# PLANNING STAFF MEMORANDUM
## FILE No. 2-Z-16

I. **Applicant:** City of Newport (initiated by motion of the Planning Commission on 9/26/16).

**Request:** The request before the Planning Commission is to review and to provide a recommendation to the City Council on proposed legislative text amendments to the Newport Zoning Ordinance (NZO) (Ordinance No. 1308, as amended) updating Chapter 14.10 ("Height Limitations") of the Newport Municipal Code. Changes allow vertical evacuation structures within mapped tsunami inundation areas south of the Yaquina Bay Bridge to exceed maximum building height limitations.

II. **Findings Required:** This is a legislative action and there are no applicable criteria.

III. **Planning Staff Memorandum Attachments:**

Attachment "A" – Markup of Amendments to Chapter 14.10 of the Newport Municipal Code
Attachment "B" – Map showing where vertical evacuation structures can exceed building height limitations
Attachment "C" – Notice of public hearing
Attachment "D" – Executive Summary - Marine Studies Initiative Building Siting Recommendation
Attachment "E" – Planning Commission Work Session Minutes for 8/22/16 and 9/26/16 meetings
Attachment "F" – Email from Bob Cowen, Director, Hatfield Marine Science Center, dated 10/18/16
Attachment "G" – Letter from the Department of Land Conservation and Development, dated 10/26/16
Attachment "H" – Copies of the Section 403 and 1704.5 of the 2014 Oregon Structural Specialty Code

IV. **Notification:** The Department of Land Conservation & Development was provided notice of the proposed legislative amendment in accordance with the DLCD requirements on October 7, 2016. Notice of the Planning Commission hearing was published in the Newport News-Times on November 4, 2016 (Attachment "C").

V. **Comments:** As of November 9, 2016, the Community Development Department received correspondence from Bob Cowen, Director, Hatfield Marine Science Center (HMSC) and Patrick Wingard with the Department of Land Conservation and Development (DLCD). The documents are enclosed as Attachments "F" and "G."

VI. **Discussion of Request:** Proposed revisions were initiated to create standards for the construction of vertical evacuation structures in tsunami inundation areas in light of Oregon State University's July 6, 2016 announcement that they selected HMSC as the location for their new Marine Studies Initiative building (Attachment "D"). The announcement noted that they intend to incorporate vertical evacuation features into the design of the building. While the City has a process in place for applicants to seek a variance to building height limits, the City Council felt that this is an issue that might best be addressed legislatively given that the existing height limits were put in place before (a) the modern understanding of tsunamis and their potential impact on our community came to light and (b) vertical evacuation was developed as a tool for responding to tsunami risks. A legislative option could allow for the application of vertical evacuation technologies in a number of locations within the community. Considering the above, the Council directed staff to work with the Planning Commission on potential legislative amendments.

The Planning Commission discussed the matter at work sessions on August 22, 2016 and September 26, 2016 (Attachment "E"), and at the close of the September work session the Commission voted to initiate legislative amendments to Chapter 14.10 of the Newport Municipal Code, which sets out general exceptions to the building height limitations listed in the Zoning Ordinance. Draft amendments are listed in Attachment "A." The standards provide a non-discretionary means of authorizing vertical evacuation structures. At its work sessions, the Commission considered areas likely to be impacted by a tsunami, and expressed a desire to limit vertical evacuation structures to areas south of the Yaquina Bay Bridge reasoning that the City's exposure to tsunamis is most acute in this portion of the community. Exposed areas north of the bridge are largely situated at the base of bluffs, so folks in those areas need only travel a short distance to reach high ground. A map of areas where vertical evacuation structures would be permissible is enclosed as Attachment "B."

Oregon State University and the Department of Land Conservation and Development provided comment on the draft code revisions (Attachment "F" and "G"). In response, staff has made additional changes to the Attachment "A" draft, including an explanation for each of the revisions. The Attachment "A" document include a policy option as it relates to the magnitude of a tsunami that a structure must be designed to meet, and a couple of the standards from the original draft have been removed but are listed as optional add backs. Some of the staff changes were made to better align the proposed, non-discretionary zoning code standards with the Oregon Structural Specialty Code and the relevant building code sections are enclosed for the commission's review (Attachment "H").

VII. **Conclusion and Recommendation:** The Planning Commission should review the proposed amendments and make a recommendation to the City Council on the request. The Commission recommendation can include suggested changes to the proposed amendments.

Derrick I. Tokos, AICP
Community Development Director
City of Newport

November 9, 2016

# Attachment “A”

# CHAPTER 14.10 HEIGHT LIMITATIONS

## 14.10.010 Height Limitations

A building, structure, or portion thereof hereafter erected shall not exceed the height listed in Table A for the zone indicated except as provided for in Sections 14.10.020, General Exceptions to Building Height Limitations and 14.10.030, Special Exceptions to Building Height Limitations.

## 14.10.020 General Exceptions to Building Height Limitations

A. The following types of structures or structural parts are not subject to the building height limitations of this Code as long as the square footage of said structure or structural part is no greater than 5% of the main building foot print as shown on the site plan, or 200 square feet, whichever is less: chimneys, cupolas, church spires, belfries, domes, transmission towers, smokestacks, flag poles, radio and television towers, elevator shafts, conveyors and mechanical equipment.

B. No structure or structural part excepted under Subsection (A) from the building height limitations of this Code, whether freestanding or attached to another structure or structural part, may exceed the maximum allowable height by more than 25% unless approved by the Planning Commission per section 14.10.030.

C. Standalone antennas, cell towers, electrical transmission towers, telephone or electric line poles and other public utility types of structures or structural parts, where allowed by this Ordinance, are limited in height to 50 feet in R-1, R-2, R-3, R-4, W-1, W-2, ~~W-3~~ and C-2 zones; 100 feet in the P-1, C-1 and C-3 zones; 150 feet in the I-1, I-2 and I-3 zones. A taller structure or structural part referenced under this subsection may be allowed upon the issuance of a conditional use permit per Section 14.33 of this Code.

*Staff: A typographical error has been corrected. The City does not have a W-3 zone district.*

D. A stand-alone structure or portion of a building designed for vertical evacuation from a tsunami where the property upon which the structure or building is located is situated south of the Yaquina Bay Bridge within the "XXL" tsunami inundation area boundary, as depicted on the maps titled "Local Source (Cascadia Subduction Zone) Tsunami Inundation Map Newport North, Oregon" and "Local Source (Cascadia Subduction Zone) Tsunami Inundation Map Newport South, Oregon" produced by the Oregon Department of Geology and Mineral Industries (DOGAMI), dated February 8, 2013 (i.e. the tsunami inundation maps), provided:

*Staff: This language has been revised to acknowledge that vertical evacuation assembly areas can be incorporated into the design of a building or they may be developed as a stand-alone structure.*

1. Evacuation assembly areas shall provide at least 10 square feet of space per occupant. Assembly areas that are incorporated into a building shall be sized to accommodate the maximum occupant load of that building; For stand-alone structures, the assembly area shall be sized to accommodate the occupant load of nearby building(s) and/or assembly area(s) to which it is associated; and

   *Staff: This standard has been added in response to comments provided by the Department of Land Conservation and Development, and provides direction as to how a vertical evacuation area should be sized. The 10 square foot per occupant threshold is consistent with recommendations contained in "Guidelines for Design of Structures for Vertical Evacuation from Tsunamis, Second Edition," published by the Federal Emergency Management Agency and dated April, 2012.*

2. Ingress/egress to the evacuation assembly area shall be signed in a manner consistent with state and/or federal guidelines for the identification of such facilities; and

***Standard No. 3 - Alternative A***

*Staff: This language is consistent with the draft reviewed by the Planning Commission at its September 26, 2016 work session and allows the owner to identify the magnitude of the tsunami event that the facility should be designed to meet.*

3. Plans and specifications, stamped by an architect or engineer licensed in the State of Oregon, establish that the structure is of sufficient height and has been designed to withstand an earthquake and wave forces attributable to the magnitude of the tsunami event for which the vertical evacuation structure is intended to provide relief; and

***Standard No. 3 - Alternative B***

*Staff: This language responds to feedback from the Department of Land Conservation and Development, where they requested that the City require vertical evacuation structures be designed for an XXL event.*

3. Plans and specifications, stamped by an architect or engineer licensed in the State of Oregon, establish that the structure is of sufficient height and has been designed to withstand an earthquake and wave forces attributable to an "XXL" tsunami event as depicted on the tsunami inundation maps; and

4. An architect or engineer licensed in the State of Oregon is retained by the applicant or land owner to perform structural observations during the course of construction. Prior to issuance of a building permit, the observer shall submit a written statement identifying the frequency and extent of the structural observations to be perform. At the conclusion of the work and prior to issuance of a certificate of occupancy, the structural observer shall submit a statement that the site visits were performed and that any deficiencies identified as a result of those observations were addressed to their satisfaction.

*Staff: This section has been modified to more closely align with requirements listed in Section 1704.5 of the Oregon Structural Specialty Code for structural observations during construction related to seismic resistance and wind loads. At the same time, it addresses concerns raised by the OSU design team regarding the certification language contained in the prior draft and the frequency at which observations would have to be performed.*

~~D~~E. Except as provided in Section 14.10.020(D), ~~No~~ no structure or structural part excepted under this section from the building height limitations of this Code may be used for human habitation.

*Staff: While it is arguable that this subsection wouldn't apply to vertical evacuation areas since they are not designed per se for human habitation, this change makes it clear that is the case.*

***Optional Standards:***

- The evacuation assembly area is the roof of the structure; and
- The lowest floor of rooms or enclosed spaces designed for human occupancy are located no higher than 50-feet above of the finished grade adjacent to the exterior of the structure; and

*Staff: These standards were included in the draft set of revisions discussed by the Commission at its September 26, 2016 meeting. The requirement that evacuation assembly areas be limited to rooftop areas was added by the Commission in recognition of the fact that a vertical evacuation structure will already exceed height limitations by a substantial amount and adding additional pitched roof features would unnecessarily exacerbate the visual impact on the surrounding landscape. The 50-foot height limit for enclosed spaces designed for human occupancy limit accounts for the equipment constraints of the Newport's Fire Department.*

*The OSU design team expressed concerns that the roof top assembly area requirement is too limiting and would preclude designs that incorporate the*

*assembly area within an enclosed location. Also, in discussing the issue further with Newport Fire Chief, Rob Murphy, he was satisfied that the Department could provide an adequate response for occupied floors up to 75-feet, above which provisions in Section 403 of the Oregon Structural Specialty Code for high-rise buildings trigger. Those provisions require that enhanced access and fire suppression capabilities be incorporated into the interior of a building so that a fire can be fought from the inside as opposed to the outside of the building. In short, the Department has indicated that they do not need a height limitation to be imposed as a result of limitations related to their response capabilities.*

*The inundation maps produced by DOGAMI suggest a wave height for an XXL event isn't likely to exceed 70-feet. Low lying areas in South Beach are around 12-feet in elevation, so it is unlikely that a structure over 75-feet in height would be needed. It is possible that a structure 50 to 60-feet in height would be sufficient, depending upon its location.*

14.10.030 Special Exceptions to Building Height Limitations

Any person seeking a special exception to the building height limitations of this Code shall do so by applying for an adjustment or variance as described in Section 14.33 of this Code, and consistent with Section 14.52, Procedural Requirements.**

***(*Amended by Ordinance No. 1839 (10-1-01).***
***(**Amended by Ordinance No. 1989 (1-1-10).)***

# CHAPTER 14.10 HEIGHT LIMITATIONS

## 14.10.010 Height Limitations

A building, structure, or portion thereof hereafter erected shall not exceed the height listed in Table A for the zone indicated except as provided for in Sections 14.10.020, General Exceptions to Building Height Limitations and 14.10.030, Special Exceptions to Building Height Limitations.

## 14.10.020 General Exceptions to Building Height Limitations

A. The following types of structures or structural parts are not subject to the building height limitations of this Code as long as the square footage of said structure or structural part is no greater than 5% of the main building foot print as shown on the site plan, or 200 square feet, whichever is less: chimneys, cupolas, church spires, belfries, domes, transmission towers, smokestacks, flag poles, radio and television towers, elevator shafts, conveyors and mechanical equipment.

B. No structure or structural part excepted under Subsection (A) from the building height limitations of this Code, whether freestanding or attached to another structure or structural part, may exceed the maximum allowable height by more than 25% unless approved by the Planning Commission per section 14.10.030.

C. Standalone antennas, cell towers, electrical transmission towers, telephone or electric line poles and other public utility types of structures or structural parts, where allowed by this Ordinance, are limited in height to 50 feet in R-1, R-2, R-3, R-4, W-1, W-2, ~~W-3~~ and C-2 zones; 100 feet in the P-1, C-1 and C-3 zones; 150 feet in the I-1, I-2 and I-3 zones. A taller structure or structural part referenced under this subsection may be allowed upon the issuance of a conditional use permit per Section 14.33 of this Code.

