CODE SUMMARY:

BUILDING CODE:
2014 OREGON RESIDENTIAL SPECIALTY CODE

CODE SECTION:
R 302.2 TOWNHOUSES

CONSTRUCTION TYPE:
V-B

OCCUPANCY:
R-2

BUILDING HEIGHT:
29'-0" OVERALL BUILDING HEIGHT

NUMBER OF STORIES:
TWO

SPRINKLER SYSTEM REQUIRED/INSTALLED:
NO

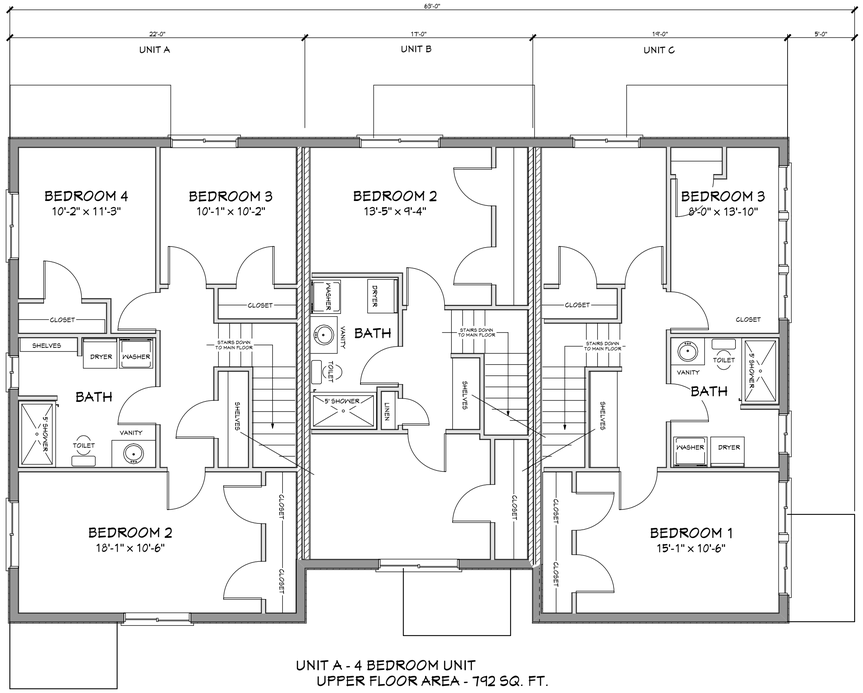
FIRE ALARM REQUIRED/INSTALLED:
NO

20 PERCENT OF CONSTRUCTION MATERIALS WILL BE BOTH SUSTAINABLE AND LOCAL MATERIALS, AND WILL BE SOURCED FROM WITHIN 500 MILES OF DEVELOPMENT SITE.

PRESENTATION VIEW OF THE:

FRONT FACADE

SCALE: ¼" = 1'-0"



UNIT A - 4 BEDROOM UNIT
UPPER FLOOR AREA - 792 SQ. FT.

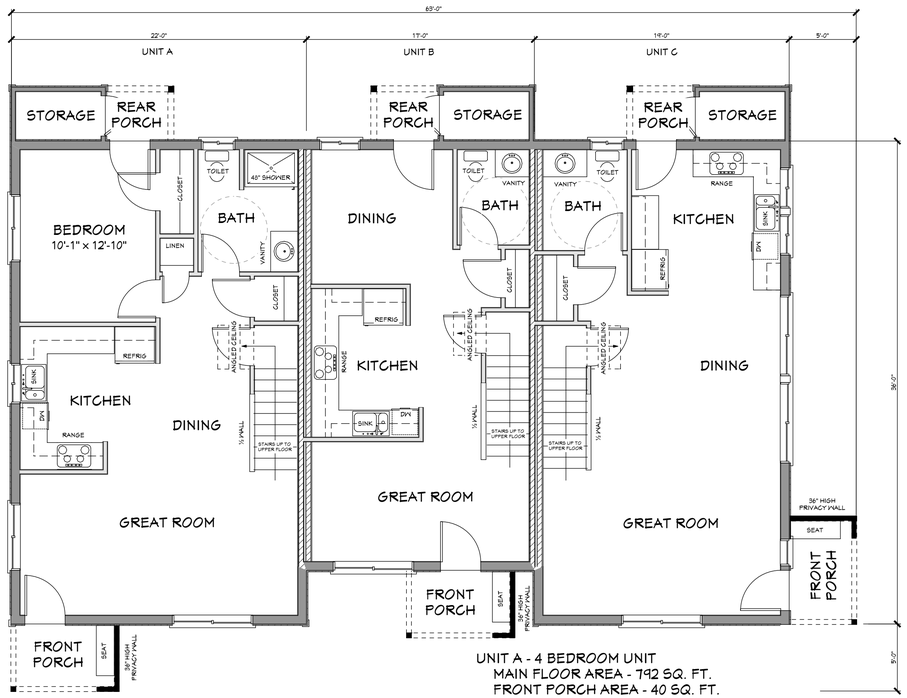
UNIT B - 2 BEDROOM UNIT
UPPER FLOOR AREA - 544 SQ. FT.

UNIT C - 3 BEDROOM UNIT
UPPER FLOOR AREA - 684 SQ. FT.

PRESENTATION VIEW OF THE:

UPPER FLOOR PLAN

SCALE: 3/16" = 1'-0"



UNIT A - 4 BEDROOM UNIT
MAIN FLOOR AREA - 792 SQ. FT.
FRONT PORCH AREA - 40 SQ. FT.
REAR PORCH AREA - 20 SQ. FT.
REAR ENCLOSED STORAGE - 28 SQ. F T.

UNIT B - 2 BEDROOM UNIT
MAIN FLOOR AREA - 544 SQ. FT.
FRONT PORCH AREA - 40 SQ. FT.
REAR PORCH AREA - 20 SQ. FT.
REAR ENCLOSED STORAGE - 28 SQ. FT.

UNIT C - 3 BEDROOM UNIT
MAIN FLOOR AREA - 684 SQ. FT.
FRONT PORCH AREA - 40 SQ. FT.
REAR PORCH AREA - 20 SQ. FT.
REAR ENCLOSED STORAGE - 28 SQ. FT.

PRESENTATION VIEW OF THE:

MAIN FLOOR PLAN

SCALE: 3/16" = 1'-0"

HABITAT FOR HUMANITY - PORTLAND/METRO EAST
GLISAN GARDENS - BUILDING 7

CITY OF GRESHAM
APPROVED
Permit No: BP14-00003750
Date: 4/20/15
THESE PLANS SHALL BE ON THE JOB SITE FOR ALL REQUESTED INSPECTIONS

BENTHIN DESIGN GROUP LLC
20337 S. BUTTE ROAD PO BOX 42
BEAVERCREEK, OREGON USA 97004
503-632-2862 1-800-698-9144
EMAIL: INFO@BENDG.COM
WEBSITE: WWW.BENDG.COM

TOWN HOUSES R302.2

BUILDING 7 (3 UNIT)
UNIT A - 4 BR
UNIT B - 2 BR
UNIT C - 3 BR

PROJECT NAME:
GLISAN GARDENS

CONTRACTOR/OWNER NAME:
HABITAT FOR HUMANITY

PROJECT INFORMATION:

HABITAT FOR HUMANITY
PORTLAND / METRO EAST
1478 NE KILLINGSWORTH STREET
PORTLAND, OREGON 97211
503-287-9539

GLISAN GARDENS
NE 165TH AVENUE & NE GLISAN STREET
GRESHAM, OREGON 97230
MULTNOMAH COUNTY

PAGE TITLES:
PRESENTATION

- PROJECT INFORMATION
- FRONT FACADE
- MAIN FLOOR PLAN
- UPPER FLOOR PLAN
- CODE SUMMARY

PLANS TO SCALE ON 24"x36 SHEETS

PROJECT NUMBER:	
ORIGINAL DATE:	MAY 2014
REVISION DATE:	4-1-2015
PAGE NUMBER:	1
REFERENCE NUMBER:	1.0

EXTERIOR ELEVATIONS NOTES AND SPECIFICATIONS:

EXTERIOR FACADE:

FINISHED GRADE:
ACTUAL FINISHED GRADES MAY VARY FROM FINISHED GRADES SHOWN ON PLANS AND ELEVATIONS

PROVIDE HARD SURFACE AREAS AT ALL EXTERIOR DOOR LOCATIONS

ROOFING:
'COMPOSITION' ROOFING OR EQUAL

SIDING: EXTERIOR WALL AND EACH SIDE OF PRIVACY WALL
MAIN FLOOR: (HORIZONTAL LAP)
'HORIZONTAL' LAP SIDING MATERIAL. SHALL BE FIBER REINFORCED CEMENT AND UP 8½' FROM TOP OF FOUNDATION WALL WITH 2x BELLY BAND ABOVE LAP SIDING.
UPPER FLOOR: (BOARD & BATTEN)
HARDIPANEL WITH FULL 1"x4" ROUGH SAWN CEDAR BATTENS AT 24" OC

TRIM:
2x8 FASCIA BOARDS - PLUMB CUT
2x8 BARGE RAFTERS - PLUMB CUT

ROOF PITCH:
6/12 AT MAIN & REAR PORCH ROOF STRUCTURE
8/12 FRONT PORCHES

ROOF OVERHANGS:
24" ROOF EAVE OVERHANGS
24" ROOF RAKE OVERHANGS
24" ROOF RAKE OVERHANG AT FRONT

FRONT PORCH CONSTRUCTION:
HEAVY TIMBER
8x8 POST AND BEAMS
2x6 ROUGH SAWN ROOF RAFTERS
2x8 FASCIA BOARD - PLUMB CUT
2x8 BARGE RAFTER - PLUMB CUT

JELD-WEN Model # THDJW184500210 Internet # 202036402 Store SKU # 827358

Premium Fan Lite Primed Steel Entry Door with Brickmold

FRONT ENTRY DOOR

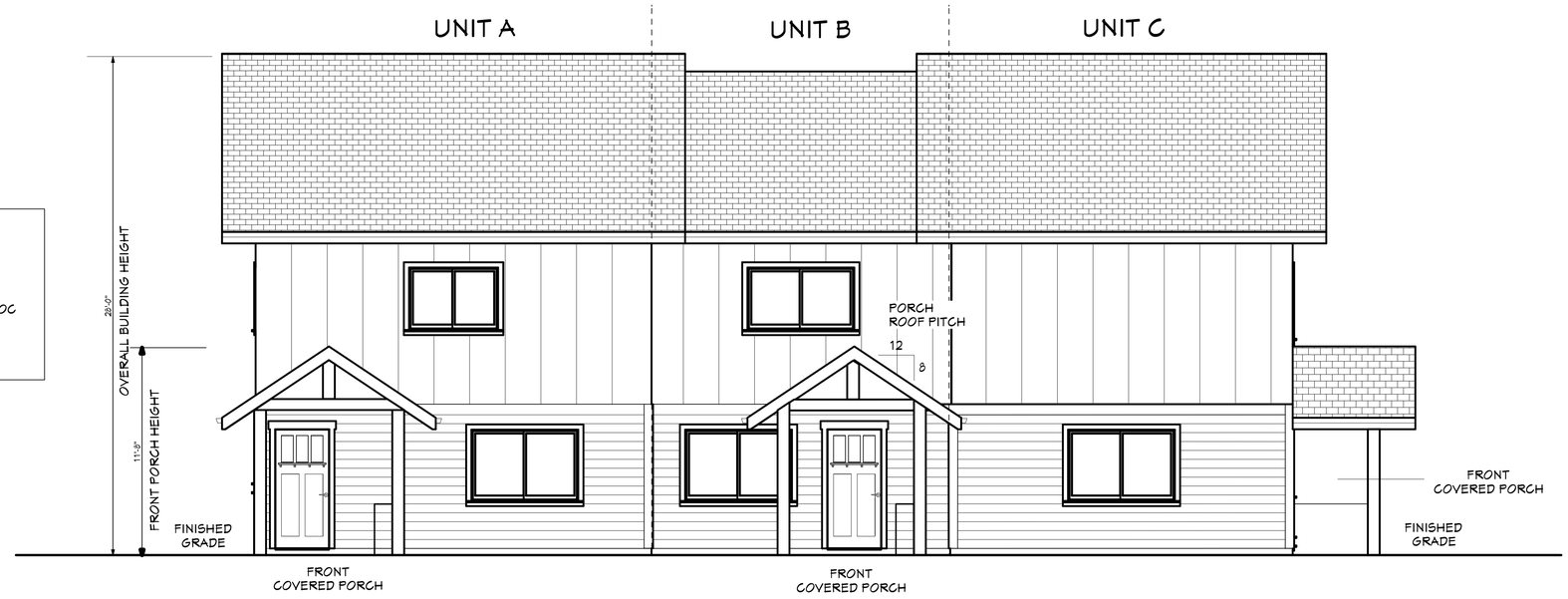
FACADE MATERIAL CALCULATIONS:

FRONT FACADE:
HORIZONTAL - PRIMARY SIDING 46.4%
VERTICAL - SECONDARY SIDING 47.0%
TRIM AND ACCENT SIDING 6.6%

REAR FACADE:
HORIZONTAL - PRIMARY SIDING 44.7%
VERTICAL - SECONDARY SIDING 47.0%
TRIM AND ACCENT SIDING 8.3%

RIGHT SIDE FACADE:
HORIZONTAL - PRIMARY SIDING 41.5%
VERTICAL - SECONDARY SIDING 56.2%
TRIM AND ACCENT SIDING 2.3%

LEFT SIDE FACADE:
HORIZONTAL - PRIMARY SIDING 41.5%
VERTICAL - SECONDARY SIDING 56.2%
TRIM AND ACCENT SIDING 2.3%



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

FRONT FACADE

SCALE: ¼" = 1'-0"

PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

REAR FACADE

SCALE: ¼" = 1'-0"

CITY OF GRESHAM
APPROVED
Permit No: BP14-00003750
Date: 4/20/15
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EMAIL: INFO@BENDG.COM
WEBSITE: WWW.BENDG.COM

TOWN HOUSES R302.2

BUILDING 7 (3 UNIT)
UNIT A - 4 BR
UNIT B - 2 BR
UNIT C - 3 BR

PROJECT NAME:
GLISAN GARDENS

CONTRACTOR/OWNER NAME:
HABITAT FOR HUMANITY

PROJECT INFORMATION:

HABITAT FOR HUMANITY
PORTLAND / METRO EAST
1478 NE KILLINGSWORTH STREET
PORTLAND, OREGON 97211
503-287-9539

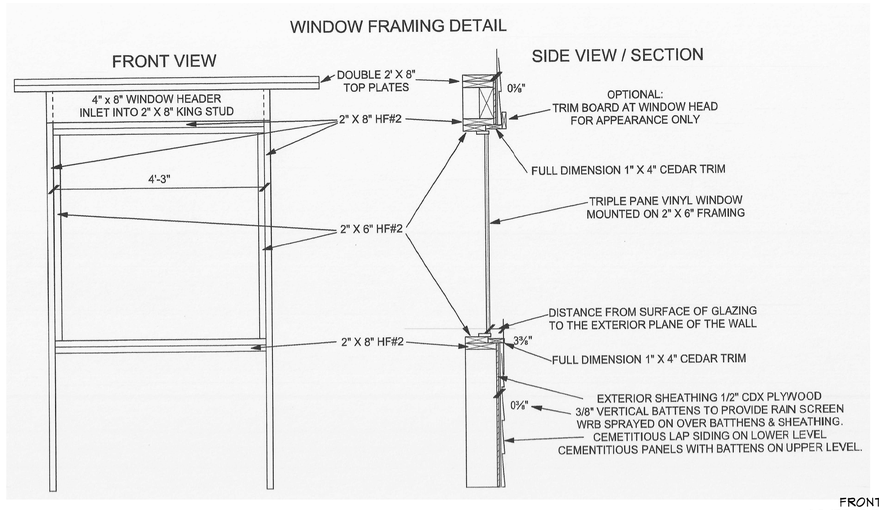
GLISAN GARDENS
NE 165TH AVENUE & NE GLISAN STREET
GRESHAM, OREGON 97230
MULTNOMAH COUNTY

PAGE TITLES:
FACADES

EXTERIOR FACADES 1:
- FRONT FACADE
- REAR FACADE
- SPECIFICATIONS
- FRONT DOOR
- FACADE MATERIAL CALCS

PLANS TO SCALE ON 24"x36 SHEETS

PROJECT NUMBER:	
ORIGINAL DATE:	MAY 2014
REVISION DATE:	4-1-2015
PAGE NUMBER:	2
REFERENCE NUMBER:	2.0



STREET FACING FACADE GLAZING CALCULATIONS:

FRONT FACADE WALL SURFACE AREA --------- 863.0 SQ. FT.
REQUIRED FACADE GLAZING AREA (25%)----- 216.0 SQ. FT.

