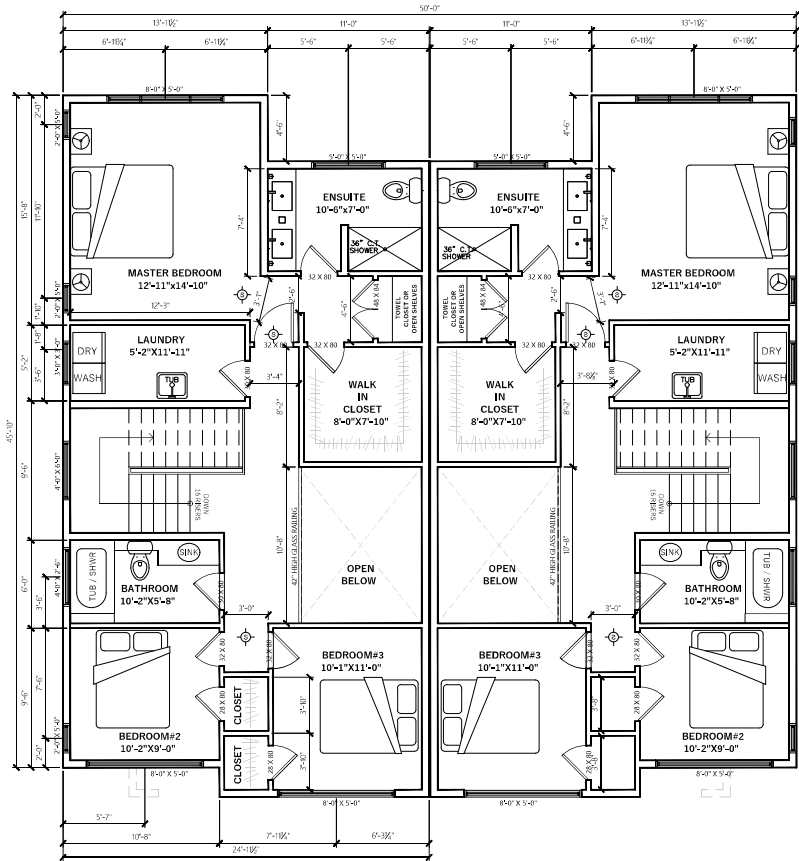
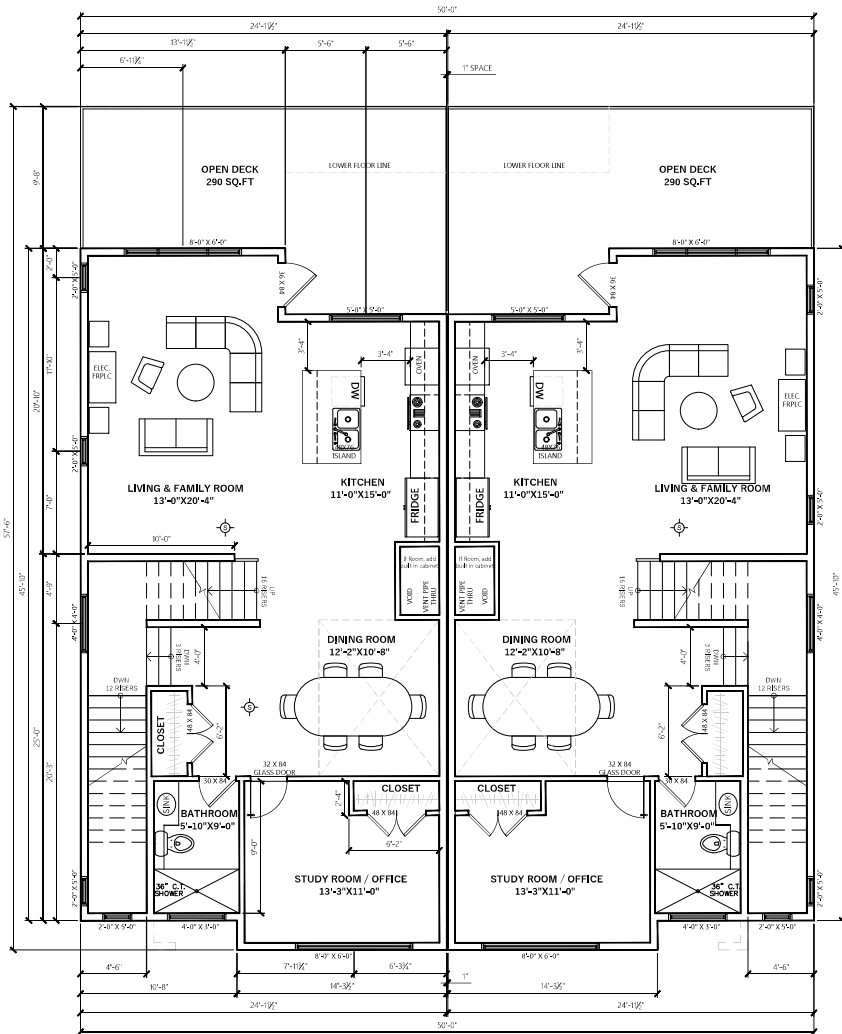
General Notes

No.	Revision/Issue	Date

Plan Title and Address
2288 WILLOUGHBY COURT,
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www.rnfdesigns.com

Project Name and Address
DUPLEX BUILD FOR
MANDEEP DANDIWA
4565 700th ST
LANGLEY, BC
V3A 6H8

Revision Title FDN & 1st FLOOR PLAN	Sheet 2
Date 25-JUL-2023	
Scale 1/4" = 1'-0"	