*Staff: A typographical error has been corrected. The City does not have a W-3 zone district.*

D. A stand-alone structure or portion of a building designed for vertical evacuation from a tsunami where the property upon which the structure or building is located is situated south of the Yaquina Bay Bridge within the "XXL" tsunami inundation area boundary, as depicted on the maps titled "Local Source (Cascadia Subduction Zone) Tsunami Inundation Map Newport North, Oregon" and "Local Source (Cascadia Subduction Zone) Tsunami Inundation Map Newport South, Oregon" produced by the Oregon Department of Geology and Mineral Industries (DOGAMI), dated February 8, 2013 (i.e. the tsunami inundation maps), provided:

*Staff: This language has been revised to acknowledge that vertical evacuation assembly areas can be incorporated into the design of a building or they may be developed as a stand-alone structure.*

1. Evacuation assembly areas shall provide at least 10 square feet of space per occupant. Assembly areas that are incorporated into a building shall be sized to accommodate the maximum occupant load of that building; For stand-alone structures, the assembly area shall be sized to accommodate the occupant load of nearby building(s) and/or assembly area(s) to which it is associated; and

   *Staff: This standard has been added in response to comments provided by the Department of Land Conservation and Development, and provides direction as to how a vertical evacuation area should be sized. The 10 square foot per occupant threshold is consistent with recommendations contained in "Guidelines for Design of Structures for Vertical Evacuation from Tsunamis, Second Edition," published by the Federal Emergency Management Agency and dated April, 2012.*

2. Ingress/egress to the evacuation assembly area shall be signed in a manner consistent with state and/or federal guidelines for the identification of such facilities; and

   *Staff: This language has been revised in response to feedback from the OSU design team, where they expressed concern that directing the general public to an assembly area could give the impression that the site can meet the needs of more people than its design occupancy will accommodate. There are state and federal guidelines for signing assembly areas, such as DOGAMI's "Tsunami Sign Placement Guidelines" OFR-03-06. It is reasonable for the Commission to rely upon these types of guidelines to ensure that access to an assembly area is clearly identified.*

***Standard No. 3 - Alternative A***

3. Plans and specifications, stamped by an architect or engineer licensed in the State of Oregon, establish that the structure is of sufficient height and has been designed to withstand an earthquake and wave forces attributable to the magnitude of the tsunami event for which the vertical evacuation structure is intended to provide relief; and

   *Staff: This language is in line with the draft reviewed by the Planning Commission at its September 26, 2016 work session and allows the owner to identify the magnitude of the tsunami event that the facility should be designed to meet.*

***Standard No. 3 - Alternative B***

3. Plans and specifications, stamped by an architect or engineer licensed in the State of Oregon, establish that the structure is of sufficient height and has been designed to withstand an earthquake and wave forces attributable to an "XXL" tsunami event as depicted on the tsunami inundation maps; and

   *Staff: This language responds to feedback from the Department of Land Conservation and Development, where they requested that the City require vertical evacuation structures be designed for an XXL event.*

4. An architect or engineer licensed in the State of Oregon is retained by the applicant or land owner to perform structural observations during the course of construction. Prior to issuance of a building permit, the observer shall submit a written statement identifying the frequency and extent of the structural observations to be perform. At the conclusion of the work and prior to issuance of a certificate of occupancy, the structural observer shall submit a statement that the site visits were performed and that any deficiencies identified as a result of those observations were addressed to their satisfaction.

   *Staff: This section has been modified to more closely align with requirements listed in Section 1704.5 of the Oregon Structural Specialty Code for structural observations during construction related to seismic resistance and wind loads. At the same time, it addresses concerns raised by the OSU design team regarding the certification language contained in the prior draft and the frequency at which observations would have to be performed.*

~~D~~E. Except as provided in Section 14.10.020(D), ~~No~~ no structure or structural part excepted under this section from the building height limitations of this Code may be used for human habitation.

   *Staff: While it is arguable that this code provision wouldn't apply to vertical evacuation areas since they are not designed per se for human habitation, this change makes it clear that is the case.*

***Optional Standards:***

- The evacuation assembly area is the roof of the structure; and

- The lowest floor of rooms or enclosed spaces designed for human occupancy are located no higher than 50-feet above of the finished grade adjacent to the exterior of the structure; and

*Staff: These standards were included in the draft set of revisions discussed by the Commission at its September 26, 2016 meeting. The requirement that evacuation assembly areas be limited to rooftop areas was added by the Commission in recognition of the fact that a vertical evacuation structure will already exceed height limitations by a substantial amount and adding additional pitched roof features would unnecessarily exacerbate the visual impact on the surrounding landscape. The 50-foot height limit for enclosed spaces designed for human occupancy limit accounts for the equipment constraints of the Newport's Fire Department.*

*The OSU design team expressed concerns that the roof top assembly area requirement is too limiting and would preclude designs that incorporate the assembly area within an enclosed location. Also, in discussing the issue further with Newport Fire Chief, Rob Murphy, he was satisfied that the Department could provide an adequate response for occupied floors up to 75-feet, above which provisions in Section 403 of the Oregon Structural Specialty Code for high-rise buildings trigger. Those provisions require that enhanced access and fire suppression capabilities be incorporated into the interior of a building so that a fire can be fought from the inside as opposed to the outside of the building. In short, the Department has indicated that they do not need a height limitation to be imposed as a result of limitations related to their response capabilities.*

*The inundation maps produced by DOGAMI suggest a wave height for an XXL event isn't likely to exceed 70-feet. Low lying areas in South Beach are around 12-feet in elevation, so it is unlikely that a structure over 75-feet in height would be needed. It is possible that a structure 50 to 60-feet in height would be sufficient, depending upon its location.*

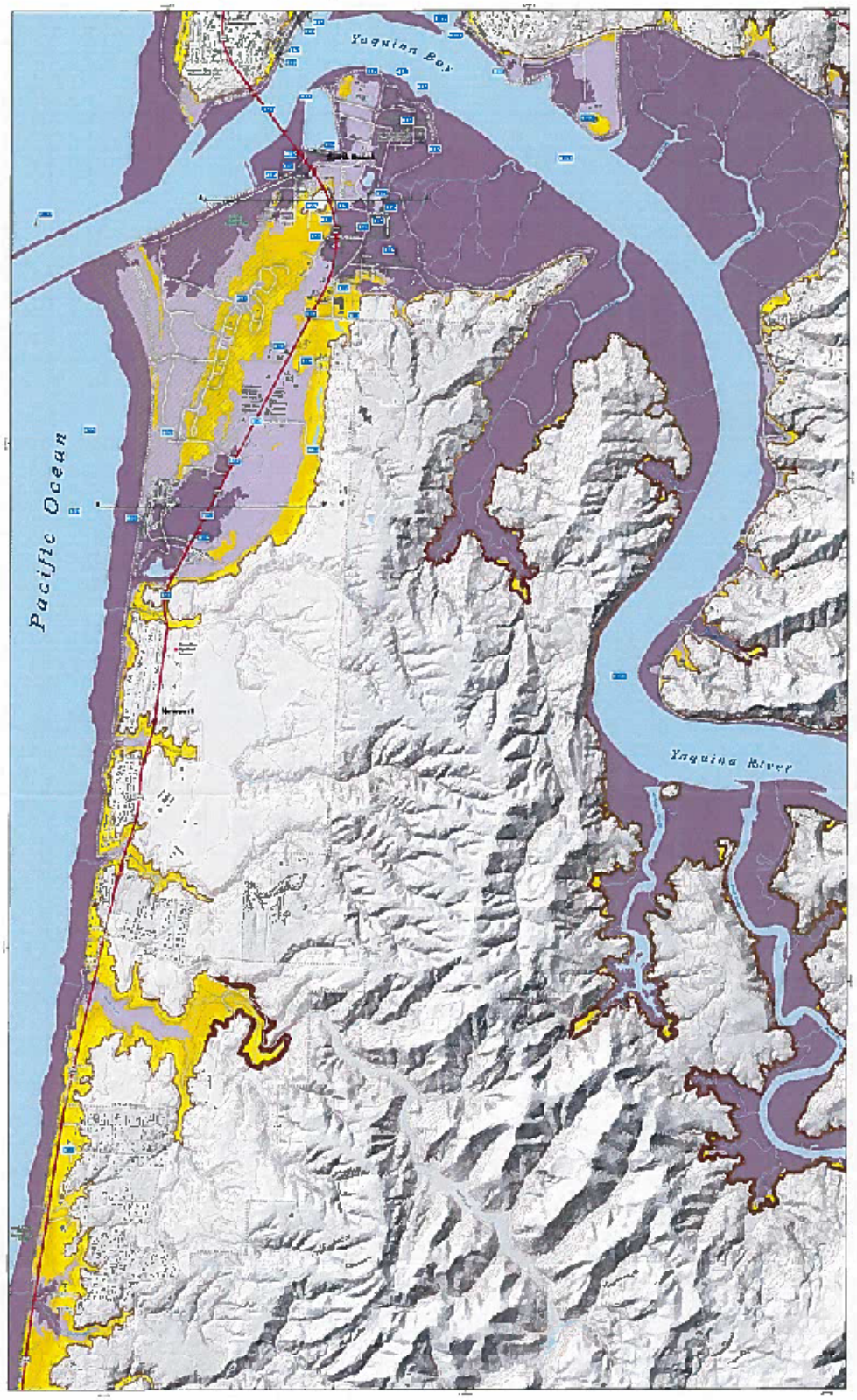
14.10.030 Special Exceptions to Building Height Limitations

Any person seeking a special exception to the building height limitations of this Code shall do so by applying for an adjustment or variance as described in Section 14.33 of this Code, and consistent with Section 14.52, Procedural Requirements.**

***(*Amended by Ordinance No. 1839 (10-1-01).***
***(**Amended by Ordinance No. 1989 (1-1-10).)***

# Attachment “B”

# Local Source (Cascadia Subduction Zone) Tsunami Inundation Map
# Newport South, Oregon



# Attachment “C”

# CITY OF NEWPORT
# NOTICE OF A PUBLIC HEARING

The Newport Planning Commission will hold a public hearing on Monday, November 14, 2016, at 7:00 p.m. in the City Hall Council Chambers to consider File No. 2-Z-16 involving text amendments to Chapter 14.10 (Height Limitations) of the Newport Municipal Code allowing an exception to maximum height limitations to allow the construction of vertical evacuation structures within mapped tsunami inundation areas. Pursuant to Newport Municipal Code (NMC) Section 14.36.010, the Commission must find that the change is required by public necessity and the general welfare of the community in order for it to make a recommendation to the City Council that the amendments be adopted. Testimony and evidence must be directed toward the request above or other criteria, including criteria within the Comprehensive Plan and its implementing ordinances, which the person believes to apply to the decision. Failure to raise an issue with sufficient specificity to afford the city and the parties an opportunity to respond to that issue precludes an appeal, including to the Land Use Board of Appeals, based on that issue. Testimony may be submitted in written or oral form. Oral testimony and written testimony will be taken during the course of the public hearing. The hearing may include a report by staff, testimony from the applicant and proponents, testimony from opponents, rebuttal by the applicant, and questions and deliberation by the Planning Commission. Written testimony sent to the Community Development (Planning) Department, City Hall, 169 SW Coast Hwy, Newport, OR 97365, must be received by 5:00 p.m. the day of the hearing to be included as part of the hearing or must be personally presented during testimony at the public hearing. The proposed code amendments, additional material for the amendments, and any other material in the file may be reviewed or a copy purchased at the Newport Community Development Department (address above). Contact Derrick Tokos, Community Development Director (541) 574-0626, d.tokos@newportoregon.gov (mailing address above).

***(FOR PUBLICATION ONCE ON FRIDAY, NOVEMBER 4, 2016)***

✓

# NOTICES

**WEDNESDAY EDITION: 5:00pm Thursday Prior**

**FRIDAY EDITION: 5:00pm Tuesday Prior**

the above estate. All persons having claims against the estate are required to present them, with vouchers attached, to the personal representative at PO Box 1144, Newport, OR 97365, within four months after the date of first publication of this notice, or the claims may be barred. All persons whose rights may be affected by the proceedings may obtain additional information from the records of the court, the personal representative, or the attorney for the personal representative, Jeff Waarvick, PO Box 1144, Newport, OR 97365. Dated and first published October 21, 2016. O-21, 28, N-4 (36-04)

**NOTICE OF SHERIFF'S SALE #16-1511**

On November 22, 2016, at the hour of 10:00 a.m., at the Lincoln County Sheriff's Office, 225 W Olive St., Rm 203, in the City of Newport, Oregon, the defendant's interest will be sold, subject to redemption, in the real property commonly known as: 5324 Logsden Road, Siletz, Oregon 97380. The court case number is 16CV04928, NATIONSTAR MORTGAGE, LLC, plaintiff(s) vs. RONALD L OLEMAN; THE BANK OF NEW YORK MELLON fka THE BANK OF NEW YORK, AS SUCCESSOR TRUSTEE FOR JP MORGAN CHASE BANK, N.A., AS TRUSTEE ON BEHALF OF THE CERTIFICATHOLDERS OF THE CWHEQ INC., CWHEQ REVOLVING HOME EQUITY LOAN TRUST, SERIES 2005-1; UNITED STATES OF AMERICA; CACH, LLC; PORTFOLIO RECOVERY ASSOCIATES; and ALL OTHER PERSONS OR PARTIES UNKNOWN CLAIMING ANY RIGHT, TITLE, LIEN, OR INTEREST IN THE REAL PROPERTY COMMONLY KNOWN AS 5324 LOGSDEN ROAD, SILETZ, OREGON 97380 defendant(s). This is a public auction to the highest bidder for cash or cashier's check, in hand. For more details go to http://www.oregonsheriffssales.org/county/lincoln/. O-21, 28, N-4, 11 (37-11)

**NOTICE OF SHERIFF'S SALE #16-1512**

On November 22, 2016, at the hour of 10:00 a.m., at the Lincoln County Sheriff's Office, 225 W Olive St., Rm 203, in the City of Newport, Oregon, the defendant's interest will be sold, subject to redemption, in the real property commonly known as: 51 N Echo Drive, Otis, OR 97368. The court case number is 15CV09912, BAYVIEW LOAN SERVICING, LLC, plaintiff(s) vs. LAWRENCE EUGENE DAUGHERTY, JR.; and ALL OTHER PERSONS OR PARTIES UNKNOWN CLAIMING ANY RIGHT, TITLE, LIEN, OR INTEREST IN THE REAL PROPERTY COMMONLY KNOWN AS 51 N ECHO DRIVE, OTIS, OR 97368 defendant(s). This is a public auction to the highest bidder for cash or cashier's check, in hand. For more details go to http://www.oregonsheriffssales.org/county/lincoln/. O-21, 28, N-4, 11 (38-11)

**IN THE CIRCUIT COURT OF THE STATE OF OREGON FOR THE COUNTY OF LINCOLN PROBATE DEPARTMENT CASE NO.: 16PB06799 NOTICE TO INTERESTED PERSONS IN THE MATTER OF THE ESTATE OF RICHARD B. KADING, JR., DECEASED.**

NOTICE IS HEREBY GIVEN that Judith Settle Kading has been duly appointed as personal representative. All persons having claims against the estate are required to present them to the undersigned attorney for the personal representative at Schwabe, Williamson & Wyatt, P.C., 1211 SW 5th Ave., Suite 1900, Portland, OR 97204, within four months after the date of first publication of this notice, or the claims may be barred. All persons whose rights may be affected by the proceedings may obtain additional information from the records of the Court, the personal representative, or the attorney for the personal representative. Dated and first published on October 28, 2016. JUDITH SETTLE KADING, Personal Representative. Kevin F. Kerstiens, OSB No. 812789, Schwabe, Williamson, & Wyatt, PC, Attorneys for the Personal Representative, 1211 SW 5th Ave., Suite 1900, Portland, OR 97204. Published Oct.28, Nov. 4 & Nov. 11, 2016. O-28, N-4, 11 (42-11)