PROPOSED WALL GLAZING AREA ---------- 216.0 SQ. FT. = 25.0%

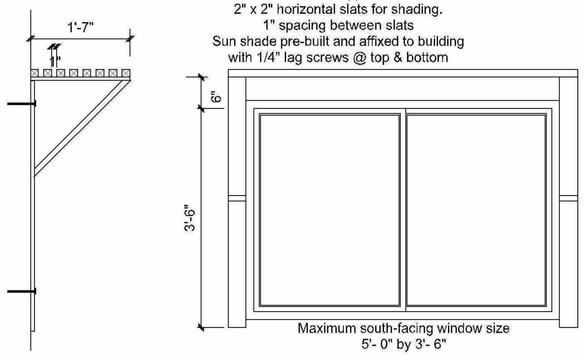
PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

RIGHT SIDE FACADE

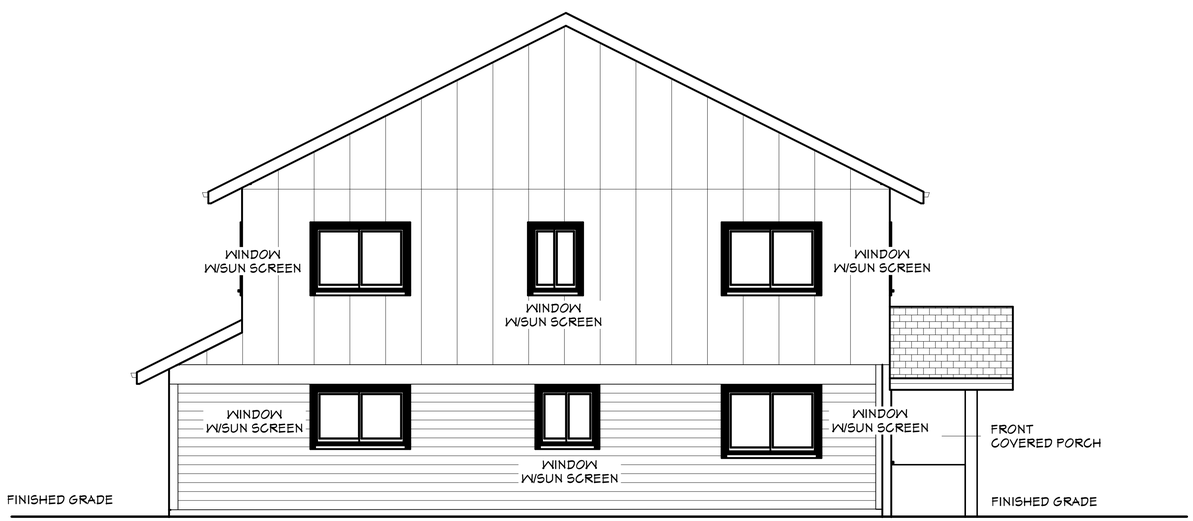
SCALE: ¼" = 1'-0"

INSTALLED SUN SCREEN DETAIL

1" x 4" cedar support boards
2" x 2" horizontal slats for shading.
1" spacing between slats
Sun shade pre-built and affixed to building
with 1/4" lag screws @ top & bottom



THIS PAGE NEEDS TO MEET THE DESIGN COMMISSION REQUIREMENT FOR THE STREET FACING FACADE. IF THIS IS APPROVED BY THE PLANNER, NO OTHER CHANGES ARE REQUIRED.



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

LEFT SIDE FACADE (SOUTH)

SCALE: ¼" = 1'-0"

CITY OF GRESHAM
APPROVED
Permit No: BP14-00003750
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TOWN HOUSES
R302.2

BUILDING 7
(3 UNIT)
UNIT A - 4 BR
UNIT B - 2 BR
UNIT C - 3 BR

PROJECT NAME:
GLISAN GARDENS

CONTRACTOR/OWNER NAME:
HABITAT FOR HUMANITY

PROJECT INFORMATION:

HABITAT FOR HUMANITY
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PORTLAND, OREGON 97211
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GLISAN GARDENS
NE 165TH AVENUE & NE GLISAN STREET
GRESHAM, OREGON 97230
MULTNOMAH COUNTY

PAGE TITLES:
FACADES

EXTERIOR FACADES 2:
- RIGHT SIDE ELEVATION
- LEFT SIDE ELEVATION
- WINDOW FRAME DETAIL
- SUN SCREEN DETAIL

PLANS TO SCALE ON 24"x36 SHEETS

PROJECT NUMBER:	
ORIGINAL DATE:	MAY 2014
REVISION DATE:	4-1-2015
PAGE NUMBER:	3
REFERENCE NUMBER:	3.0

FLOOR PLAN
NOTES AND SPECIFICATIONS:

EXTERIOR:
PROVIDE HARD SURFACE CONCRETE PAD ALL EXTERIOR DOOR LOCATIONS.

PROVIDE HOSE BIB LOCATIONS AT EACH LIVING UNIT.

INTERIOR:
VENT TO EXTERIOR:
RANGE HOOD (150 CFM MIN.)
BATH CEILING EXHAUST FANS (80 CFM MIN.)
LAUNDRY ROOM CEILING EXHAUST FANS ((50 CFM MIN.)
CLOTHES DRYER (VENT ONLY)

SMOKE/CARBON DIOXIDE DETECTORS:
PROVIDE SMOKE DETECTOR EACH SLEEPING ROOM AND ADJACENT LIVING AREA. DETECTORS MUST BE HAVE BATTERY BACKUP AND BE INTERCONNECTED TO OTHER DETECTORS.

FRAMING:
SLEEPING ROOM EGRESS:
PROVIDE EGRESS WINDOWS AT EACH SLEEPING FOR EMERGENCY ESCAPE.

ATTIC ACCESS:
PROVIDE 22"x30" (MIN.) ATTIC ACCESS TO BE LOCATED BETWEEN ROOF TRUSSES AT THE UPPER FLOOR AREA.

RATED FIRE SEPARATION:
PARTY WALL:
PROVIDE 'MODIFIED' 2 HOUR FIREWALL FOR UNIT SEPARATION.

DWELLING UNIT SEPARATION - 2014 ORSC
TOWNHOUSE STYLE UNITS PER R302.2

CEILING:
PROVIDE 2 LAYERS 5/8" TYPE 'X' SHEETROCK AT ENTIRE UPPER FLOOR CEILING.

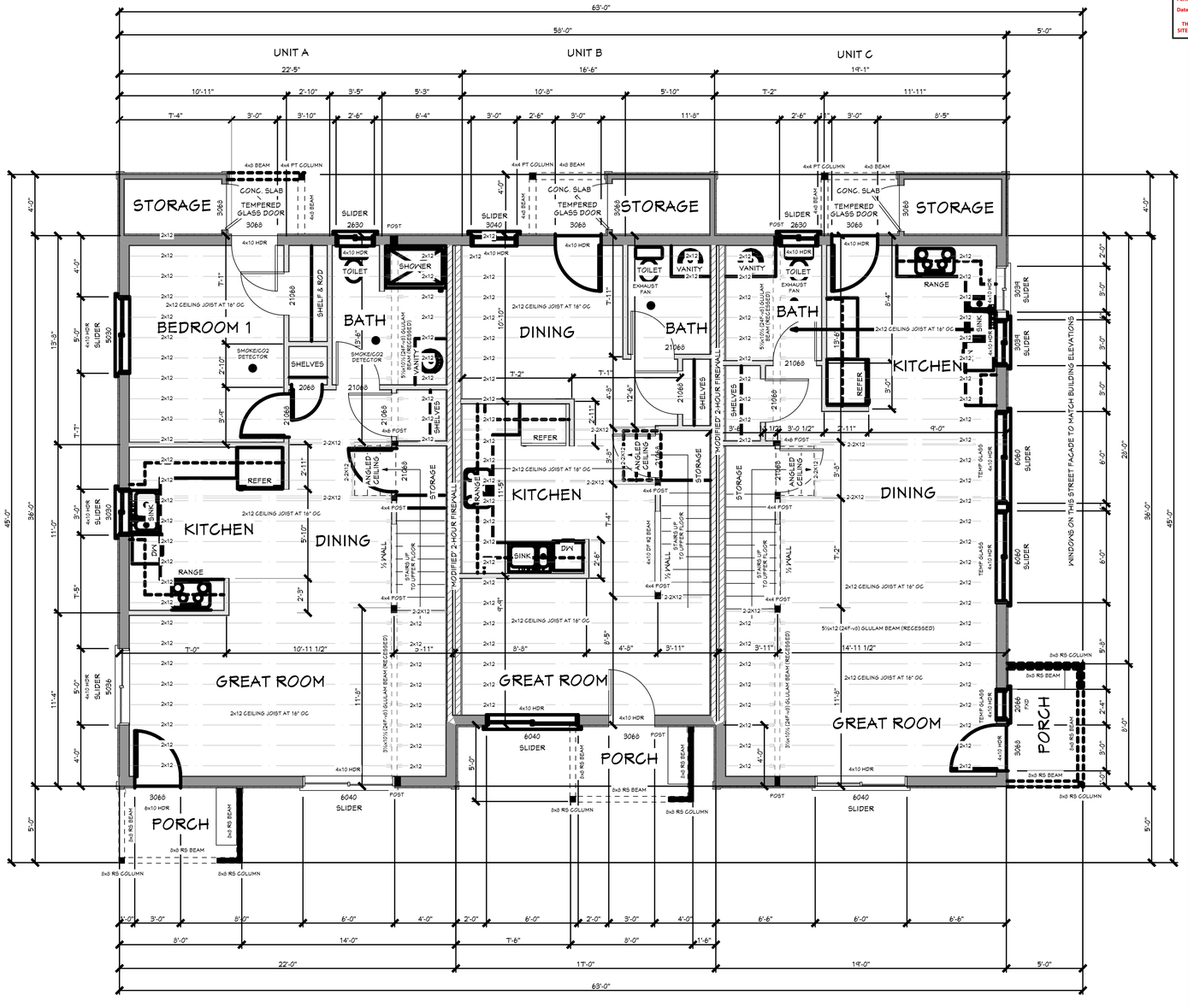
WIND/SEISMIC (LATERAL) WALL BRACING:
SEE PAGE 11 ATTACHED FOR PRESCRIPTIVE WALL BRACING LOCATIONS AND SPECIFICATIONS.

MATERIALS:
LUMBER:
WALLS: STUD GRADE OR BETTER
CEILING/FLOOR JOIST: DF/HF #2 OR BETTER

FRONT COVERED PORCH:
PARTITION WALL:
36" HIGH PARTITION WALL AT SIDE WALL BEHIND BENCH AND CONTINUE WALL ALONG FRONT OF PORCH FOR 16". PROVIDE "HORIZONTAL" LAP SIDING AT BOTH SIDES OF PARTITION WALL.
BENCH:
PROVIDE 16" WIDE WOOD BENCH AND 20" HIGH ABOVE CONCRETE PORCH SLAB.

ELECTRICAL:
OUTLETS TO CODE
BREAKER BOX TO CODE

HEAT SYSTEM:
PROVIDE ZONAL HEATING SYSTEM WITH CADET TYPE WALL HEATERS. ELECTRICAL TO DETERMINE SIZE AND LOCATION OF HEATERS AND INSTALL TO CODE.



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

MAIN FLOOR FRAMING PLAN

SCALE: ¼" = 1'-0"

APPROVED
Permit No. 214-00003750
Date 4/1/15
THIS PLAN SHALL BE ON THE JOB SITE FOR ALL REQUIRED INSPECTIONS

BENTHIN DESIGN GROUP LLC
20337 S. BUTTE ROAD PO BOX 42
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WEBSITE: WWW.BENDG.COM

TOWN HOUSES R302.2

BUILDING 7 (3 UNIT)
UNIT A - 4 BR
UNIT B - 2 BR
UNIT C - 3 BR

PROJECT NAME:
GLISAN GARDENS

CONTRACTOR/OWNER NAME:
HABITAT FOR HUMANITY

PROJECT INFORMATION:

HABITAT FOR HUMANITY
PORTLAND / METRO EAST
1478 NE KILLINGSWORTH STREET
PORTLAND, OREGON 97211
503-287-9539

GLISAN GARDENS
NE 165TH AVENUE & NE GLISAN STREET
GRESHAM, OREGON 97230
MULTNOMAH COUNTY

PAGE TITLES:
FRAMING PLAN

- MAIN FLOOR PLAN
- SPECIFICATIONS

PLANS TO SCALE ON 24"x36 SHEETS

PROJECT NUMBER:	
ORIGINAL DATE:	MAY 2014
REVISION DATE:	4-1-2015
PAGE NUMBER:	4
REFERENCE NUMBER:	4.0

FLOOR PLAN
NOTES AND SPECIFICATIONS:

EXTERIOR:
PROVIDE HARD SURFACE CONCRETE PAD ALL EXTERIOR DOOR LOCATIONS.

PROVIDE HOSE BIB LOCATIONS AT EACH LIVING UNIT.

INTERIOR:
VENT TO EXTERIOR:
RANGE HOOD (150 CFM MIN.)
BATH CEILING EXHAUST FANS (80 CFM MIN.)
LAUNDRY ROOM CEILING EXHAUST FANS ((50 CFM MIN.)
CLOTHES DRYER (VENT ONLY)

SMOKE/CARBON DIOXIDE DETECTORS:
PROVIDE SMOKE DETECTOR EACH SLEEPING ROOM AND ADJACENT LIVING AREA. DETECTORS MUST BE HAVE BATTERY BACKUP AND BE INTERCONNECTED TO OTHER DETECTORS.

FRAMING:
SLEEPING ROOM EGRESS:
PROVIDE EGRESS WINDOWS AT EACH SLEEPING FOR EMERGENCY ESCAPE.

ATTIC ACCESS:
PROVIDE 22"x30" (MIN.) ATTIC ACCESS TO BE LOCATED BETWEEN ROOF TRUSSES AT THE UPPER FLOOR AREA.

RATED FIRE SEPARATION:
PARTY WALL:
PROVIDE 'MODIFIED' 2 HOUR FIREWALL FOR UNIT SEPARATION.

DWELLING UNIT SEPARATION - 2014 ORSC
TOWNHOUSE STYLE UNITS PER R302.2

CEILING:
PROVIDE 2 LAYERS 5/8" TYPE 'X' SHEETROCK AT ENTIRE UPPER FLOOR CEILING.