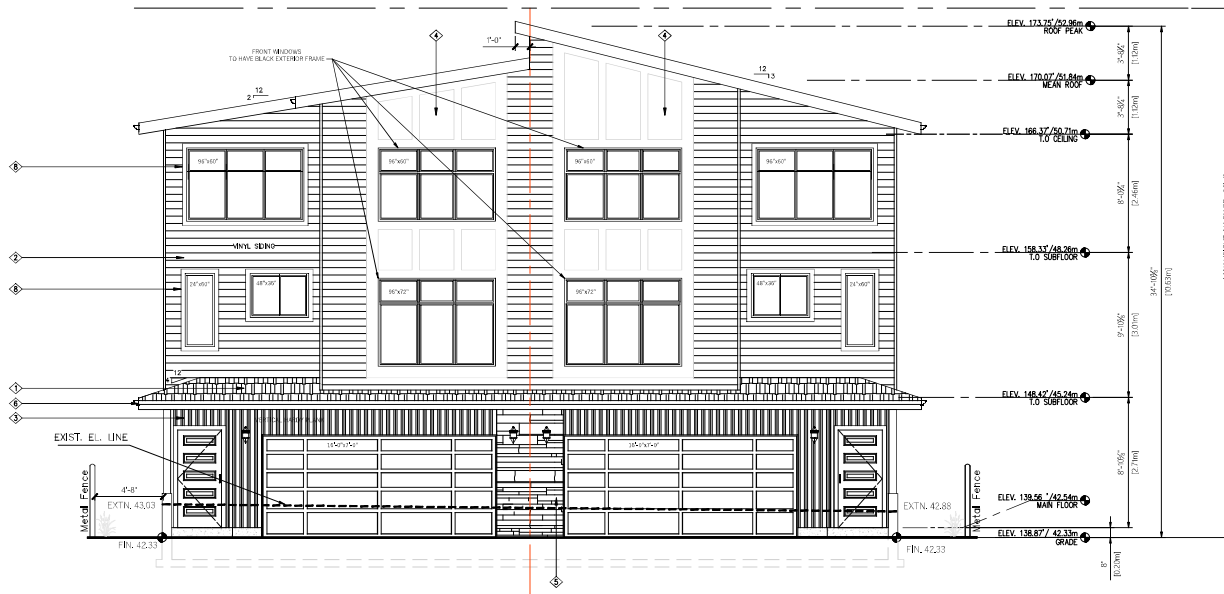
General Notes

No.	Revision/Issue	Date

Plan Title and Address
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Project Name and Address
 DUPLEX BUILD FOR
 MANDEEP DANOWAL
 4565 70th St
 LANGLEY, BC
 V3A 6H8

Revision Title 2nd & 3rd FLOOR PLAN	Sheet 3
Date 25-JUL-2023	
Scale 1/4" = 1'-0"	



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



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

EXTERIOR FINISHES SCHEDULE	
TAG	DESCRIPTION
①	SHAKE PROFILE ASPHALT SHINGLES
②	ARTISAN SHIPLAP SIDING (LINEN COLOUR)
③	HARDIE ALMOST BLACK FROM JAMES HARDIE
④	HARDIE TIMBER BARK FROM JAMES HARDIE
⑤	STONE YENER "SOPHIA CREAM SPLIT FACE"
⑥	1X4 TRIM ON 2X8 FASCIA
⑦	BLACK WROUGHT IRON RAIL
⑧	1X4 TRIM AROUND WINDOWS

EXTERIOR FINISH AS PER SCHEDULE OR TO BE AS PER OWNER

General Notes

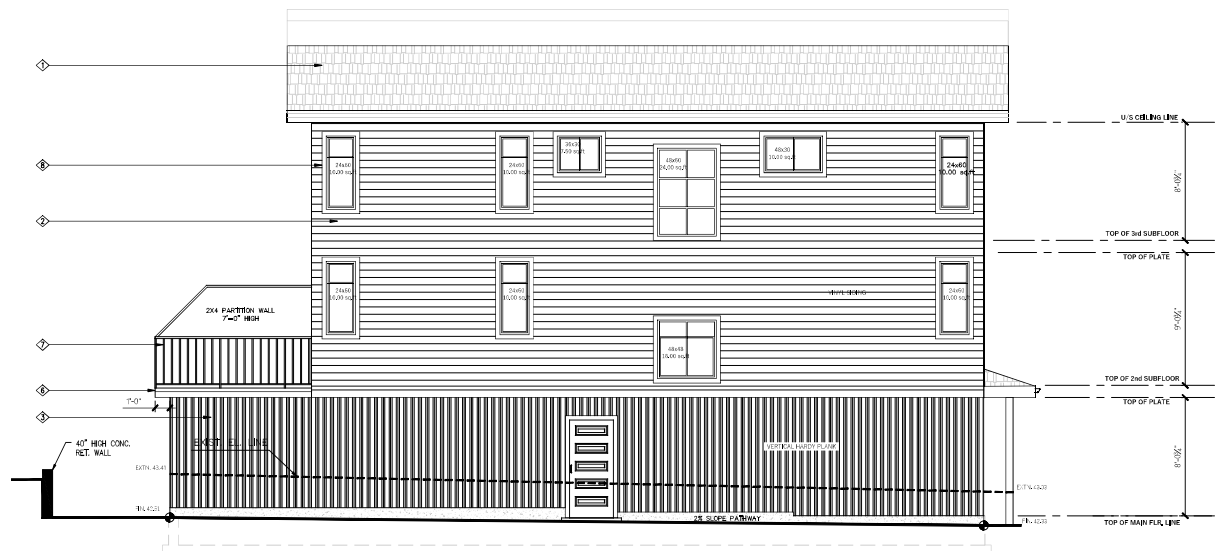
No.	Revision/Issue	Date

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Project Name and Address
DUPLIX BUILD FOR
MANDEEP DANDIWAJ
4565 7009 St
LANGLEY, BC
V3A 6H8