**PUBLIC SALE**

The following storage units will be sold at public auction on Saturday, November 12, 2016 at 1:00 PM for non-payment of rent and other fees. Auction is pursuant to Action Rules and Procedures of Lincoln Storage, 4809 S Coast Hwy, South Beach, OR 97366, 541-867-6550. Rules are available upon inquiry. Unit #101 – Kelly Allard; Unit #204 – Kenneth Jordan; Unit #260 – Steven Tipsword; Unit #270 – Barbara Minaudo; Unit #422 – Marty Little; Unit #572 – Crystal Vance; Unit #589 – Thomas Francis. N-4, 11 (48-11)

**IN THE CIRCUIT COURT OF THE STATE OF OREGON FOR THE COUNTY OF LINCOLN IN THE MATTER OF THE ESTATE OF: STANLEY RAY GANN, DECEDENT. CASE NO. 16PB06892 NOTICE TO INTERESTED PERSONS**

NOTICE IS HEREBY GIVEN that the undersigned has been appointed personal representative. All persons having claims against the estate are required to present them, with vouchers attached, to the undersigned personal representative at 423 North Coast Highway, P.O. Box 1270, Newport, OR, 97365, within four months after the date of first publication of this notice, or the claims may be barred. All persons whose rights may be affected by the proceedings may obtain additional information from the records of the Court, the personal representative, or the attorneys for the personal representative, Macpherson, Gintner & Diaz, 423 North Coast Highway, Post Office Box 1270, Newport, Oregon 97365. Dated and first published November 04, 2016. /s/ Corey G Blake Of Attorneys for the Personal Representative. Personal Representative: Heather L Shillinger, 140 N. Indies Drive, Unit B, Duck Key, Florida 33050. Attorney for Personal Representative: Corey G. Blake OSB No. 051686, P.O. Box 1270, Telephone 541-265-8881, Fax No. 541-265-3571. N-4, 11, 18 (49-18)

**NOTICE OF SHERIFF'S SALE #16-1604**

On December 6, 2016, at the hour of 10:00 a.m., at the Lincoln County Sheriff's Office, 225 W Olive St., Rm 203, in the City of Newport, Oregon, the defendant's interest will be sold, subject to redemption, in the real property commonly known as: 382 E Alsea Riviera Dr., Tidewater, OR 97390. The court case number is 142269, Planet Home Lending, LLC, FKA Green Planet Servicing, LLC plaintiff(s) vs. Carl E Wofford; Deborah D. Wofford, NKA Deborah Dee Martin; Oregon Affordable Housing Assistance Corporation; and Persons or Parties Unknown Claiming Any Right, Title, Lien, or Interest in the Property Described in the Complaint Herein defendant(s). This is a public auction to the highest bidder for cash or cashier's check, in hand. For more details go to http://www.oregonsheriffssales.org/county/lincoln/. N-4, 11, 18, 25 (50-25)

**NOTICE**

The Newport Police Department has in its physical possession the unclaimed personal property described below. If you have any ownership interest in the unclaimed property, you must file a written claim with the Newport Police Department within 30 days from the date of publication of this notice (November 04, 2016) or you will lose your interest in that property. Included Property: Air Soft Pistol, Backpacks, Bags, Bicycle, Breathing apparatus, Camera, Cell Phones, Clothing, Currency, Day Planner, Dragon Seat Covers, Garage Door Opener, Garmin, Hat, Identification Documents, Jacket, Jewelry, Keys, Knives, Purses, Skateboard, Suitcases, Sunglasses, Wallets, Whistle. Persons Mentioned: William Kingery, Ronald Larson, Jamie Valet, Newport Shell Station, Guy Huckel, Regina Smith, Steven Bostick, Michael Barrett, Casey Hall, Ben Sanders, Jerie Tatum, Philip Meredith, Velasco Francisco, Travis Lake, Malia Zollner, Melvin Christian, Sabrina Vinson, Devin Culbreath, John Ross, Edmund Day, Ellen Wentzell. Address to file a written claim: Newport Police Department, Attn: Property Custodian, 169 SW Coast Hwy., Newport, OR 97365. 541-574-3348. This notice is published in accordance with ORS 98.245. N-4 (51-04)

**CITY OF NEWPORT NOTICE OF A PUBLIC HEARING**

The Newport Planning Commission will hold a public hearing on Monday, November 14, 2016, at 7:00 p.m. in the City Hall Council Chambers to consider File No. 2-Z-16 involving text amendments to Chapter 14.10 (Height Limitations) of the Newport Municipal Code allowing an exception to maximum height limitations to allow the construction of vertical evacuation structures within mapped tsunami inundation areas. Pursuant to Newport Municipal Code (NMC) Section 14.36.010, the Commission must find that the change is required by public necessity and the general welfare of the community in order for it to make a recommendation to the City Council that the amendments be adopted. Testimony and evidence must be directed toward the request above or other criteria, including criteria within the Comprehensive Plan and its implementing ordinances, which the person believes to apply to the decision. Failure to raise an issue with sufficient specificity to afford the city and the parties an opportunity to respond to that issue precludes an appeal, including to the Land Use Board of Appeals, based on that issue. Testimony may be submitted in written or oral form. Oral testimony and written testimony will be taken during the course of the public hearing. The hearing may include a report by staff, testimony from the applicant and proponents, testimony from opponents, rebuttal by the applicant, and questions and deliberation by the Planning Commission. Written testimony sent to the Community Development (Planning) Department, City Hall, 169 SW Coast Hwy, Newport, OR 97365, must be received by 5:00 p.m. the day of the hearing to be included as part of the hearing or must be personally presented during testimony at the public hearing. The proposed code amendments, additional material for the amendments, and any other material in the file may be reviewed or a copy purchased at the Newport Community Development Department (address above). Contact Derrick Tokos, Community Development Director (541) 574-0626, d.tokos@newportoregon.gov (mailing address above). N-4 (52-04)

**CITY OF NEWPORT NOTICE OF A PUBLIC HEARING**

The Newport Planning Commission will hold a public hearing on Monday, November 14, 2016, at 7:00 p.m. in the City Hall Council Chambers to review and make a recommendation to the Newport City Council on File No. 3-Z-16. The City of Newport has requested an amendment to the Zoning Map of the City of Newport in order to initiate rezoning of certain City and Port of Newport owned Bayfront properties involving Tax Lot 2100 of Lincoln County Assessor's Map 11-11-08-CA and Tax Lot 200 of Lincoln County Assessor's Map 11-11-09-CB resulting in an equal area exchange of "W-1/"Water Dependent" and W-2/"Water-Related" Designated Lands. For the proposed amendment to the Zoning Map of the City of Newport, the applicable criteria are identified in Section 14.36.010 of the Newport Zoning Ordinance. Testimony and evidence must be directed toward the criteria above or other criteria in the Comprehensive Plan and its implementing ordinances that the person believes applies to the decision. Failure to raise an issue with sufficient specificity to afford the city and the parties an opportunity to respond to that issue precludes an appeal, including to the Land Use Board of Appeals, based on that issue. Testimony may be submitted in written or oral form; and oral and written testimony will be taken during the course of the public hearing. The hearing may include a report by staff, testimony from the applicant, proponents, opponents, other interested parties, rebuttal by the applicant, and questions and deliberation by the Planning Commission. Written testimony sent to the Community Development (Planning) Department, City Hall, 169 SW Coast Hwy, Newport, OR 97365, must be received by 5:00 p.m. the day of the hearing to be included as part of the hearing or must be personally presented during testimony at the public hearing. Pursuant to ORS 197.763(6), any person prior to the conclusion of the initial public hearing may request a continuance of the public hearing or that the record be left open for at least seven days to present additional evidence, arguments, or testimony regarding the application. The staff report may be reviewed or a copy purchased at the Newport Community Development (Planning) Department at City Hall, 169 SW Coast Hwy, Newport, Oregon 97365, seven days prior to the hearing. The application materials and the applicable criteria are available for inspection at no cost or copies may be purchased for reasonable cost at this address. Contact Derrick Tokos, Community Development Director (541) 574-0626 (address above). N-4 (53-04)

Elizalde found his way into crowded penalty area, gain control of the ball and put past the defense for the sco

The Cubs final goal of t evening would come fro the leg of Jakob Spink, the team made full use

## MOVING ON

Continued from page 1

goal for the game winner.

"It was the best play of t season," James said.

With the win, Taft w now move on to the rou of eight where they'll face against Portland Advent Academy (11-4, 6-2 Distr 1). The Cougars entered t tournament as the No. 2 se and advanced to the seco round after taking out Un tilla, 5-1.

Two seasons ago, Po

# Attachment “D”

**Marine Studies Initiative Newport Building Siting Recommendation**
**Executive Summary**
**July 6, 2016**

Marine Studies Initiative Newport Building Siting Committee*

## Introduction

Through its Marine Studies Initiative (MSI), Oregon State University will be recognized as a global leader in 21st-century transdisciplinary education, research and outreach, and lead the development of inclusive global strategies for successful stewardship of the oceans and planet. The MSI will help to create a healthy future through research and teaching that emphasizes collaboration, experiential learning and research, engagement with society and problem solving.

To achieve this goal, the MSI will leverage and build upon OSU's existing strengths in the marine-related sciences and other academic disciplines, coastal community engagement and OSU's state-of-the-art research and teaching facilities, especially those at the Hatfield Marine Science Center (HMSC) in Newport, Oregon. By 2025, the goal is to have 500 full-time equivalent marine studies students resident in Newport, with 400 of those students being undergraduates and 100 as graduate students. The MSI will expand the collaborative, problem-solving and experiential learning environment in Newport with access to real-world scholars, agency scientists and engaging community issues. The MSI program will use existing classrooms, seawater teaching laboratories and facilities, and the Guinn Library at HMSC. MSI programming will improve overall "access to the sea" for OSU students, faculty and staff, thereby creating the foundation for experiential learning and research.

As part of the MSI, the University plans to construct an academic and research building in Newport. Given the importance of the MSI and the priority for safety in light of an eventual significant seismic event occurring along the coast, OSU has conducted a comprehensive evaluation of multiple potential site locations for this building. The primary purpose for this evaluation was to develop a recommendation on siting the building within the tsunami inundation zone at HMSC or on higher ground outside the inundation zone. The evaluation included two third-party reports about the HMSC site (Poland Report) and two alternative sites (Fortis Report), as well as information gathered from a public comment session in Newport, consultations with legislators, and input from a range of government officials and OSU faculty -- primarily from the College of Earth, Ocean and Atmospheric Sciences (CEOAS) and the College of Engineering (COE).

Regardless of the location selected for the MSI Newport building, Oregon State will meet the following building principles:

- The building will be designed to ensure that its structural integrity is maintained for the expected Cascadia Subduction Zone (CSZ) earthquake. This design will enable all occupants—including those with limited mobility—to survive a future seismic event, exit timely manner and, if required, safely follow a tsunami evacuation plan

- The building's design and safety features will serve as a national and global showcase and demonstrate state-of-the-art structural options for future buildings located in seismically active regions worldwide, as well as for earthquake and tsunami readiness.

- The building will have a design occupancy of not more than 350 people.

**Overview of Seismic Hazards**

All of the Newport-area sites considered are in a high seismic zone. The primary contributor to the seismic hazard is the Cascadia Subduction Zone. When a site is subjected to earthquakes and/or tsunamis, specific seismic hazards are considered: strong shaking, fault rupture, landslides, liquefaction, lateral spreading and tsunamis. All sites in the Newport-area will be subjected to a similar amount of strong shaking during a CSZ event. Some of the hazards, such as fault rupture and a tsunami event, can be avoided by site selection while other hazards, such as liquefaction and lateral spreading, can be prevented through design and construction measures.

Researchers have been able to identify 41 tsunamis associated with CSZ earthquakes of various sizes over the last 10,000 years. Based on the paleo seismic record, the average return interval for significant earthquakes (ranging from 7.4 to 9.2 in magnitude) within the CSZ is about 300 years. The last one occurred in 1700. In the last 10,000 years, the refereed literature indicates that there has been one event of magnitude 9.2. Recent OSU research indicates that there may have been a second event of this magnitude in the past 10,000 years, though this second event is currently not in the refereed literature.

Earthquakes of different sizes generate different sizes of tsunamis. For simplicity, the Oregon Department of Geology and Mineral Industries (DOGAMI) has used the "t-shirt" sizes of S, M, L, XL and XXL to characterize the different sizes of tsunamis using estimated inundation line -- the inland limit of inundation due to the tsunami. According to DOGAMI, inundation depths at HMSC range from less than 1 foot in the "S" event to 27 feet in the "XXL" event. The XXL-line is associated with the largest tsunami in the past 10,000 years.

In 2015, the Governor's Task Force on Implementation of the Oregon Resilience Plan recommended that the L-line, the inundation limit associated with an L-size tsunami, be used for planning and design purposes in the state of Oregon. For this recommended design event, the inundation depth at HMSC for an L-size tsunami is six feet.

**Student Housing to Be Located Outside of Tsunami Inundation Zone**

Regardless of the location of the proposed MSI Newport building, all new OSU housing for marine studies students, as well as other students working at HMSC, will be constructed above the XXL inundation zone described by DOGAMI. Assuming that students spend about 9 to10 hours per day at their residence hall, the location of housing on higher ground reduces students' potential time spent in the tsunami zone by about 40 percent while also mitigating the potential impact that darkness might have on students should a seismic event occur at night. OSU is currently conducting due diligence on a site located outside the XXL tsunami inundation zone and proximal to HMSC, for use as student housing.

**Overview of Site Characteristics**

*HMSC Site*
The terrain in the South Beach area that includes the HMSC site is relatively flat and ranges from 15 to 18 feet above sea level. The area is underlain by a deep deposit of sand, whose density varies with location and depth. OSU leases the HMSC campus property from the Port of Newport. Over time, the City of Newport has invested $3.2 million to develop infrastructure to support the build out of the HMSC marine research and educational facilities.

*Sites above Tsunami Inundation Zone – "Alternative Sites"*
The two alternative sites identified by OSU are located south of the Yaquina Bay Bridge; are outside the tsunami inundation zone ("XXL-line") as identified by DOGAMI; and are within the City of Newport and/or the city's urban growth boundary. The sites are located between one to two miles away from HMSC; respectively provide 11 and 29 acres of developable land; and presently are heavily wooded with undulating terrain. One site includes infrequent deep ravines.

**Summary Evaluation of Sites**

Evaluation criteria of all prospective sites included the following factors:

1. Life Safety (seismic, inundation, evacuation, HMSC staff and visitor safety)
2. MSI Program Delivery
3. Cost of Development and Operations; and
4. Schedule

***1. Life Safety Factors***

A. Seismic
Both the HMSC site and the alternative sites will experience strong shaking of similar levels. In fact, it is possible that the alternative sites may experience greater shaking due to ground motion amplification. Structures at any of the sites can be designed to survive the strong shaking.