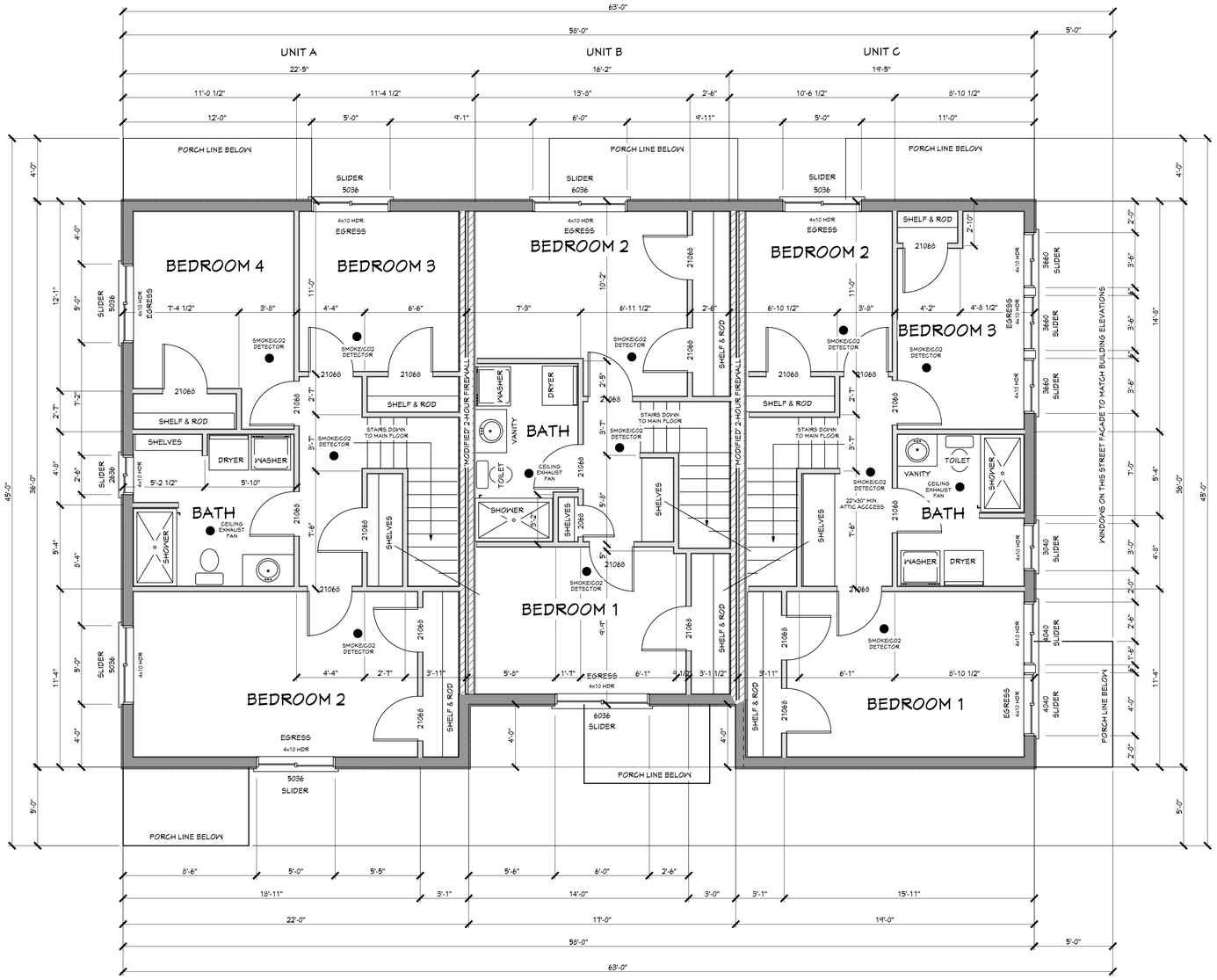
WIND/SEISMIC (LATERAL) WALL BRACING:
SEE PAGE 11 ATTACHED FOR PRESCRIPTIVE WALL BRACING LOCATIONS AND SPECIFICATIONS.

MATERIALS:
LUMBER:
WALLS: STUD GRADE OR BETTER
CEILING/FLOOR JOIST: DF/HF #2 OR BETTER

FRONT COVERED PORCH:
PARTITION WALL:
36" HIGH PARTITION WALL AT SIDE WALL BEHIND BENCH AND CONTINUE WALL ALONG FRONT OF PORCH FOR 16". PROVIDE "HORIZONTAL" LAP SIDING AT BOTH SIDES OF PARTITION WALL.
BENCH:
PROVIDE 16" WIDE WOOD BENCH AND 20" HIGH ABOVE CONCRETE PORCH SLAB.

ELECTRICAL:
OUTLETS TO CODE
BREAKER BOX TO CODE

HEAT SYSTEM:
PROVIDE ZONAL HEATING SYSTEM WITH CADET TYPE WALL HEATERS. ELECTRICAL TO DETERMINE SIZE AND LOCATION OF HEATERS AND INSTALL TO CODE.



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

UPPER FLOOR FRAMING PLAN

SCALE: ¼" = 1'-0"

KATHLEEN GRESHAM
APPROVED
Permit No: BP14-00003750
Date: 4/20/15
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TOWN HOUSES R302.2

BUILDING 7 (3 UNIT)
UNIT A - 4 BR
UNIT B - 2 BR
UNIT C - 3 BR

PROJECT NAME:
GLISAN GARDENS

CONTRACTOR/OWNER NAME:
HABITAT FOR HUMANITY

PROJECT INFORMATION:

HABITAT FOR HUMANITY
PORTLAND / METRO EAST
1478 NE KILLINGSWORTH STREET
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PAGE TITLES:
FRAMING PLAN

- UPPER FLOOR PLAN
- SPECIFICATIONS

PLANS TO SCALE ON 24"x36 SHEETS

PROJECT NUMBER:	
ORIGINAL DATE:	MAY 2014
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FOUNDATION PLAN
NOTES AND SPECIFICATIONS:

TWO STORY STRUCTURE:

FOUNDATION WALLS: TWO STORY STRUCTURE
- STANDARD FOUNDATION WALL:
  - 8" WIDE X 18" HIGH (MIN.) CONCRETE FOUNDATION WALLS

FOOTINGS: TWO STORY STRUCTURE
- FOUNDATION WALL:
  - 15" WIDE X 7" HIGH CONTINUOUS FOOTINGS
- CONTINUOUS FOOTINGS:
  - 15" WIDE X 7" HIGH CONTINUOUS FOOTINGS
- POINT LOAD FOOTINGS:
  - PER PLAN
- PARTY WALL:
  - 18" WIDE X 10" HIGH CONCRETE MONOLITHIC FOOTING

CONCRETE SLABS:
- MAIN FLOOR: UN-EXPOSED
  - 4" THICK (MIN.) CONCRETE SLAB OVER REQUIRED FILL WITH ACCOMMODATIONS FOR PLUMBING AND RADON SYSTEMS.
- PATIO, STEPS AND SIDEWALKS: EXPOSED
  - 4" THICK (MIN.) CONCRETE SLAB OVER REQUIRED FILL.

REINFORCEMENT BARS: (WALLS LESS THAT 48" TALL)
- FOOTINGS:
  - HORIZONTAL REBAR:
    - 2-#4 HORIZONTAL BAR WITH 3" COVER
  - VERTICAL REBARS:
    - NO VERTICAL BARS
- FOUNDATION WALLS:
  - HORIZONTAL REBAR:
    - 1-#4 HORIZONTAL BAR WITHIN 12" FROM TOP OF WALL
  - VERTICAL REBAR:
    - #4 VERTICAL BARS AT 48" O.C.

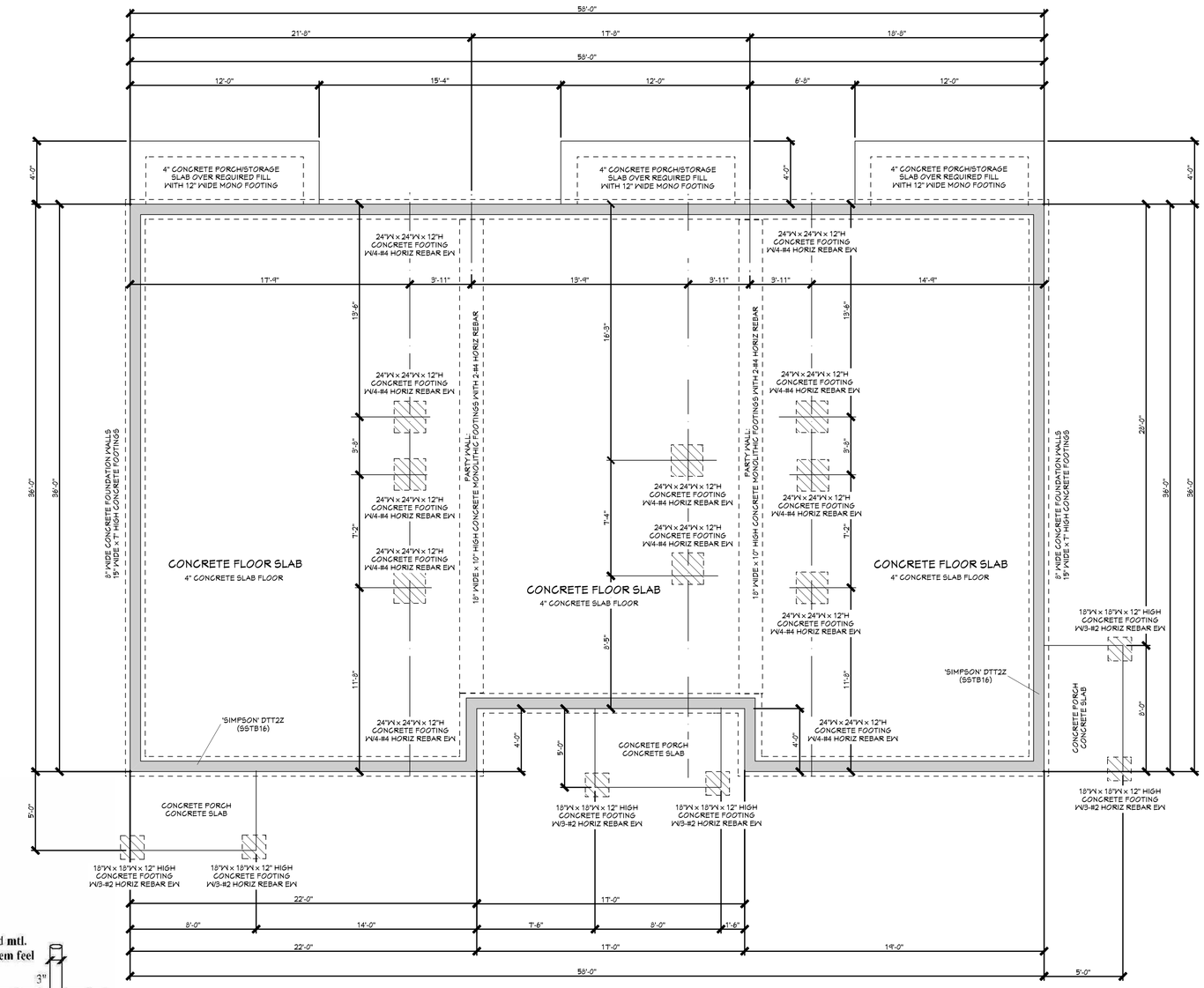
ANCHORING SPECIFICATIONS:
- STANDARD ANCHOR BOLTS:
  - ½" DIAMETER X 10" LONG ANCHOR BOLTS LOCATED 12" FROM FOUNDATION WALL CORNERS AND SPACED 6' - 0" O.C. (MAX.) W/3"x3" PLATE WASHERS.
- PARTY WALL ANCHOR BOLTS:
  - ½" DIAMETER x 3½" EMBEDED EXPANSION ANCHORS AT 48" OC (NO SPECIAL INSPECTION REQ'D.) (OPTIONAL 'SIMPSON' MAS MUDSILL ANCHORS AT 48" OC MAX. 12" FROM CORNER WITH MINIMUM OF TWO ANCHORS PER PLATE.

DRAINS:
- PROVIDE FOOTING AND UNDER SLAB DRAINS AS REQUIRED.

CONCRETE STRENGTH REQUIREMENTS:
- 2500 P.S.I. - CONCRETE NOT EXPOSED TO WEATHER.
- 2500 P.S.I. - FLOOR SLABS ON GRADE
- 3000 P.S.I. - FOUNDATION WALLS/FOOTINGS AND OTHER CONCRETE WORK EXPOSED TO THE WEATHER (PROVIDE AIR-ENTRAINED PER CODE).
- 3000 P.S.I. - PORCH SLABS, PATIO SLABS AND SIDEWALKS (PROVIDE AIR-ENTRAINED PER CODE).

UNDERSLAB INSULATION:
- R-10 RIGID UNDERSLAB INSULATION
- R-15 RIGID FOUNDATION WALL PERIMETER WALL INSULATION

RADON CONTROL MEASURES:
- INSTALL PASSIVE SUBSLAB DEPRESSURIZATION IN ACCORDANCE WITH AF-103.6 (SEE ATTACHED DETAIL)



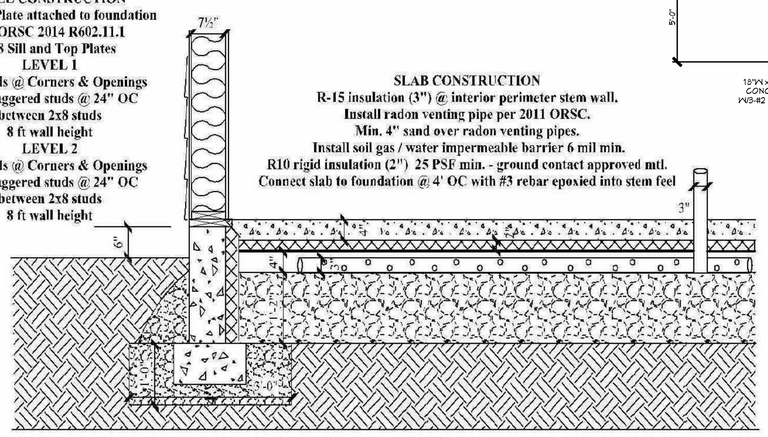
PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

FOUNDATION PLAN

SCALE: ¼" = 1'-0"

WALL CONSTRUCTION
2x10 PT Plate attached to foundation per ORSC 2014 R602.11.1
2x8 Sill and Top Plates
LEVEL 1
2x8 Studs @ Corners & Openings
2x4 staggered studs @ 24" OC between 2x8 studs
8 ft wall height
LEVEL 2
2x8 Studs @ Corners & Openings
2x4 staggered studs @ 24" OC between 2x8 studs
8 ft wall height

SLAB CONSTRUCTION
R-15 insulation (3") @ interior perimeter stem wall.
Install radon venting pipe per 2011 ORSC.
Min. 4" sand over radon venting pipes.
Install soil gas / water impermeable barrier 6 mil min.
R10 rigid insulation (2") 25 PSF min. - ground contact approved mtl.
Connect slab to foundation @ 4' OC with #3 rebar epoxied into stem feel



EXCAVATION
Building Footprint excavated to Top of Footing Elevation.
Perimeter Trench for footing.

FOUNDATION CONSTRUCTION - FOOTINGS
MINIMUM STEEL REINFORCEMENT - Two #4 Hz Rebar @ 3" above bottom
STEM WALLS
INIMUM STEEL REINFORCEMENT Vertical #4 hooked rebar @ 48" OC
Horizontal #4 rebar within 12" of the top & bottom of the stem wall
Single Story - 6" wide. Two Story - 8" wide.
NOTE: SEE PLANS FOR SPECIFIC PROJECT CONSTRUCTION DETAILS.