Drawn By ELEVATIONS	Sheet 4
Date 25-JUL-2023	
Scale 1/4" = 1'-0"	



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

SPATIAL OPENING CALCULATION
TOTAL WALL AREA: 1270 SQ.FT
TOTAL OPENINGS ALLOWED N/A
TOTAL PROPOSED OPENINGS: 117.50 SQ.FT
LIMITING DISTANCE: 1.5m

SPATIAL OPENING CALCULATION
TOTAL WALL AREA: 1270 SQ.FT
TOTAL OPENINGS ALLOWED N/A
TOTAL PROPOSED OPENINGS: 117.50 SQ.FT
LIMITING DISTANCE: 1.5m

EXTERIOR FINISHES SCHEDULE	
TAG	DESCRIPTION
①	SHAKE PROFILE ASPH/FLT SHINGLES
②	ARTISAN SHIP LAP SIDING (LINEN COLOUR)
③	HARDIE ALMOST BLACK FROM JAMES HARDIE
④	HARDIE TRIMMER BLANK FROM JAMES HARDIE
⑤	STONE VENEER "SOPHIA CREAM SPLIT FACE"
⑥	1X4 TRIM ON 2X8 FASCIA
⑦	BLACK WROUGHT IRON RAIL
⑧	1X4 TRIM AROUND WINDOWS



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

SPATIAL OPENING CALCULATION
TOTAL WALL AREA: 1270 SQ.FT
TOTAL OPENINGS ALLOWED N/A
TOTAL PROPOSED OPENINGS: 117.50 SQ.FT
LIMITING DISTANCE: 1.5m

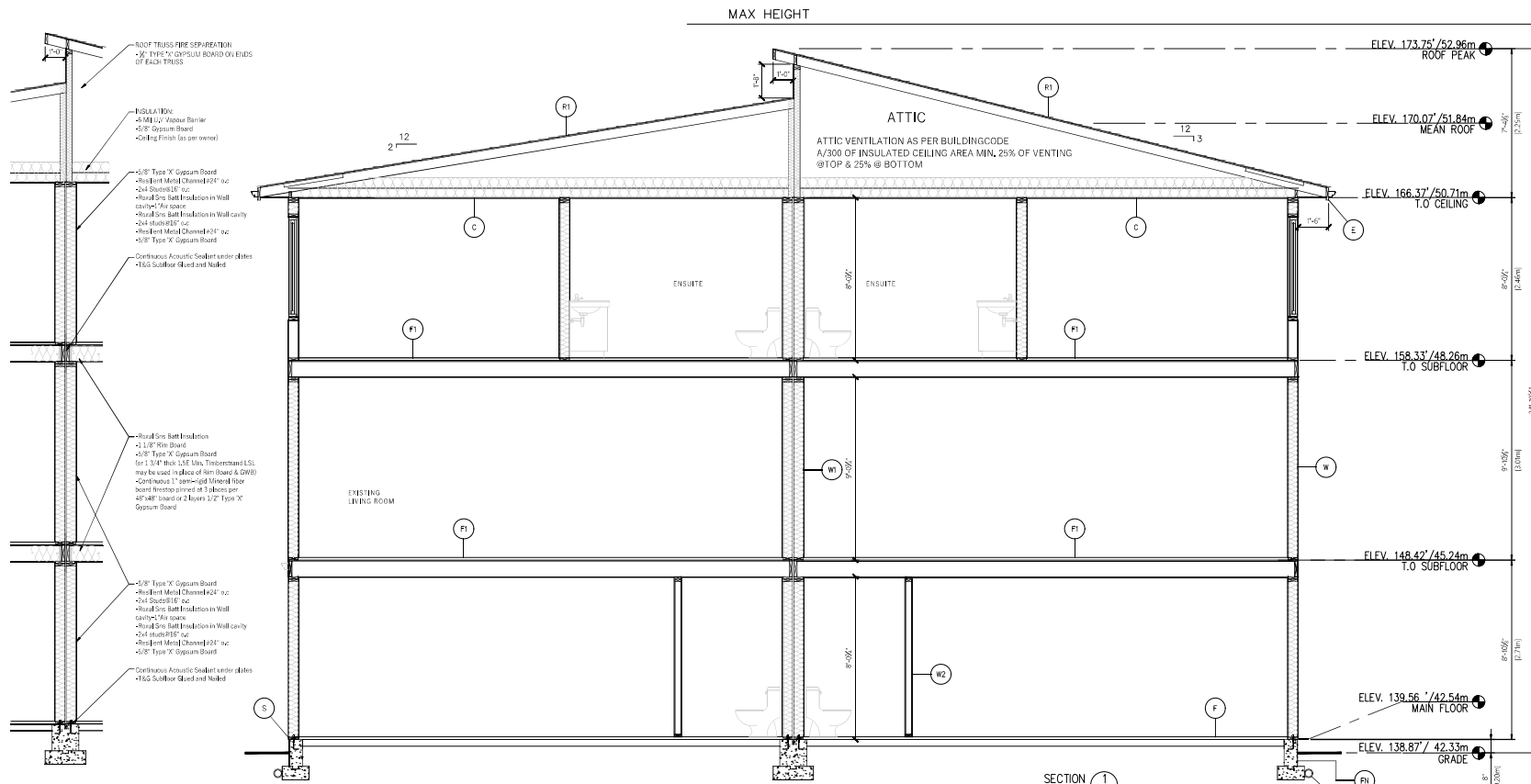
General Notes

No.	Revision/Issue	Date

Plan Title and Address
2288 WILLOUGHBY COURT,
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Project Name and Address
DUPLICATE BUILD FOR
MANDEEP DANDIYAL
4565 7009A ST
LANGLEY, BC
V3A 6H8