**HMSC Site:** Previous soil borings have been undertaken to determine the site's underlying sand characteristics. Without appropriate seismic design measures, significant liquefaction settlement is expected at the HMSC site, while it is anticipated the liquefaction settlement inland along the evacuation path may range from negligible to up to six inches. Liquefaction-induced lateral spreading, which may lead to cracks in the ground, is likely along the Yaquina Bay shoreline, but lateral spread is not expected to extend to Marine Science Drive (Fortis Report). Both liquefaction and lateral spreading hazards can be mitigated and are included in the construction cost estimates.

**Alternative Sites:** No signs of slope instability were observed and DOGAMI landslide maps show no indication of historic landslides having occurred at the sites. Based on anticipated subsoil conditions, modest ground motion amplification is anticipated and liquefaction at these locations, and lateral spread hazard are anticipated to be relatively low. Exploratory drilling will

be required to better evaluate these hazards and guide the detailed design and construction processes (Fortis Report).

B. Inundation

DOGAMI and OSU College of Engineering inundation models show an estimated arrival time of 30 minutes for the tsunami to reach the proposed HMSC building site. Based on the Poland report recommendations, if the building were sited at HMSC, it should be designed to be repairable for the L-sized tsunami and horizontal evacuation strategies and capabilities should be designed for the worst case XXL-sized event. Inundation is not a concern for the alternative sites.

C. Evacuation *(Revision of July 1, 2016 Report)*

Throughout the world, the preferred method of evacuation planning for tsunamis stresses horizontal evacuation routes, preparations, procedures and training. HMSC conducts tsunami evacuation drills twice per year and a very high percentage of HMSC workers have a safety and survival pack ("go bags") nearby them at their place of work.

Evacuation modeling by the OSU College of Engineering shows that 100 percent of mobile evacuees can make it safely to Safe Haven Hill before the predicted arrival of a tsunami. The City of Newport and FEMA recently have completed a $900,000 project to improve the tsunami evacuation assembly area at Safe Haven Hill. Located at 70 feet above sea level, the top of Safe Haven Hill features a 2.33-acre area that includes approximately 50,000 square feet of cleared space. Based upon federal and engineering emergency space standards of 10-square-feet per person, the Safe Haven Hill evacuation area will serve 5,075 people. (See recommendation below regarding investments in hardening the evacuation route to Safe Haven Hill.)

Importantly, in addition to providing an emphasis on horizontal evacuation plans, the MSI building design process needs to consider building a seismically safe structure that includes features to vertically evacuate people with limited mobility to the upper levels and roof of the building or to the construction of a dedicated vertical shelter. Training and vertical evacuation drills to serve injured, disabled or elderly individuals should be emphasized and routinely conducted by OSU in coordination with other Newport-area community emergency planners. By doing so, OSU will provide additional life safety capacity to the existing HMSC staff and students, as well as visitors, other agency employees who work at HMSC, or others who work in the South Beach area.

Oregon State employed 356 people at HMSC in the winter of 2015; 436 people in the summer of 2015; and is expected to grow to 800 to 900 people by 2025.

Evacuation to higher ground is not required at the alternative sites.

D. HMSC Staff and Visitor Safety

The evacuation route from HMSC to Safe Haven Hill presently is clearly marked with blue tsunami evacuation signs. HMSC designed and implemented a tsunami interpretive trail on behalf of community partners, which each year educate thousands of visitors within the HMSC Visitor Center and the Oregon Coast Aquarium. HMSC is coordinating with South Beach peninsula stakeholders to fully supply two disaster caches at critical nearby evacuation sites.

### 2. *MSI Program Delivery*

Building at an alternative site would significantly compromise MSI program delivery and the ability to meet MSI program goals, due to the extensive spatial disconnect that would occur by separating the activities to occur within the MSI Building from OSU and agency researchers already working within HMSC, and by limiting users of the MSI building from ready access to core HMSC research facilities, including seawater labs. Further, MSI students would still spend the majority of their time at HMSC. Operationally, there would be added complications and likely costs in administering and maintaining offsite facilities. Finally, OSU would miss the opportunity -- and commitment made in the MSI building principles and during fund-raising -- to demonstrate state-of-the-art innovation in seismic and tsunami resilient engineering for local and global coastal communities.

### 3. *Cost*

HMSC site

OSU can build on leased land at no additional cost. Additional costs for providing seismic and tsunami safety will be included in the $50 million project cost. Construction on this site creates the opportunity to leverage additional public and private investments to support these safety features.

Alternative Sites

Construction costs at the alternative sites, including site infrastructure (utilities, roads, lighting, etc.), are estimated to be $1.5 to $3.5 million less than for the HMSC site. However, the alternative sites would also require additional one-time expenditures, including the purchase of land (estimated at $1 to $4 million) and required infrastructure (estimated at $1 to $3 million) to accommodate the off-site research building (shuttle, parking lot at HMSC, traffic flow improvements, facility vehicles, etc.). In addition, annual operating costs of the alternative sites would be approximately $500,000 to $700,000 due to the cost of shuttle services and building facilities and custodial support.

### 4. *Schedule from completion of architectural and engineering work*

HMSC Site

Construction is estimated at 16 months.

Alternate Sites

Construction ranges between 16-17 months, including possible infrastructure and site preparation work.

## Additional Considerations

### *Faculty Input*

Input regarding the siting of the MSI Newport building was sought from Oregon State faculty with relevant expertise. The initial input was provided in the form of letters from the Geology and Geophysics disciplinary group within the College of Earth, Ocean and Atmospheric Sciences

(CEOAS) and from faculty in the College of Engineering's School of Civil and Construction Engineering (COE). CEOAS Geology and Geophysics faculty urged the consideration of alternative sites located outside of the known tsunami flooding zones. COE faculty noted that Oregon State is in a unique position to provide evaluation in planning, design and construction, and education to reduce the coastal impact of a Cascadia Subduction Zone event. COE faculty urged OSU to design and construct the new Marine Studies facility beyond the conventional code requirements to serve as a model for earthquake and tsunami resilience.

COE and CEOAS faculty were asked by University leadership to review and comment on the two MSI building third-party reports: the Poland and Fortis reports. COE faculty did point out the requirement to address life safety at the three locations due to an earthquake citing that the MSI project would be new construction and would have to conform to seismic codes. The COE faculty discussion did not reveal any "red flags" or technical challenges which could not be overcome, and they noted that a well-designed building within the tsunami inundation zone would increase life safety opportunities for people already working within the surrounding area. COE faculty concluded that the new construction and plans to increase life safety should be integrated with the overall planning for the Newport campus.

CEOAS Geology and Geophysics faculty noted that the Poland Report concludes that a building that can withstand a large earthquake and tsunami and provide life safety for an extra-large event is feasible. They concluded that an alternative site "makes sense in terms of economic, hazard, life safety and longevity considerations." They also agreed with the recommendation for a new reinforced evacuation path to provide improved egress from existing facilities in and around HMSC. CEOAS Geology and Geophysics faculty concluded by recommending a long-term plan to relocate all existing OSU facilities to an alternative site above the tsunami inundation zone to substantively avoid the multiple natural hazards that exist at the HMSC site.

***Community stakeholder input***

Newport community stakeholder input is nearly unanimous in favor of building the MSI Newport building at HMSC. The Mayor and City Manager of Newport both stressed the investments made by the city and partners to improve the South Beach tsunami evacuation route and evacuation assembly area at Safe Haven Hill. Lincoln County Commissioners remarked that the risks of building at the HMSC site are mitigated by on-going advancement in structural design to withstand tsunamis including vertical evacuation features, and by the advancement in effective early detection and warning systems.

Leaders of three major OSU programs located at HMSC -- the Cooperative Institute for Marine Resources Studies (CIMRS); the Coastal Oregon Marine Experiment Station (COMES); and the

Marine Mammal Institute (MMI) -- stressed that building on the HMSC site will provide "an excellent example of how to build earthquake- and tsunami-safe buildings in coastal communities" and that the new building can "be engineered to increase survivorship for individuals working at South Beach by acting as an alternate on-location 'safe haven' for the disabled and injured."

Other HMSC faculty and staff emphasized the synergy of having the new MSI Newport building be built on the HMSC campus to gain the positive benefits of collaboration with existing personnel and facilities. HMSC faculty and staff also expressed concerns about potential damage to the tsunami evacuation route from the earthquake and the need for seismic retrofitting of existing OSU HMSC buildings.

***HMSC Federal and State Agency plans (Revision of July 1, 2016 Report)***

A survey of government agencies located on the HMSC campus, including the National Oceanic and Atmospheric Administration (NOAA); the U.S. Environmental Protection Agency (USEPA); the United States Department of Agriculture (USDA); the United States Fish and Wildlife Service (USFWS); and the Oregon Department of Fish and Wildlife (ODFW), indicated that the agencies were supportive of the MSI program, are aware of the potential seismic and tsunami hazards, and had no plans to leave the HMSC location. Each agency is involved in discussions of how to best prepare for seismic and tsunami hazards. NOAA leadership expressed interest in the potential for vertical evacuation in the new MSI building, especially for individuals who are mobility challenged and who may have difficulty reaching other higher ground locations in a timely manner.

***Government agency and/or Commission Communications***

Over the last two years, University officials have been in frequent contact with a wide variety of federal, state and local government officials and entities. Throughout the consideration of the capital project, both Governors Kitzhaber and Brown were kept fully aware that MSI plans provided for the construction of the building in the tsunami inundation zone. Through consideration of House Bill 5005, members of the Legislature's Joint Ways and Means Committee anticipated and enabled the construction of the project on the HMSC campus. In our evaluation, members of the Newport Building Siting Committee also recognize that the legislative history of the project's consideration does not require that the building be located on HMSC campus.

The committee acknowledges the importance of the natural hazard issues faced by all of Oregon's universities that are cited in a Feb. 1, 2016 letter sent by the chair and vice chair of the Oregon Seismic Safety Policy Advisory Commission (OSSPAC). While these resiliency issues are relevant to the location selected for the MSI Newport building, they predominantly apply to all of OSU's statewide operations. The Newport Building Siting Committee believes that Oregon State University should convene a seismic preparedness committee to evaluate and provide the University strategic recommendations on the following issues in the event of a major seismic event:

- Continuity planning for general university operations planning;
- Continuity planning for grant-funded research;
- Continuity planning for on-going student enrollment and tuition revenues;
- Continuity planning for research centers, experiment stations and extension centers along the coast and throughout the state that would be relied on after a seismic event.

In the event of a CSZ XXL-sized event, OSU might face liability for repair, recovery and cleanup of the campus facilities (both the existing and any new MSI Building). OSU's Risk Management intends to address this liability by extending existing insurance coverage to the new HMSC building. This coverage insures for costs associated with repair, recovery and cleanup of the campus facilities in the event of damage caused by either earthquake or flooding. OSU is currently protected from property damage caused by earthquake at a $100 million limit which specifically includes the Pacific Northwest earthquake zone and flood insurance at a $250 million limit. The premium amount charged to OSU for such property insurance for the new MSI building will not change because the property is inside or outside of the tsunami inundation zone. While OSU is working to avoid or mitigate personal injury and any loss of life in such a catastrophic event, we have also confirmed that OSU's liability is mitigated through insurance and negligence findings are less likely given OSU's dedication to meet or exceed industry standards for building and evacuation training.

A CSZ event might also have a significant impact on the surrounding community which might require a shutdown of the HMSC campus. This shutdown can occur regardless of the location of the new MSI building. Because of that possible shutdown, OSU is exposed to potential liability in the form of lost tuition, lost research grant revenue and obligations to continue to pay operating costs for the faculty and staff in salary and OPE. The financial model for MSI (which has a large number of assumptions in it) projects $12.8 million in revenues for fiscal year 2025. More than 90 percent of that revenue is projected to come from tuition from the student growth. Assuming OSU is still able to operate in Corvallis following a seismic event, OSU would presumably move Newport-based classes to facilities in Corvallis, and relocate what research activity that had not been lost into Corvallis labs. Because operating costs for the faculty and staff in salary and OPE would continue despite a shutdown of HMSC, presumably faculty and staff would move their work to Corvallis during restoration of the HMSC campus. In addition, OSU is also covered by a business interruption policy which covers lost tuition and research revenue and expenses, such as payment of salaries. OSU would look to its insurance provider to cover its revenue losses to the extent that mitigation efforts are not 100 percent successful.

In recent conversations, Jay Wilson, chair of the OSSPAC -- without expressing an opinion regarding precisely where the facility should be constructed -- expressed that he was pleased with the robust process OSU has followed. He said he understood OSU needs to balance function and seismic issues, and he expressed an assurance that through this process, President Ray can reach a thoughtful siting decision, whatever that decision may ultimately be.

During a February 2016 meeting with the Coastal Legislative Caucus, all legislators present were adamant in supporting construction of the facility on the HMSC campus. A number of members expressed deep concerns regarding the precedent – and possible impacts to the economic vitality of the coastal region – if OSU were to locate the facility outside of the tsunami inundation zone.

From numerous conversations involving OSU officials and a wide variety of political and governmental entities over the last two years, it is clear that construction within the inundation zone should be contingent upon the inclusion of design elements that will enable the building to withstand a significant seismic event, as well as provide for adequate evacuation infrastructure and plans from the HMSC campus.

***Donor intent***

The degree to which the primary donor is committed to locating the building at HMSC is not presently known. While the 2013 proposal to the primary donor was very explicit about building at the HMSC site, follow up will be needed with all donors if one of the alternative sites is selected. In the donor proposal, the building site at HMSC was specifically emphasized to:

1) Ensure that "students will have outstanding access to the full spectrum of research and educational facilities of the Marine Studies Campus and nearby natural habitats;"
2) "Build on Hatfield Marine Science Center's exceptional resources for education, research and outreach;" and
3) "Access the collaboration and innovation which is so deeply ingrained in the culture at Hatfield, where OSU researchers work in close proximity to and in collaboration with researchers in federal and state agencies."

As summarized in the section on program delivery, it may be possible to marginally meet these expectations at an alternative site, but it will be more difficult and operationally expensive to do so.

It was also clear within the donor proposal that "the facility will be designed with structural resiliency for seismic and tsunami events," and that "student housing facilities for the Marine Studies Campus will be located outside the hazard zone."

**Summary Recommendations** ***(Revision of July 1, 2016 Report)***

Based on this comprehensive evaluation of the alternative sites and the HMSC location, it is recommended that OSU build the new MSI Newport building on the HMSC campus. This recommendation is based on due consideration of life safety while addressing program delivery, cost and schedule.