CONCRETE FLOOR SLAB DETAIL

SCALE: N.T.S. - NOT TO SCALE

CITY OF GRESHAM
APPROVED
Permit No: BP14-00003750
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BDG
BENTHIN DESIGN GROUP LLC
20337 S. BUTTE ROAD PO BOX 42
BEAVERCREEK, OREGON USA 97004
503-632-2862 1-800-698-9144
EMAIL: INFO@BENDG.COM
WEBSITE: WWW.BENDG.COM

TOWN HOUSES R302.2

BUILDING 7 (3 UNIT)
UNIT A - 4 BR
UNIT B - 2 BR
UNIT C - 3 BR

PROJECT NAME:
GLISAN GARDENS

CONTRACTOR/OWNER NAME:
HABITAT FOR HUMANITY

PROJECT INFORMATION:

HABITAT FOR HUMANITY
PORTLAND / METRO EAST
1478 NE KILLINGSWORTH STREET
PORTLAND, OREGON 97211
503-287-9539

GLISAN GARDENS
NE 165TH AVENUE & NE GLISAN STREET
GRESHAM, OREGON 97230
MULTNOMAH COUNTY

PAGE TITLES:
FOUNDATION

FOUNDATION PLAN:
- FOUNDATION PLAN
- SPECIFICATION
- SLAB FLOOR DETAIL

PLANS TO SCALE ON 24"x36 SHEETS

PROJECT NUMBER:	
ORIGINAL DATE:	MAY 2014
REVISION DATE:	4-1-2015
PAGE NUMBER:	6
REFERENCE NUMBER:	6.0

ROOF PLAN
NOTES AND SPECIFICATIONS:

ROOF-CEILING CONSTRUCTION

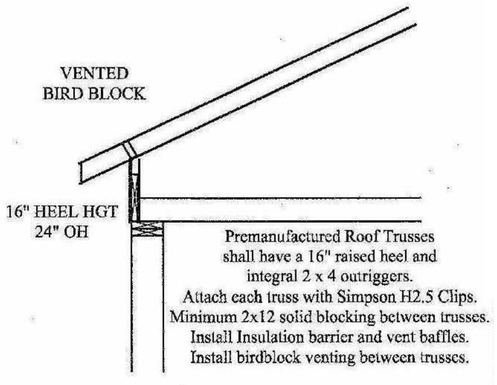
ROOFING:
'COMPOSITION' ROOFING (CLASS 'C' ROOF ASSEMBLIES)
15# FELT
MAIN ROOF STRUCTURE:
7/16" (MIN.) STRUCTURAL ROOF SHEATHING
RAISED HEEL ROOF TRUSSES AT 24" O.C.
WITH 'SIMPSON' H2.5A CONNECTION
6:12 ROOF PITCH
ROOF TRUSS AT PARTY WALL WIH 5/8" TYPE 'X"
SHEETROCK AT EACH SIDE FOR DRAFT STOP
FRONT PORCH STRUCTURE:
6x8 POST AND BEAMS
7/16" (MIN.) STRUCTURAL ROOF SHEATHING
2x6 ROUGH SAWN ROOF RAFTERS AT 24" O.C.
6:12 ROOF PITCH
REAR PORCH STRUCTURE:
4x4 PT POST AND 4x6 BEAMS
7/16" (MIN.) STRUCTURAL ROOF SHEATHING
2x4 ROOF RAFTERS AT 24" O.C.
6:12 ROOF PITCH
ROOF OVERHANGS:
MAIN ROOF AND COVERED PORCH ROOF STRUCTURES:
24" ROOF EAVE OVERHANG
24" ROOF RAKE OVERHANG
TRIM AND ACCENTS:
2x8 BARGE RAFTERS - PLUMB CUT
2x8 FASCIA BOARDS - PLUMB CUT
GUTTERS:
PROVIDE GUTTERS AT ALL ROOF EAVE LOCATIONS
(CONTRACTOR TO SPECIFY AND LOCATE DOWNSPOUTS)

ROOF VENTILATION
NOTES AND SPECIFICATIONS:

ROOF VENTILATION:

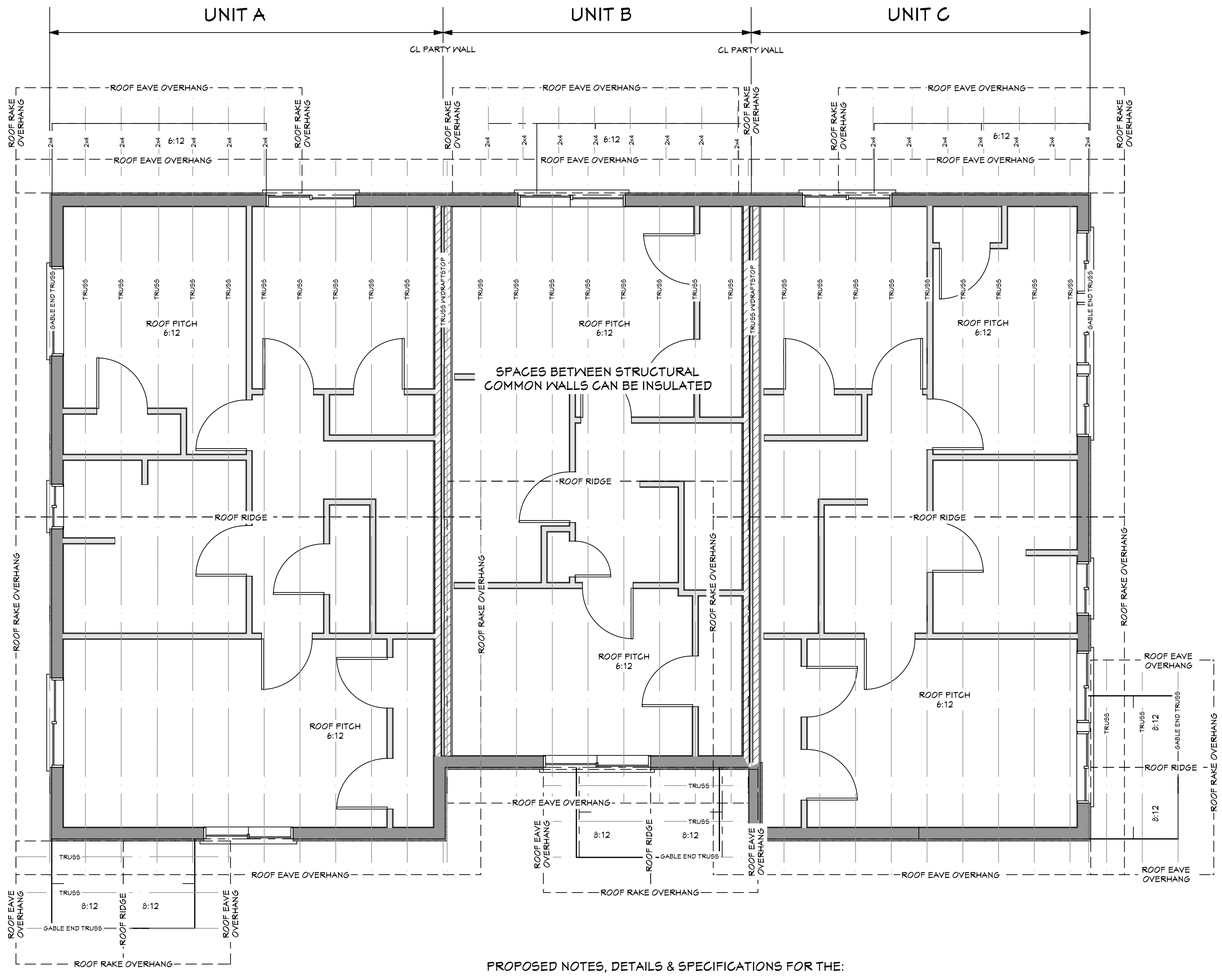
ROOF RIDGE VENTILATION SPECIFICATIONS:
PROVIDE 1/300 SQ. IN. SCREENED ROOF RIDGE VENTILATION
(CONTRACTOR TO SPECIFY AND LOCATE RIDGE VENTS)

ROOF EAVE VENTILATION SPECIFICATIONS:
PROVIDE 1/300 SQ. IN. SCREENED ROOF RIDGE VENTILATION
(CONTRACTOR TO SPECIFY AND LOCATE BIRDBLOCK VENTS)



RAISED HEEL TRUSS DETAIL

SCALE: N.T.S. - NOT TO SCALE



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

ROOF PLAN

SCALE: ¼" = 1'-0"

CITY OF GRESHAM
APPROVED
Permit No: BP14-00003750
Date: 4/20/15
THESE PLANS SHALL BE ON THE JOB SITE FOR ALL REQUESTED INSPECTIONS

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TOWN HOUSES
R302.2

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PAGE TITLES:
ROOF

ROOF PLAN:
- ROOF PLAN
- SPECIFICATIONS
- RAISED HEEL TRUSS DETAIL

PLANS TO SCALE
ON 24"x36 SHEETS

PROJECT NUMBER:	
ORIGINAL DATE:	MAY 2014
REVISION DATE:	4-1-2015
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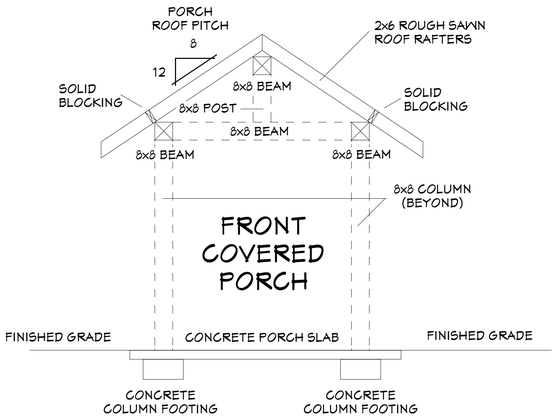
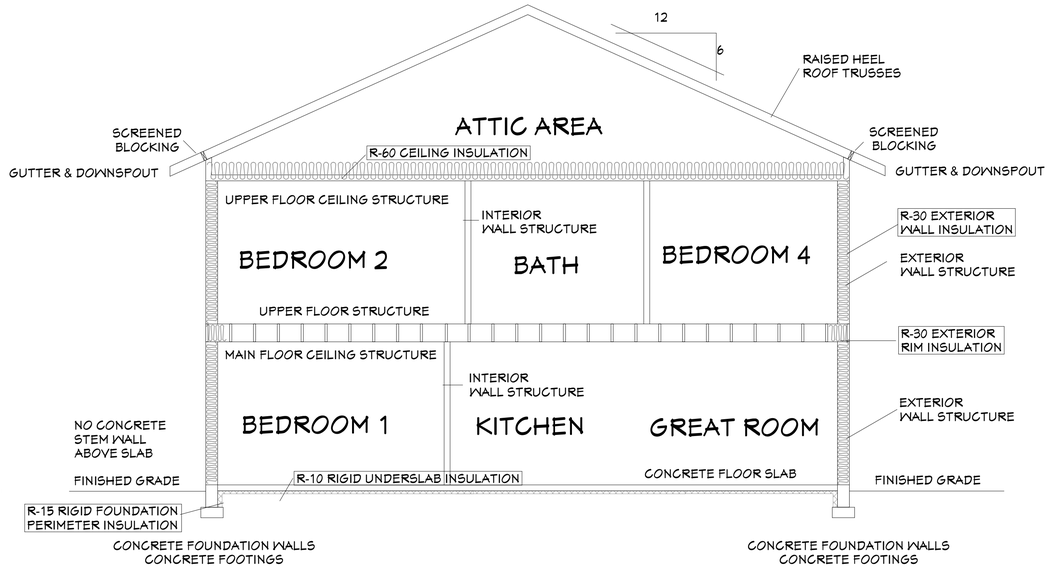


PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

FRONT PORCH CROSS SECTION C

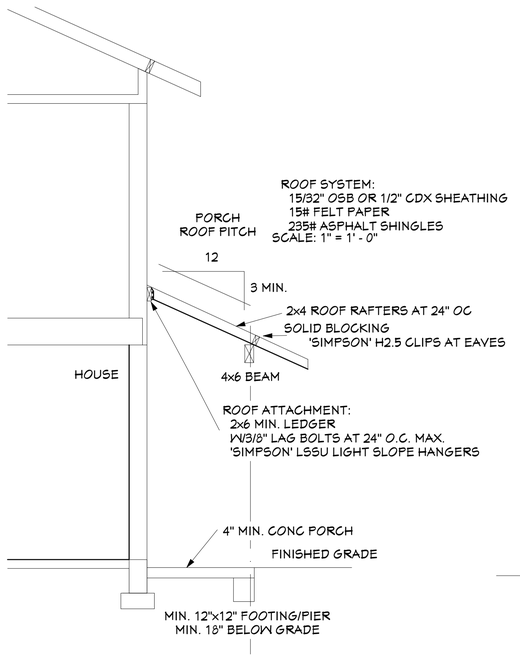
SCALE: 3/8" = 1'-0"



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

BUILDING CROSS SECTION A

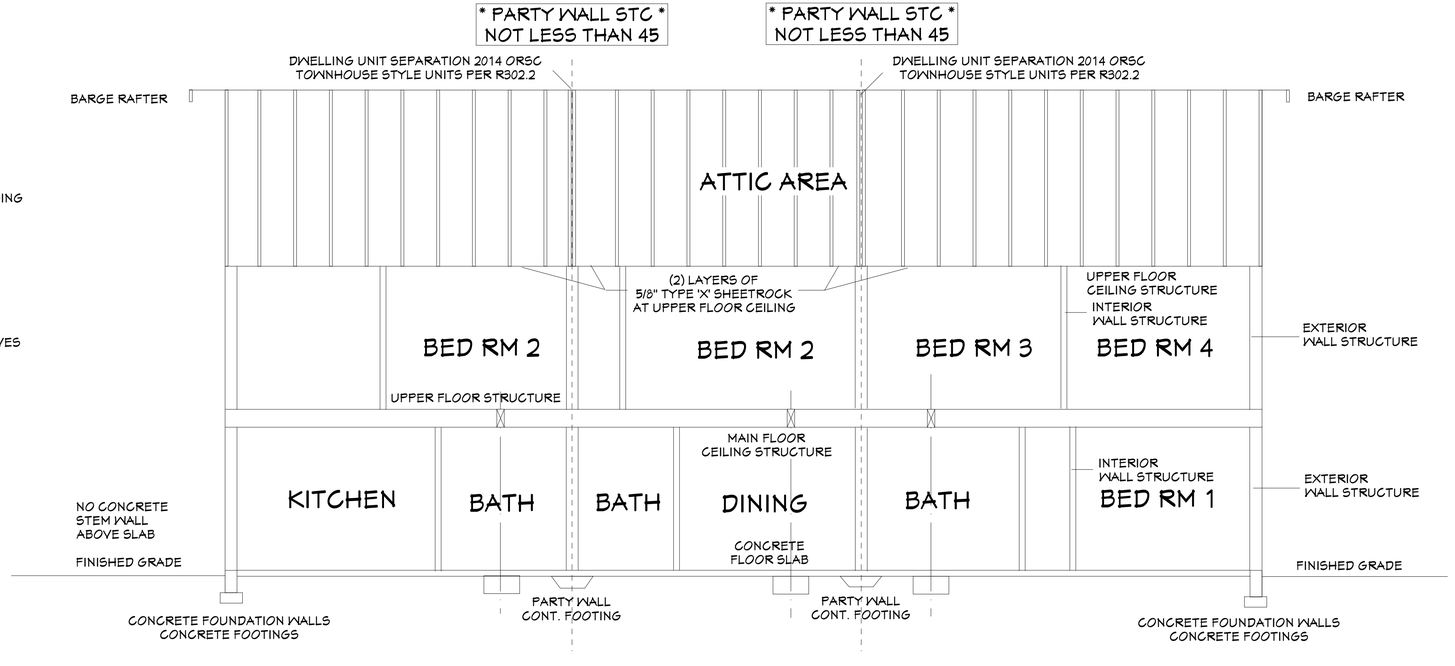
SCALE: ¼" = 1'-0"