Revision Title	Sheet
ELEVATIONS	5
Date	25-JUL-2023
Scale	1/4" = 1'-0"



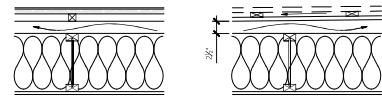
PARTYWALL DETAIL
SCALE: 3/8"=1'-0"

- R1 - ROOF :**
SHAKE PROFILE ASPHALT SHINGLES
ASPHALT BUILDING FELT
1 PLYWOOD SHEATHING (H CLIPPED)
ROOF TRUSSES @ 24" O.C
1"=4" EAVE PROTECTION
2:12 ROOF PITCH (LEFT)
3:12 ROOF PITCH (RIGHT)
- R2 - ROOF AT FRONT OVER GARAGE :**
SHAKE PROFILE ASPHALT SHINGLES
ASPHALT BUILDING FELT
1 PLYWOOD SHEATHING (H CLIPPED)
ROOF RAFTERS @ 24" O.C
2"=4" EAVE PROTECTION
4:12 ROOF PITCH
- E - EAVE :**
CONTINUOUS 4" ALUMINUM EAVE TROUGHS
2X4 TRIM ON 2X8 FASCIA
ALUMINUM VENTED SOFFIT
ALUMINUM DOWNSPOUTS TO SEWER CONNECTION
- W - EXTERIOR WALL :**
STUCCO/ANVL SIDING/HARDY BOARD
2" STRAPPING FOR RAIN SCREENING
TYNEX BUILDING MEMBRANE
1/2" OSB SHEATHING
2X6 STUDS @16" O.C
R20 BATT INSULATION
6 ML POLY V.B
GYPSUM WALL BOARD: 1/2" THICK

- W2 - INTERIOR WALL :**
2X4 STUDS @ 16" O.C (MIN.0)
GYPSUM WALL BOARD: 1/2" THICK
- C - CEILING :**
INSULATION: R40 BATT INSULATION
6 ML POLY
GYPSUM WALL BOARD: 5/8" THICK
MIN.20%EXTENT/TOPTOP OF ATTIC SPACE
MIN.25%VENT/BOTTOM OF ATTIC SPACE
- F - 1st FLOOR :**
HARDWOOD/CARPET OR LAMINATE
4" CONCRETE SLAB
6ML POLY (MIN.4" LAP JOINTS)
3"=5"=2" INSULATION
5" CONCRETE
- F1 - 2nd & 3rd FLOOR :**
HARDWOOD/CARPET OR LAMINATE
5/8" THICK SUB FLOOR SHEATHING
11" FLOOR JOISTS @ 16" O.C WITH BRIDGING
4" GWB
- WP - INTERIOR PARTITION WALL :**
SEE PARTYWALL DETAIL ON LEFT

- FN - EXTERIOR FOUNDATION WALL :**
APPROVED WATERPROOF MEMBRANE
APPLY TO EXTERIOR PERIMETER UP TO GRADE
8" CONCRETE FOUNDATION WALL
DAMP PROOFING: 2 COATS OF EMULSION
INSULATION: R12 FIBER INSULATION [24" BELOW GRADE]
ROOFING SLOPE: 20:12
- S - SILL PLATE :**
SILL PLATE: 2X6 PLATE(TREATED)
GASKETS: FORM SILL GASKET
ANCHOR BOLTS: 1/2" DIAMETER SPACING @ 8"-0" O.C
- D - DRAINAGE :**
DRAIN TILE: 4" PVC PERFORATED
DRAIN ROCK: 3/4" CRUSHED ROCK AROUND ENTIRE BUILDING
TO BE INSTALLED PRIOR TO BACKFILL
RAIN WATER LEADER: 4" PVC SOLID
- S - STAIRS :**
RISE: 7-5/8"
RUN: 10"
SPINDERS: 3 STRINGERS OF 2X12
TREADS: 1" THICK
NOSSING: 1"
HEADROOM: 6'-8"
HANDRAIL: 3/4" HIGH
TOTAL RISE: 10'-2 1/4"
TOTAL RUN: AS PER FLOOR PLAN

SECTION 1
SCALE: 3/8"=1'-0"



R1- VENTED SLOPED ROOF ASSEMBLY
ASPHALT SHINGLES (LIGHT COLOUR)
ROOFING UNDERLAYMENT MEMBRANE
POLY-FACED SELF-ADHERED MEMBRANE
2X2 SLEEPERS TO ALLOW VENTILATION
9.5" TJI (OR 2X10) ROOF JOISTS (OR TRUSS) (AS PER STRUCT. ENG.)
9.5" BATT INSULATION TO FILL SPACE
6 ML POLY VAPOR AIR BARRIER
(TAPED AT ALL JOISTS & SEALED AT EDGES)
5/8" GWB