By building a seismically safe structure on the HMSC campus – with the ability to vertically evacuate people – OSU will deliver additional life safety capacity for existing HMSC employees and visitors. Building at the HMSC campus site will maximize the ability to meet the MSI programmatic goals due to new building's proximity to existing OSU and agency researchers, and access to core research facilities.

Even if the MSI building were built away from the HMSC campus, students would still spend the majority of their day time at HMSC, significantly negating the intended goal of keeping students out of the tsunami zone.

By building at the HMSC site, OSU will demonstrate state-of-the-art innovation in seismic and tsunami resilient engineering to local and global coastal communities.

Further, by building a seismically safe structure on the HMSC campus with the ability to vertically evacuate people, OSU will address life safety for those individuals with limited mobility or who are injured during a seismic event by providing training and vertical evacuation drills in coordination with other Newport-area community emergency planners. By doing so,

OSU also will provide additional life safety capacity to the existing HMSC staff and students, as well as visitors, other agency employees who work at HMSC, or others who work in the South Beach area.

The building should be designed to allow individuals with limited mobility to be assisted in reaching the building's upper floors and roof.

In addition to this summary recommendation, the MSI Siting Committee also recommends:

- Improvement of evacuation route between the HMSC campus and Safe Haven Hill to mitigate risk from soil liquefaction. Hardening of the evacuation route with reinforced pavement will reduce the risk of cracking and faulting along the route, hence improving safe evacuation including for wheel chair access. The direct construction cost of this hardening is estimated at about $515,000.
- Hold the project budget to $50 million even if the building gross square footage is compromised to achieve the life safety benefits.
- A holistic evaluation by the University of seismic conditions at all OSU locations, including HMSC, and creation of a seismic safety improvement plan for each location. This effort will include implementing over the next decade recommendations in the Fortis Construction Inc. report as how to bring existing HMSC buildings up to appropriate standards.
- Continuation of ongoing and improved seismic safety and tsunami evacuation training for all HMSC visitors, students and employees in association with the local community. This preparation must address the needs of everyone, including those with limited mobility.

Finally, the MSI Newport Building and any related seismic improvements and safety efforts should capture a full learning experience for OSU students, as well as the community at large.

*MSI Newport Building Siting Committee membership:
Ron Adams, Interim Provost and Executive Vice President
Scott Ashford, Dean, College of Engineering
Anita Azarenko, Associate Vice President designate, Capital Planning, Development & Facilities Operations
Jack Barth, MSI Executive Director
Steve Clark, Vice President for University Relations and Marketing
Robert Cowen, HMSC Director
Lori Fulton, Manager of Capital Administration
Mike Green, Interim Vice President for Finance and Administration/CFO
Jock Mills, Director, Government Relations
Kelly Kozisek, Chief Procurement Officer
Terry Meehan, Associate General Counsel
Nicole Neuschwander, Director of Leasing and Strategic Real Property Management
Cindy Sagers, Vice President for Research
Gabrielle Serra, Director, Federal Relations

# Attachment “E”

**MINUTES**
**City of Newport Planning Commission**
**Work Session**
**Newport City Hall Conference Room A**
**August 22, 2016**
**6:00 p.m.**

**Planning Commissioners Present:** Jim Patrick, Lee Hardy, Bob Berman, Mike Franklin, and Jim Hanselman.

**Planning Commissioners Absent:** Rod Croteau and Bill Branigan *(excused)*.

**PC Citizens Advisory Committee Members Present:** Karmen Vanderbeck and Dustin Capri.

**PC Citizens Advisory Committee Members Absent:** Bob Heida.

**City Staff Present:** Community Development Director (CDD) Derrick Tokos and Executive Assistant Wanda Haney.

1. **Call to Order**. Chair Patrick called the Planning Commission work session to order at 6:00 p.m.

2. **Unfinished Business.**

A. **Preliminary discussion about the release of the 2016 flood insurance rate maps**. Tokos noted that included in the meeting packet was the preliminary release of the new FEMA Flood Study and Insurance Rate Maps. The letter distributed at this meeting was the actual hard copy with instructions. There's an official 30-day review period followed by a 90-day appeal period, after which they will look to finalize the maps in seven to ten months. We will take the study and maps through local ordinance adoption, which should be in the fall of 2017. Hardy asked if we're obliged to adopt them. Tokos said if we want to maintain flood insurance for our constituents we have to adopt them. Hardy said then people wouldn't build in hazardous areas and we wouldn't lose lives; what's wrong with that?

Tokos noted that when FEMA did the early release back in 2014 to get feedback on how the maps were coming together, we had a few targeted areas. One was the Nye Beach turnaround. Franklin asked if the new gray area was revised. Tokos said yes, they pulled it back considerably. They found that VE zones didn't play well with the vertical seawall. They had to adjust their modeling a bit to get it to handle the seawall dynamic better. That's why they said the original information was overly conservative. Patrick said that area could still flood, but this is more realistic with respect to wave surge. Tokos said in that VE zone, the surge shouldn't be much beyond halfway through the parking lot at the turnaround. Patrick thought that made more sense.

Tokos said that over by Neolha Point they were basically pulling most of the townhouses out. We gave them photos showing flooding in 2007. While it may not be related to wave action, the thought was that if it's subject to a 100-year event, it should be in the 100-year flood plain so people know that when they purchase the property they possibly can get federally subsidized flood insurance and they're not saying that nobody informed them. Berman asked how they know. If he's from out of the area and buys a piece of property that looks perfectly reasonable, how does he know? Tokos said if there's a lender involved, it's mandatory. It will come up in the disclosure documents. Berman asked who's disclosing it. Tokos said he thinks a lender will require that it's mandatory for insurance before purchasing property. Hardy said it's not clear in the disclosure documents used in this state. Certain sellers, like banks, governments, housing authorities, and developers, don't have to disclose. In addition, on these forms the third answer choice is, "don't know." She said we don't have disclosures properly structured to provide that information accurately. Patrick asked if it's shown on title reports. Franklin said that banks find it. Tokos said that our office gets contacted regularly. Hardy said hopefully it stops them because their banks won't lend the money; but there are a lot of people who spend cash. Patrick said it would get tagged when they go to get insurance. Tokos noted that there's the required disclosure on the deed documents that you are responsible for going to your local planning office to review zoning laws. This is an overlay, which is a zoning law. Hardy said that doesn't mean that it gets read and they will do that. Tokos said it's a "buyer beware" system. Hardy said it's not the be all to all concerns. Tokos said, it's the system we work with. Hardy mentioned a NOAA employee who was using a realtor that should have encouraged him to ask the right questions; but she didn't. Now this person is facing $30-$50 thousand to rebuilt HOA common area. That had been known for years, but he was never advised. It was bank-owned property. Special assessments aren't in the CC&Rs. The disclosure form wasn't required because it was bank-owned property. If he had asked to review minutes and budgets, he would have seen it; but nobody advised him of it. She said a lot of people get burned relying on the disclosures. Berman said a seller is required to check those boxes if they're selling their house. Hardy said, but the third answer is "I don't know." Tokos said it's correct that they have that option in there. The disclosure form is something held tight by the real estate lobby in the state. Capri said if you had just "yes" or "no" that's scary because you are liable. Hardy said it's easy if you don't know something to hire somebody to find the answer. Capri said geologic reports are the same; there's so many caveats.

Looking at the Neolha Point aerial, Franklin asked if that structure next to the townhouses is required to get flood insurance. You can see how tight that is. Tokos said we have to go through the 30-day review. We can pull out circumstances like that where it comes up to the eaves of the structure and ask, what are you looking for on something like this? He said as a matter of interpretation, it makes things difficult. They are giving us highly-defined, good-quality maps. They should be able to tell us, if it's close, you are going through the process. Now it's very tight. Berman said it looks like a corner is in. Carpi asked if a structure touches, is it in? Tokos said, what do we do with that? He said it probably should have been already elevated. Franklin asked if it's the structure or the property lines. Once it's on the property, is that subject to FIRM? Tokos said, no, you could have a large property. Patrick said what you are looking at is the flood level numbers and floor level. Tokos said he needs to see what FEMA's expectations are with these new highly accurate maps as opposed to the old ones that were less accurate and we had more discretion. Patrick noted that that structure Franklin asked about was built when it flooded down there. Tokos said he didn't recall if that assisted living facility was flooded; but at least half of the townhouses were.

On a side note, Berman had a question about a property on the lower left of the map that had a white roof. He said that's a derelict property that needs to be cleaned up. Tokos said that's a question for Jim Folmar, our Community Services Officer. That's who would handle that; it would be a nuisance abatement. Patrick thought it would be good if we could have Folmar come and do an update to the Planning Commission about zoning things he handles.

Tokos said the third map we had talked about was the Big Creek area. They didn't make any changes that we talked about. They are pulling out a number of homes where we have had flooding. Hardy said she knew for a fact that a couple of the homes have pumps under the houses, but are outside the zone. Patrick said that could be a spring thing, and not flooding. Hardy said the first time it happened they didn't call it a flood because it didn't cover two square miles. She said it's probably a combination of ground water and runoff. Tokos said he will follow up with FEMA. As he pointed out in his memo, the study was all coastal. There was no hydrologic analysis of rivers or streams. The dynamics of those have changed considerably; where they're located and where the sand bars are. Hardy said you would think because it's the same water system, that they would look at it all at once. Tokos said it's a big piece, and they didn't tackle it. It makes you think that they would be more cautious there. Patrick asked if they're ever going to tackle that. Tokos said he can ask them. They are looking to set up a consultation coordination officer (CCO) meeting in mid-September. He will ask when or if it's even on their radar. Patrick said it would be nice to know. Capri thought Big Creek has big impact. He said anywhere rivers flow into the ocean it could flood in really different ways than what this is projecting. Hanselman noted that it's increasing at Agate Beach. DOGAMI and OSU are studying changes of wave actions on the beach. He said this is a 20-year cycle. Sand being deposited on Agate Beach may be coming from Cape Blanco. They are saying that the Newport beaches extend as far as Cape Perpetua. The sand comes from the sloughing off of the bluffs. That's what gets deposited north. There seems to be a reversal after twenty years. The depth changes dramatically in thirty years, which will change these flood maps too. He said that in the pictures that DOGAMI has of Agate Beach and the high water marks, it's remarkable where the high water is over fifty to sixty years. Some of this will change because nature changes. Patrick said that brings up the reason to ask them.

Tokos noted that in the packet, he included the north side and south side maps and a link to the website where we have the panels and the study. Patrick said he looked at those maps, but couldn't read them. Tokos said on those, the blue area would be the area. Tokos said the gist of this for Newport is that we don't have a lot of expansion. Much is elevated and bluffs. The storm surge can cause issues. One area, Big Creek, has a large floodplain. Tokos shared with the Port of Newport their area. Kevin Greenwood is working with the Port Commission. We will share their comments on behalf of the Port. They have McLean Point. That will impact them a little bit. It's currently being used as a dredge disposal site. They actually benefit by and large. Port Dock 7 is pulled out. FEMA originally set the bay height at 11.5 feet, but adjusted that to 12 feet. Tokos noted that there's a fair amount coming out in South Beach in the State Park. A lot has to do with accretion as the beach area moves further out toward the end of the Jetty. Berman said that's not buildable anyway. Tokos noted that some lots in Southshore are getting drawn in on the south end; three or four are impacted. Capri wondered what that was on the north map up by 89th. Tokos said it looks like something from the original maps. Maybe it was tracked further in. Berman said Moolack Creek goes back up in there.

Tokos said, as part of our comments, there were a number of letters of map changes (LOMCs), letters of map amendments (LOMAs), and letters of map revisions (LOMRs) that were all different flavors of changes made to FEMA maps outside the regular update cycle that will be superseded. They sent a two-page printout listing the out-of-cycle map amendments that are impacted because of these changes. We will be contacting those folks personally. Any property owner impacted will be contacted. He noted that we have a property owner who is looking to develop on property that is going in. They are looking at what to do. Do they want to develop in a more noncompliant manner? What's it going to cost to build in compliance with the new maps? What's the cost of insurance? He said, on the other hand, Capri had mentioned someone wanting to develop on property coming out. Capri said if it's outside tidal action, anybody can do site specific. They submit a letter to FEMA. Tokos added, if you can show that the development site is elevated and you don't need to artificially elevate, you can do that. Berman asked if these maps are based on Lidar. Tokos said yes, and also there's the study of the coast where they did modeling in terms of wave surge and terrain features on the coastline. They have been observing wave action over a number of years. That's why along the coastline it's broken down into finite sections and you will have different elevations for these different sections. They

took a hard look at the coastline. Capri said before it didn't follow the topography at all. Tokos said the '09 maps were digitized versions of the hand-drawn maps. They were very cartoonish, but it was the best they had at the time. Hanselman asked if the red lines on the maps were the UGB or city boundaries. Tokos said that's the city boundary. Capri thought it was good that we would be sending notices out to the affected people. Hardy asked if the City will be keeping a registry of those people and properties. Tokos said we will start a legislative file that we will keep under permanent retention.

On a side note, Patrick asked where we're at on the city limits. You can't tell what's in and what's out. Tokos said the City Council put their Urban Renewal hats on and talked about that. The general consensus was that we need to do concept planning for the highway corridor at least down to 50th (32nd to 50th) with the same detail as we did for Coho/Brant. Then pick up a conversation about annexation when they could have a more-informed discussion. Those property taxes will go up. We can quantify what they will look like. Without that, we can't answer what it will do if they come in looking at the long-term. Many of those properties are industrial. Do they want to stay where they are, or will the City turn it over to commercial? When given enough time, they can make those decisions. Hardy recalled that the developer of Wolf Tree did outreach between there and Newport to try to gain contiguous properties. The resort would develop sanitation and water system and sell it back. Then he lost the property and Will Emery bought it. The original developer was offering free golf for life if the property owners would agree to be annexed. Tokos noted that if a property is surrounded, we can take it; that's called island annexation. They have a say. They can show up at public hearings. But they couldn't stop it at the end of the day. Tokos said there are properties to the south in the UGB he doesn't show, but we don't technically surround anything there. Hardy said that south of 98th on the west side was targeted for that in the past. Patrick asked about 50th. Tokos said that is all surrounded. Patrick said for Surfland we don't have any way to get services down there. Capri said that 50th should be looked at. He said they are doing a development there, and by the time the City annexes it, you will be stuck with development at County standards. Patrick asked if the Council wants to do a design study down to there. Tokos said possibly to convert to commercial down to 40th, and industrial will go away. It's light industrial, which is a flex zone. They are not wanting to see a towing company for instance that won't mix well with a Trader Joe's. He's guessing that 32nd to 40th will possibly shift to commercial; and 40th to 50th will be industrial. We would want to have serious conversations with Hwy. 101 major landowners, like Tryon. Some of theirs is heavy industrial. They have entertained other uses like Lowes, but it just didn't happen. They are open, though. Wilder doesn't want to see heavy industrial there after the experience they had with that temporary asphalt plant that set up there. The issue is the smell if you're a residential owner and an asphalt plant comes in.

