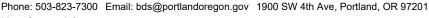
## **Development Services**

### From Concept to Construction



More Contact Info (http://www.portlandoregon.gov//bds/article/519984)





#### APPEAL SUMMARY

Status:	Decision	Rendered
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Appeal ID: 20526	Project Address: 6521-23-25 SE 78th Ave
Hearing Date: 6/12/19	Appellant Name: Gerry Engler
<b>Case No.</b> : B-018	Appellant Phone: 503-227-0440
Appeal Type: building	<b>Plans Examiner/Inspector:</b> John Stelzenmueller, David Bartley
Project Type: commercial	Stories: 2 Occupancy: R-2 Construction Type: V-B
Building/Business Name:	Fire Sprinklers: No
Appeal Involves: Erection of a new structure	LUR or Permit Application No.: 17-135775-CO
Plan Submitted Option: pdf [File 1]	Proposed use: 3 attached townhouses

#### APPEAL INFORMATION SHEET

#### Appeal item 1

Code Section	OSSC 2014 302.1.502. 708.4 and 718

Requires	The commercial code sections per OSSC 2014 302 1 502, 708 4 and 718 require 13R fire	
Requires	The commercial code sections per USSC 2014 302 1 502 708 4 and 718 require 13R fire	,

sprinklers in a R2 occupancy.

## **Proposed Design** We are asking to revise the original permit from the commercial permit error to the townhouse

project by simply adding 2-hour fire partitions per the attached 2-hour wall details and delete the

sprinklers.

The commercial code sections per OSSC 2014 302.1.502, 708.4 and 718 require 13R fire sprinklers in a R2 occupancy. We should be allowed to do a revision to the approved commercial permit to use ORSC 2014 code section R302.2, 2 & 3. We can use the 2-hour fire partition walls allowed in a townhouse project to eliminate the fire sprinklers and hydrant.

#### Reason for alternative Owners/Applicants Narrative RE: code appeal.

6521-23-25 SE 78th. Permit 2017-135775-000-00-CO

Request: To qualify/build the party walls between the units as 2-hour walls and eliminate the fire sprinkler system.

This appeal should be granted since the issue was is merely been created by paperwork and is not a real deviation from the code.

The 2011 Oregon Residential Specialty Code (the code at the time this plan was submitted for building permits) has a definition for a Townhouse and this project fits that definition.

Section R.302.2.2 & 3 allow construction without a fire sprinkler system if the units are separated by a 2-hour wall. This unit contains a 2-hour wall based on the design and layers of drywall but it is mis- labeled a 1-hour wall. (WP 3110) A diagram of a 2-hour wall is attached (UL U334) and our diagram exceeds the specifications of that wall even though our wall in the plan is called out a

1-hour wall. We propose building UL U334.

#### History:

The owner was misled by the City intake staff when they insisted the triplex be submitted as a commercial project rather than the residential town house project that it is. This has caused needless expense on the thousands of dollars due to the commercial code requiring 13R fire sprinklers and a new fire hydrant.

On 03-30-17 this plan was submitted to the city. At the second screen we were asked if we wanted to process this as a 1-2 family townhouse. I said yes but that the units were not rowhouses with property lines. The intake person checked with a superior and was told emphatically NO. No property lines mean this is a commercial 3-plex. In my ignorance and relying on the city staff's expertise I submitted as a commercial 3-plex. This created a whole host of escalating issues and requirements, including the need to provide fire sprinklers to the building.

On or just prior to 8-24-18 as we were trying to get the permit issued, we were told that the fire marshal's office had not completely signed off. We met with Jeff Herman, the fire marshal on duty, for corrections and a sign off. He asked us why we were even fire sprinkling the building??? I told him because it was not a rowhouse with property lines and we were told we had to. He replied that he has regularly seen townhouses without property lines approved without fire sprinklers. We checked with fire-life-safety and they told us that Jeff Herman was wrong. We asked to double check. They asked a senior plans examiner and that person told them that there was no way that this building was exempt from all the commercial requirements including a fire sprinkler system. They were all wrong and Jeff Harmon was right. Only in the last couple of months and after looking at the plans of similar projects I found out about "Townhouse" construction without property lines. (See city stamp from plan excerpt of a similar 3-unit building.)

This problem was created solely by our ignorance and the city's mis-information. This adjustment complies completely with the spirit of the code as outlined in 302.2.

This adjustment should be granted. Attachments:

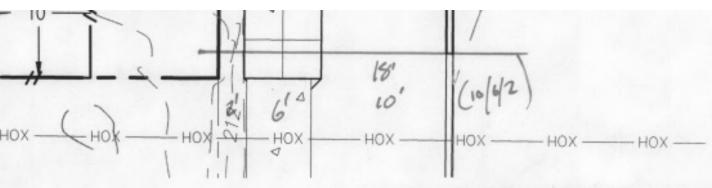
- City stamp from plan excerpt of a similar 3-unit building.
- Plan excerpt. Detail WP 3110
- · Wall detail UL U334

#### APPEAL DECISION

Change of permit type from commercial to residential: Denied. Proposal does not provide equivalent Life Safety protection.

Appellant may contact John Butler (503 823-7339) with questions.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 180 calendar days of the date this decision is published. For information on the appeals process and costs, including forms, appeal fee, payment methods and fee waivers, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.



TOWNHOUSE CONSTRUCTION

Street Tree Requirements: iper Street Trees Required. Urban Forestry guidelines. 733 for more information.

Each townhouse shall be considered a separate building and shall be separated by a 2-hour fire-resistive rated wall assembly. Utilities serving a townhouse shall not run beneath another townhouse. Through penetrations in fire-resistive exterior walls, privacy walls, and individual townhouse separation walls are not permitted. Per ORSC 2001 Sec. 302.2, 302.2.1.2 and 302.4.1.

THE EXISTENCE AND UTILITIES OR STRUCTURE OBTAINED BY A SEARCH BEST OF OUR KNOWLEDGE EXCEPT THOSE SHOWN OF THE CONTRACTOR FURE RESPONSIBILITY FOR STRUCTURES SHOWN OF

## GA FILE NO. WP 3110

# GYPSUM WALLBOARD, RESILIENT CHANNELS, MINERAL FIBER INSULATION, WOOD STUDS

RESILIENT CHANNELS 24" O.C. ATTACHED AT RIGHT ANGLES TO "ONE SIDE" OF 2x4 WOOD STUDS 16" WITH 1"
TYPE "S" DRYWALL SCREWS. BASE LAYER 5/8" TYPE "X" GYPSUM WALLBOARD OR GYPSUM VENEER BASE
APPLIED AT RIGHT ANGLES TO CHANNELS WITH 1" TYPE "S" DRYWALL SCREWS 12" O.C. FACE LAYER 5/8"
TYPE "X" GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED AT RIGHT ANGLES TO CHANNELS WITH
3/4" DAUBS OF ADHESIVE 12" O.C. VERTICALLY AND HORIZONTALLY.

OPPOSITE SIDE: BASE LAYER 5/8" TYPE "X" GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED PARALLEL TO STUDS WITH 5d COATED NAILS. 1-5/8" LONG, Ø.Ø86" SHANK, 15/64" HEADS, 32" O.C. SECOND LAYER 1/2" TYPE "X" GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED PARALLEL TO STUDS WITH 8d COATED NAILS, 2-3/8" LONG, Ø.113" SHANK, 9/32" HEADS, 12" O.C. FACE LAYER 1/4" REGULAR GYPSUM WALLBOARD APPLIED PARALLEL TO SUDS WITH 3/4" DAUBS OF ADHESIVE 12" O.C. VERITICALLY AND HORIZONTALLY. 2" GLASS FIBER INSULATION, Ø.9Ø PCF, STAPLED TO THREE LAYER SIDE IN STUD SPACE.

JOINTS STAGGERED 16" EACH LAYER AND SIDE (LOAD BEARING)

FIRE PARTITION

\* REFER TO CONNECTIONS DETAIL 7/AIØ

HOUR 55 to 59 STC FIRE SOUND

THICKNESS: APPROX. WEIGHT: 6-3/4" 2 PSF

FIRE TEST:

UL R3660-2, 12-3-68,

UL DESIGN U313,

SOUND TEST: RAL TL69-286, 620-68

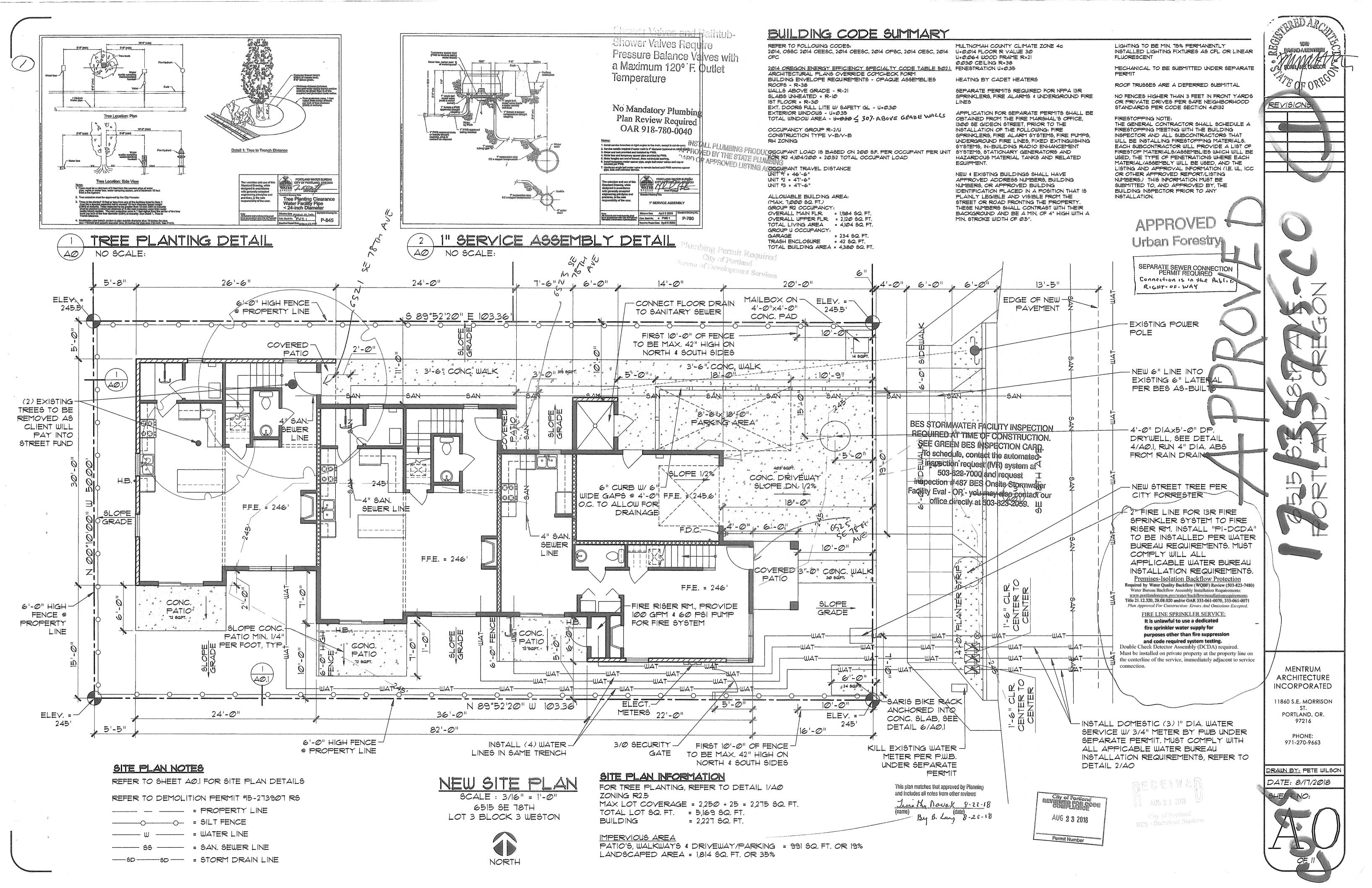
(REV. 9-4-68)