R2- VENTED ROOF DECK ASSEMBLY (COLD ROOF)
(LEVEL THERMO-WOOD DECKING (SCOTTWOOD) ON SLEEPERS TO SUIT) @ DECKS ONLY
2PLY SBS ROOFING MEMBRANE (IN INTO DRAIN)
1/2" PLYWOOD SHEATHING
2X ON EDGE CUT TO 2X SLOPE
TO MAINTAIN MIN. 2.5" VENTILATION SPACE
9.5" TJI ROOF JOISTS PER STRUCTURAL ENG.
9.5" BATT INSULATION (R-12.5) TO FILL JOIST SPACE
6 ML POLY VAPOR AIR BARRIER
SEAL ALL SEAMS & TRANSITION TO AIR BARRIER @ WALLS

General Notes

No.	Revision/Issue	Date

Plan, Elevation and Address

2288 WILLOUGHBY COURT,
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Project Name and Address

DUPLEX BUILD FOR
MANDEEP DANDIWAJ
4555 70th St
LANGLEY, BC
V3A 6H8

Revision Title	Sheet
25-JUL-2023	6
1/2"=1'-0"	

General Notes

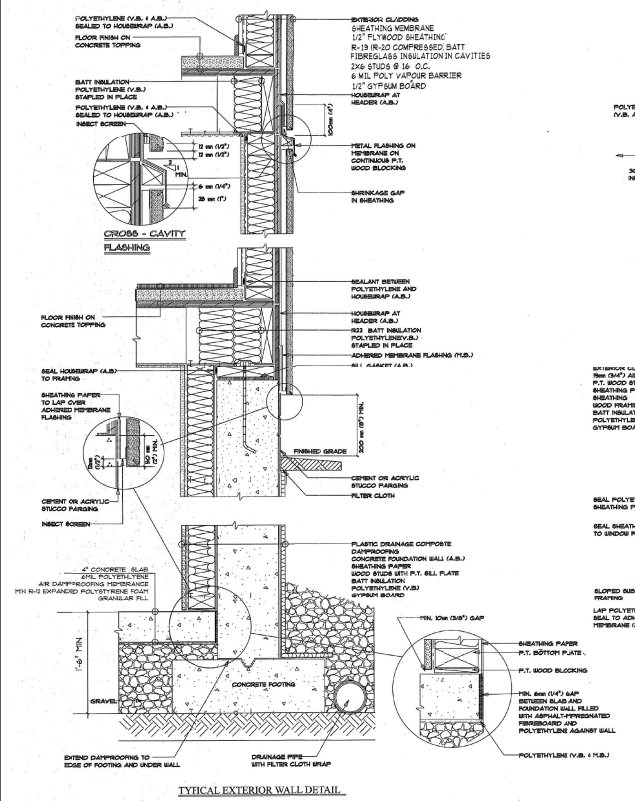
No.	Revision/Issue	Date

File Name and Address
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 Ph: 778-551-1033
 E: d@tradesignshome.com
 www.tradesignsh.com

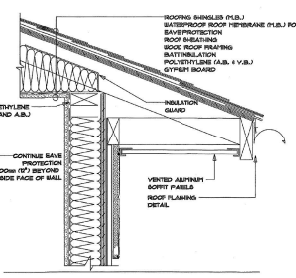


Project Name and Address
 DUPLEX BUILD FOR
 MANDEEP DANDIWAL
 4545 201st St
 LANGLEY, BC
 V3A 5J8

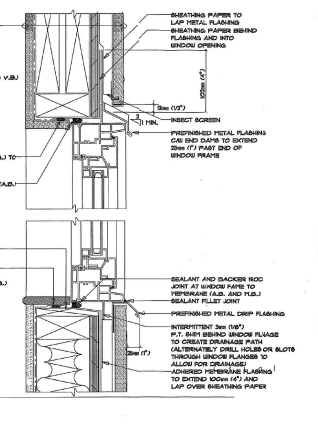
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DETAILS	7
Date	25-JUL-2023
Scale	1/8" = 1'-0"