Patrick mentioned Tillamook; and Tokos said that Tillamook is going to get hammered. There's one little bit in the middle that's high enough. He said the big concern is the assay stuff; the concept of having to do habitat protection and not knowing what that is going to cost.

3. <u>New Business</u>.

A. <u>Code changes to height limits for vertical evacuation</u>. Hardy asked if we can limit that to existing buildings only. Tokos said he didn't think that would be saleable. Existing buildings may not be designed to take on the extra load. He said this is just an initial stab at the code language. He attached the guidelines FEMA has, which is a pretty good resource out there. It gives you an idea of what some structures look like. He attached a couple of chapters; the link has the whole document. It was felt that the most straightforward way to make changes would be to do a general exception. We have a variety of zones that fall within the tsunami inundation area. We have other exceptions that are akin to this. Hardy asked if that would apply to new construction. Tokos said it would apply to new or redevelopment. In the Height Limitations chapter of the NMC he added under general exceptions, "Portions of a structure designed for vertical evacuation from a tsunami where the property upon which the structure is located is within a tsunami inundation area as depicted on the maps entitled. . ." and then spelled those out. We can amend it in the future if newer maps are put out. He avoided putting a maximum height in here. We don't know what that needs to be in certain areas. In commercial and industrial the height limit is 50 feet, but that might not be sufficient in certain areas. It depends on site-specific conditions.

Hardy asked if the City has an inventory of buildable sites in the inundation zones. Tokos said we have a buildable lands inventory from 2013 and 2015. If we bring this to adoption, he could map that. Hardy said you know where they are, and someone wanted to build for vertical evacuation, it requires new construction to possibly be engineered to sustain impact. This just addresses one thing. Hardy thought that if it's just isolated to one thing, it leaves you hanging out there. Tokos said he can talk to our Building Official, Joseph Lease, about whether the building code is sufficient. He suspects that the building code is going to be flexible enough to allow you to design robustly to withstand wave force; it's not going to compel you. Hardy said it seems that if we start allowing this exception for that kind of construction then it's encouraging high-risk behavior. Tokos said there could be additional standards in the zoning code or as local building codes. Hardy asked if they aren't supposed to be stricter than State codes. Tokos said only if they're addressed in the State code; if not, we can address it. Capri thought you would be identifying properties you can't develop. Hardy wondered why have laws and rules if you can't develop safely. Berman said that's the direction of almost any property. If an earthquake hits, the weak will fall over. Hanselman thought it was of greater importance to not want buildings in there in the first place. We wouldn't want to give a height variance to residential just to encourage people to stay. He doesn't see that as appropriate. He said we should be using standards to prevent that. Hardy

said, or discourage anyway. Hanselman said to build a house that needs an evacuation level above 35 feet is counterproductive. Capri said on all these lots are people that have spent fortunes; then you tell them that they can't?

Tokos said the Commission could limit it to water-related or water-dependent; you have that flexibility if you want. Capri said the purpose is to protect life safety. Tokos said it's not intended for people to try to use that to circumvent the height limits in areas where there are views of the ocean and the bay. Patrick said that level's not supposed to be for human habitation. Franklin wondered who's going to review those. Vanderbeck wondered why not keep it as is and use a conditional use permit to assess exceptions. Why open it up? Tokos said the concern from the Council about handling it as a variance is that the variance standards talk about practical difficulties and hardship. You could make a pretty good argument that there's no problem with anybody building to the current code, and they have no entitlement to vertical evacuation. They felt it's better as a legislative matter. You are talking about height limits established before there were tsunami inundation zones. Hardy said we don't have actual data about inundation. It's all computer-generated. Patrick said there were places in Thailand that withstood the tsunami, and people vertically evacuated. There are studies saying this can be done. Hardy said, but it hasn't been established here in terms of impact on the topography. It's based on computer models. You don't know what is going to move where. If they evacuate vertically, can they survive? Tokos again noted that one way to go is to limit it to water-dependent and water-related because under the revised statutes that apply to building codes, there's a prohibition to essential facilities being in inundation zones. You could say vertical evacuation makes sense in W-1 and W-2 zoned areas where you could have higher occupancy. That would make more sense. Not in residential zones; outside of maybe hotels. You could say R-4 would make sense to pick up hotels then. The challenge is building further up there. Capri asked if it could go the Planning Commission. Tokos said we would have to have standards for evacuation.

Berman said we're talking about height; and if he's reading the maps right, there's 80 feet plus 30 plus 10; and that doesn't take into account 10-30 feet of subsidence. A 200-foot building is impractical. If it's engineered and they're doing it right, it still would be totally impractical. Tokos said it's not unrealistic to put in the standards that there be an engineer's certification that the design meets or likely would withstand the forces of waves attributed to whatever level of tsunami. He said he could work on language. Berman said the height is the thing. If it's 80 feet, that's what we should be planning for. Capri wondered what elevation that's taken from. Hardy said that waves are typically measured from the ocean floor. Vanderbeck wondered if it could be set up so that it's just for that particular area. She said because when you're talking about anything having to do with height, people will want to build something on top to get higher and will try to do whatever they can. Capri noted that there's no view protection in Newport. Hardy agreed that you don't own air space. Patrick asked what the purple and yellow on the maps indicate. Tokos said they refer to "t-shirt-size characteristics; S, M, L, XL, and XXL. Berman asked, as the color gets lighter is there more extreme flooding? Franklin asked if it would be at sea level. Patrick said mean sea level at that time. Looking at Oceanview, Franklin asked if it's at 70 feet, there would be a 10-foot wave then? Tokos said this is the elevation where they check Oceanview. At about 75 feet, Oceanview gets overtopped with XL or XXL. Vertical escape would be 20 feet. Tokos said if you have developable property and build a house there, it would not be ridiculous to build to withstand 35 feet. Berman said we're talking about Hatfield; that's what initiated this. They're right in the middle of purple. Franklin wondered what's going to happen after the wave when the water's rushing back out and there's no sand left underneath it.

Tokos said we could put some language about having to have an engineer's certification. Hardy asked how long that's good for in terms of the interest of the consumer. Are they protected if it gets passed when it's getting built and then fails ten years down the road? Tokos said probably not. We evaluate at the time of construction; not how long those materials last. Hardy said if the engineer doesn't provide a warranty, then what use is it. Capri said they could hire a structural engineer to do it and then have to hire a geo tech engineer to review it. Tokos said it's not unreasonable for a local jurisdiction to say if you're going to do this, you are going to do it right. Provide engineered plans that set out how it withstands whatever tsunami you are designing to. That knocks out single-family residences. Maybe they're just designing to large; they choose. Berman said we wouldn't dictate, they pick. Then we say, prove it. Franklin said what if somebody builds a cupola on top for escape; who enforces it? He doesn't know how you'd enforce it.

Tokos asked if the Commission wants language that limits this to water-dependent or water-related, or even commercial. Patrick thought so. He doesn't see it working for single-family. Vanderbeck said that hotels could build up in someone's view. Tokos said, or maybe it could be not in an area where you can reasonably get out of there. There's a big chunk in South Beach that can't get out. Hardy asked why build that low anyway. Patrick thought that if we break the 50-foot limit, we don't want to give an open height thing. We might have to write standards for it. He's not enthusiastic about saying you can bust through 50 feet to 70 feet. Tokos said he'd rather not do a variance because the standards aren't a great fit; hardship or practical difficulty in meeting the code. You can meet the code; just don't build vertical evacuation. Berman said he thought it was a conditional use because he noted that in the code above that it says antennas upon the issuance of a conditional use permit. Tokos said he was looking on the back of the code all the way at the bottom where it says adjustment or variance. Berman said they could take out a conditional use permit if they want to exceed 50 feet. Tokos asked Berman what's magical about 50 feet. Berman said that's what's in the code. Tokos said not in water-related; that's 35 feet. He said that one of the standards for a conditional use permit is consistency with the character of the area. If it gets into a contested case, he's not positive that the discretionary criteria the Planning Commission would have to rationalize would withstand an appeal.

Patrick asked how tall is this building going to end up. How much is it breaking the 35-foot limit. Tokos said he believes the full set of materials released indicate they are targeting a large event; not XXL. He doesn't think they could design something to withstand XXL. The question with a discretionary review is what do you want to evaluate against. Patrick said what if we give an exception to go over 35 feet in South Beach. He said we had the same discussion with NOAA. So we better have something to stand on. If all of a sudden they do a 60-foot structure there, we won't hear the end of it. Tokos said if that is a habitable area. It's only for vertical evacuation, and that's a big expense for what it is. If they can only add a safe haven for employees, there's a point where they will stop adding to it. We're making sure they don't have ways of getting additional floors of offices. Berman asked what goes between the 60 feet and the 35 feet. Tokos said raised ceilings, attic area, or just mechanical. Berman said 40 feet would be the floor and then it said add 30% and another 10 feet. Hanselman said that's only proposing vertical evacuation for 40 feet of flood level; it would have to be above that, so about 49 feet. Capri said you're talking 70 feet, and we'd never hear the end of it. Tokos asked what standards do you apply? Concerning the discretionary criteria, we can't use it and put the Planning Commission in a pickle where you can't issue the decision that you want to make. Capri said we can tell them they can't have it unless it's under a certain height. Tokos said you can have a cap. Hanselman asked, if we tell people they can have an evacuation level, do we also have to set standards for what that has to be built to.

Tokos said what if we set it up for water-dependent and water-related because we can justify that essential facilities that are available in other zoning districts can't be put in tsunami zones; and W-1 and W-2 areas would be inundated in a tsunami. Further, you have to provide engineering and geo tech methodology that what you are proposing will withstand the wave velocity you are designing to; and you can't have habitable space above 30 feet. How many projects are you likely to see? Capri said in theory, the Bay Front could have 70-foot buildings. Pacific Shrimp could do it. Patrick said it would be easier for them to evacuate up the hill. Tokos said even with reinforced piling, they would have to swap it out. It would be a huge expense. Capri asked if it could be just for South Beach. Tokos said that McLean Point is another area. The Commissioners said that at McLean Point, they could run across the road. Tokos said that while the Bay Front has an area to evacuate to, there are a lot of tourists and employees. There are constrained avenues and unstable slopes on the Bay Front. They would have twenty to thirty minutes to evacuate. There would be disabled people. By the time they figure out they need to go somewhere, there may not be time to go up hill. Tokos said you could limit it to South Beach; but his suggestion is not to. He thinks the rationale would be better to state it as just in water-related and water-dependent zones. Hardy asked, and those are defined as? Tokos said whatever they're defined as in the code. Hardy said maybe we should look at amending that. Hardy said the only way Hatfield is related to water is to be able to go out on the ocean. That doesn't mean the building siting has to be on the water. Berman said they do run seawater through their facility. Hardy said you can pipe seawater anywhere. She said they have already acknowledged that the existing buildings won't stand up. Even if there's a new building there, they will have to pay payroll to their people even though they can't go to work. She said, why not just go up hill. Tokos said from the City Council there is a lot of momentum particularly in the Hatfield area that they want to see the actual classrooms in the same location as the rest of the agency. Hardy said, in their own words, if they locate the facility up the hill, they are still spending most of the days at Hatfield. Why do they need that facility? Tokos said what getting the students up in Wilder accomplishes is that now they're not down there 24/7. Housing is gone from the campus, so they wouldn't be down there 24/7. Capri said you can't change OSU's opinion. Berman said they have laboratories there. Hardy said, they're classrooms. Tokos said they are going to need access to seawater facilities and some of the other State and Federal agencies. Berman said we're not going to decide where they're going; they are. Hardy said only if they're in compliance with the zoning ordinance. She said they can apply for a variance or a conditional use permit; and those evaluations will start to quell some of those voices saying don't build there.

Tokos said what the City Council asked the Planning Commission to do is explore legislative options as opposed to a variance. Those discretionary standards can be inconsistently applied and appealed over and over again. Practical difficulties are looked at tightly in the courts. Can you do anything on your property? Someone can't get front-yard setback; that's the typical kind of variance that can withstand an appeal. They would say you don't have to do vertical evacuation; what's your hardship? Capri thought that if everyone on the City Council heard that the building would have to be 70-75 feet tall, there would be less interest. It changes the morphology of the buildings in Newport. Tokos said if you want to make sure it's discretionary; what kind of standards do you put at it? With something like a conditional use, you'll never get there. Vanderbeck asked why the City Council wants to accommodate them before they're asked. Tokos said we don't. From the City Council's perspective, they anticipate that something's going to happen. There may be more than one down the road. There are new maps and new understanding of the tsunami risk. The height restrictions were put in before that was known. They feel we should look at it legislatively. They asked the Planning Commission to explore this and tell them what a good tool is. Hardy agreed it would be easier to enforce with legislation rather than a variance. If it's designed properly, you can say this is what you could do. If it's discretionary, you end up all over the place.

Capri said basically the building will be 75 feet tall. Tokos said if they have to engineer it to withstand that kind of wave force, you're talking substantial costs. This is a huge project without additional habitable space and only for life safety purposes at that point. Hardy said they have already indicated that they are willing to reduce the square footage if they reach the $50 million cap they are looking at. They will end up with a much smaller building.

Tokos said we can get away with requiring engineering certification for a safe place to go, much like with our geologic permits. We are not second guessing them; we are just saying you have to do it and we will accept the engineer's stamp. Capri said that

takes out the Bay Front because they won't be able to do that on piles. Berman said if we get language in there for a 75-foot building, that's not in character with the vision of South Beach. He doesn't want the views and the feeling of the marine area disrupted with a tall building. Tokos said you have the LNG tank. Patrick said you have the jail at 60 feet to the elevator tower. Hanselman said they are not required to build vertical evacuation. If they want it, it has to meet these engineering standards. We're already dealing with an unknown class of tsunami. He said we will have to change everything.