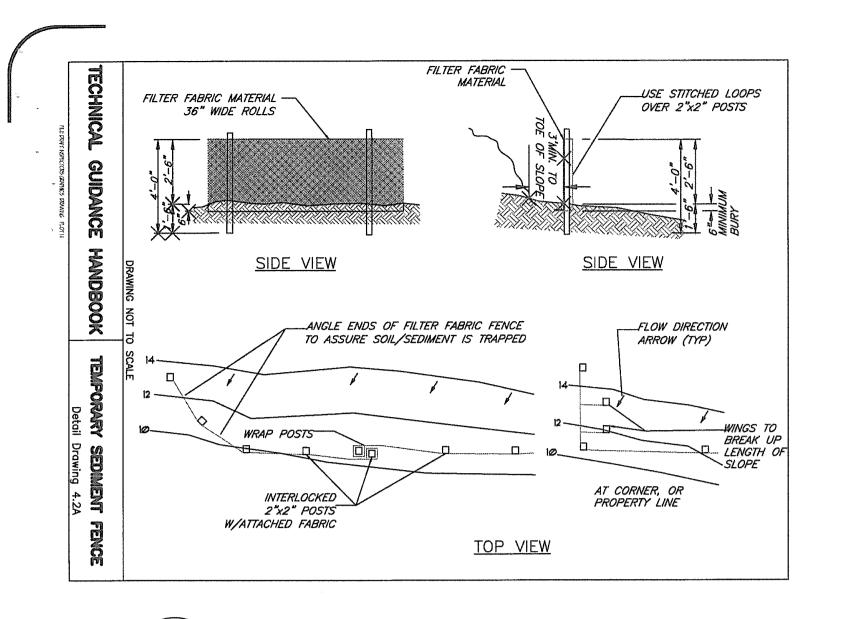


88'-0"

24'-0"

7'-6"





**BES Pollution Prevention:** If any de-watering is proposed to be discharged into a City sanitary or storm sewer system,

pre-authorization MUST be obtained from the

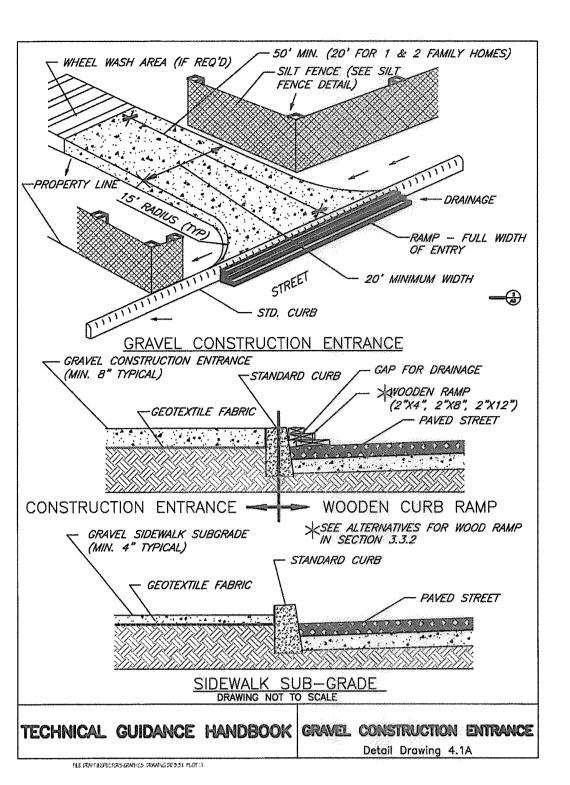
BES Pretreatment of Stormwater Programs.

Call 503-823-7122 for more information.

SILT FENCE DETAIL

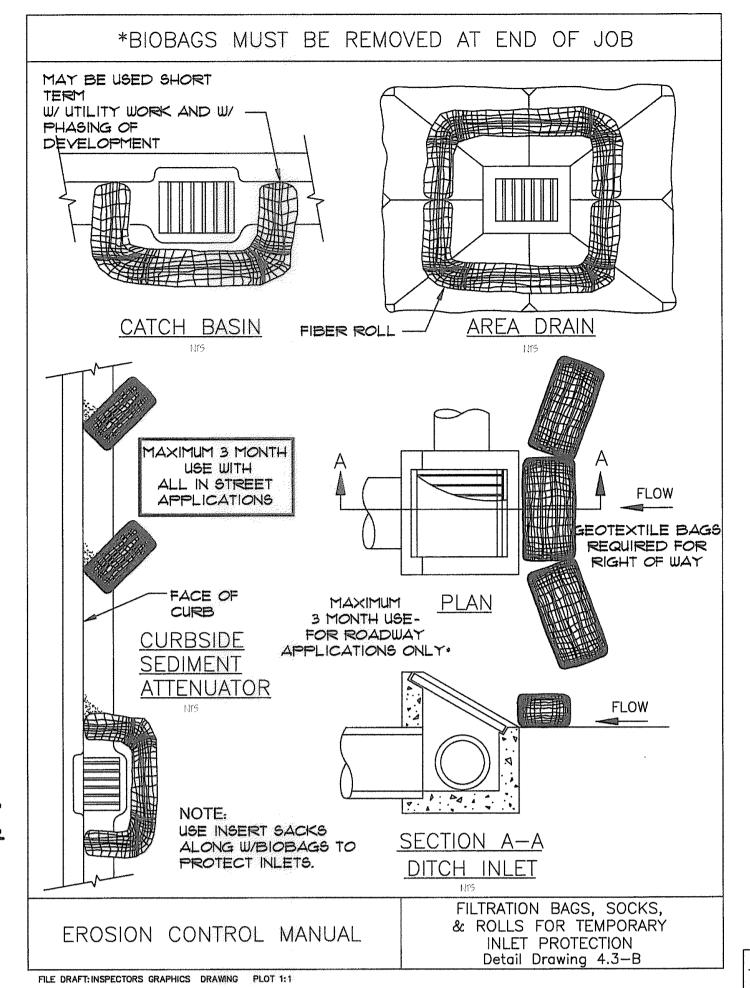
NO SCALE:

BES Pollution Prevention Approved By: andie M Date: 9-21-17 By 8 Lany 8-22-18

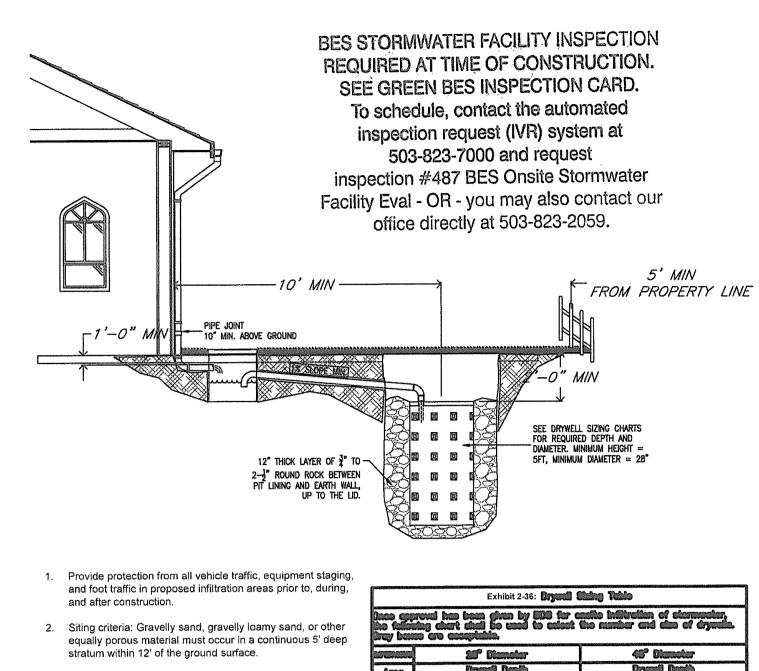












3. Sizing: Exhibit 2-36 is used to appropriately size the drywell(s) based on the amount of impervious area that each drywell is designed to manage. This chart shall be used as guidance, is based on field experience, and should be used as minimums only. 4. Drywell shall not be installed where base of facility has less

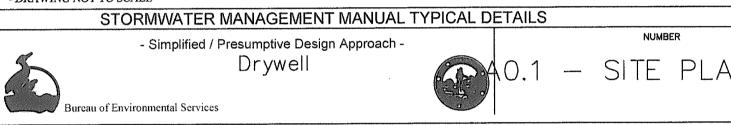
than 10' of separation to water table. 5. Top of drywell must be below lowest finished floor.

6. Setbacks (from center of facility): a. 10' from foundations

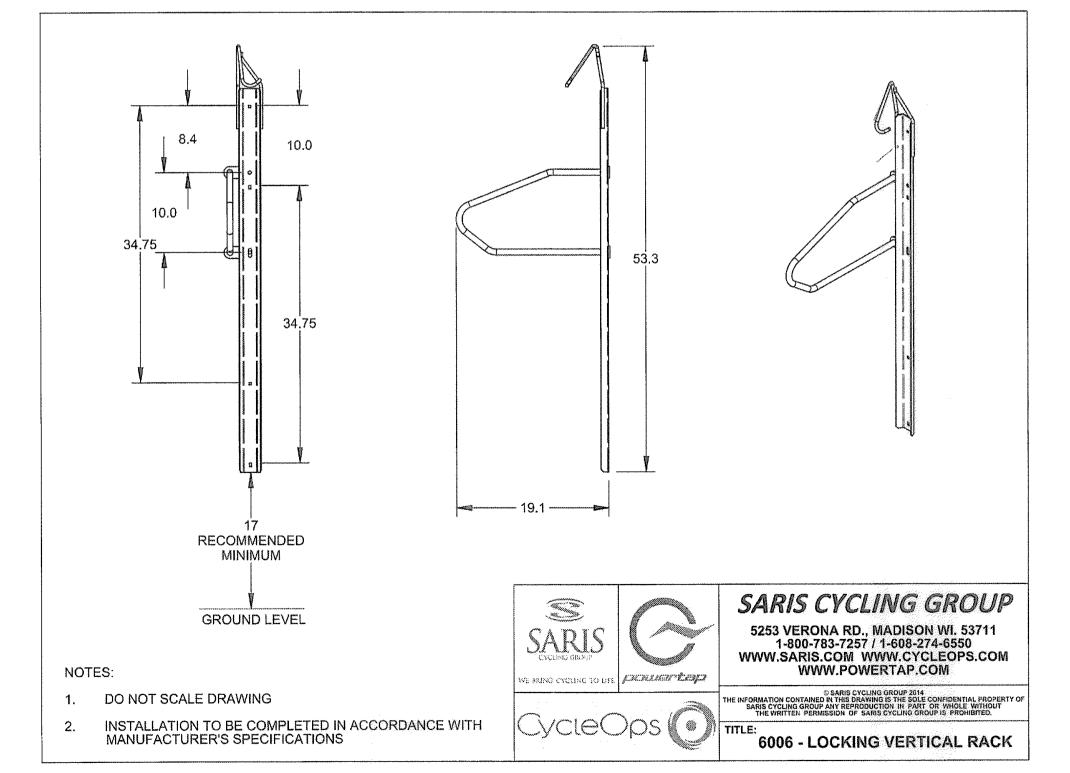
b. 5' from property lines c. 20' from cesspools. 7. Piping shall be ABS SCH40, cast iron, or PVC SCH40. 3" pipe must be used for up to 1500sf of impervious area,

otherwise 4" minimum. Piping must have 1% grade and

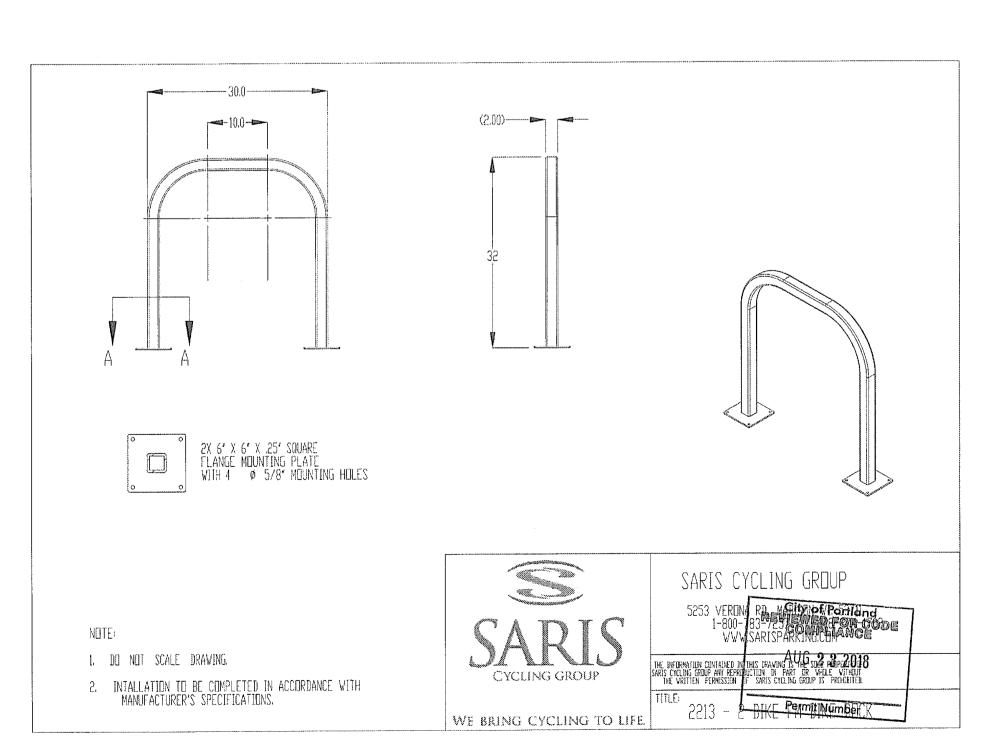
must follow current Uniform Plumbing Code. - DRAWING NOT TO SCALE -













MUNICA REVISIONS:

MENTRUM ARCHITECTURE **INCORPORATED** 

11860 S.E. MORRISON PORTLAND, OR. 97216

> PHONE: 971-270-9663

DRAUN BY: PETE WILSON

DATE: 9/26/17 SHEET NO:

MENTRUM ARCHITECTURE

**INCORPORATED** 

11860 S.E. MORRISON

ST. PORTLAND, OR.