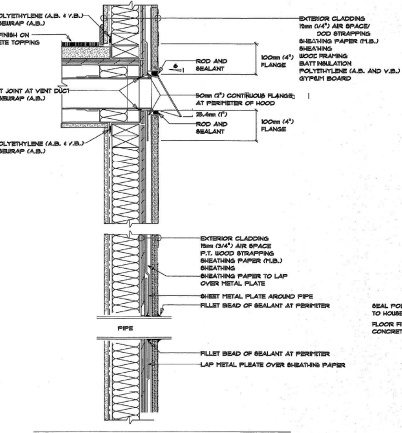
TYPICAL EXTERIOR WALL DETAIL



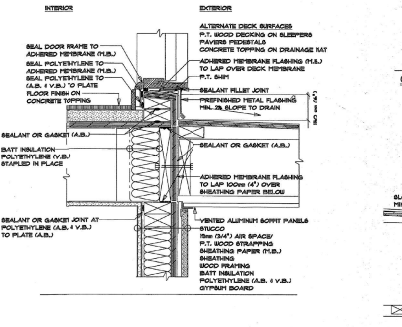
TYPICAL OVERHAND & WALL CONNECTION



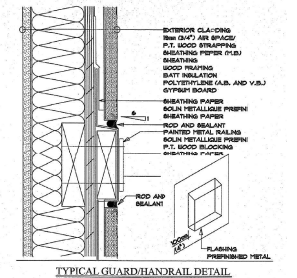
TYPICAL TOP & BOTTOM WINDOW DETAIL



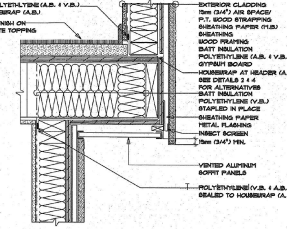
TYPICAL PENETRATION DETAILS



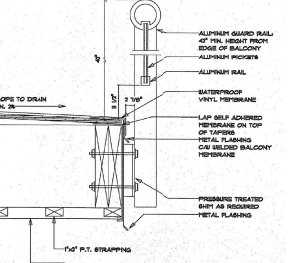
DOOR SILL DETAIL - DECK SURFACE



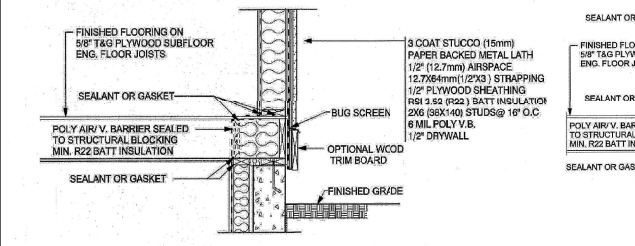
TYPICAL GUARD/HANDRAIL DETAIL



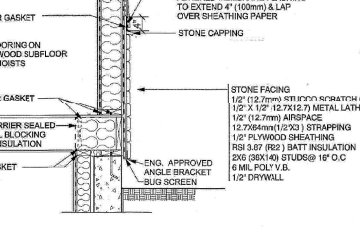
CANTILEVERED FLOOR DETAIL ABOVE PORCH



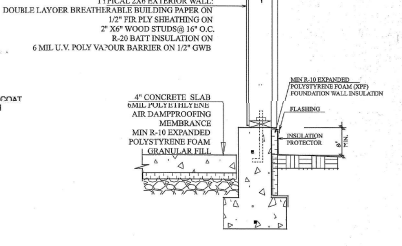
FLAT ROOF / DECK OVER LIVING SPACE



TYP 2X6 STUCCO WALL DETAIL



TYP 2X6 STONE WALL DETAIL



TYPICAL GARAGE WALL DETAIL - UNHEATED FLOOR

1 FLOORS OVER UNHEATED SPACES (WITHOUT FLOORING)

MINIMUM REQUIRED EFFECTIVE THERMAL RESISTANCE= R_{S1} 4.51 (R-25.57) 2X10 JOISTS @16" O.C.--MIN OVER GARAGE
R_{S1} 4.67 (R-26.57) 2X10 JOISTS @16" O.C.--MIN OVER OUTSIDE

ASSEMBLY DESCRIPTION:

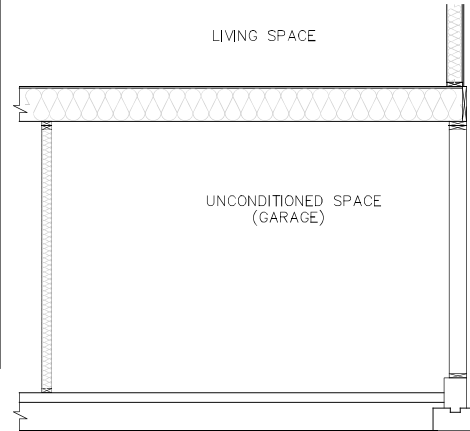
- 1/2" PLYWOOD SUBFLOOR
- 5/8" T&G D.FIR PLYWOOD SUBFLOOR
- 2 X 10 JOISTS @16" O.C.
- R-31 FIBREGLASS BATT INSULATION IN CAVITIES
- 1/2" GYPSUM BOARD OVER UNHEATED SPACE

CONTINUOUS ELEMENTS

INTERIOR AIR FILM	0.16
5/8" T & G D.FIR PLYWOOD SUBFLOOR	0.138
1/2" GYPSUM BOARD	0.08
EXTERIOR AIR FILM	<u>0.03</u>
	RSI 0.408 (R-2.31)

CAVITY RSI (PARALLEL) RSI 4.45 (R-25.23)
100 / (13/1.9975)+(87/5.46)=4.45 RSI

TOTAL EFFECTIVE INSULATION VALUE RSI 4.858 (R-27.54)