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

REAR PORCH CROSS SECTION D

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



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

BUILDING CROSS SECTION B

SCALE: ¼" = 1'-0"

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PAGE TITLES:
SECTIONS 1

CROSS SECTIONS:
- BUILDING SECTION A
- BUILDING SECTION B
- PORCH SECTION C
- PORCH SECTION D

PLANS TO SCALE
ON 24"x36 SHEETS

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ORIGINAL DATE:	MAY 2014
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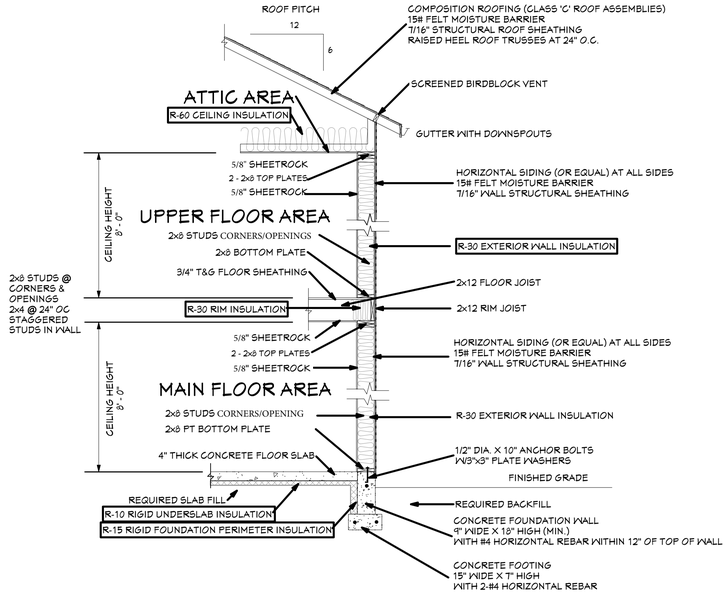


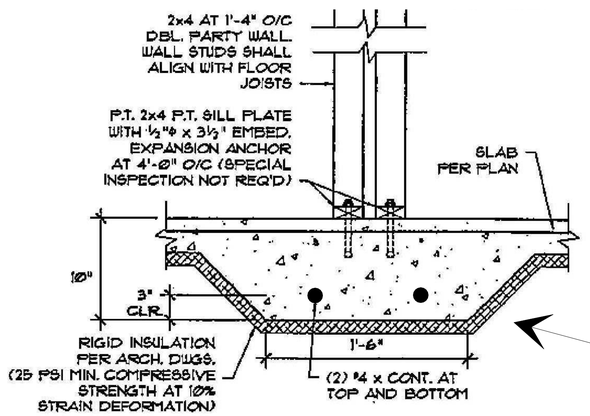
PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

TYPICAL WALL CROSS SECTION

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

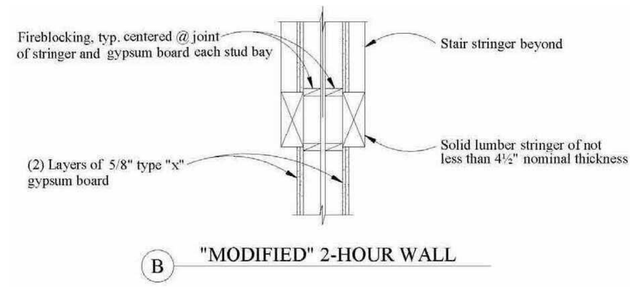
CROSS SECTION NOTES AND SPECIFICATIONS:

ROOFING:
'COMPOSITION' ROOFING (CLASS 'C' ROOF ASSEMBLIES)
15# FELT
ROOF STRUCTURE:
7/16" (MIN.) STRUCTURAL SHEATHING
2x BARGE RAFTERS - PLUMB CUT
2x8 FASCIA BOARDS - PLUMB CUT
ROOF TRUSSES AT 24" OC
ROOF OVERHANGS:
2'-0" ROOF EAVE OVERHANGS
2'-0" ROOF RAKE OVERHANGS
ROOF PITCH:
6:12 ROOF PITCH AT MAIN AND REAR ROOF STRUCTURE
8:12 ROOF PITCH AT FRONT COVERED PORCH STRUCTURE
CEILING STRUCTURE:
1/2" SHEETROCK
(2) LAYERS 5/8" TYPE 'X' SHEETROCK AT ENTIRE UPPER FLOOR CEILING
** R-49 FLAT CEILING INSULATION **
WALL STRUCTURE:
HORIZONTAL/BOARD-BATTEN SIDING
7/16" (MIN.) STRUCTURAL WALL SHEATHING
DOUBLE 2x8 TOP PLATES
2x8 STUDS AT 24" O.C.
2x8 BOTTOM PLATE
1/2" SHEETROCK AT INTERIOR SURFACE
** R-30 EXTERIOR WALL INSULATION **
INTERIOR WALL STRUCTURE:
DOUBLE 2x4 TOP PLATES
2x4 STUDS AT 24" O.C.
2x4 BOTTOM PLATE
5/8" DRYWALL THROUGHOUT INTERIOR
PARTY WALL: DOUBLE WALL - TYPICAL CONSTRUCTION BOTH WALLS
1" SPACE BETWEEN STRUCTURAL WALLS, SPACE CAN BE INSULATED
DOUBLE 2x4 TOP PLATES
2x4 STUDS AT 16" O.C. ALIGN WITH FLOOR JOIST
2x4 PT BOTTOM/SILL PLATE
(2) LAYERS 5/8" TYPE 'X' SHEETROCK
7/16" MIN STRUCTURAL SHEATHING AT SPACE SIDE
** R-15 WALL INSULATION **
** STC 45 (OR GREATER)
UPPER FLOOR STRUCTURE:
3/4" T&G FLOOR SHEATHING
2x12 FLOOR JOIST (SEE FLOOR FRAMING PLAN)
MAIN FLOOR STRUCTURE:
4" CONCRETE SLAB OVER REQUIRED FILL (SEE FLOOR SLAB DETAIL)
** R-10 FOAM UNDERSLAB INSULATION **
FOUNDATION/FOOTING STRUCTURE: TWO STORY STRUCTURE
CONCRETE FOUNDATION WALLS:
8" WIDE (MIN.) X 18" HIGH (MIN.) CONCRETE FOUNDATION WALLS
CONCRETE FOOTINGS:
WALL FOOTINGS: 15" WIDE X 7" HIGH CONTINUOUS CONCRETE WALL FOOTINGS
POINT FOOTINGS: PER FOUNDATION PLAN
PARTY WALL FOOTING: 18" WIDE X 10" HIGH CONCRETE MONOLITHIC FOOTING
REINFORCEMENT BARS: SEE FOUNDATION PLAN.
CONCRETE SLABS:
4" CONCRETE SLAB STEPS, SIDEWALKS AND PATIO SLABS OVER REQUIRED GRAVEL FILL.

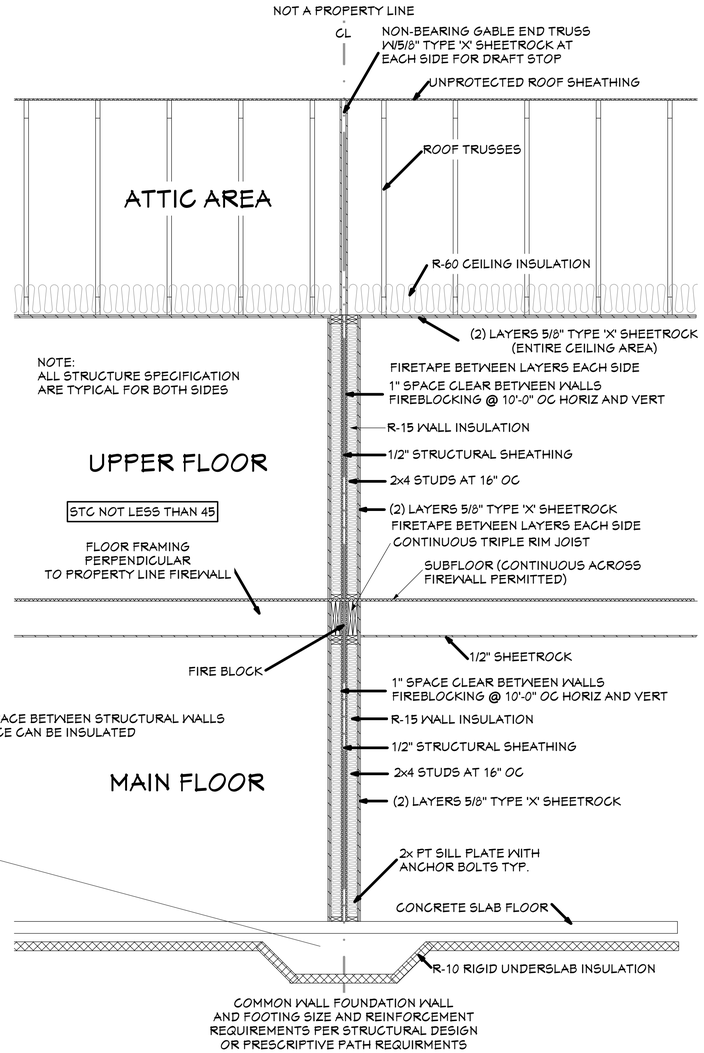


PARTY WALL FOOTING DETAIL

SCALE: NTS - NOT TO SCALE



B "MODIFIED" 2-HOUR WALL



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

PARTY WALL CROSS SECTION

SCALE: 1/2" = 1'-0"

CITY OF GRESHAM
APPROVED
Permit No: BP14-00003750
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THERE IS ONLY SHALL BE ON THE JOB SITE FOR ALL REQUESTED INSPECTIONS

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TOWN HOUSES R302.2

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PAGE TITLES:
SECTIONS 2

CROSS SECTIONS 2:
- TYPICAL WALL SECTION
- PARTY WALL SECTION
- 2 HOUR WALL SECTION
- FOOTING DETAIL
- SPECIFICATIONS

PLANS TO SCALE ON 24"x36 SHEETS

PROJECT NUMBER:	
ORIGINAL DATE:	MAY 2014
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AF103.6 Passive subslab depressurization system. In *basement* or slab-on-grade buildings, the following components of a passive sub-slab depressurization system shall be installed during construction.

AF103.6.1 Vent pipe. A minimum 3-inch-diameter (76 mm) ABS, PVC or equivalent gas-tight pipe shall be embedded vertically into the sub-slab aggregate or other permeable material before the slab is cast. A "T" fitting or equivalent method shall be used to ensure that the pipe opening remains within the sub-slab permeable material. Alternatively, the 3-inch (76 mm) pipe shall be inserted directly into an interior perimeter drain tile loop or through a sealed sump cover where the sump is exposed to the sub-slab aggregate or connected to it through a drainage system.

The pipe shall be extended up through the building floors, terminate at least 12 inches (305 mm) above the surface of the roof in a location at least 10 feet (3048 mm) away from any window or other opening into the *conditioned spaces* of the building that is less than 2 feet (610 mm) below the exhaust point, and 10 feet (3048 mm) from any window or other opening in adjoining or adjacent buildings.

AF103.6.2 Multiple vent pipes. In buildings where interior footings or other barriers separate the sub-slab aggregate or other gas-permeable material, each area shall be fitted with an individual vent pipe. Vent pipes shall connect to a single vent that terminates above the roof or each individual vent pipe shall terminate separately above the roof.

AF103.7 Vent pipe drainage. All components of the radon vent pipe system shall be installed to provide positive drainage to the ground beneath the slab or soil-gas-retarder.

AF103.8 Vent pipe accessibility. Radon vent pipes shall be accessible for future fan installation through an *attic* or other area outside the *habitable space*.

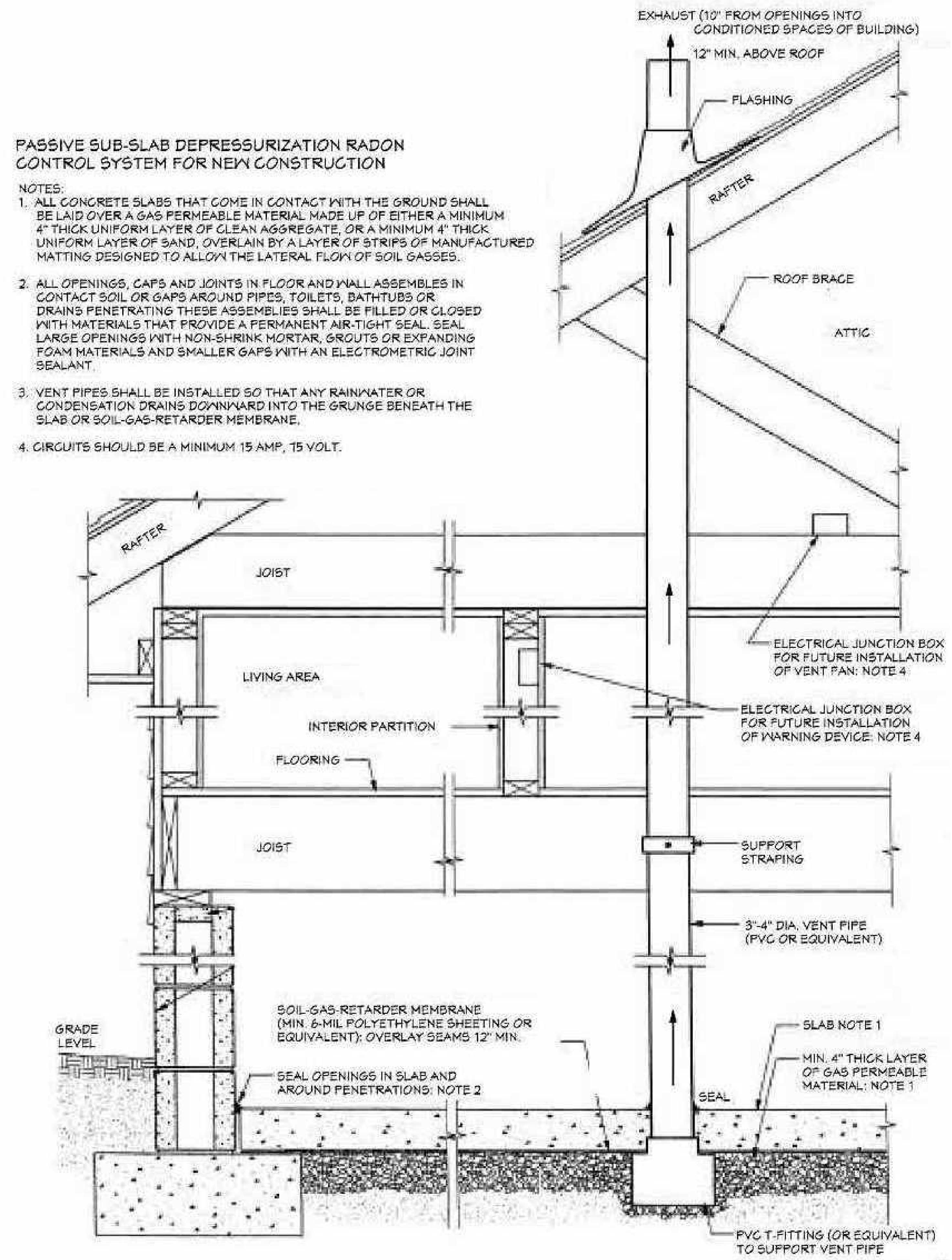
Exception: The radon vent pipe need not be accessible in an *attic* space where an *approved* roof-top electrical supply is provided for future use.