97216

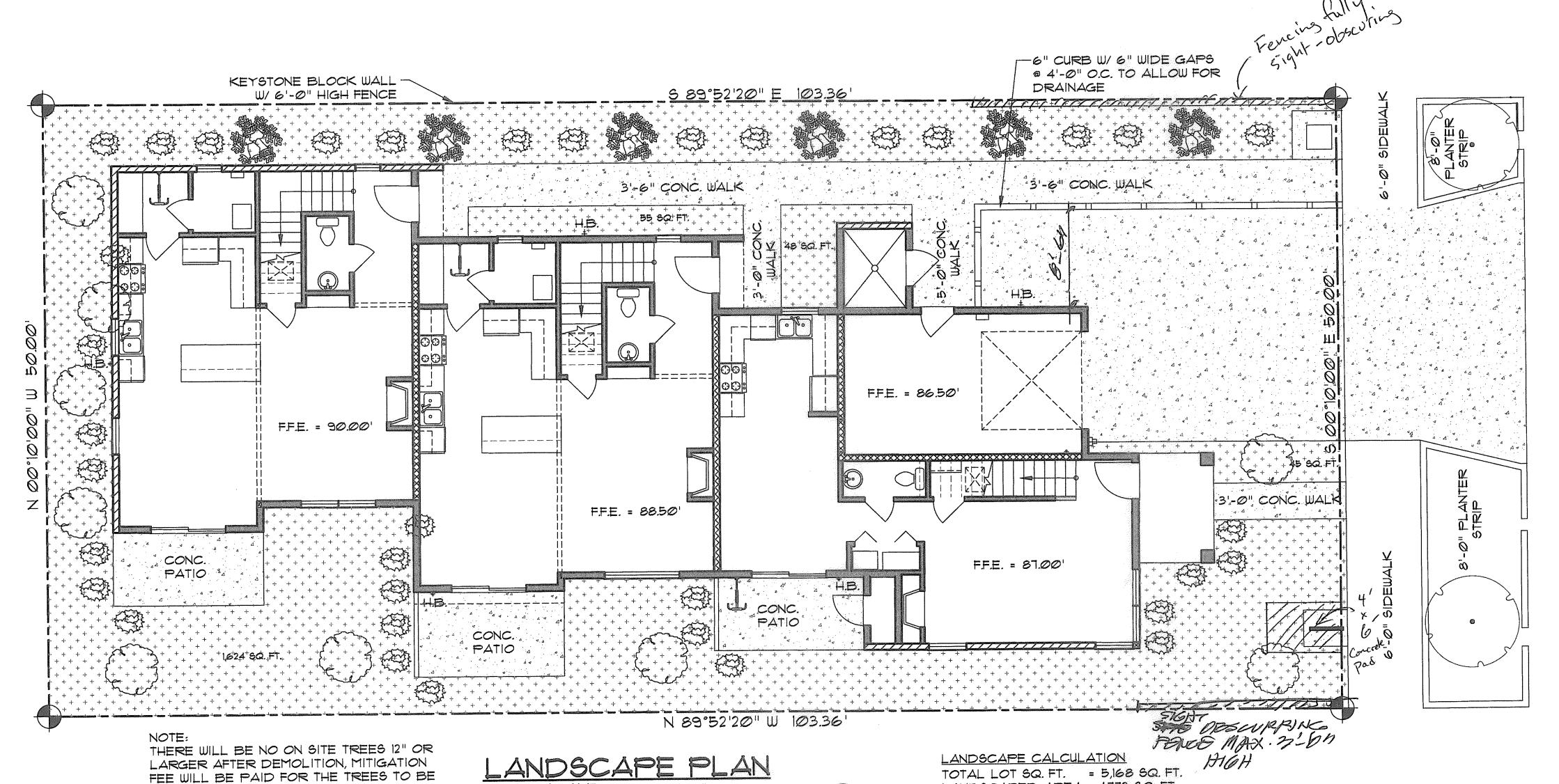
PHONE:

971-270-9663

DRAWN BY: PETE WILSON

REVISIONS:

This plan matches that approved by Planning and includes all notes from other reviews Timith, Novak \$1-29-17 By B. Lary 8-23-18



NORTH

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

6515 SE 78TH

LOT 3 BLOCK 3

WESTON

REMOVED

LANDSCAPED AREA = 1,772 SQ. FT.

LANDSCAPE NOTES:

IRRIGATION: HAND WATERED BY HOSE

WEST SIDE

RED MAPLE 2" CALIPER "ACER RUBRUM" @ 15' O.C., 15%

GINKGO MAIDEN HAIR TREE "GINKGO BILOBA" @ 5' O.C., 15% SOUTH SIDE

LINDEN LITTLE LEAF "TILIA CORDATH" 20'-0" O.C.

PONDEROSA PINE "PINUS PONDEROSA" 6' TALL

SHRUBS:

3 GAL. ABELIA "ABELIA GOUCHER" 6'-0" O.C. WEST SIDE

3 GAL. DAPHNE "DAPHNE TANGUTILA" 3'-0" O.C. MOCK ORANGE "PHILADEPHUS LEWISSI" 3'-0" O.C.

GROUND COVER:

SOUTH & WEST SIDE CALIFORNIA LILAC "CEANOTHUS GLORIOSUS" 3'-0" O.C. NORTH & EAST SIDE

PURPLE LEAF CREAPER "EUONYMUS FORTUNES" 3'-0" O.C.

# PLANT LIST

PLANTS, SHRUBS, SMALL TREES AND GROUNDCOVER MUST COVER MIN 90% OF PLANTERS. LANDSCAPING TO MEET "LI" STANDARDS

LANDSCAPE TO BE WATERED BY HAND W/ HOSE

GROUND COVER

SHRUBS, REFER TO LANDSCAPE NOTES FOR TYPE AND LOCATION



TREE, REFER TO LANDSCAPE NOTES FOR TYPE AND LOCATION



TREE, REFER TO LANDSCAPE NOTES FOR TYPE AND LOCATION



CITY FORRESTER

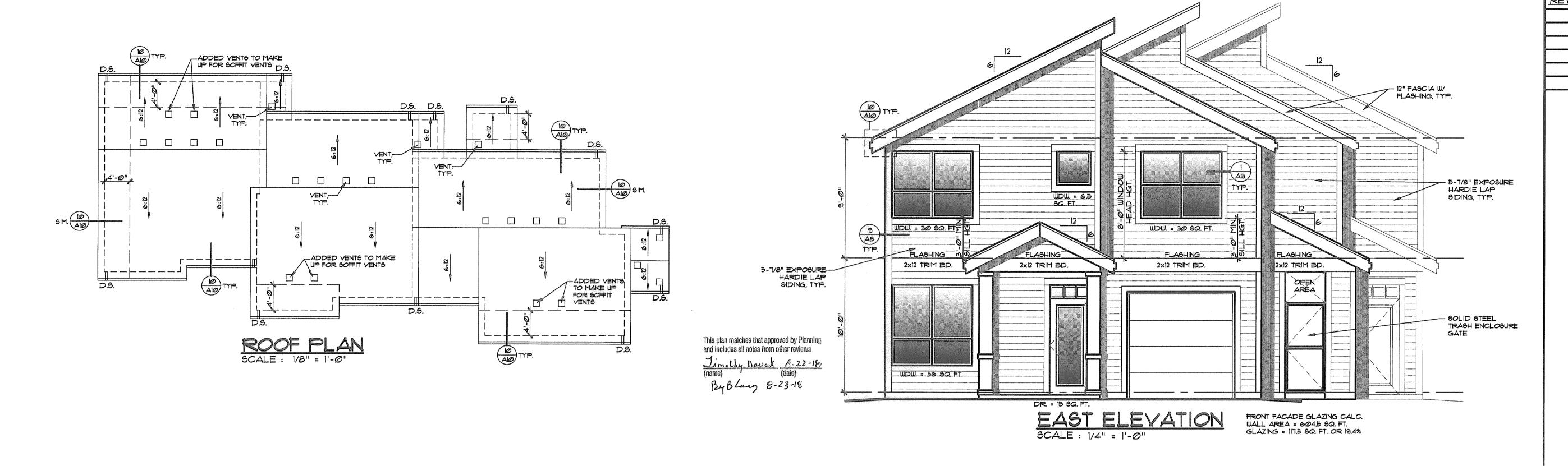


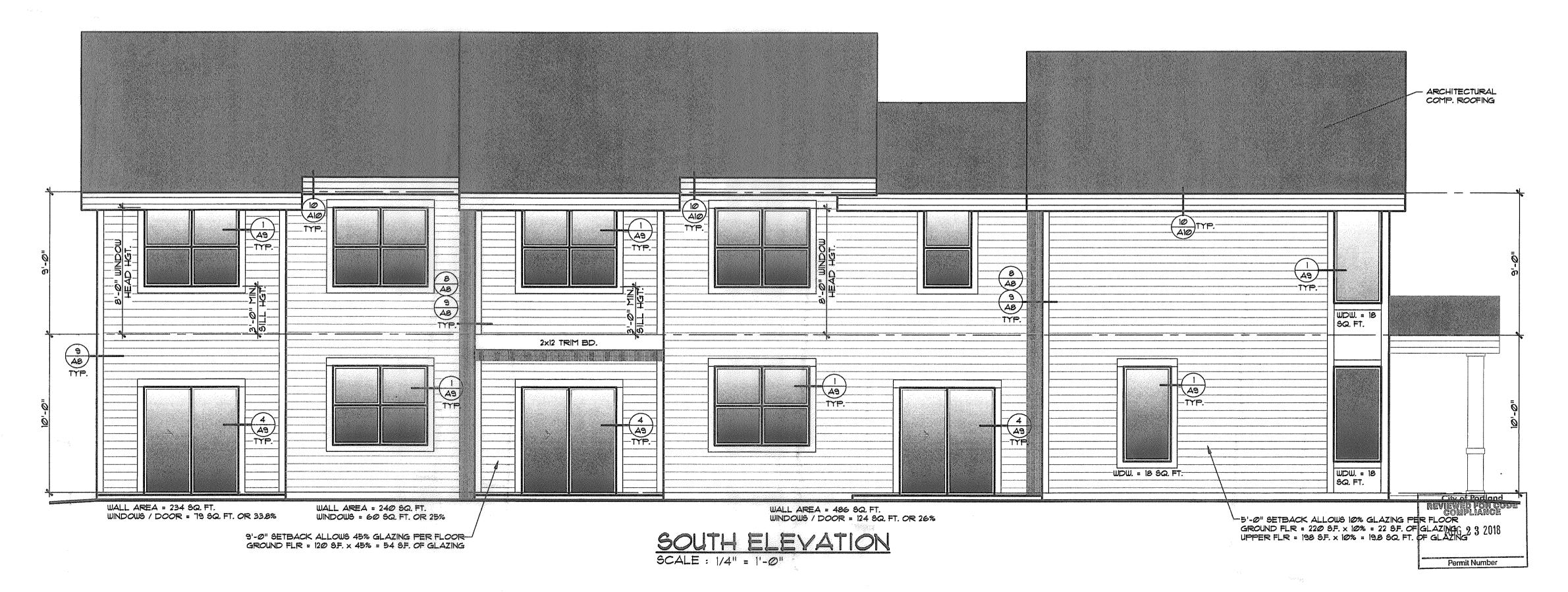
STREET TREES TO BE APPROVED BY

AUG 2 3 2018

Permit Number

DATE: 9/26/17 SHEET NO:





REVISIONS:

MENTRUM ARCHITECTURE INCORPORATED

11860 S.E. MORRISON ST. PORTLAND, OR. 97216

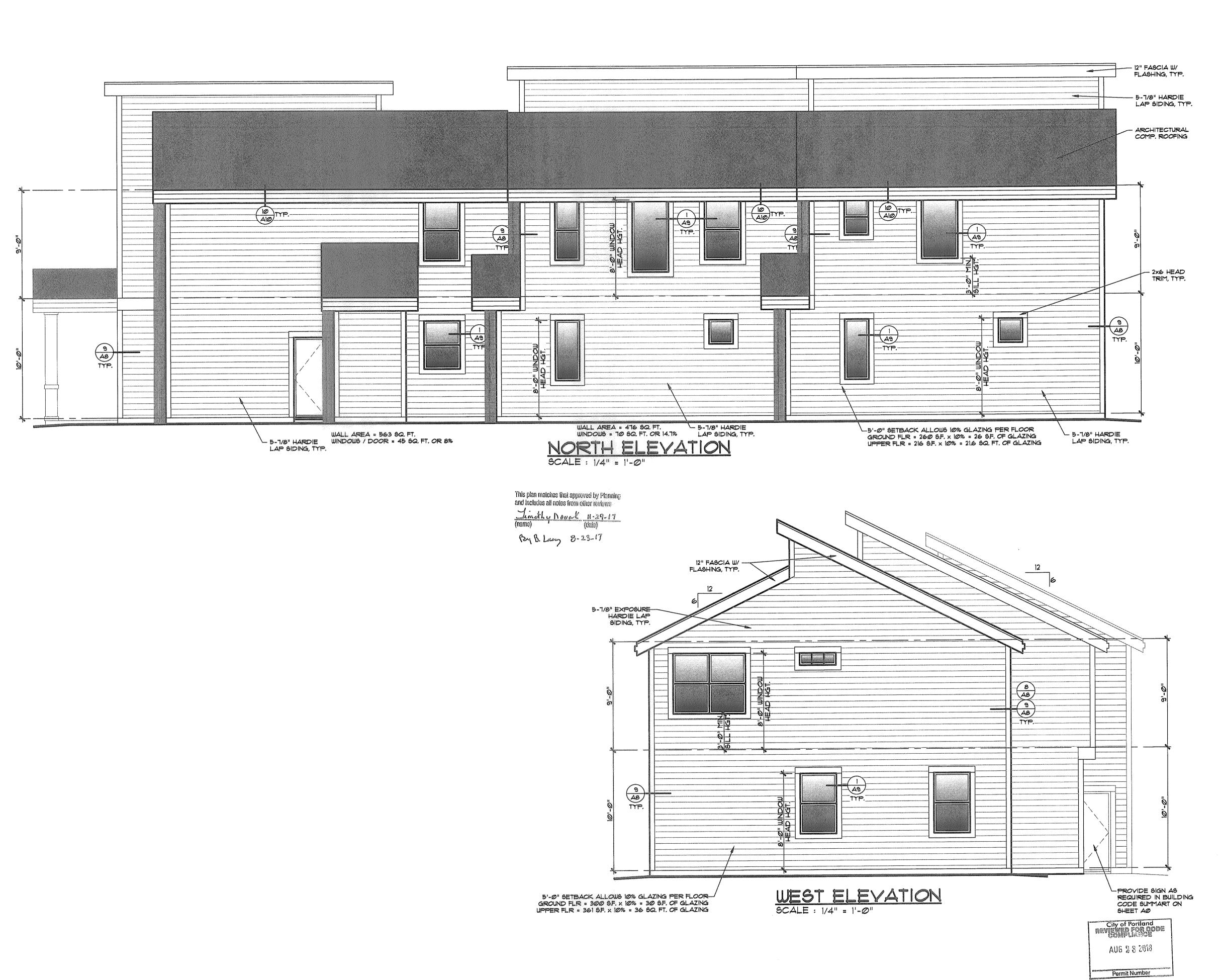
> PHONE: 971-270-9663

DRAWN BY: PETE WILSON

DATE: 1/22/2018

SHEET NO:

OF 11



REVISIONS:

Q

MENTRUM ARCHITECTURE INCORPORATED

11860 S.E. MORRISON ST. PORTLAND, OR. 97216

> PHONE: 971-270-9663

DRAWN BY: PETE WILSON

DATE: 9/26/17 SHEET NO:

OF 11

# GA FILE NO. WP 3110

GYPSUM WALLBOARD, RESILIENT CHANNELS, MINERAL FIBER INSULATION, WOOD STUDS

RESILIENT CHANNELS 24" O.C. ATTACHED AT RIGHT ANGLES TO "ONE SIDE" OF 2x4 WOOD STUDS 16" WITH 1" TYPE "S" DRYWALL SCREWS. BASE LAYER 5/8" TYPE "X" GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED AT RIGHT ANGLES TO CHANNELS WITH 1" TYPE "S" DRYWALL SCREWS 12" O.C. FACE LAYER 5/8" TYPE "X" GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED AT RIGHT ANGLES TO CHANNELS WITH 3/4" DAUBS OF ADHESIVE 12" O.C. VERTICALLY AND HORIZONTALLY.

OPPOSITE SIDE: BASE LAYER 5/8" TYPE "X" GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED PARALLEL TO STUDS WITH 5d COATED NAILS. 1-5/8" LONG, 0.086" SHANK, 15/64" HEADS, 32" O.C. SECOND LAYER 1/2" TYPE "X" GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED PARALLEL TO STUDS WITH 8d COATED NAILS, 2-3/8" LONG, Ø.113" SHANK, 9/32" HEADS, 12" O.C. FACE LAYER 1/4" REGULAR GYPSUM WALLBOARD APPLIED PARALLEL TO SUDS WITH 3/4" DAUBS OF ADHESIVE 12" O.C. VERITICALLY AND HORIZONTALLY. 2" GLASS FIBER INSULATION, 0.90 PCF, STAPLED TO THREE LAYER SIDE IN STUD SPACE.

JOINTS STAGGERED 16" EACH LAYER AND SIDE (LOAD BEARING)

FIRE PARTITION \* REFER TO CONNECTIONS DETAIL 7/A10 1 HOUR 55 to 59 STC SOUND

THICKNESS: APPROX. WEIGHT: FIRE TEST:

SOUND TEST:

6-3/4" 2 PSF UL R3660-2, 12-3-68, UL DESIGN U313, RAL TL69-286, 620-68

(REV. 9-4-68)

GA FILE NO. WP 8130

1 HOUR

GYPSUM WALLBOARD, GLASS MAT GYPSUM SUBSTRATE, WOOD STUDS

EXTERIOR SIDE: One layer 5/8" proprietary type X glass mat gypsum substrate (sheathing) applied parallel or at right angles to 2 x 4 wood study 16" o.c. with galvanized roofing nails, 13/4" long, 0.128" shank, 1/16" head, 7" o.c. Exterior surface covered with weather exposed cladding or finish system.

INTERIOR SIDE: One layer 5/8" proprietary type X glass mat gypsum substrate, glass mat water-resistant gypsum backing board, gypsum wallboard, water-resistant gypsum backing board, or gypsum veneer base applied parallel or at right angles to studs with 6d coaled nails, 17/s" long, 0.0915" shank, 1/4" heads, 7" o.c.

Joints staggered on opposite sides. (LOAD-BEARING)

PROPRIETARY GYPSUM BOARD

G-P Gypsum Lafarge North America Inc. 5/6" Dens-Glass Gold® Fireguard® 5/s" Firecheck® FIRE

Thickness: Approx. Weight: 71/2 psf Fire Test: WI-II-495-0702, 8-7-85; WHI-495-0703, 8-8-85; UL R2717, 89NK3419,

8-29-89, UL Designs U337 & U305

**EXTERIOR WALLS** 

RATED WALL ASSEMBLY
NO SCALE:

DOOR SCHEDULE

ALL DOORS TO HAVE ADA 4 ANSI APPROVED LEVER HARDWARE

(1) 3'-0"x6'-8" FULL LIGHT FIBERGLASS DOOR W/ SAFETY GLASS

2) 2'-6"x6'-8" STEEL 20 MIN. RATED DOOR

(3) 2'-6"x6'-8" PRE-FINISH WOOD W/ PASSAGE HARDWARE

4 2'-4"x6'-8" PRE-FINISH WOOD W/ PRIVACY LOCK

(5) 2'-4"x6'-8" PRE-FINISH WOOD

(6) 2'-6"x6'-8" PRE-FINISH WOOD

(7) 5'-0"x6-8" BI-FOLD PRE-FINISH WOOD

8 3'-0"x6-8" BI-FOLD PRE-FINISH WOOD

(9) 3'-0"x6'-8" STEEL GATE WITH CARD KEY

FLOOR PLAN NOTES

5/8" GREEN BD. GYP. BD. REQUIRED BEHIND ALL TUBS, SHOWERS, WATER HEATERS, KITCHEN SINKS & WASHER / DRYERS

USE CAST IRON WASTE LINES & DOWNSPOUT

ALL PENETRATIONS AND DUCTS THRU AN EXTERIOR FIRE RATED WALL REQUIRE PROTECTED OPENINGS.

FOR TYPICAL WALL CONNECTIONS REFER TO DETAIL VAID

O = SMOKE DETECTOR W/ BACKUP BATTERY

= EXHAUST FAN, VENT TO OUTSIDE AIR, @ SECOND FLOOR VENT TO ROOF OF BUILDING

= EXHAUST FAN W/ HEAT LAMP, VENT TO OUTSIDE AIR, @ SECOND FLOOR VENT TO

ROOF OF BUILDING = CARBON MONOXIDE DETECTOR WITHIN 15'-0" OF ANY BEDROOM

# WALL MOUNTED GAS WATER HEATER

GAS W/H

CH = CADET HEATER

 □ ■ BEARING POINT, REFER TO FLOOR FRAMING PLANS FOR SIZE

A = REFER TO SHEARWALL SCHEDULE ON SHEET A4

= REFER TO HOLDOWN SCHEDULE ON SHEET A4

WALL LEGEND

= TYP. 2x WALL CONSTRUCTION SEE DETAIL 4/AIØ, UN.O.

= FIRE PARTITION CONSTRUCTION SEE DETAIL 1/A3, UN.O. = 1 HR. EXT. WALL CONSTRUCTION WITHIN 5'-0" OF PROPERTY LINE

SEE DETAIL 2/A3, UN.O.