AS PER SECTION 9.36.2.10 -NOTES PERTAINING TO LEAKAGE IN PROBLEMATIC AREAS

FOUNDATION TO SILL PLATE AND RIM JOISTS: MECHANICAL CHIMNEYS AND CHIMNEYS THAT PENETRATE THE BUILDING ENVELOPE MUST BE MADE AIRTIGHT BY BLOCKING THE VOID BETWEEN THE FOUNDATION WALL AND THE ABOVE GRADE WALL. REQUIRED CLEARANCES FOR METAL CHIMNEYS AND SURROUNDING JUNCTIONS BETWEEN THE STRUCTURAL COMPONENTS CONSTRUCTION WITH SHEET METAL SEALANT CAPSULE OF AIR BARRIER MATERIAL. PLUMBING STACKS: PLUMBING VENT STACK PIPES THAT PENETRATE THE BUILDING ENVELOPE MUST BE MADE AIRTIGHT BY EITHER SEALING THE AIR CAVITIES WITH AN INTERIOR PLANE OF AIR TIGHT BARRIER MATERIAL TO THE VENT STACK PIPE WITH A COMPATIBLE MATERIAL OR SHEATHING TAPE, OR INSTALLING A RUBBER GASKET BETWEEN THE STRUCTURAL COMPONENTS. PREFABRICATED ROOF FLASHING AT THE PENETRATION OF THE COVERING THE STRUCTURAL COMPONENTS WITH AIRPLANE OF AIRTIGHTNESS AND SEALING IT TO THE TOP PLATE. BARRIER MATERIAL OR MAINTAINING THE CONTINUOUS INTERFERENCE BETWEEN THE SKYLIGHT AND WALL ASSEMBLY MUST BE MADE AIRTIGHT BY SEALING ALL JOINTS AND JUNCTIONS BETWEEN THE STRUCTURAL COMPONENTS, OR COVERING JOINTS AT THE TRANSITION BETWEEN THE ABOVE GRADE WALL AND THE STRUCTURAL COMPONENTS WITH AN AIR BARRIER MATERIAL. CEILING MUST BE MADE AIRTIGHT BY SEALING ALL JOINTS AND MATERIAL. JUNCTIONS BETWEEN THE STRUCTURAL COMPONENTS AND/OR WINDOW HEAD: COVERING THE STRUCTURAL COMPONENTS WITH AN AIR BARRIER MATERIAL. WINDOW HEAD: THE INTERFACE BETWEEN WINDOW HEAD AND WALL MATERIAL. ASSEMBLY MUST BE MADE AIRTIGHT BY SEALING INITIAL WALL VENTED DUCTS JOISTS AND JUNCTIONS BETWEEN THE AIR BARRIER PENETRATIONS THROUGH THE BUILDING ENVELOPE MUST HAVE APPLIES TO DOORS AND SKYLIGHTS. WINDOW SILL: ELECTRICAL PENETRATION IN WALL INCLUDING ELECTRICAL OUTLETS, SWITCHES AND RECESSED FIXTURES THROUGH THE PLANE JOISTS AND JUNCTIONS BETWEEN THE AIR BARRIER AIRTIGHTNESS MUST BE AIRTIGHT. OPTIONS INCLUDE USING A MATERIAL IN THE WALL AND THE WINDOW. THE COMPONENT THAT IS DESIGNED TO BE AIRTIGHT AND SEALING IT TO REQUIREMENT ALSO APPLIES TO DOORS AND SKYLIGHTS. ADJACENT AIR BARRIER MATERIAL OR BY COVERING THE COMPONENT WITH AN AIR BARRIER MATERIAL AND SEALING IT TO THE ADJACENT AIR BARRIER MATERIAL.

SPECIFIC REQUIREMENTS

EFFECTIVE INSULATION OF CEILING, WALLS AND FLOORS MEET THE REQUIREMENTS OF TABLE 9.36.2.4.A AND TABLE 9.36.2.6.9 FOR THE CORRECT CLIMATE ZONE.
THE THERMAL CHARACTERISTICS OF WINDOWS, DOOR AND SKYLIGHTS MEET THE REQUIREMENTS OF TABLE 9.36.2.7.A, B AND C FOR THE CORRECT CLIMATE ZONE.
EFFECTIVE INSULATION OF FOUNDATION MEET THE REQUIREMENTS OF TABLE 9.36.2.8.A OR B FOR THE CORRECT CLIMATE ZONE.
DUCTS LOCATED OUTSIDE THE THERMAL ENCLOSURE ARE SEALED AND INSULATED TO THE EXTERIOR WALL INSULATION REQUIREMENTS.
DAMPERS ARE INSTALLED AT AIR INLETS AND EXHAUSTS WHERE REQUIRED.
PIPING FOR HEATING OR COOLING SYSTEMS IS LOCATED WITHIN THE THERMAL ENCLOSURE OR ARE FULLY INSULATED.
HVAC EQUIPMENT IS LOCATED WITHIN THERMAL ENCLOSURE OR DESIGNATED TO BE INSTALLED OUTSIDE OF THERMAL ENCLOSURE.
TEMPERATURE CONTROLS ARE INSTALLED ON HEATING AND COOLING EQUIPMENT.
INDOOR POOLS ARE COVERED OR HAVE AN HRV/DE.
HVAC AND SWH EQUIPMENT MEET MINIMUM PERFORMANCE REQUIREMENTS DETERMINED IN TABLE 9.36.3.10 AND 9.36.4.2.
SERVICE WATER HEATING PIPES ARE INSULATED AT THE INLET AND OUTLET OF STORAGE TANKS.
SERVICE WATER HEATERS HAVE TEMPERATURE CONTROLS.

THE AIR BARRIER DETAILS AND LOCATIONS HAVE BEEN IDENTIFIED.

TEMPERATURE CONTROLS AS PER SECTION 9.36.3.6

TEMPERATURE CONTROLS ARE GENERALLY REQUIRED FOR HEATING AND COOLING EQUIPMENT. THE ACCURACY OF THE CONTROL MUST BE BETTER THAN PLUS OR 0.3 DEGREES CELSIUS.
Note: Regulations contained within the most current edition of the BC Building Code including any subsequent amendments and code interpretation by building jurisdictions, shall take precedence over any schematics and specifications contained on this page. Further, it shall be the sole responsibility of the lot owner to ensure that all components specified on this page are installed to full compliance with the BC Building Code, whether or not it is determined that this page contains any error or omission.

2 FLOORS OVER UNHEATED SPACES (WITHOUT FLOORING)

MINIMUM REQUIRED EFFECTIVE THERMAL RESISTANCE= R_{S1} 4.51 (R-25.57) 2X10 JOISTS @16" O.C. --MIN OVER GARAGE

ASSEMBLY DESCRIPTION

- 5/8" T&G D.FIR PLYWOOD SUBFLOOR
- 2 X 10 JOISTS @16" O.C.
- R-28 FIBREGLASS BATT INSULATION IN CAVITIES
- 1/2" GYPSUM BOARD OVER UNHEATED SPACE

CONTINUOUS ELEMENTS

INTERIOR AIR FILM	0.16
5/8" T & G D.FIR PLYWOOD SUBFLOOR	0.138
1/2" GYPSUM BOARD	0.08
EXTERIOR AIR FILM	<u>0.03</u>
	RSI 0.408 (R-2.31)