AF103.9 Vent pipe identification. All exposed and visible interior radon vent pipes shall be identified with at least one *label* on each floor and in accessible *attics*. The *label* shall read: "Radon Reduction System."

AF103.10 Combination foundations. Combination *basement*/crawl space or slab-on-grade/crawl space foundations shall have separate radon vent pipes installed in each type of foundation area. Each radon vent pipe shall terminate above the roof or shall be connected to a single vent that terminates above the roof.

AF103.11 Building depressurization. Joints in air ducts and plenums in un*conditioned spaces* shall meet the requirements of Section M1601. Thermal envelope air infiltration requirements shall comply with the energy conservation provisions in Chapter 11. Fireblocking shall meet the requirements contained in Section R302.11.

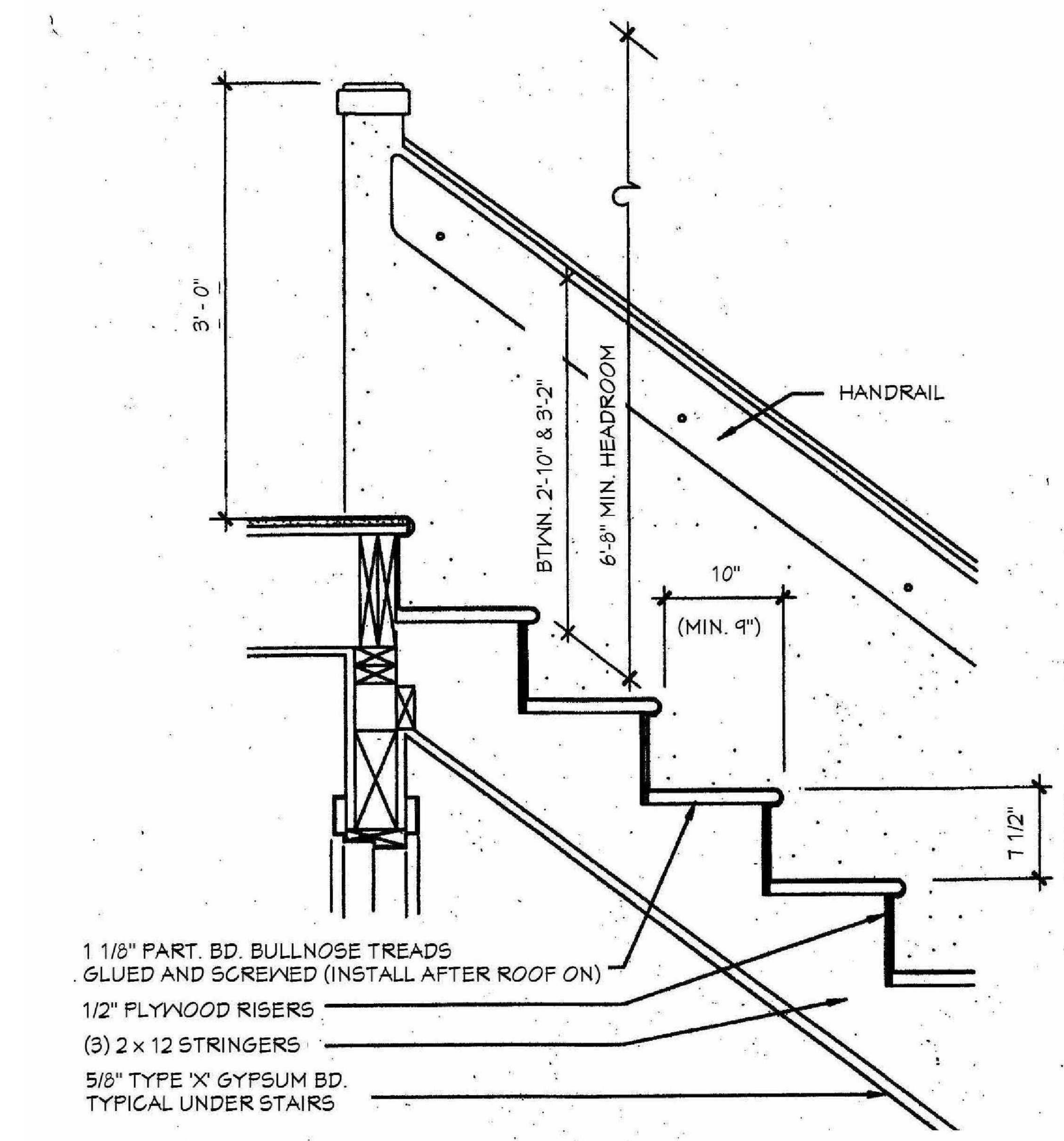
AF103.12 Power source. To provide for future installation of an active sub-membrane or sub-slab depressurization system, an electrical circuit terminated in an *approved* box shall be installed during construction in the *attic* or other anticipated location of vent pipe fans. An electrical supply shall also be accessible in anticipated locations of system failure alarms.



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

RADON DETAIL

SCALE: N.T.S. - NOT TO SCALE



R311.7.7.3 Grip-size. All required handrails shall be of one of the following types or provide equivalent graspability.

1. Type I. Handrails with a circular cross section shall have an outside diameter of at least $1^1/_4$ inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than $6^1/_4$ inches (160 mm) with a maximum cross section of dimension of $2\,^1/_4$ inches (57 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).
2. Type II. Handrails with a perimeter greater than $6^1/_4$ inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of $^3/_4$ inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least $^5/_{16}$ inch (8 mm) within $^7/_8$ inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least $^3/_8$ inch (10 mm) to a level that is not less than $1^3/_4$ inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be $1^1/_4$ inches (32 mm) to a maximum of $2^3/_4$ inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

STAIR DETAIL

SCALE: N.T.S. - NOT TO SCALE

GLISAN GARDENS PROJECT BP14-00003750
2014 ORSC CODE NOTES

HANDRAILS 2014 ORSC R311.7.7 HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS WITH 4 OR MORE RISERS. 2011 R311.7.7.3 GRIP SIZE TYPE I CIRCULAR RAILS > 1.25" < 2" OR PERIMETER > 4" < 6.25" MAX CROSS SECTION 2.25"	STAIRWAY ILLUMINATION 2014-ORSC SECTION R303.6 ALL STAIRS AND LANDINGS TO BE ILLUMINATED. INTERIOR @ ALL LANDING EXTERIOR @ TOP LANDING INTERIOR ILLUMINATION CONTROLLED BY WALL SWITCH AT EACH FLOOR LEVEL EXTERIOR ILLUMINATION CONTROLLED FROM INTERIOR	ORSC 2014 Section 806.2 Attic Venting Provide net free area of 1 SF per each 300 SF of attic area. Venting to be split equally between vent in the eaves and roof jacks within 3 Ft. of the eaves. Install vapor barrier in ceiling on the interior side of the building envelope.	ENERGY EFFICIENCY - ORSC 2014 TABLE N1101.1 (1) PRESCRIPTIVE ENVELOPE REQUIREMENTS REQUIRED: Wall Insulation - Above Grade - U 0.060 / R21 SPECIFIED: R30, 7 1/2 Blown-in Batts REQUIRED: Slab Edge - F-0.565 / R15 SPECIFIED: R15 Rigid insulation inside foundation perimeter. REQUIRED: Flat Ceiling - U 0.031 / R38 SPECIFIED: Flat Ceiling R60 REQUIRED: Windows - U 0.35 SPECIFIED: Windows - U0.20 REQUIRED: Exterior Doors U 0.20 Exterior Doors w/> 2.5 SF glazing U 0.40 TABLE N1101.1 (2) ENVELOPE ENHANCEMENT MEASURES NUMBERED ITEMS: 1. High Efficiency Walls & Windows. Walls R30 2x8 advanced framing with 7 1/2" blown in batt insulation. Triple Pane Windows U-0.20 LETTERED ITEMS: B. All ducts and air handler are within building envelope
Guards 2014 ORSC R312 Guards are required on open stairs, raised floors, porches and balconies more the 30" above the adjacent surface. Handrails 2011 ORSC R311 Continuous handrail > 30" but < 38" above the tread nosing. The rail shall have a grippable surface < 2 5/8" but > 1 1/4". Vertical balusters shall be 4" maximum at the closest point. A newel post shall be installed at the bottom. The guardrail shall be constructed to resist the specified applied lateral force per 2014 ORSC.	2014 ORSC from SECTION R310 EMERGENCY ESCAPE & RESCUE OPENING Maximum Sill Height - 44 Inches Minimum Opening Area 5.0 Sq. Ft. @ Grade 5.7 Sq Ft. @ 2+ stories above grade Min. net clear opening Height - 24 inches Min. net clear opening Width - 20 inches Inside Operable - no restraints	DWELLING UNIT SEPARATION - 2014 ORSC TOWNHOUSE STYLE UNITS PER R302.2 Common Walls - 2 HR rated minimum COMMON WALL SYSTEM Continuous ICF wall from footing to trusses. 4 hour fire rating. Double layer 5/8" Type X on ceilings at trusses seams taped on first layer prior to installation of 2nd layer. mechanical, plumbing & venting prohibited. Outlet boxes per R302.2	
1/2" anchor bolts 6' oc max. min. 2 bolts per plate. max 12" from corner or end of sill plate. 3" X 3" min. plate washers. R602.11.1 Tie down devices per R602.10.11.4 EXCEPTION: Foundation anchorage, spaced as required to provide equivalent anchorage to 1/2" diameter anchor bolts. OPTIONAL: SIMPSON MAS MUDSILL ANCHORS @ 4 FT ON CENTER. MAX 12" FROM CORNER MINIMUM OF TWO ANCHORS PER PLATE.	2014 ORSC LIVE LOADS from TABLE R301.5 Attic with storage 20 PSF Attic no storage 10 PSF Exterior Balconies / Decks 40 PSF Living Areas 40 PSF Sleeping Areas 30 PSF Guardrails / Handrails 200 PLF	MECHANICAL SYSTEMS Panasonic FV - 04VE1 Venting to exterior. Range Hood 150 CFM Min. Laundry Room 50 CFM Fan Min. Bathroom 80 CFM Fan Min. Less than 3 Sone. Door cut 3/4" above finish floor	2014 ORSC GROUNDING ELECTRODES R403.1.7 Uncoated #4 bar 3" maximum from bottom 2" concrete cover min. 20 foot minimum length. Uncoated #4 bar stubbed up 12" min 2014 ORSC Section R314 - SMOKE ALARMS 110V ac primary power w/ battery back-up all detectors interconnected. Install alarms in each sleeping room & adjacent common areas, and on each addition level. 2014 ORSC Section R315 - CARBON MONOXIDE DETECTORS Install combination detectors for Smoke & Carbon Monoxide

CITY OF GRESHAM
The plans have been reviewed for Code Compliance and are
APPROVED
No changes shall be made on these plans except by permission of the Building Official or authorized designee
Permit No. BP14-00003750
Date 04/20/15
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PAGE TITLES:
DETAILS

STRUCTURAL DETAILS:
- STAIR DETAIL
- RADON DETAIL
- 2014 CODE NOTES

PLANS TO SCALE ON 24"x36 SHEETS

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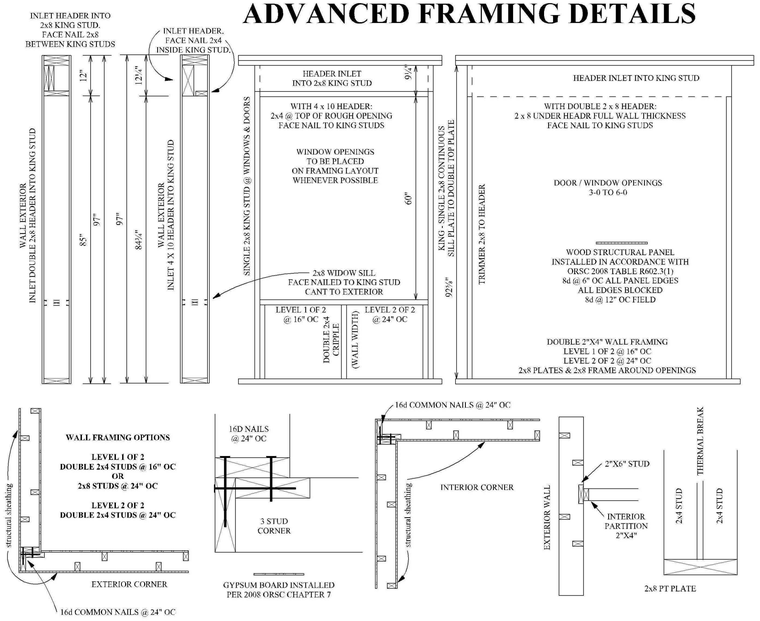
REFERENCE NUMBER:	10.0

ADVANCED FRAMING DETAILS



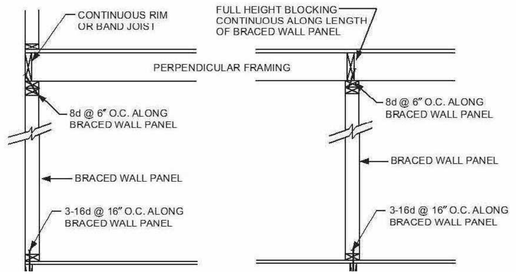


FIGURE R602.10.6(1)
BRACED WALL PANEL CONNETION WHEN PERPENDICULAR TO FLOOR/ CEILING FRAMING

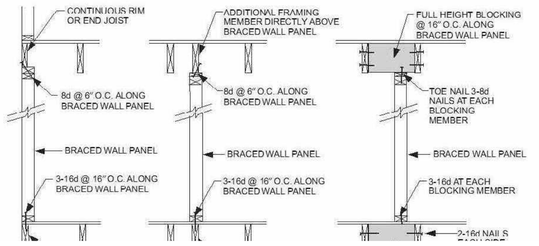


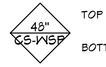
FIGURE R602.10.6(2)
BRACED WALL PANEL CONNETION WHEN PARALLEL TO FLOOR/ CEILING FRAMING

PRESCRIPTIVE WALL BRACING CHAPTER 6

SPECIFICATIONS FROM:
2014 OREGON RESIDENTIAL SPECIALTY CODE
CHAPTER 6 - WALL BRACING (PERSCRIPTIVE WALL BRACING)

SYMBOLS FOR CONTINUOUS WALL SHEATHING BRACING METHOD (CS-WSP)

BRACED WALL LOCATION IDENTIFICATION



TOP - LENGTH OF WALL STRUCTURAL PANEL

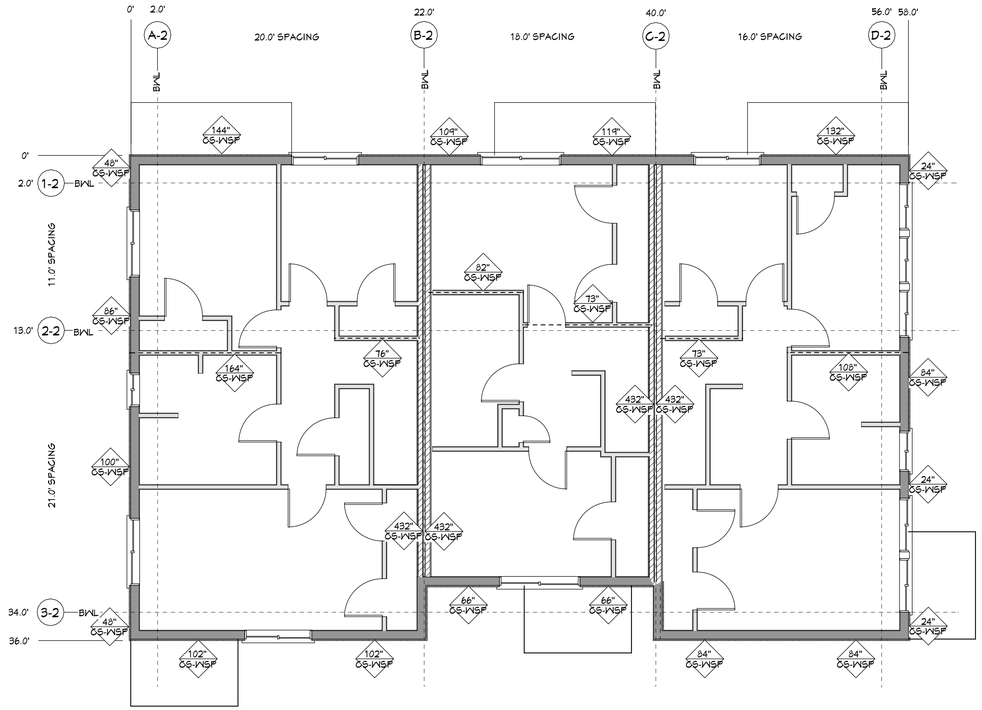
BOTTOM - TYPE OF BRACING
CS-WSP (CONTINUOUS SHEATHING-WALL STRUCTURAL PANEL)