Tokos asked if the Commissioners were comfortable with the reference to the TIM (tsunami inundation maps); and they confirmed that they were. Tokos said his thought for what he can do for an upcoming work session is to bring back two options. One would be beefed-up nondiscretionary engineering standards and geo tech. Then a discretionary option where he will try to make something up where there would be a hearing. Capri asked if you could base it on occupancy. Patrick said they will open up that building to everybody down there. Capri said he understands that's choosing life. Patrick said we could always limit it to 35 feet, and they could do it; or we could say you have to run to Safe Haven Hill, and that's your only choice.

Tokos said one thing advantageous for having vertical evacuation down there is the same as for the Bay Front. You have the aquarium, Hatfield, and RV parks. It will take time for them to figure out what's going on, and some can't get out. Somebody will know to go to that vertical evacuation site. It's a safety measure. Patrick said all of these things assume earthquakes. At that level we don't know how much that is going to shift everything up and down. It's a shear guess. Hardy agreed that we don't have direct experience here. Capri asked what about the handicapped and was told that it's assumed people will help others.

Tokos said he will put together discretionary and nondiscretionary standards for further discussion at a work session. He thinks we'll get nowhere with discretionary. There was discussion about the occupancy limit of Safe Haven Hill. Tokos said the thought is that some people won't be able to get there because it's too far or they can't, so it's better to have vertical evacuation where they can go. We want to create different opportunities because we don't know where they'll go. Berman said for evacuations, most of the people at Hatfield are healthy. Tokos said it's more the tourists.

Tokos said the Commission could go through with legislative with options "A" and "B" and say you prefer "A," but here is option "B" the Council can also consider.

4. **Adjournment.** Having no further discussion, the meeting adjourned at 7:33 p.m.

Respectfully submitted,

Wanda Haney

Wanda Haney,
Executive Assistant

**Draft MINUTES**
**City of Newport Planning Commission**
**Work Session**
**Newport City Hall Conference Room A**
**September 26, 2016**
**6:00 P.M.**

Planning Commissioners Present: Jim Patrick, Lee Hardy, Rod Croteau, Mike Franklin, James Hanselman, and Bob Berman.

Planning Commissioners Absent: Bill Branigan.

Planning Commission Citizens Advisory Committee Members Present: Karmen Vanderbeck, Bob Heida, and Dustin Capri.

City Staff Present: Community Development Director (CDD) Derrick Tokos, and City Recorder Peggy Hawker.

Chair Patrick called the Planning Commission work session to order at 6:00 P.M., and turned the meeting over to CDD Tokos.

A. Unfinished Business

1. Continued Discussion Regarding Code Amendments for Vertical Evacuation Structures. Tokos displayed a slide containing a map of the tsunami inundation areas. He reported that the packet contains draft amendments to Chapter 14.10 of the Newport Municipal Code that contain additional non-discretionary criteria for vertical evacuation structures. He added that they build off of a work session that the Planning Commission held on August 22, and a follow-up e-mail from Dustin Capri. He noted that additional standards were included prohibiting occupiable space from being added at an elevation that is above the maximum building height, limiting the evacuation assembly area to the roof of a structure, and requiring that the assembly area be accessible to the general public. He stated that an engineering requirement was also added.

   Tokos stated that a second packet document contains discretionary standards. He noted that the Commission had requested an example of what might work. He added that he included provisions to Chapter 14.33, for adjustments and variances, as seemed most logical. He stated that non-discretionary standards can be folded into the revisions of Chapter 14.33, but that regardless, the Municipal Code would need to be amended to include a definition of vertical evacuation structures. He noted that the FEMA definition for vertical evacuation structures is "A building or earthen mound that has sufficient height to elevate evacuees above the tsunami inundation depth, and is designed and constructed with the strength required to resist the forces generated by tsunami waves." He stated that the DLCD has another definition in its publication titled,

"Preparing for a Cascadia Subduction Zone Tsunami: A Land Use Guide for Oregon Coastal Communities."

The Commission reviewed the proposed changes to Chapter 14.10.020, General Exceptions to Building Height Limitations, of the Municipal Code. The addition to this section reads:

D. Portions of a structure designed for vertical evacuation from the tsunami where the property upon which the structure is located is within a tsunami inundation area, as depicted on the maps titled, "Local Source (Cascadia Subduction Zone) Tsunami Inundation Map Newport North, Oregon," and "Local Source (Cascadia Subduction Zone) Tsunami Inundation Map Newport South, Oregon" produced by the Oregon Department of Geology and Mineral Industries, dated February 8, 2013, provided:

1. The evacuation assembly area is the roof of the structure; and

2. Ingress/egress to the evacuation assembly area shall be made available to the general public; and

3. The lowest floor of rooms or enclosed spaces designed for human occupancy are located below the maximum building height of the zone district within which the structure is locate; and

4. Plans and specifications, stamped by a licensed engineer, establish that the structure has been designed to withstand an earthquake and wave forces attributable to the magnitude of the tsunami event for which the vertical evacuation structure is intended to provide relief.

Discussion ensued regarding exposure in other zones; shorter distance to safety; where vertical evacuation towers can be located; what happens with people standing on the roof of a vertical evacuation structure unprotected. Tokos recommended keeping the footprint of vertical evacuation towers small and non-discretionary within the city limits south of the bridge. There was consensus among the Commission with this recommendation.

Tokos noted that rooftop vertical evacuation structures could be equipped with amenities such as portable bathrooms, etc.

Further discussion ensued regarding height limitations in the W-1 and W-2 zones, and it was suggested that the height limitation should be fifty feet only for vertical evacuation structures; this limitation should be non-discretionary; it should include areas south of the bridge within the XXL event boundaries; and be accessible to the public in the event evacuation is necessary. A brief discussion ensued regarding ADA requirements. The Commission concurred with including sections D.(1.), (2.), and (4.).

MOTION was made by Croteau, seconded by Franklin to initiate a legislative amendment to Chapter 14.10, Height Limitations, of the Newport Municipal Code. The motion carried unanimously in a voice vote.

B. Adjournment. Having no further business/time, the meeting adjourned at 7:15 P.M.

_____

Margaret M. Hawker, City Recorder

# Attachment “F”

## Derrick Tokos

**From:** Cowen, Robert <Robert.Cowen@oregonstate.edu>
**Sent:** Tuesday, October 18, 2016 7:28 AM
**To:** Derrick Tokos
**Subject:** FW: Draft Newport Code Standards for Vertical Evacuation Structures

Hi Derrick — I ran this by Lori Fulton and our architect team. They provide the following feedback as comments/suggestions. Hopefully it is useful. Thanks for sharing and acting proactively.

Bob

---

**From:** "Fulton, Lori"
**Date:** Monday, October 17, 2016 at 11:43 AM
**To:** Robert Cowen
**Subject:** RE: Draft Newport Code Standards for Vertical Evacuation Structures

Bob-
Below is our (OSU/YGH team) initial reaction to the language being suggested. We do appreciate the opportunity to comment and are available for future discussions.

D.1 The language is too limiting and should be changed to open up possibilities. That is, an evacuation assembly area may or may not be on the roof. Depending on how any one project executes a design, an evacuation area could be within an enclosed floor. Additionally, this does not allow for consideration of a stand-alone structure, which may be an alternative solution.
D.2 The language should reinforce addressing mobility challenged individuals and (perhaps) not everyone. If it's left completely open, how would one determine the required design capacity? Making it open to the general public makes sense, but directing the general public to a specific building seems unduly burdensome on an individual project. Language could be modified to "Ingress/egress to the evacuation assembly area shall be signed according."
D.3 We understand the intent of avoiding design of "stilted" structures.
D.4 It appears the language is written to allow projects to define the "level of tsunami events". However, there is a reference to DOGAMI's XXL as identified on specific 2013 maps. Perhaps this paragraph ties back to the earlier reference?
D.5 This might be just a "rewording of language" issue. In order to have an engineer "certify" a structure is built per the documents, the engineer would need to be on-site full time, or have an inspector on-site full time, during construction. While doable, it would be at substantial cost to the client/owner and would be far in excess of industry standards for even emergency response buildings such as hospitals, police and fire stations. Insurance companies and attorneys do not typically like the word "certified".

Lori

**Lori Fulton**
Manager, Capital Administration
Capital Planning and Development
3015 SW Western Blvd., Corvallis, Oregon 97331 | Phone: 541-737-4625 | Fax: 541-737-3013
lori.fulton@oregonstate.edu

---

**From:** Cowen, Robert
**Sent:** Monday, October 10, 2016 5:36 PM

**To:** Fulton, Lori <Lori.Fulton@oregonstate.edu>
**Subject:** FW: Draft Newport Code Standards for Vertical Evacuation Structures

Lori – Derrick Tokos sent me this draft of a Zoning change the city of Newport is considering – wanting to know if we see anything to comment on (see note below and attached) – please share as you see fit, and send me any comments – let's say by COB Friday so I can relay them back to him.

Thanks

Bob

Robert K. Cowen, Director
Hatfield Marine Science Center
Oregon State University

---

**From:** Derrick Tokos <D.Tokos@NewportOregon.gov>
**Date:** Friday, October 7, 2016 at 4:44 PM
**To:** Robert Cowen <Robert.Cowen@oregonstate.edu>
**Subject:** Draft Newport Code Standards for Vertical Evacuation Structures

Hi Bob,

Attached is a set of amendments that we are looking to make to the Newport Zoning Ordinance that would allow vertical evacuation structures to exceed maximum building height limitations on certain lands subject to non-discretionary approval criteria. Currently, the only way to potentially get there is through an application for a variance, the standards for which were not crafted with this type of project in mind.

It is my understanding that you will be looking to incorporate a vertical evacuation assembly area into the design of the classroom/research building that you will be constructing on the Hatfield Marine Science Center campus. Please take a look at our proposed standards and let me know if you have any comments or concerns. You are also welcome to attend the public hearings, the first of which will be held before the Newport Planning Commission at 7:00 pm on Monday, November 14, 2016.

Thanks,

*Derrick I. Tokos, AICP*
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov

# Attachment “G”

Oregon
Kate Brown, Governor

**Department of Land Conservation and Development**
635 Capitol Street NE, Suite 150
Salem, Oregon 97301-2540
Phone: (503) 373-0050
Fax: (503) 378-5518
www.oregon.gov/LCD

October 26, 2016

Derrick I. Tokos
Community Development Director
City of Newport
169 SW Coast Hwy
Newport, OR 97365

Delivered via email: d.tokos@newportoregon.gov

**RE: Municipal Code Zoning amendment: Vertical evacuation structures (2-Z-16); DLCD File No. 006-16**

Dear Derrick:

We appreciate having the opportunity to work with you on this proposal. The City of Newport is a highly valued partner in Oregon's Coastal Management Program and a leader amongst Oregon's coastal communities in planning for a Cascadia Subduction Zone earthquake and tsunami. We laud the city for its initiative and proactive approach in confronting this unique and challenging issue. We look forward to continued collaboration with the City on this project as well as other planning and community development endeavors in the future.

Newport's proposed plan amendment to allow vertical evacuation structures to exceed maximum building height limits is consistent with DLCD's Tsunami Land Use Guide recommendations. Horizontal evacuation to high ground after an earthquake is always the preferred option to get to safety before a tsunami hits the Oregon coast. However, in certain locations and instances, vertical evacuation may be the only or best option. While it is possible to get to high ground via Safe Haven Hill or the Oregon Coast Community College campus from the South Beach area, it may not be possible for everyone to reach high ground in time. This proposed amendment will allow for the building of vertical evacuation structures to provide an alternative or back-up option to the South Beach community and the many visitors who frequent this area.

The parameters set forth in the proposed amendment limit the scope of the allowance for vertical evacuation structures to just the area south of Yaquina Bay, where the City's exposure to tsunamis is most acute. The language also stipulates the plans and specifications of these structures must be

designed to withstand an earthquake and wave forces attributable to the event for which the structure is intended to provide relief, and to allow public access to this emergency option in a tsunami event.

In addition to the parameters the City already specifies in the proposed plan amendment, DLCD also recommends adding the following conditions:

- Vertical evacuation structures should be of sufficient height to place evacuees above the XXL (extra extra-large) level of tsunami inundation for the area in which it is located; and,
- Vertical evacuation structures proposed as a component of new development shall provide at least sufficient capacity to accommodate the evacuation needs of the proposed development.

We request that this letter be entered into the record of the proceedings. If you have questions or would like to further discuss anything contained in this letter, please contact me at your convenience at (503) 812-5448 or via email at patrick.wingard@state.or.us. Thank you very much for your time and consideration and for the opportunity to comment on this important proposal.

Yours truly,

*Patrick Wingard*

Patrick Wingard
North Coast Regional Representative

Copy. Meg Gardner, DLCD Coastal Shores Specialist
Matt Spangler, DLCD Senior Coastal Policy Analyst

# Attachment “H”

4. Where two or more *exits* are required, not more than one-half of the *exits* shall be permitted to include either a horizontal sliding or vertical rolling grille or door.

## SECTION 403
## HIGH-RISE BUILDINGS

**403.1 Applicability.** *High-rise buildings* shall comply with Sections 403.2 through 403.6.

**Exception:** The provisions of Sections 403.2 through 403.6 shall not apply to the following buildings and structures:

1. Airport traffic control towers in accordance with Section 412.3.
2. *Open parking garages* in accordance with Section 406.5.
3. Buildings with a Group A-5 occupancy in accordance with Section 303.6.
4. Special industrial occupancies in accordance with Section 503.1.1.
5. Buildings with a Group H-1, H-2 or H-3 occupancy in accordance with Section 415.

**403.2 Construction.** The construction of *high-rise buildings* shall comply with the provisions of Sections 403.2.1 through 403.2.4.

**403.2.1 Reduction in fire-resistance rating.** The *fire-resistance-rating* reductions listed in Sections 403.2.1.1 and 403.2.1.2 shall be allowed in buildings that have sprinkler control valves equipped with supervisory initiating devices and water-flow initiating devices for each floor.

**403.2.1.1 Type of construction.** The following reductions in the minimum *fire-resistance rating* of the building elements in Table 601 shall be permitted as follows:

1. For buildings not greater than 420 feet (128 000 mm) in *building height*, the *fire-resistance rating* of the building elements in Type IA construction shall be permitted to be reduced to the minimum *fire-resistance ratings* for the building elements in Type IB.

   **Exception:** The required *fire-resistance rating* of columns supporting floors shall not be permitted to be reduced.
2. In other than Group F-1, M and S-1 occupancies, the *fire-resistance rating* of the building elements in Type IB construction shall be permitted to be reduced to the *fire-resistance ratings* in Type IIA.
3. The *building height* and *building area* limitations of a building containing building elements with reduced *fire-resistance ratings* shall be permitted to be the same as the building without such reductions.