PORTLAND, OR. 97216 PHONE: 971-270-9663

MENTRUM ARCHITECTURE

**INCORPORATED** 

11860 S.E. MORRISON

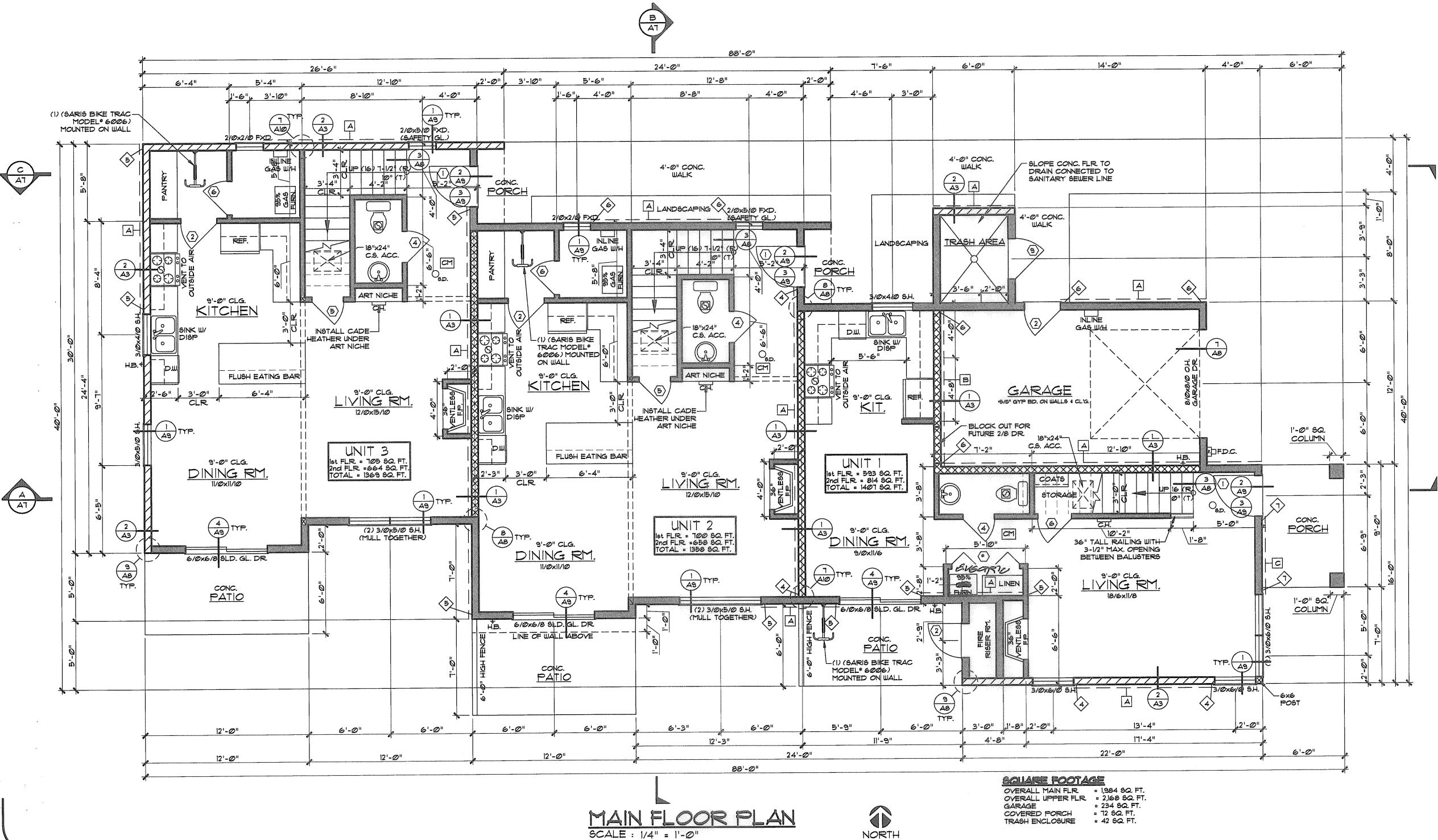
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REVISIONS:

DRAWN BY: PETE WILSON

DATE: 9/26/17 SHEET NO:

OF 11



NORTH

Permit Number

City of Portland REVIEWED FOR CODE COMPLIANCE AUG 2 3 2018

HOLDOWN SCHEDULE					
MARK	SEATHING	NAILING	REMARKS		
$\Diamond$	SIMPSON MSTC28	(16) 16d SINKERS	CENTER STRAP ON RIM		
$\langle 2 \rangle$	SIMPSON MSTC4Ø	(32) 16d SINKERS	CENTER STRAP ON RIM		
3	SIMPSON MSTC52	(48) 16d SINKERS	CENTER STRAP ON RIM		
4	SIMPSON HDU2-SDS2.5	ATTACH TO DBL. 2× STUD	ANCHOR WITH SSTB16		
⟨b⟩	6IMP60N HDU4-6D62.5	ATTACH TO DBL. 2x STUD	ANCHOR WITH SSTB24		
6	SIMPSON HOUS-SOS2.5	ATTACH TO DBL. 2x STUD	ANCHOR WITH SSTB24		
$\langle \overline{\uparrow} \rangle$	SIMPSON HOUII-SDS2.5	ATTACH TO 6x6 STUD	ANCHOR WITH SBIX30		

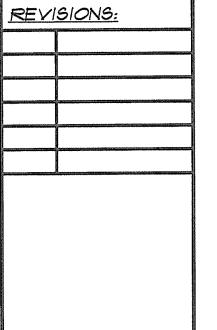
SHEAR WALL SCHEDULE

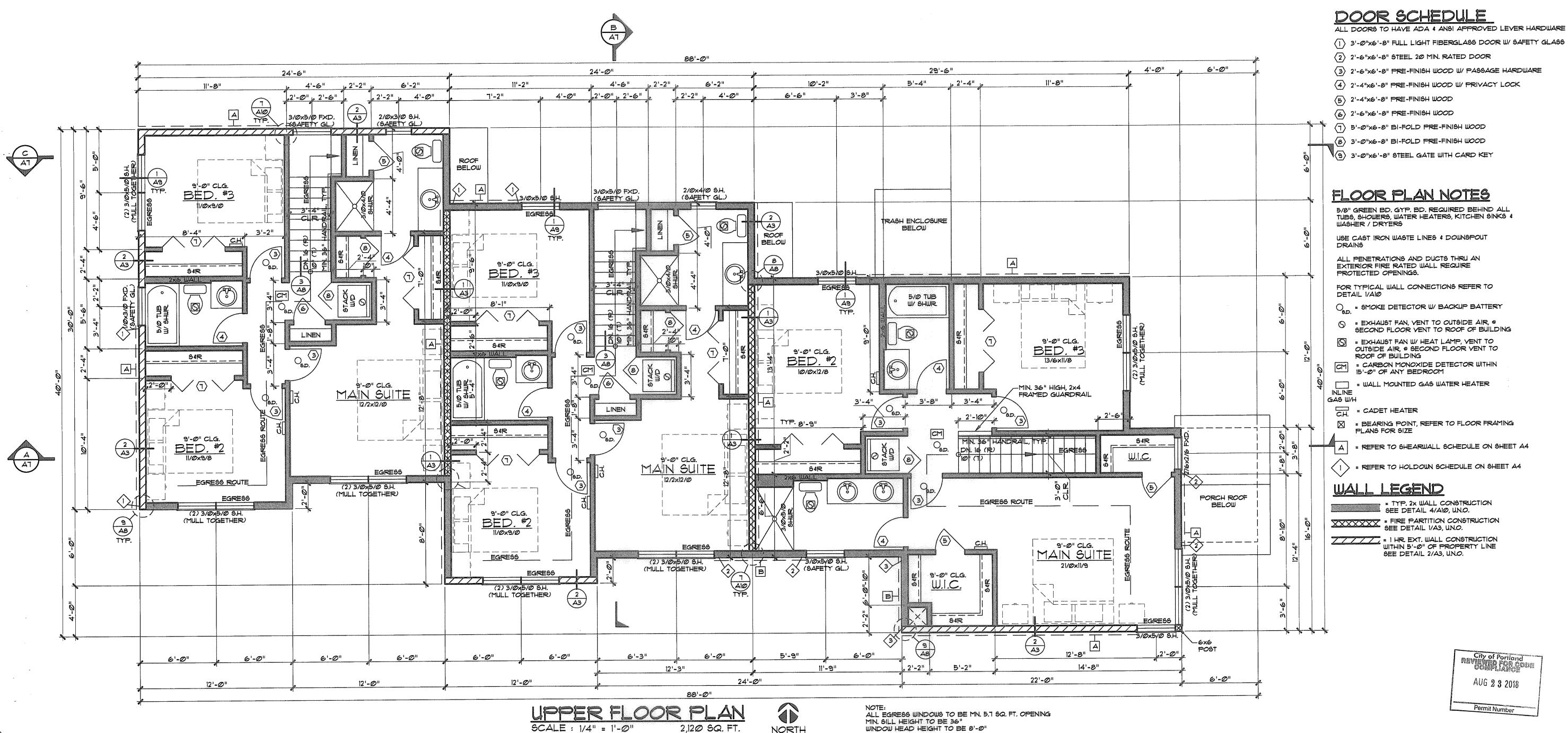
MARK	SEATHING	NAILING	REMARKS
A	15/32" APA RATED (32/16)	8d @ 6" o/c EDGES	SEE NOTES:
	PLWD. (BLOCK EDGES)	8d @ 12" o/c FIELD	A, B
В	15/32" APA RATED (32/16)	8d @ 4" o/c EDGES	SEE NOTES:
	PLWD. (BLOCK EDGES)	8d @ 12" o/c FIELD	A, B, C
U	15/32" APA RATED (32/16)	8d @ 3" o/c EDGES	SEE NOTES:
	PLWD. (BLOCK EDGES)	8d @ 12" o/c FIELD	A, B, C

A. Panel edges backed with 2 in. nominal or wider framing.

B. Space studs at 16 in. on center.

C. Framing at adjoining panels shall be 3 in nominal or wider.





NORTH

WINDOW HEAD HEIGHT TO BE 8'-0"



ARCHITECTURE INCORPORATED 11860 S.E. MORRISON

MENTRUM

PORTLAND, OR. 97216

PHONE: 971-270-9663

DRAWN BY: PETE WILSON DATE: 9/26/17

SHEET NO:

OF 11

FOUNDATION NOTES:

CONC. FTGS.

CLEARANCE

HOLDOWNS.

REFER TO HOLDDOWN SCHEDULE ON SHEET A4

PROVIDE 3" MIN. BRG. @ BM. POCKET ON 55" A.S. FELT W/ 1/2" AIR SPACE @ SIDES 4 ENDS, TYP.

COVER ENTIRE AREA AND 12" UP WALLS W/ 6 ML

4"x8" GIRDERS ON 4"x4" POST ON 18" RD. x 8"

and the second of the second o

REVISIONS:

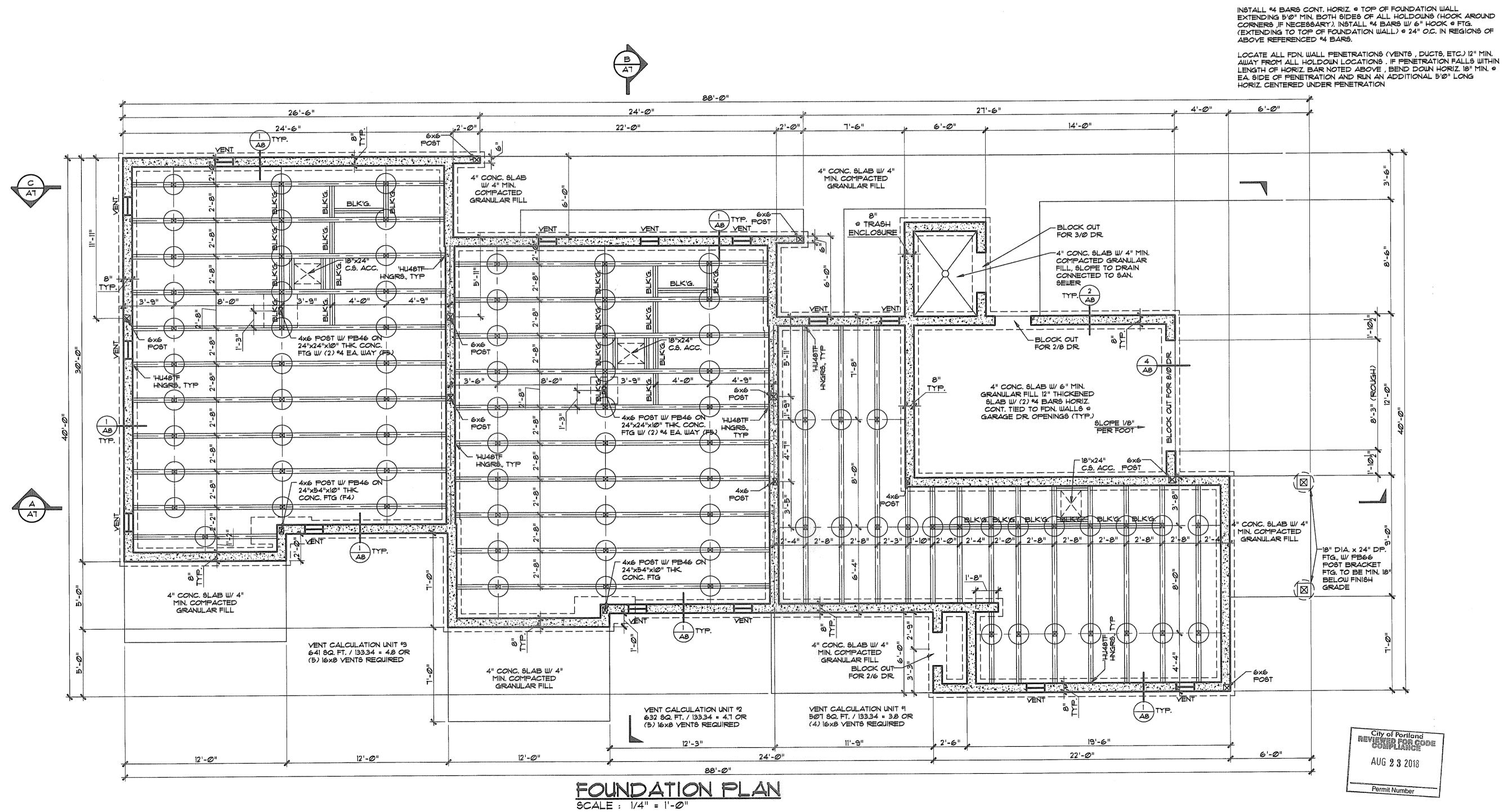
MENTRUM ARCHITECTURE INCORPORATED

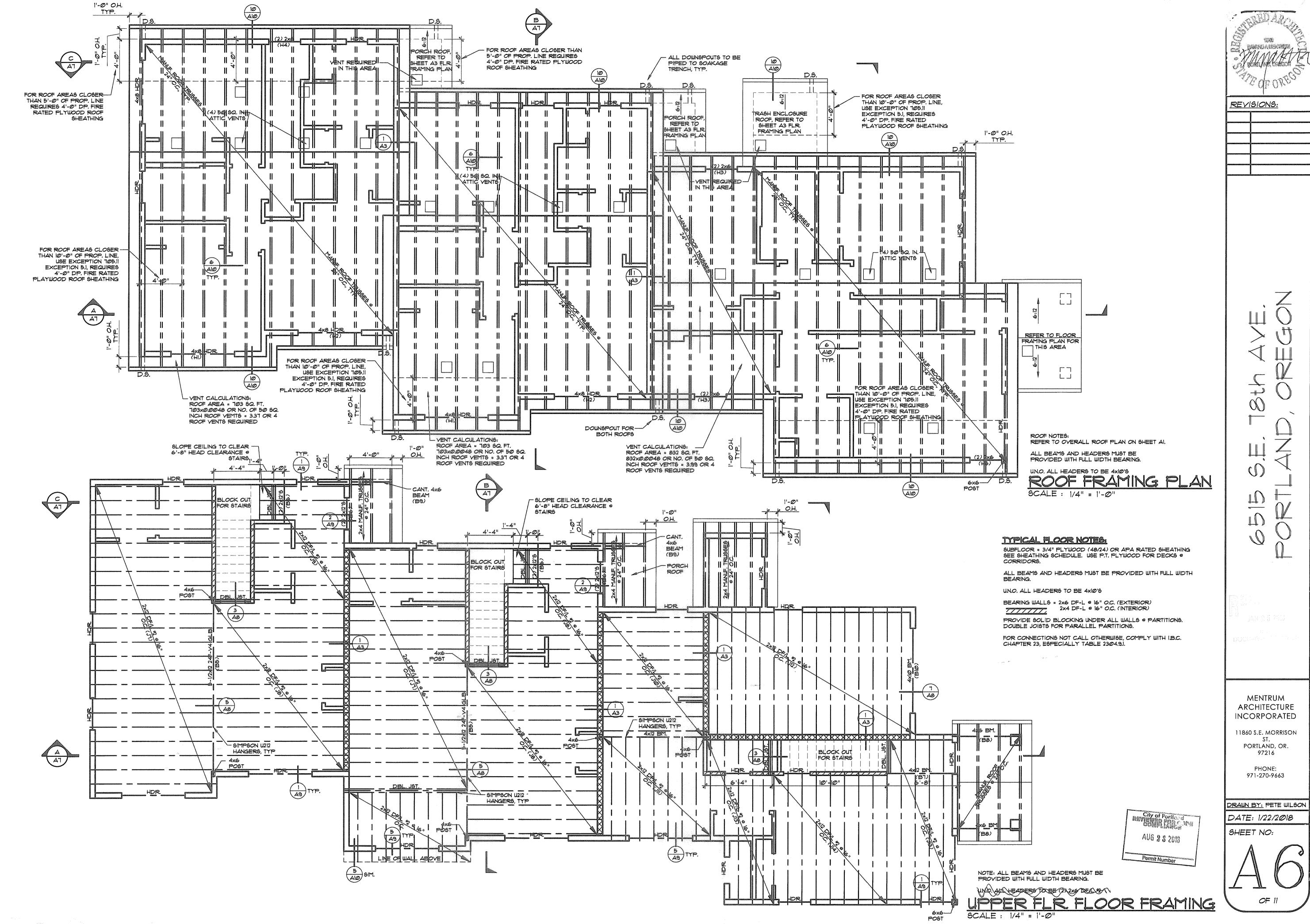
11860 S.E. MORRISON ST. PORTLAND, OR. 97216

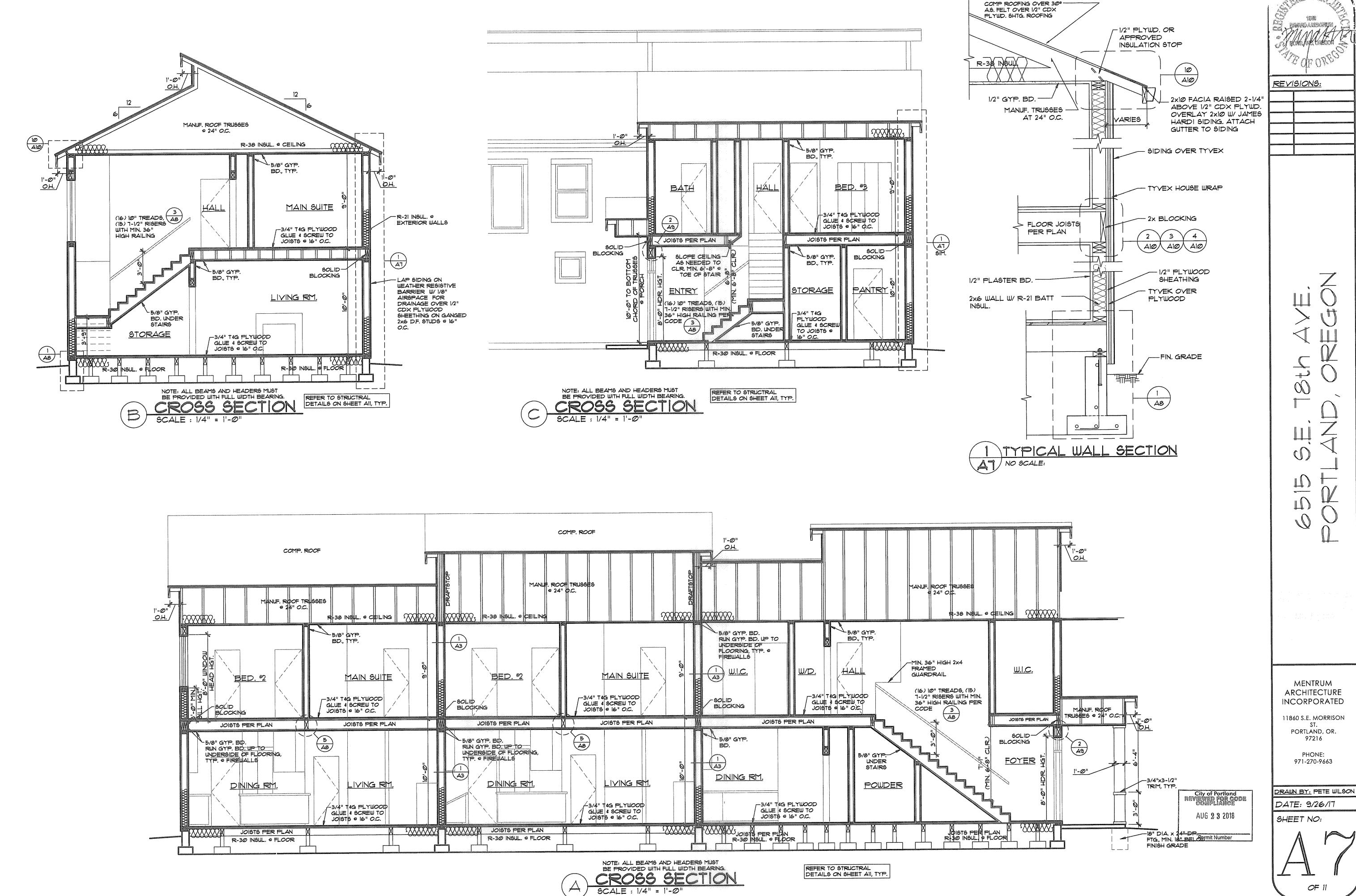
> PHONE: 971-270-9663

DRAWN BY: PETE WILSON DATE: 9/26/17

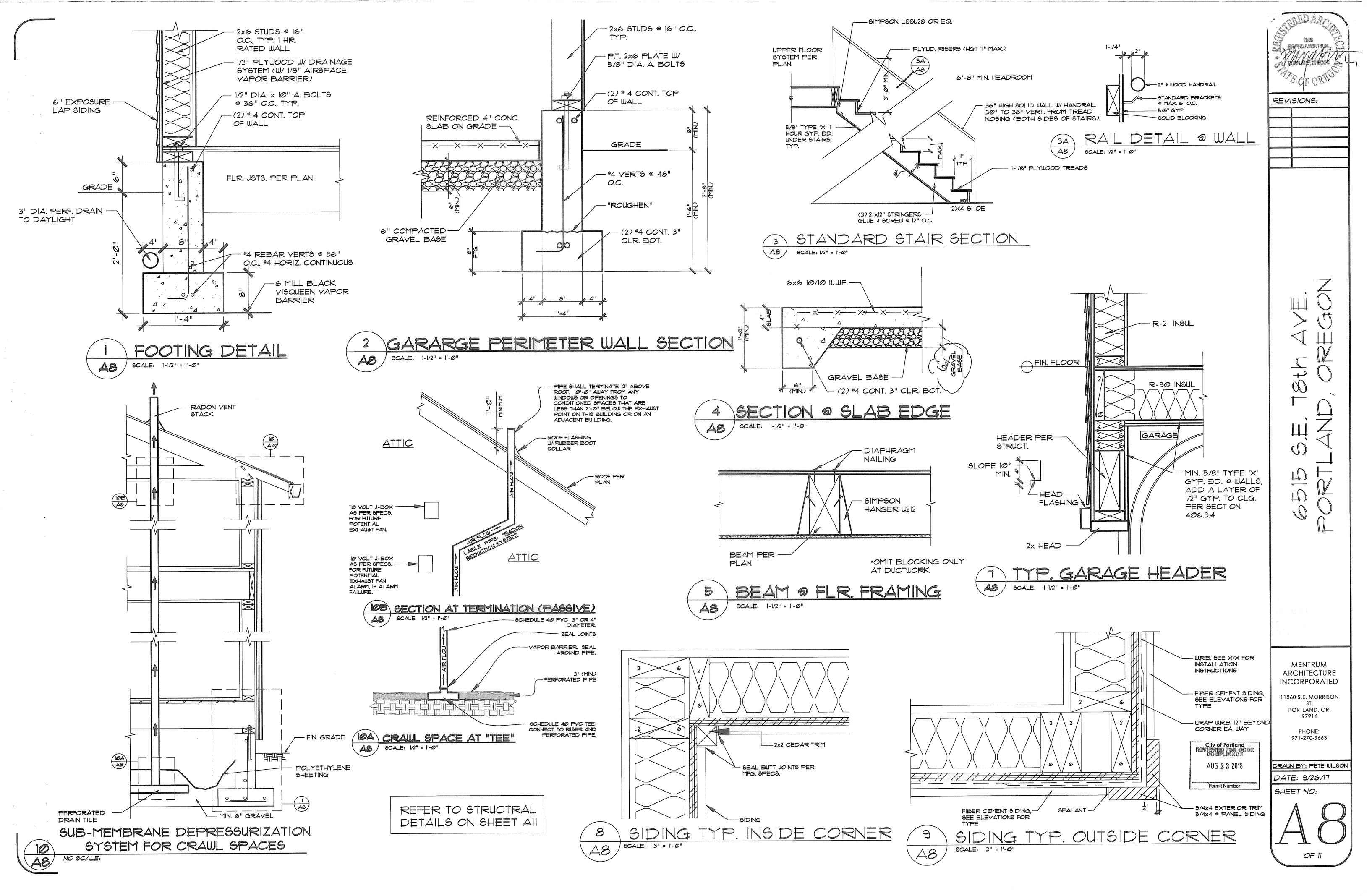
SHEET NO:

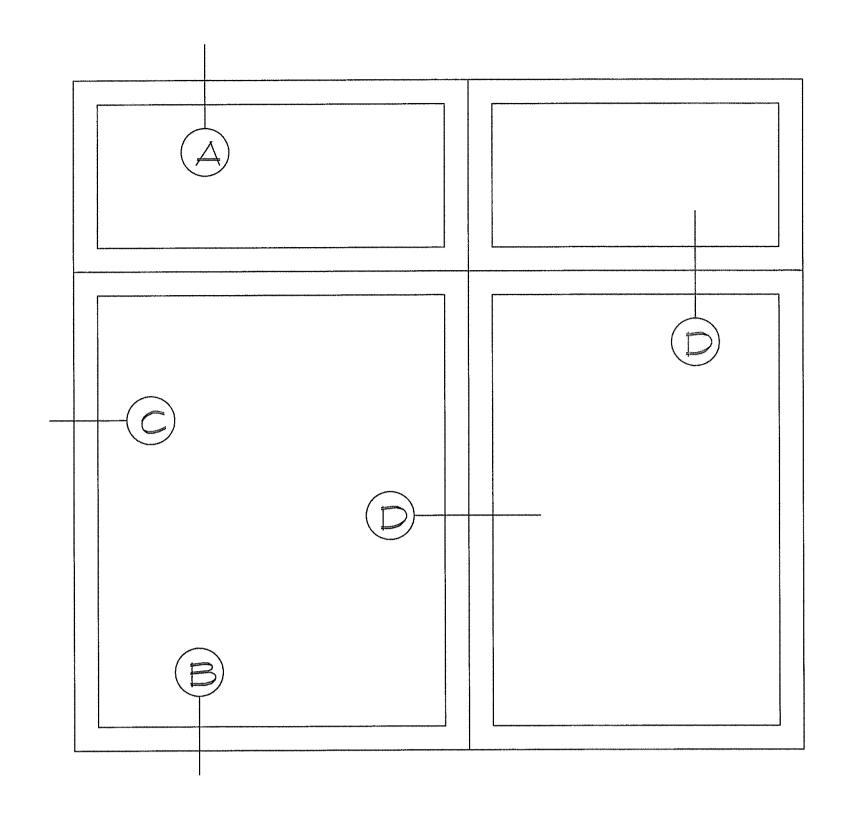






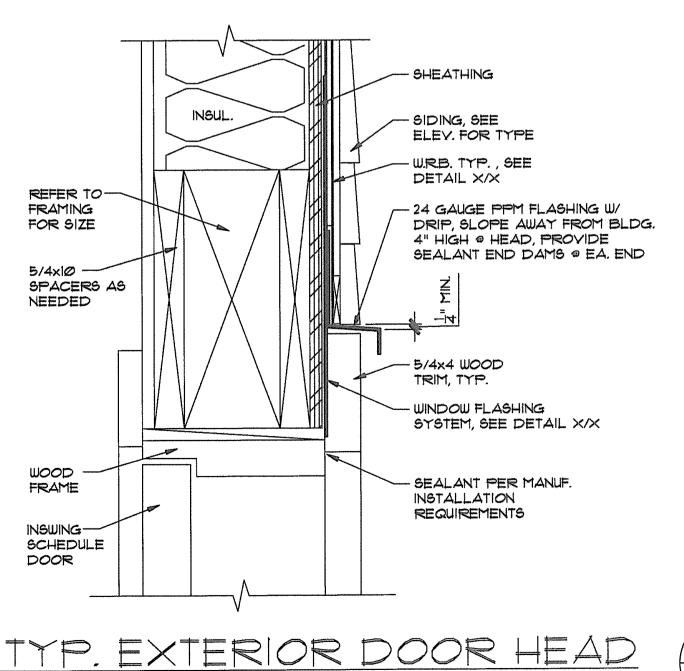
ARCHITECTURE INCORPORATED

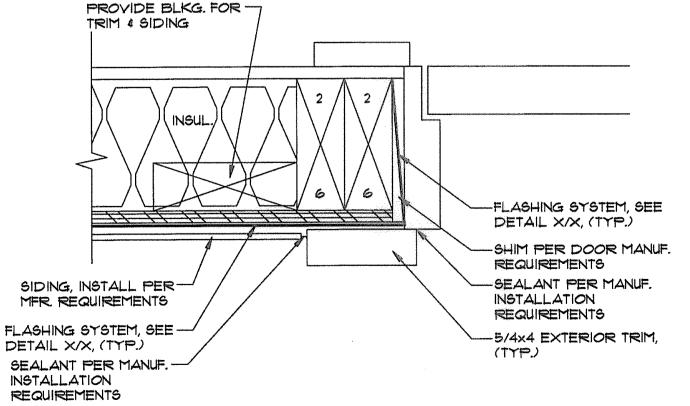




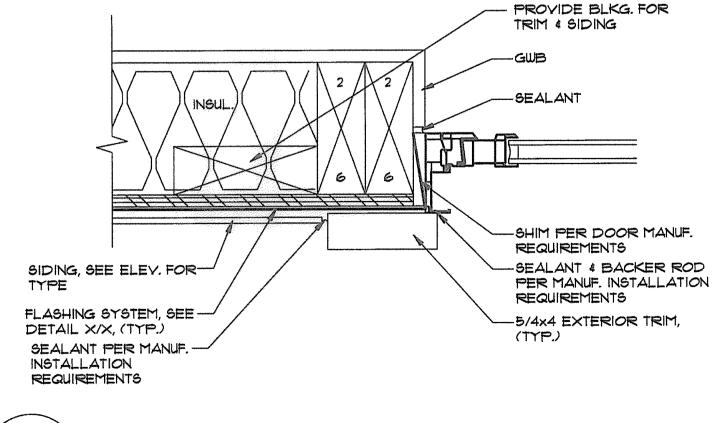
YP. WINDOW DETAILS SCALE: 1-1/2" = 1'-0"

REFER TO STRUCTRAL DETAILS ON SHEET All, TYP.

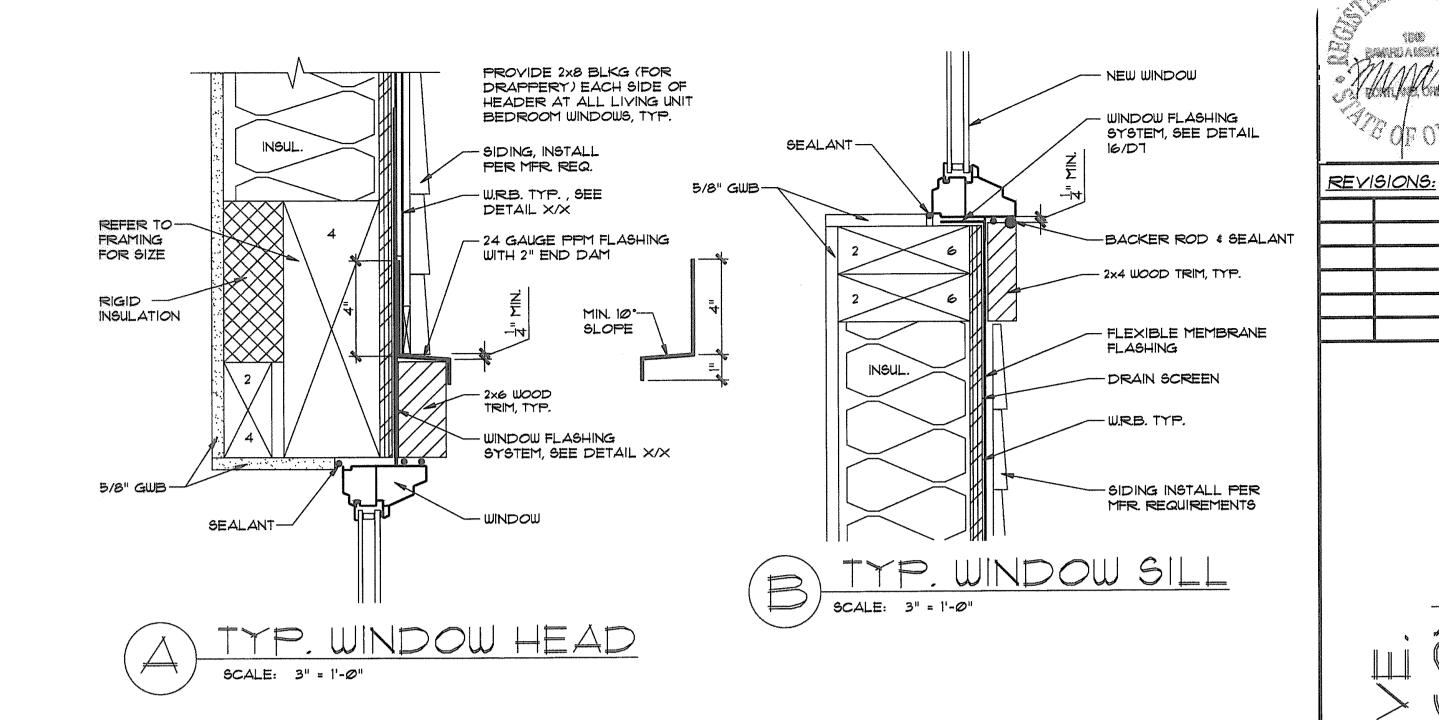


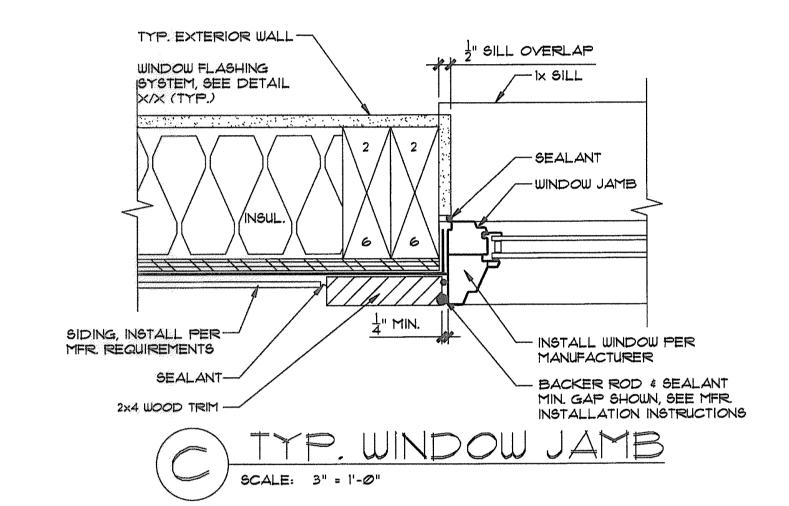


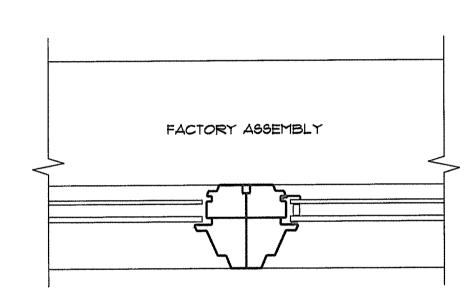
EXTERIOR DOOR JAMB A9



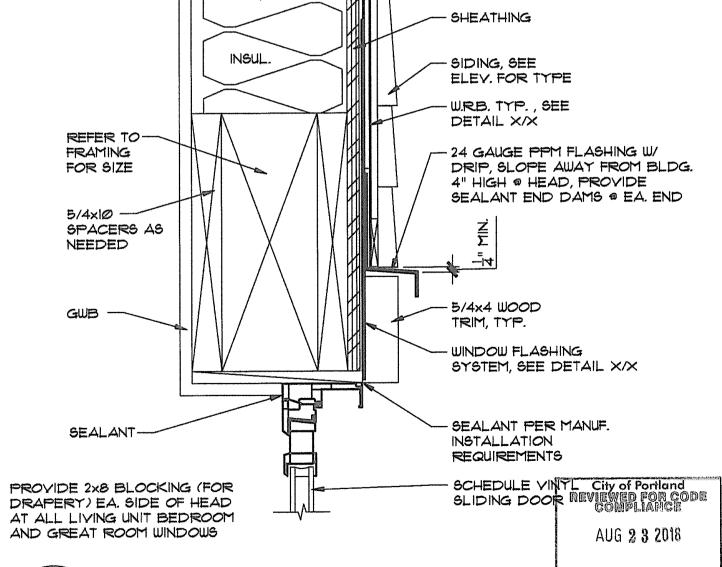
SLIDING PATIO DOOR JAMB SCALE: 3" = 1'-0"