ADDITIONAL BRACING INFORMATION:

TYPE OF BRACING & SPECIFICATIONS:
1. WALL HEIGHT 8'-0"
2. HOLDDOWN LOCATION AT INDICATED LOCATION

CS-WSP (CONTINUOUS SHEATHING - WALL STRUCTURAL PANEL)
A. 7/16" WALL SHEATHING AT EXTERIOR WALLS AND INTERIOR WALLS WITH BLOCKING AT ALL JOINTS AT INDICATED LOCATIONS.
B. 8d COMMON NAILS AT 6" SPACING (PANEL EDGES) AND AT 12" SPACING (INTERMEDIATE SUPPORTS).
C. ½" SHEETROCK AT ALL INTERIOR AREAS

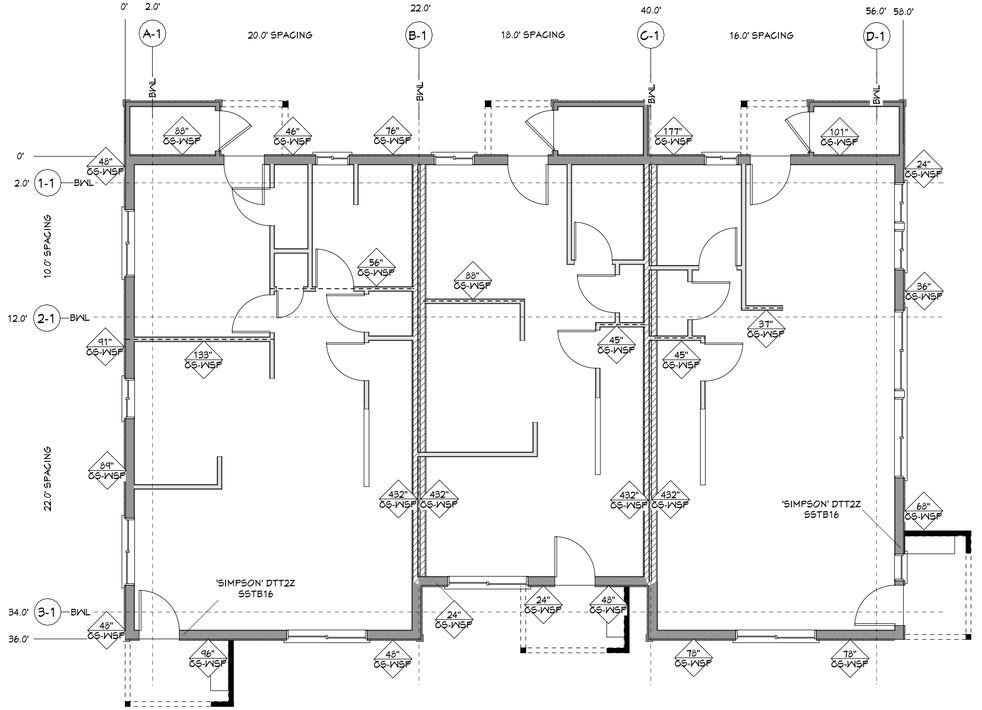
GYPSUM BOARD
A. ½" MIN. GYPSUM BOARD - BOTH SIDES INTERIOR BRACE WALL
B. NAILS OR SCREWS AT 7" SPACING AT PANEL EDGES INCLUDING TOP AND BOTTOM PLATES; FOR ALL BRACED WALL PANEL LOCATIONS FOR EXTERIOR SHEATHING NAIL OR SCREW SIZE, SEE TABLE R602.3(1); FOR INTERIOR GYPSUM BOARD NAIL OR SCREWS SIZE, SEE TABLE R702.3.5



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

UPPER FLOOR BRACING PLAN

SCALE: 3/16" = 1'-0"



PROPOSED NOTES, DETAILS & SPECIFICATIONS FOR THE:

MAIN FLOOR BRACING PLAN

SCALE: 3/16" = 1'-0"

CITY OF GRESHAM
APPROVED
Permit No: BP14-00003750
Date: 4/20/15
THESE PLANS SHALL BE ON THE JOB SITE FOR ALL REQUESTED INSPECTIONS

BDG
BENTHIN DESIGN GROUP LLC
20337 S. BUTTE ROAD PO BOX 42
BEAVERCREEK, OREGON USA 97004
503-632-2862 1-800-698-9144
EMAIL: INFO@BENDG.COM
WEBSITE: WWW.BENDG.COM

TOWN HOUSES R302.2

BUILDING 7 (3 UNIT)
UNIT A - 4 BR
UNIT B - 2 BR
UNIT C - 3 BR

PROJECT NAME:
GLISAN GARDENS

CONTRACTOR/OWNER NAME:
HABITAT FOR HUMANITY

PROJECT INFORMATION:

HABITAT FOR HUMANITY
PORTLAND / METRO EAST
1478 NE KILLINGSWORTH STREET
PORTLAND, OREGON 97211
503-287-9539

GLISAN GARDENS
NE 165TH AVENUE & NE GLISAN STREET
GRESHAM, OREGON 97230
MULTNOMAH COUNTY

PAGE TITLES:
WALL BRACING

LATERAL/SEISMIC BRACING:
- MAIN FLOOR BRACING
- UPPER FLOOR BRACING
- BRACING DETAILS
- ADV FRAMING DETAILS
- SPECIFICATIONS

PLANS TO SCALE ON 24"x36 SHEETS

PROJECT NUMBER:	
ORIGINAL DATE:	MAY 2014
REVISION DATE:	4-1-2015
PAGE NUMBER:	11
REFERENCE NUMBER:	11.0

TABLE R602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a, b, c]	SPACING OF FASTENERS
	Roof		
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2½" x 0.113")	—
2	Ceiling joists to plate, toe nail	3-8d (2½" x 0.113")	—
3	Ceiling joists not attached to parallel rafter, laps over partitions, face nail	3-10d	—
4	Collar tie rafter, face nail or 1¼" x 20 gage ridge strap	3-10d (3" x 0.128")	—
5	Rafter to plate, toe nail	2-16d (3½" x 0.135")	—
6	Roof rafters to ridge, valley or hip rafters: toe nail face nail	4-16d (3½" x 0.135") 3-16d (3½" x 0.135")	— —
	Wall		
7	Built-up corner studs	10d (3" x 0.128")	24" o.c.
8	Built-up header, two pieces with ½" spacer	16d (3½" x 0.135")	16" o.c. along each edge
9	Continued header, two pieces	16d (3½" x 0.135")	16" o.c. along each edge
10	Continuous header to stud, toe nail	4-8d (2½" x 0.113")	—
11	Double studs, face nail	10d (3" x 0.128")	24" o.c.
12	Double top plates, face nail	10d (3" x 0.128")	24" o.c.
13	Double top plates, minimum 24-inch offset of end joints, face nail in lapped area	8-16d (3½" x 0.135")	—
14	Sole plate to joist, solid deck or blocking, face nail	16d (3½" x 0.135")	16" o.c.
15	Sole plate to joist, solid deck or blocking at braced wall panels	3-16d per 16" (3½" x 0.135")	—
16	Stud to sole plate, toe nail	3-8d (2½" x 0.113") or 2-16d (3½" x 0.135")	— —
17	Top or sole plate to stud, end nail	2-16d (3½" x 0.135")	—
18	Top plates, laps at corners and intersections, face nail	2-10d (3" x 0.128")	—
19	1" x 6" brace to each stud and plate, face nail	2-8d (2½" x 0.113") 2 staples 1¾"	— —
20	1" x 6" sheathing to each bearing, face nail	2-8d (2½" x 0.113") 2 staples 1¾"	— —
21	1" x 8" sheathing to each bearing, face nail	2-8d (2½" x 0.113") 3 staples 1¾"	— —
22	Wider than 1" x 8" sheathing to each bearing, face nail	3-8d (2½" x 0.113") 4 staples 1¾"	— —
	Floor		
23	Joist to sill or girder, toe nail	3-8d (2½" x 0.113")	—
24	1" x 6" subfloor or less to each joist, face nail	2-8d (2½" x 0.113") 2 staples 1¾"	— —
25	2" subfloor to joist or girder, blind and face nail	2-16d (3½" x 0.135")	—
26	Rim joist to top plate, toe nail (roof applications also)	8d (2½" x 0.113")	6" o.c.
27	2" planks (plank & beam – floor & roof)	2-16d (3½" x 0.135")	at each bearing
28	Built-up girders and beams, 2-inch lumber layers	10d (3" x 0.128")	Nail each layer as follows: 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice.

ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER[b, c, e]	SPACING OF FASTENERS: Edges (inches)	SPACING OF FASTENERS: Intermediate supports[c, e] (inches)
	Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing			
30	5/16" - 1/2"	6d common (2" x 0.113") nail (subfloor wall) 8d common (2½" x 0.131") nail (roof)[i]	6	12[g]
31	19/32" - 1"	8d common nail (2½" x 0.131")	6	12[g]
32	1 1/8" - 1 1/4"	10d common (3" x 0.148") nail or 8d (2½" x 0.131") deformed nail	6	12
	Other wall sheathing[h]			
33	½" structural cellulosic fiberboard sheathing	½" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga, 1¼" long	3	6
34	25/32" structural cellulosic fiberboard sheathing	1¾" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga, 1½" long	3	6
35	½" gypsum sheathing[d]	1½" galvanized roofing nail; staple galvanized, 1½" long; 1¼" screws, Type W or S	7	7
36	5/8" gypsum sheathing[d]	1¾" galvanized roofing nail; staple galvanized, 1⅝" long; 1⅝" screws, Type W or S	7	7
	Wood structural panels, combination subfloor underlayment to framing			
37	¾" and less	6d deformed (2" x 0.120") nail or 8d common (2½" x 0.131") nail	6	12
38	7/8" - 1"	8d common (2½" x 0.131") nail or 8d deformed (2½" x 0.120") nail	6	12
39	1 1/8" - 1 1/4"	10d common (3" x 0.148") nail or 8d deformed (2½" x 0.120") nail	6	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 ksi = 6.895 MPa.

a. All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.142 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.

b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.

c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.

d. Four-foot-by-8-foot or 4-foot-by-9-foot panels shall be applied vertically.

e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).

f. For regions having basic wind speed of 110 mph or greater, 8d deformed (2½" x 0.120) nails shall be used for attaching plywood and wood structural panel roof sheathing to framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum.

g. For regions having basic wind speed of less than 110 mph, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.

h. Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208.

i. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.

j. Interior non-braced wall lines may be nailed with a minimum 4-10d nails.

TABLE R602.3(2)
ALTERNATE ATTACHMENTS

NOMINAL MATERIAL THICKNESS (inches)	DESCRIPTION[a, b] OF FASTENER AND LENGTH (inches)	SPACING[c] OF FASTENERS: Edges (inches)	SPACING[c] OF FASTENERS: Intermediate supports (inches)
	Wood structural panels subfloor, roof and wall sheathing to framing and particleboard wall sheathing to framing[f]		
up to 1/2"	Staple 15 ga. 1¾"	4	8
	0.097" - 0.099" Nail 2¼"	3	6
	Staple 16 ga. 1¾"	3	6
19/32" and 5/8"	0.113" Nail 2"	3	6
	Staple 15 and 16 ga. 2"	4	8
	0.097" - 0.099" Nail 2¼"	4	8
23/32" and 3/4"	Staple 14 ga. 2"	4	8
	Staple 15 ga. 1¾"	3	6
	0.097" - 0.099" Nail 2¼"	4	8
	Staple 16 ga. 2"	4	8
1"	Staple 14 ga. 2¼"	4	8
	0.113" Nail 2¼"	3	6
	Staple 15 ga. 2¼"	4	8
	0.097" - 0.099" Nail 2½"	4	8
NOMINAL MATERIAL THICKNESS (inches)	DESCRIPTION[a, b] OF FASTENER AND LENGTH (inches)	SPACING[c] OF FASTENERS: Edges (inches)	SPACING[c] OF FASTENERS: Body of panel[d] (inches)
	Floor underlayment; plywood-hardboard-particleboard[f]		
	Plywood		
1/4" and 5/16"	1¼" ring or screw shank nail—minimum 12½ ga. (0.099") shank diameter	3	6
	Staple 18 ga., 7/8", 3/16" crown width	2	5
11/32", 3/8", 15/32", and 1/2"	1½" ring or screw shank nail—minimum 12½ ga. (0.099") shank diameter	6	8[e]
19/32", 5/8", 23/32" and 3/4"	1¾" ring or screw shank nail—minimum 12½ ga. (0.099") shank diameter	6	8
	Staple 16 ga. 1½"	6	8
	Hardboard[f]		
0.200"	1½" long ring-grooved underlayment nail	6	6
	4d cement-coated sinker nail	6	6
	Staple 18 ga., 7/8" long (plastic coated)	3	6
	Particleboard		
1/4"	4d ring-grooved underlayment nail	3	6
	Staple 18 ga., 7/8" long, 3/16" crown	3	6
3/8"	6d ring-grooved underlayment nail	6	10
	Staple 16 ga., 1 1/8" long, 7/16" crown	3	6
1/2", 5/8"	6d ring-grooved underlayment nail	6	10
	Staple 16 ga., 1⅝" long, 7/16" crown	3	6

For SI: 1 inch = 25.4 mm.

a. Nail is a general description and may be T-head, modified round head or round head.

b. Staples shall have a minimum crown width of 7/16-inch on diameter except as noted.

c. Nails or staples shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater. Nails or staples shall be spaced at not more than 12 inches on center at intermediate supports for floors.

d. Fasteners shall be placed in a grid pattern throughout the body of the panel.

e. For 5-ply panels, intermediate nails shall be spaced not more than 12 inches on center each way.

f. Hardboard underlayment shall conform to ANSI/AHA A135.4.