**403.2.1.2 Shaft enclosures.** For buildings not greater than 420 feet (128 000 mm) in *building height*, the required *fire-resistance rating* of the *fire barriers* enclosing vertical *shafts*, other than *exit enclosures* and elevator hoistway enclosures, is permitted to be reduced to 1 hour where automatic sprinklers are installed within the *shafts* at the top and at alternate floor levels.

**403.2.2 Seismic considerations.** For seismic considerations, see Chapter 16.

**403.2.3 Structural integrity of interior exit stairways and elevator hoistway enclosures.** For *high-rise buildings* of *Risk Category* III or IV in accordance with Section 1604.5, and for all buildings that are more than 420 feet (128 000 mm) in *building height*, enclosures for *interior exit stairways* and elevator hoistway enclosures shall comply with Sections 403.2.3.1 through 403.2.3.4.

**403.2.3.1 Wall assembly.** The wall assemblies making up the enclosures for *interior exit stairways* and elevator hoistway enclosures shall meet or exceed Soft Body Impact Classification Level 2 as measured by the test method described in ASTM C 1629/C 1629M.

**403.2.3.2 Wall assembly materials.** The face of the wall assemblies making up the enclosures for *interior exit stairways* and elevator hoistway enclosures that are not exposed to the interior of the enclosures for *interior exit stairways* or elevator hoistway enclosure shall be constructed in accordance with one of the following methods:

1. The wall assembly shall incorporate no fewer than two layers of impact-resistant construction board each of which meets or exceeds Hard Body Impact Classification Level 2 as measured by the test method described in ASTM C 1629/C 1629M.
2. The wall assembly shall incorporate no fewer than one layer of impact-resistant construction material that meets or exceeds Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C 1629/C 1629M.
3. The wall assembly incorporates multiple layers of any material, tested in tandem, that meets or exceeds Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C 1629/C 1629M.

**403.2.3.3 Concrete and masonry walls.** Concrete or masonry walls shall be deemed to satisfy the requirements of Sections 403.2.3.1 and 403.2.3.2.

**403.2.3.4 Other wall assemblies.** Any other wall assembly that provides impact resistance equivalent to that required by Sections 403.2.3.1 and 403.2.3.2 for Hard Body Impact Classification Level 3, as measured by the test method described in ASTM C 1629/C 1629M, shall be permitted.

**403.2.4 Sprayed fire-resistant materials (SFRM).** The bond strength of the SFRM installed throughout the building shall be in accordance with Table 403.2.4.

TABLE 403.2.4
MINIMUM BOND STRENGTH

| HEIGHT OF BUILDING[a] | SFRM MINIMUM BOND STRENGTH |
|---|---|
| Up to 420 feet | 430 psf |
| Greater than 420 feet | 1,000 psf |

For SI: 1 foot = 304.8 mm, 1 pound per square foot (psf) = 0.0479 kW/m$^2$.
a. Above the lowest level of fire department vehicle access.

**[F] 403.3 Automatic sprinkler system.** Buildings and structures shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 903.3.5.2.

**Exception:** An *automatic sprinkler system* shall not be required in spaces or areas of:

1. *Open parking garages* in accordance with Section 406.5.
2. Telecommunications equipment buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided that those spaces or areas are equipped throughout with an automatic fire detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour *fire barriers* constructed in accordance with Section 707 or not less than 2-hour *horizontal assemblies* constructed in accordance with Section 711, or both.

**[F] 403.3.1 Number of sprinkler risers and system design.** Each sprinkler system zone in buildings that are more than 420 feet (128 000 mm) in *building height* shall be supplied by no fewer than two risers. Each riser shall supply sprinklers on alternate floors. If more than two risers are provided for a zone, sprinklers on adjacent floors shall not be supplied from the same riser.

**[F] 403.3.1.1 Riser location.** Sprinkler risers shall be placed in *interior exit stairways* and ramps that are remotely located in accordance with Section 1015.2.

**[F] 403.3.2 Water supply to required fire pumps.** Required fire pumps shall be supplied by connections to no fewer than two water mains located in different streets. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

**Exception:** Two connections to the same main shall be permitted provided the main is valved such that an interruption can be isolated so that the water supply will continue without interruption through no fewer than one of the connections.

**[F] 403.3.3 Fire pump room.** Fire pumps shall be located in rooms protected in accordance with Section 913.2.1.

**[F] 403.4 Emergency systems.** The detection, alarm and emergency systems of *high-rise buildings* shall comply with Sections 403.4.1 through 403.4.9.

**[F] 403.4.1 Smoke detection.** Smoke detection shall be provided in accordance with Section 907.2.13.1.

**[F] 403.4.2 Fire alarm system.** A *fire alarm* system shall be provided in accordance with Section 907.2.13.

**[F] 403.4.3 Standpipe system.** A *high-rise building* shall be equipped with a standpipe system as required by Section 905.3.

**[F] 403.4.4 Emergency voice/alarm communication system.** An *emergency voice/alarm communication system* shall be provided in accordance with Section 907.5.2.2.

~~**[F] 403.4.5 Emergency responder radio coverage.** Emergency responder radio coverage shall be provided in accordance with Section 510 of the *Fire Code*.~~

**[F] 403.4.6 Fire command.** A *fire command center* complying with Section 911 shall be provided in a location *approved* by the fire department.

**403.4.7 Smoke removal.** To facilitate smoke removal in post-fire salvage and overhaul operations, buildings and structures shall be equipped with natural or mechanical *ventilation* for removal of products of combustion in accordance with one of the following:

1. Easily identifiable, manually operable windows or panels shall be distributed around the perimeter of each floor at not more than 50-foot (15 240 mm) intervals. The area of operable windows or panels shall be not less than 40 square feet (3.7 m$^2$) per 50 linear feet (15 240 mm) of perimeter.

   **Exceptions:**

   1. In Group R-1 occupancies, each *sleeping unit* or suite having an *exterior wall* shall be permitted to be provided with 2 square feet (0.19 m$^2$) of venting area in lieu of the area specified in Item 1.
   2. Windows shall be permitted to be fixed provided that glazing can be cleared by fire fighters.

2. Mechanical air-handling equipment providing one exhaust air change every 15 minutes for the area involved. Return and exhaust air shall be moved directly to the outside without recirculation to other portions of the building.
3. Any other *approved* design that will produce equivalent results.

**[F] 403.4.8 Standby power.** A standby power system complying with Chapter 27 and Section 3003 shall be provided for standby power loads specified in 403.4.8.2. Where elevators are provided in a *high-rise building* for *accessible means of egress*, fire service access or occupant self-evacuation, the standby power system shall also comply with Sections 1007.4, 3007 or 3008, as applicable.

**[F] 403.4.8.1 Special requirements for standby power systems.** If the standby system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. System supervision with manual start and

**1704.2.5.1 Fabrication and implementation procedures.** The special inspector shall verify that the fabricator maintains detailed fabrication and quality control procedures that provide a basis for inspection control of the workmanship and the fabricator's ability to conform to *approved construction documents* and referenced standards. The special inspector shall review the procedures for completeness and adequacy relative to the code requirements for the fabricator's scope of work.

**Exception:** *Special inspections* as required by Section 1704.2.5 shall not be required where the fabricator is *approved* in accordance with Section 1704.2.5.2.

**1704.2.5.2 Fabricator approval.** *Special inspections* required by Section 1705 are not required where the work is done on the premises of a fabricator registered and *approved* to perform such work without *special inspection*. Approval shall be based upon review of the fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by a nationally recognized accrediting authority. At completion of fabrication, the *approved* fabricator shall submit a *certificate of compliance* to the *building official* stating that the work was performed in accordance with the *approved construction documents*.

**

**1704.3 Statement of special inspections.** Where *special inspection* or testing is required by Section 1705, the *registered design professional in responsible charge* shall prepare a statement of special inspections in accordance with Section 1704.3.1 for submittal by the applicant in accordance with Section 1704.2.3.

**Exception:** The statement of *special inspections* is permitted to be prepared by a qualified person *approved* by the *building official* for construction not designed by a *registered design professional*.

**1704.3.1 Content of statement of special inspections.** The statement of special inspections shall identify the following:

1. The materials, systems, components and work required to have *special inspection* or testing by the *building official* or by the *registered design professional* responsible for each portion of the work.
2. The type and extent of each *special inspection*.
3. The type and extent of each test.
4. Additional requirements for *special inspection* or testing for seismic or wind resistance as specified in Sections 1705.10, 1705.11 and 1705.12.
5. For each type of *special inspection*, identification as to whether it will be continuous *special inspection* or periodic *special inspection*.

**1704.3.2 Seismic requirements in the statement of special inspections.** Where Section 1705.11 or 1705.12 specifies special inspection, testing or qualification for seismic resistance, the statement of special inspections shall identify the designated seismic systems and seismic force-resisting systems that are subject to *special inspection*.

**1704.3.3 Wind requirements in the statement of special inspections.** Where Section 1705.10 specifies special inspection for wind requirements, the statement of special inspections shall identify the main windforce-resisting systems and wind-resisting components subject to *special inspection*.

**

**1704.4 Contractor responsibility.** Each contractor responsible for the construction of a main wind- or seismic force-resisting system, designated seismic system or a wind- or seismic-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the *building official* and the owner prior to the commencement of work on the system or component. The contractor's statement of responsibility shall contain acknowledgement of awareness of the special requirements contained in the statement of *special inspection*.

**

**1704.5 Structural observations.** Where required by the provisions of Section 1704.5.1 or 1704.5.2, the owner shall employ a *registered design professional* to perform structural observations as defined in Section 202.

Prior to the commencement of observations, the structural observer shall submit to the *building official* a written statement identifying the frequency and extent of structural observations.

At the conclusion of the work included in the permit, the structural observer shall submit to the *building official* a written statement that the site visits have been made and identify any reported deficiencies which, to the best of the structural observer's knowledge, have not been resolved.

**1704.5.1 Structural observations for seismic resistance.** Structural observations shall be provided for those structures assigned to *Seismic Design Category* D, E or F where one or more of the following conditions exist:

1. The structure is classified as *Risk Category* III or IV in accordance with Table 1604.5.
2. The height of the structure is greater than 75 feet (22 860 mm) above the base.
3. The structure is assigned to *Seismic Design Category* E, is classified as *Risk Category* I or II in accordance with Table 1604.5, and is greater than two *stories above grade plane*.
4. When so designated by the *registered design professional* responsible for the structural design.
5. When such observation is specifically required by the *building official*.

**1704.5.2 Structural observations for wind requirements.** Structural observations shall be provided for those structures sited where $V_{asd}$ as determined in accordance with Section 1609.3.1 exceeds 110 mph (49 m/sec), where one or more of the following conditions exist:

1. The structure is classified as *Risk Category* III or IV in accordance with Table 1604.5.
2. The *building height* of the structure is greater than 75 feet (22 860 mm).

3. When so designated by the *registered design professional* responsible for the structural design.
4. When such observation is specifically required by the *building official*.

## SECTION 1705
## REQUIRED VERIFICATION AND INSPECTION

**1705.1 General.** Verification and inspection of elements of buildings and structures shall be as required by this section.

**

**1705.1.1 Special cases.** *Special inspections* shall be required for proposed work that is, in the opinion of the *building official*, unusual in its nature, such as, but not limited to, the following examples:

1. Construction materials and systems that are alternatives to materials and systems prescribed by this code.
2. Unusual design applications of materials described in this code.
3. Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in this code or in standards referenced by this code.

**1705.2 Steel construction.** The *special inspections* for steel elements of buildings and structures shall be as required by Section 1705.2 and Table 1705.2.

**Exceptions:**

1. Special inspection of the steel fabrication process shall not be required where the fabricator does not perform any welding, thermal cutting or heating operation of any kind as part of the fabrication process. In such cases, the fabricator shall be required to submit a detailed procedure for material control that demonstrates the fabricator's ability to maintain suitable records and procedures such that, at any time during the fabrication process, the material specification, grade and mill test reports for the main stress-carrying elements are capable of being determined.
2. The special inspector need not be continuously present during welding of the following items, provided the materials, welding procedures and qualifications of welders are verified prior to the start of the work, periodic inspections are made of the work in progress and a visual inspection of all welds is made prior to completion or prior to shipment of shop welding.
   2.1. Single-pass fillet welds not exceeding $^5/_{16}$ inch (7.9 mm) in size.
   2.2. Floor and roof deck welding.
   2.3. Welded studs when not installed with an automatically timed stud welding machine in accordance with Section 7 of AWS D1.1.
   2.4. Welded sheet steel for cold-formed steel members.
   2.5. Welding of stairs and railing systems.
3. For welded studs installed with an automatically timed stud welding machine and in accordance with Section 7 of AWS D1.1, the special inspector need not be continuously present during installation of welded studs subject to the following provisions:
   3.1. The special inspector shall perform a visual inspection of all welded studs in accordance with Sections 7 and 7.8.1 of AWS D1.1. Visual inspection of welded studs installed with an automatically timed stud welding machine may take place either in the fabrication shop prior to completion or prior to shipment, or on-site prior to coverage.
   3.2. The fabricator shall submit a certificate of compliance to the *building official* stating that the work was performed in accordance with the approved construction documents.

**1705.2.1 Structural steel.** Special inspection for structural steel shall be in accordance with the quality assurance inspection requirements of AISC 360.

**Exception:** The following provisions in AISC 360, Chapter N, are not adopted:

Section N4, Item 2. (Quality Assurance Inspector Qualifications)

Section N5, Item 2. (Quality Assurance)

Section N5, Item 3. (Coordinated Inspection)

Section N5, Item 4. (Inspection of Welding)

Section N7. (Approved Fabricators and Erectors)

Section N8. (Nonconforming Material and Workmanship)

**1705.2.1.1 High strength bolting.** In addition to the quality assurance inspection requirements contained in AISC 360, Section N5, Item 6 (Inspection of High Strength Bolting), the requirements of Table 1705.2 of the *Oregon Structural Specialty Code* shall apply.

**1705.2.1.2 Composite construction.** In addition to the quality assurance requirements contained in AISC 360, Section N6 (Minimum Requirements for Inspection of Composite Construction), the requirements of Table 1705.2 of the *Oregon Structural Specialty Code* shall apply.

**1705.2.2 Steel construction other than structural steel.** Special inspection for steel construction other than structural steel shall be in accordance with Table 1705.2 and this section.

**1705.2.2.1 Welding.** Welding inspection and welding inspector qualification shall be in accordance with this section.

**1705.2.2.1.1 Cold-formed steel.** Welding inspection and welding inspector qualification for cold-formed steel floor and roof decks shall be in accordance with AWS D1.3.