CAVITY RSI (PARALLEL) RSI 4.1425 (R-23.49)
100 / (13/1.9975)+(87/4.93)=4.1425 RSI

TOTAL EFFECTIVE INSULATION VALUE RSI 4.55 (R-25.80)

CLIMATE ZONE 4
ENERGY EFFICIENCY FLOORS
OVER UNHEATED SPACES

② EE_FloorOverUnheatedSpace-DRAWING
1/2" = 1'-0"

3 BASEMENT FLOORS

MINIMUM REQUIRED EFFECTIVE THERMAL RESISTANCE= R_{S1} 2.32 (R-13.15)

ASSEMBLY DESCRIPTION

- FLOORING FINISH
- 4" CONCRETE
- 3" XPS INSULATION
- POLYETHYLENE VAPOUR BARRIER

CONTINUOUS ELEMENTS

INTERIOR AIR FILM	0.16
FLOORING FLOORING	0.00
4" CONCRETE	0.04
3" XPS INSULATION (MIN R14)	<u>0.00</u>
VAPOUR BARRIER	2.56
	RSI 2.76 (R-15.649)

TOTAL EFFECTIVE INSULATION VALUE RSI 2.76 (R-15.649)

ENERGY EFFICIENCY REQUIREMENTS
THIS HOME IS DESIGNED TO COMPLY/MEET WITH ENERGY EFFICIENCY REQUIREMENTS AND VALUES USING THE PREScriptive METHOD FOR CLIMATE ZONE 4 -COVER MAINLAND AND SOUTHERN VANCOUVER ISLAND WITH NO H.R.V. (6366 2018 LATEST EDITION)

General Notes

No.	Revision/Issue	Date

Plan, Note and Address

2288 WILLOUGHBY COURT,
LANGLEY, BC
PH: 778-551-1053
E: info@zraftdesigns.com
www.zraftdesigns.com

Project Name and Address

DUPLEX BUILD FOR
MANDEEP DANDIWA
4565 7009 St
LANGLEY, BC
V3A 6H8

Revision Title	Sheet
Energy Requirements	
Date	
Drawn	8
Scale	
1/2" = 1'-0"	

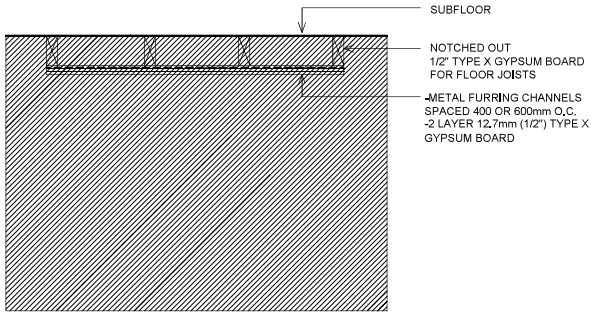
General Notes

No.	Revision/Name	Date

Drawn by and address
 2288 WILLOUGHBY COURT,
 LANGLEY, BC
 PH: 778-551-1053
 E: dcf@zrfpdesigns@hotmail.com
 www.zrfpdesigns.com

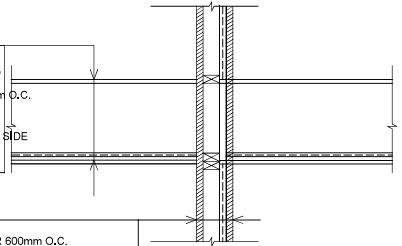

Project Name and address
 DUPLEX BUILD FOR
 MANDEEP DANDIYAL
 4545 209a St
 LANGLEY, BC
 V3A 6H8

Revised Title SUITE DETAILS	Sheet 9
Date 25-JUL-2023	(Signature)
Scale 1/2" = 1'-0"	(Signature)

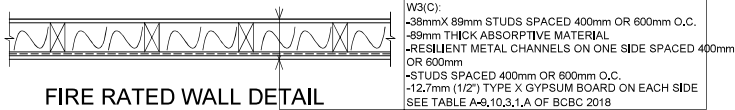


1/2" TYPE X GYPSUM BOARD AGAINST SEPERATION WALL

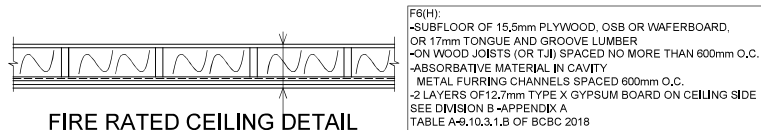
F6(H):
 -SUBFLOOR OF 15,5mm PLYWOOD, OSB OR WAFERBOARD,
 OR 17mm TONGUE AND GROOVE LUMBER
 -ON WOOD JOISTS (OR TJI) SPACED NO MORE THAN 600mm O.C.
 -ABSORBATIVE MATERIAL IN CAVITY
 -METAL FURRING CHANNELS SPACED 600mm O.C.
 -2 LAYERS OF 12,7mm TYPE X GYPSUM BOARD ON CEILING SIDE
 SEE DIVISION B -APPENDIX A
 TABLE A-9,10,3,1,B OF BCBC 2018



W3(C):
 -38mmX 89mm STUDS SPACED 400mm OR 600mm O.C.
 -89mm THICK ABSORPTIVE MATERIAL
 -RESILIENT METAL CHANNELS ON ONE SIDE SPACED 400mm OR 600mm
 -STUDS SPACED 400mm OR 600mm O.C.
 -12,7mm (1/2") TYPE X GYPSUM BOARD ON EACH SIDE
 SEE TABLE A-9,10,3,1,A OF BCBC 2018



FIRE RATED WALL DETAIL



FIRE RATED CEILING DETAIL