TABLE N1101.1(1)
PRESCRIPTIVE ENVELOPE REQUIREMENTS[a]

BUILDING COMPONENT	STANDARD BASE CASE: Required Performance	STANDARD BASE CASE: Equiv. Value[b]	LOG HOMES ONLY: Required Performance	LOG HOMES ONLY: Equiv. Value[b]
Wall insulation-above grade	U-0.060	R-21[c]	Note d	Note d
Wall insulation-below grade[e]	F-0.565	R-15	F-0.565	R-15
Flat ceilings[f]	U-0.031	R-38	U-0.025	R-49
Vaulted ceilings[g]	U-0.042	R-38[g]	U-0.027	R-38A[b]
Underfloors	U-0.028	R-30	U-0.028	R-30
Slab edge perimeter	F-0.520	R-15	F-0.520	R-15
Heated slab interior[i]	n/a	R-10	n/a	R-10
Windows[j]	U-0.35	U-0.35	U-0.35	U-0.35
Window area limitation[j, k]	n/a	n/a	n/a	n/a
Skylights[l]	U-0.60	U-0.60	U-0.60	U-0.60
Exterior doors[m]	U-0.20	U-0.20	U-0.54	U-0.54
Exterior doors w/ > 2.5 ft² glazing[n]	U-0.40	U-0.40	U-0.40	U-0.40
Forced air duct insulation	n/a	R-8	n/a	R-8

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m², 1 degree = 0.0175 rad.

a. As allowed in Section N1104.1, thermal performance of a component may be adjusted provided that overall heat loss does not exceed the total resulting from conformance to the required *U*-value standards. Calculations to document equivalent heat loss shall be performed using the procedure and approved *U*-values contained in Table N1104.1(1).

b. *R*-values used in this table are nominal for the insulation only in standard wood framed construction and not for the entire assembly.

c. Wall insulation requirements apply to all exterior wood framed, concrete or masonry walls that are above grade. This includes cripple walls and rim joist areas. R-19 Advanced Frame or 2 x 4 wall with rigid insulation may be substituted if total nominal insulation *R*-value is 18.5 or greater.

d. The wall component shall be a minimum solid log or timber wall thickness of 3.5 inches (90 mm).

e. Below-grade wood, concrete or masonry walls include all walls that are below grade and do not include those portions of such wall that extend more than 24 inches (609.6 mm) above grade.

f. Insulation levels for ceilings that have limited attic/rafter depth such as dormers, bay windows or similar architectural features totalling not more than 150 square feet (13.9 m²) in area may be reduced to not less than R-31. When reduced, the cavity shall be filled (except for required ventilation spaces).

g. The maximum vaulted ceiling surface area shall not be greater than 50 percent of the total heated space floor area unless area has a *U*-factor no greater than U-0.031. The *U*-factor of 0.042 is representative of a vaulted scissor truss. A 10-inch (254 mm) deep rafter vaulted ceiling with R-30 insulation is U-0.033 and complies with this requirement, not to exceed 50 percent of the total heated space floor area.

h. A = Advanced frame construction, which shall provide full required insulating value to the outside of exterior walls.

i. Heated slab's interior applies to concrete slab floors (both on and below grade) that incorporate a radiant heating system within the slab. Insulation shall be installed underneath the entire slab.

j. Sliding glass doors shall comply with window performance requirements. Windows exempt from testing in accordance with Section NP1111.2, Item 3 shall comply with window performance requirements if constructed with thermal break aluminum or wood, or vinyl, or fiberglass frames and double-pane glazing with low-emissivity coatings of 0.10 or less. Buildings designed to incorporate passive solar elements may include glazing with a *U*-factor greater than 0.35 by using Table N1104.1(1) to demonstrate equivalence to building envelope requirements.

k. Reduced window area may not be used as a trade-off criterion for thermal performance of any component.

l. Skylight area installed at 2 percent or less of total heated space floor area shall be deemed to satisfy this requirement with vinyl, wood or thermally broken aluminum frames and double-pane glazing with low-emissivity coatings. Skylight *U*-factor is tested in the 20 degree (0.35 rad) overhead plane in accordance with NFRC standards.

m. A maximum of 28 square foot (2.6 m²) of exterior door area per dwelling unit can have a *U*-factor of 0.54 or less.

n. Glazing that is either double pane with low-e coating on one surface, or triple pane shall be deemed to comply with this U-0.40 requirement.

TABLE N1101.1(2)
ADDITIONAL MEASURES

Conservation Measures (Select One)		Envelope Enhancement Measures (Select One)
		1 — High efficiency walls & windows: Exterior walls—U-0.047/R-19+5 (insulation sheathing)/SIPS, and one of the following options: Windows—Max 1.5 percent of conditioned area; or Windows—U-0.30
		2 — High efficiency envelope: Exterior walls—U-0.058/R-21 Intermediate framing, and Vaulted ceilings—U-0.033/R-30A[d], and Framed floors—U-0.025/R-38, and Windows—U-0.30; and Doors—All doors U-0.20, or Additional 15 percent of permanently installed lighting fixtures as high-efficacy lamps or Conservation Measure D and E
		3 — High efficiency ceiling, windows & duct sealings (Cannot be used with Conservation Measure E): Vaulted ceilings—U-0.033/R-30A[d], and Flat ceilings—U-0.025/R-49, and Windows—U-0.30, and Performance tested duct system[b]
		4 — High efficiency thermal envelope UA: Proposed UA is 15% lower than the Code UA when calculated in Table N1104.1(1)
		5 — Building tightness testing, ventilation & duct sealing: (Cannot be used with Conservation Measure H): A mechanical exhaust, supply, or combination system providing whole-building ventilation rates specified in Table N1101.1(3), or ASHRAE 62.2, and The dwelling shall be tested with a blower door and found to exhibit no more than: 1. 5.0 air changes per hour[c], and 2. Performance tested duct system[b]
		6 — Ducted HVAC systems within conditioned space: (Cannot be used with Conservation Measure B or C): All ducts and air handler are contained within 'building envelope'[j]
A		High efficiency HVAC system: Gas-fired furnace or boiler with minimum AFUE of 90% a, or Air-source heat pump with minimum HSPF of 8.5 or Closed-loop ground source heat pump with minimum COP of 3.0
B		Ducted HVAC systems within conditioned space: All ducts and air handler are contained within 'building envelope'[j]
C		Ductless heat pumps: Replace electric resistance heating in at least the primary zone of dwelling with at least one ductless mini-split heat pump having a minimum HSPF of 8.5. Unit shall not have integrated backup resistance heat, and the unit (or units, if more than one is installed in the dwelling) shall be sized to have capacity to meet the entire dwelling design heat loss rate at outdoor design temperature condition. Conventional electric resistance heating may be provided for any secondary zones in the dwelling. A packaged terminal heat pump (PTHP) with comparable efficiency ratings may be used when no supplemental zonal heaters are installed in the 'building envelope' backup resistant heat is allowed in a PTHP
D		High efficiency water heating & lighting: Natural gas/propane, on-demand water heating with min EF of 0.80, or heat pump water heater with min EF of 1.8 (northern climate) and a minimum 75 percent of permanently installed lighting fixtures as CFL or linear fluorescent or a min efficacy of 40 lumens per watt as specified in Section N1107.2[e]
E		Energy management device & duct sealing: Whole 'building energy management device that is capable of monitoring or controlling energy consumption, and Performance tested duct systems[b], and A minimum 75 percent of permanently installed lighting fixtures as high-efficacy lamps.
F		Solar photovoltaics: Minimum 1 watt/sq ft conditioned floor space[k]
G		Solar water heating: Minimum of 40 ft² of gross collector area[k]

For SI: 1 square foot = 0.093 m², 1 watt per square foot = 10.8 W/m².

a. Furnaces located within the 'building envelope' shall have sealed combustion air installed. Combustion air shall be ducted directly from the outdoors.

b. Documentation of Performance Tested Ductwork shall be submitted to the building official upon completion of work. This work shall be performed by a 'technician certified' by the Performance Tested Comfort Systems (PTCS) program administered by the Bonneville Power Administration (BPA), documentation shall be provided that work demonstrates conformance to 'PTCS duct performance standards.

c. Section N1107.3 requires 50 percent of permanently installed lighting fixtures to contain high efficacy lamps. Each of these additional measures adds an additional percent to the Section N1107.2 requirement.

d. A = advanced frame construction, which shall provide full required ceiling insulation value to the outside of exterior walls.

e. The maximum vaulted ceiling surface area shall not be greater than 50 percent of the total heated space floor area unless vaulted area has a *U*-factor no greater than U-0.026.

f. Building tightness test shall be conducted with a blower door depressurizing the dwelling 50 Pascal's from ambient conditions. Documentation of 'blower door test shall 'be submitted to the Building Official upon completion of work.

g. Solar electric system size shall include documentation indicating that Total Solar Resource Fraction is not less than 75 percent.

h. Solar water heating panels shall be Solar Rating and Certification Corporation (SRCC) Standard OG-300 certified and labeled, with documentation indicating that Total Solar Resource Fraction is not less than 75 percent.

i. A total of 5 percent of an HVAC systems ductwork shall 'be permitted to 'be located outside of the conditioned space. Ducts located outside the conditioned space shall have insulation installed as required in this code.

NAIL & ATTACHMENT SCHEDULE

ENERGY SCHEDULE

CITY OF GRESHAM
APPROVED
Permit No: BP14-00003750
Date: 4/20/15
THESE PLANS SHALL BE ON THE JOB SITE FOR ALL REQUESTED INSPECTIONS

BDG
BENTHIN DESIGN GROUP LLC
20337 S. BUTTE ROAD PO BOX 42
BEAVERCREEK, OREGON USA 97004
503-632-2862 1-800-698-9144
EMAIL: INFO@BENDG.COM
WEBSITE: WWW.BENDG.COM

TOWN HOUSES R302.2

BUILDING 7 (3 UNIT)
UNIT A - 4 BR
UNIT B - 2 BR
UNIT C - 3 BR

PROJECT NAME:
GLISAN GARDENS

CONTRACTOR/OWNER NAME:
HABITAT FOR HUMANITY

PROJECT INFORMATION:

HABITAT FOR HUMANITY
PORTLAND / METRO EAST
1478 NE KILLINGSWORTH STREET
PORTLAND, OREGON 97211
503-287-9539

GLISAN GARDENS
NE 165TH AVENUE & NE GLISAN STREET
GRESHAM, OREGON 97230
MULTNOMAH COUNTY

PAGE TITLES:
SCHEDULES

SCHEDULES:
- NAIL/ATTACHMENT
- ENERGY

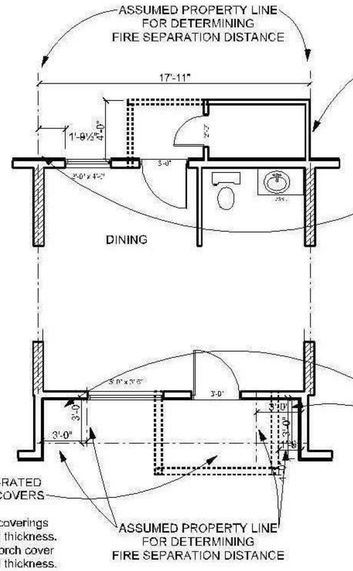
PLANS TO SCALE ON 24"x36 SHEETS

PROJECT NUMBER:	
ORIGINAL DATE:	MAY 2014
REVISION DATE:	4-1-2015
PAGE NUMBER:	12
REFERENCE NUMBER:	12.0

CITY OF GRESHAM
APPROVED
Permit No: BP14-00003750
Date: 5/12/15
THESE PLANS SHALL BE ON THE JOB SITE FOR ALL REQUESTED INSPECTIONS

BP-00003750
GLISAN GARDENS PROJECT

ORSC 2011-14
SECTION R302
FIRE-RESISTANT CONSTRUCTION



R302.2.2.3 FIRE-RESISTIVE-RATED
SEPARATION FOR PORCH COVERS
EXCEPTION #2
2.1 Supporting posts for porch coverings
shall be a minimum of 6" nominal thickness.
2.2 Joists / Beams supporting porch cover
shall be a minimum of 4" nominal thickness.
2.3 Roof sheathing
shall be a minimum of 2" nominal thickness.
The heavy timber porch cover shall be open construction

BUILDINGS 6, 7 & 8
MAIN LEVEL

R302.1 EXTERIOR WALLS
TABLE R302.1 EXTERIOR WALLS
Walls - 1 Hour tested in accordance with
ASTMe119 or UL263 with exposure from both sides.
EXCEPTION 1:
Walls, projections, openings or penetrations in
walls perpendicular to the line used
to determine the fire separation distance.

1 HR RATED WALL FROM GRADE
TO ROOF DECK - END WALL ONLY.
DRICON FIRE-RATED PLYWOOD 4 FT MIN
IN FROM ASSUMED PROPERTY LINE
3" MINIMUM ROCK WOOL IN WALL CAVITY
5/8" TYPE X DRYWALL INTERIOR SURFACE
FIRE TAPE JOINTS

R302.1 FIRE RESISTANT CONSTRUCTION
R302.1 EXCEPTION 1
Walls, projections, openings or pentrations in walls
perpendicular to the line used to determine the
fire separation distance are not required to meet
the requirements of TABLE 302.1 EXTERIOR WALLS

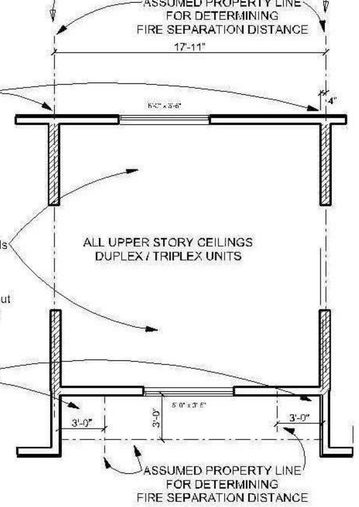
R302.2.4.1 FIRE RESISTANCE RATED
ROOF / CEILING CONSTRUCTION.
Roof / Ceiling assemblies intersecting common
fire-resistance-rated individual townhouse unit separation walls
may be constructed in accordance with this section.
OPTION: ITEM #5
As a alternative to itens 1 through 4,
the entire ceiling of the upper sotry shall be protected throughout
with two layers of 5/8" Type X Gypsum board as required for
a 1 hour fire resistive roof / ceiling assembly

ORSC 2011 - 14
PER TABLE R302.1 EXTERIOR WALLS
Less that 3 feet from a parallel assumed property line:
1 hour - tested in accordance with ASTM E 119 or UL263
with exposure from both sides.
No openings within 3 feet of parallel assumed property line.
USE DESIGN NO. U303 per ANSI / UL 263
STUDS @ 16" OC MAXIMUM
5/8" TYPE X FIRE-RATED DRYWALL
MIN 3" THICK MINERAL WOOL BATTS
MIN 15/32" X 4 FT WIDE STRUCTURAL SHEATHING
MIN 1/2" CEMENTITIOUS BACKER BOARD

Habitat for Humanity - Portland / Metro East
David Bonn, Director of Housing Development
1478 NE Killingsworth Street Portland, OR 97211
503.287.9529 x 15

BUILDINGS 6, 7 & 8
MAIN LEVEL

ASSUMED PROPERTY LINES FOR
BUILDINGS 1, 2, 3, 4, 5, 9, 10 AND 11
AT BOTH FRONT AND REAR
COMMON WALL INTERSECTIONS
ADJACENT WALLS - BOTH UNITS
PERPENDICULAR TO THE
ASSUMED PROPERTY LINES



BUILDINGS 6, 7 & 8
UPPER LEVEL

UNIT SEPARATION DETAILS

BENTHIN DESIGN GROUP LLC
20337 S. BUTTE ROAD PO BOX 42
BEAVERCREEK, OREGON USA 97004
503-632-2862 1-800-698-9144
EMAIL: INFO@BENDG.COM
WEBSITE: WWW.BENDG.COM

TOWN HOUSES
R302.2

BUILDING 8
(3 UNIT)
UNIT A - 4 BR
UNIT B - 2 BR
UNIT C - 3 BR

PROJECT NAME:
GLISAN GARDENS

CONTRACTOR/OWNER NAME:
HABITAT FOR HUMANITY

PROJECT INFORMATION:

HABITAT FOR HUMANITY
PORTLAND / METRO EAST
1478 NE KILLINGSWORTH STREET
PORTLAND, OREGON 97211
503-287-9539

GLISAN GARDENS
NE 165TH AVENUE & NE GLISAN STREET
GRESHAM, OREGON 97230
MULTNOMAH COUNTY

PAGE TITLES:
DETAILS

DETAILS:
- SEPARTION DETAIL

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