TYP. WINDOW JAMB



SLIDING PATIO DOGREPHEAD 49 SCALE: 3" = 1'-0"

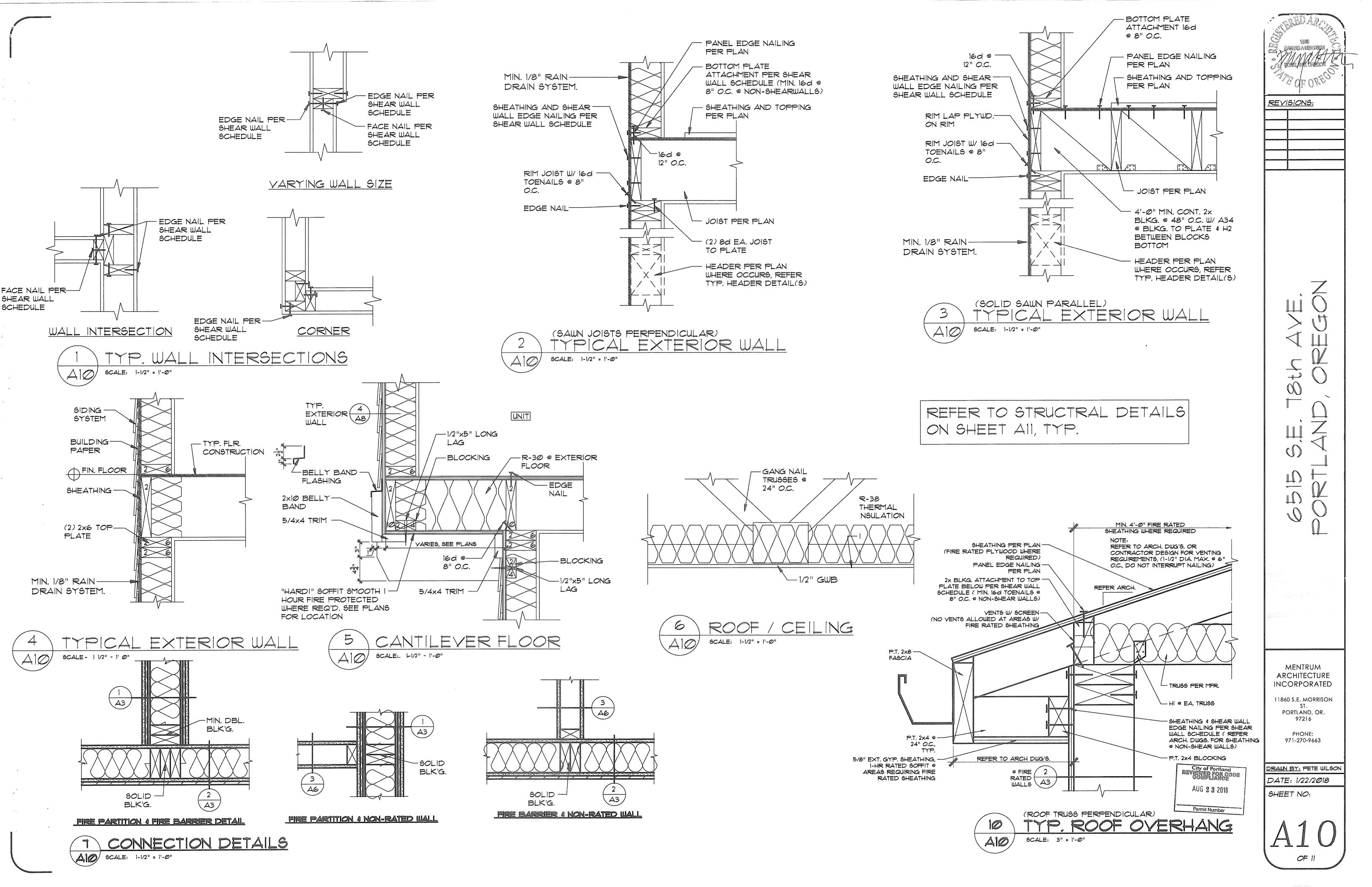
MENTRUM ARCHITECTURE INCORPORATED

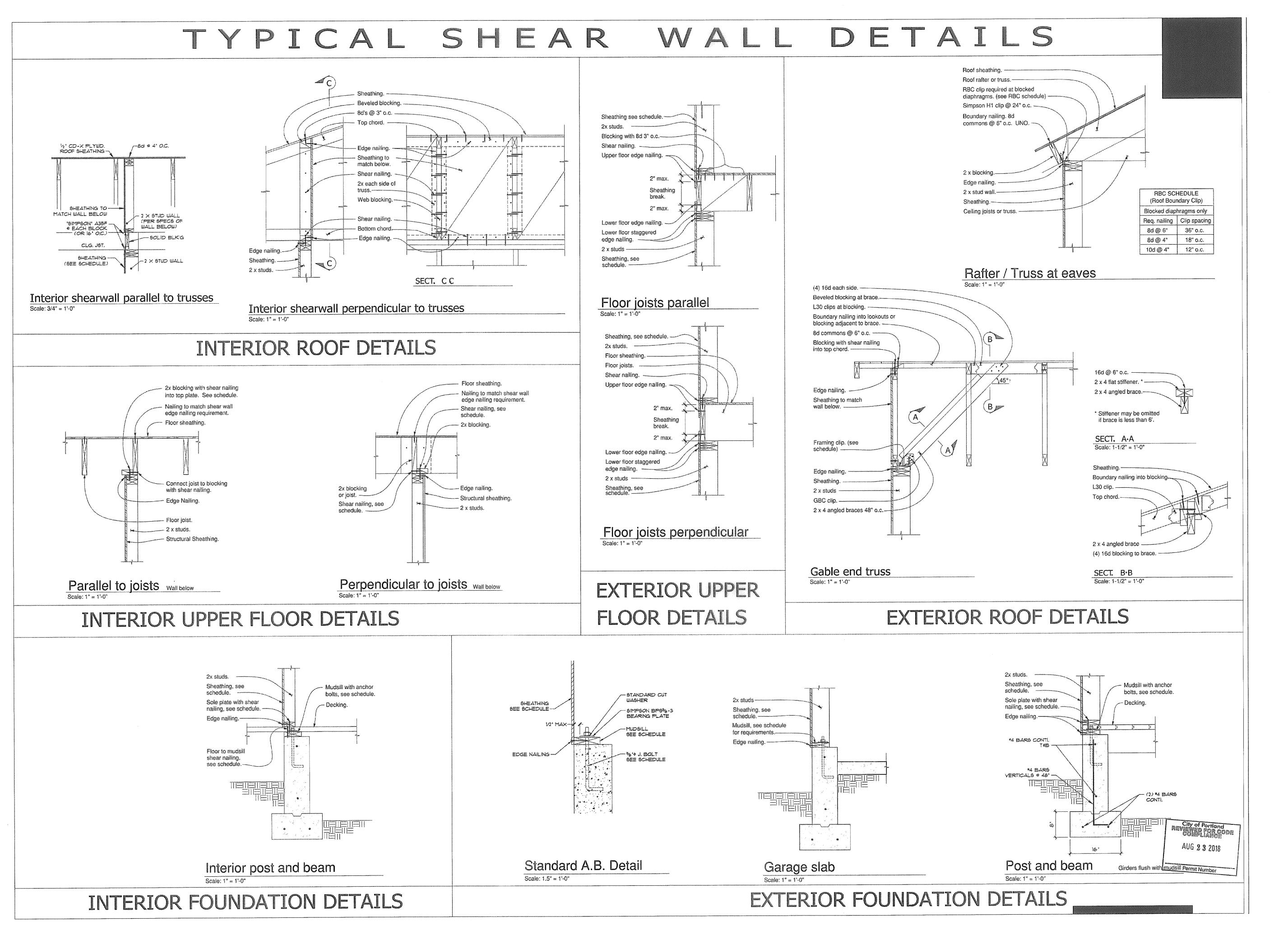
11860 S.E. MORRISON PORTLAND, OR. 97216

> PHONE: 971-270-9663

DRAWN BY: PETE WILSON DATE: 9/26/17 SHEET NO:

SCALE: 3" = 1'-0"





MANALAN

REVISIONS:

VISIONS:

PORTLAND, OREGO

MENTRUM ARCHITECTURE INCORPORATED

11860 S.E. MORRISON ST. PORTLAND, OR. 97216

> PHONE: 971-270-9663

DRAWN BY: PETE WILSON

DATE: 9/26/17

DATE: 9/26/11 SHEET NO:

A11

0F 11

# **Gypsum Board Partitions - Wood Framing (Continued)**

2 Hour

Design #

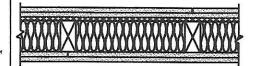
**UL U334** 

GA File #

STC - 59

N/A Sound Test #

TL-93-115



Link to .PDF file
Link to .DWG file
Link to .DWG/Text file

5/8" (15.9 mm) Fire-Shield C Gypsum Board base layers applied vertically, to 2x4 wood studs 16" o.c. one side with 6d coated nails, 1-7/8" long, 14" o.c. other side over resilient furring channels 24" o.c. attached perpendicular to studs with 1" type S screws, gypsum board attached to furring channel with 1" type S screws 24" o.c. 5/8" Fire-Shield C Gypsum Board face layers applied horizontally, on stud side with 8d coated nails, 2-3/8" long, 7" o.c. Face layer on channel side applied with 1-5/8" type S screws 12" o.c. Face layer butt joints offset 16" from base layers. 2" thick mineral wool insulation friction fit in stud cavity.

2 Hour

Design #

**FM WP-360** 

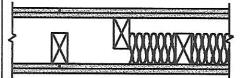
GA File #

STC - 51

WP 3910

Sound Test #

NGC-2377



<u>Link to .PDF file</u> <u>Link to .DWG file</u> <u>Link to .DWG/Text file</u> 5/8" (15.9 mm) Fire-Shield Gypsum Board, two layers applied horizontally to each side of 2x4 wood studs 16" o.c. ,staggered 8" o.c. on 2x6 wood plates. Base layer attached with 6d coated nails, 1-7/8" long, 0.085" shank, 1/4" heads, 24" o.c. Face layer 5/8" Fire-Shield Gypsum Board attached with 8d coated nails 2-3/8" long, 0.100 shank, 1/4" heads, 8" o.c. Joints staggered 16" each layer and side.

2 Hour

Design #

**FM WP-360** 

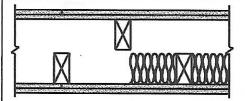
GA File #

WP 3820

STC - 58

Sound Test #

NGC-3056



Link to .PDF file Link to .DWG file Link to .DWG/Text file 5/8" (15.9 mm) Fire-Shield Gypsum Board, two layers applied horizontally to each side of double row of 2x4 wood studs 16" o.c., separate plates 1" apart. Base layer attached with 6d coated nails, 1-7/8" long, 0.085" shank, 1/4" heads, 24" o.c. Face layer 5/8" Fire-Shield Gypsum Board attached with 8d coated nails 2-3/8" long, 0.100 shank, 1/4" heads, 8" o.c. Joints staggered 16" each layer and side.

2 Hour

Design #

**UL U301** 

GA File #

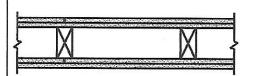
N/A

84.5

STC - 40

Sound Test #

NGC - 2363



<u>Link to .PDF file</u> <u>Link to .DWG file</u> <u>Link to .DWG/Text file</u> 5/8" (15.9 mm) Fire-Shield Gypsum Board, two layers applied either horizontally or vertically to each side of 2x4 wood studs 16" o.c. Base layer attached with 6d coated nails, 1-7/8" long, 0.0915" shank, 1/4" heads, 6" o.c. Face layer 5/8" Fire-Shield Gypsum Board attached with 8d coated nails 2-3/8" long, 0.113 shank, 9/32" heads, 8" o.c. Vertical joints located over studs. Joints staggered 16" each layer and side.