



MULTNOMAH COUNTY
LAND USE AND TRANSPORTATION PROGRAM
1600 SE 190TH Avenue Portland, OR 97233
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<http://www.co.multnomah.or.us/landuse>

FLOODPLAIN DEVELOPMENT PERMIT
CASE FILE: T1-06-043
August 15, 2006

Request: Applicant is requesting approval to construct a private boat dock. Development is to occur on land located within the 100-year flood boundary as identified on Flood Insurance Rate (FIRM) Maps published by the Federal Emergency Management Agency.

Location: 18342 NW Gillihan Road
TL 300, Sec 14, T 2N, R 1W, W.M.
Tax Account #R97114-0090

Applicant: Leon Cielona
18400 NW Gillihan Road
Portland, OR 97231

Owner: Donald Waterman
18342 NW Gillihan Road
Portland, OR 97231

Tributary: Willamette River

FIRM Map: Panel #4101790045, dated 3/18/1986



ORDINANCE REQUIREMENTS:

Applicable standards for this permit can be found within Chapter 29.600 et seq., Flood Hazard Regulations of the Multnomah County Building and Specialty Codes, copies of which are available at our offices.

MODIFICATIONS AND LIMITATIONS:

This permit is based on written narrative(s), plan(s) and an elevation certificate provided by the applicant (attached). No development shall occur under this permit other than that which is specified within these documents. It shall be the responsibility of the property owner to comply with these documents and the limitations described herein.

1. The property owner or his representative shall apply for, obtain, and get a final inspection for a building permit for the construction of the dock components.

Prior to land use sign-off of a building permit application:

The property owner is to schedule an appointment with the Staff Planner, Lisa Estrin, at Multnomah County, (503) 988-3043 x22597, for land use sign off of a building permit application. The property owner shall bring 4 sets of site and building plans to the County for approval prior to submittal of the building permits to the City of Portland Building Department. Additionally, the property owner is to provide the following:

2. A performance bond or cash deposit in the amount of \$1000.00 to assure that the height of the pilings after installation are a minimum of 30 ft as indicated on the Floodproofing Certificate (Exhibit c). The deposit/bond may be used to obtain the elevation survey, without notice, if it is not completed and submitted prior to use of the dock. The performance bond or cash deposit shall be released upon submittal of the as-built elevation survey, unless utilized to obtain compliance (MCC 29.606(B)(3)(b)).
3. No electrical, heating, ventilation, plumbing, and/or air conditioning equipment and other service facilities shall be installed on any of the dock components without first obtaining a new Flood Hazard permit from the County.
4. Detailed construction drawings shall be provided for how the walkway will be anchored to the shore. The walkway shall be anchored in such a manner to prevent its release during flood stage due to debris impact and high flood waters.
5. The construction drawings shall be stamped by the licensed engineer, Ron Sellards of Z-Tec Engineers or other qualified engineer or architect. A note shall be placed on the plans that the design of the dock is capable of resisting hydrostatic and hydrodynamic flood forces, including the effects of buoyancy and anticipated debris impact forces. The engineer's stamp is to certify that the drawings meet these standards.
6. The applicant shall provide a Floodproofing Certificate which does not have the phrase "anticipated debris impact forces" crossed out by the Structural Engineer.

Issued by:

Signed: Lisa Estrin, Planner
For: Karen Schilling - Planning Director

Date: Tuesday, August 15, 2006

Exhibits

- | | |
|------------------------------|---|
| a. FD Application Form | h. Elevation View |
| b. Letter of Authorization | i. Narrative |
| c. Floodproofing Certificate | j. Letter from Corps of Engineers |
| d. Location Map | k. Dock Design Details |
| e. Location Map #2 | l. DSL Letter of Authorization |
| f. Site Plan | m. State Marine Board Encapsulated Form Certification |
| g. Plan View | |

29.602 Areas Affected

- (A) The provisions of MCC 29.600 - 29.611 shall apply to all areas within the 100-year flood boundary as identified on the Flood Boundary and Floodway Maps and the Flood Insurance Rate Maps as published by the Federal Emergency Management Agency (FEMA) and any watercourse as defined by MCC 29.601.**

Staff: Project is located within the 100 year flood boundary of the Willamette River. In fact, the dock will be located within the floodway.

29.603 Permits

- (A) No structure, dwelling or manufactured home shall be erected, located, altered, improved, repaired or enlarged and no other new development including but not limited to grading, mining, excavation and filling shall occur on lands within the 100-year flood boundary unless a Floodplain Development Permit specifically authorizing the proposal has been obtained from Multnomah County.**

Staff: The proposed dock qualifies as a structure pursuant to the definitions under MCC 34.0005(S).

29.605 Application Information Required

An application for development subject to a Floodplain Development Permit shall include the following:

- (A) A map showing the property line locations, the boundaries of the 100 year floodplain on the parcel, roads, and driveways, existing structures, watercourses and the location of the proposed development(s), topographic elevations for the proposed development and areas of grading or filling required for the project.**

Staff: Applicant has provided a site plan for the project.

- (B) Detailed construction drawings showing compliance with the development standards specified in MCC 29.606. A licensed engineer or architect shall stamp the plans and include a statement that the plans meet the requirements of MCC 29.606.**

Staff: Provided.

- (C) An elevation certificate signed by a Registered Professional Land Surveyor, Engineer or Architect. The certificate shall be accompanied by a plan of the property which shows the location and elevation of a benchmark on the property.**

Staff: Provided.

- (D) A written narrative specifying building materials and methods that will be utilized to comply with the requirements of the Floodplain Permit.**

Staff: Provided.

- (E) Evidence that the applicant has obtained, when necessary, prior approval from those Federal, State and/or local governmental agencies with jurisdiction over the proposed development.**

Staff: Provided.

29.606 Development Standards

The following standards shall apply to all new construction, substantial improvement or other

development in areas within the 100-year flood boundary:

(A) All Structures.

(1) All new construction and substantial improvement shall:

(a) Comply with Oregon State Building Codes.

Staff: A building permit is required per Planchecker Whitehill, City of Portland. A condition has been placed.

(b) Have the electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

Staff: No electrical, heating, ventilation, plumbing or other mechanical equipment is proposed.

(c) Use materials resistant to flood damage.

Staff: The applicant will utilize trex composite decking materials, encapsulated foam for floatation and steel pilings. All these materials are resistant to moisture caused by flooding.

(d) Using methods and practices that minimize flood damage.

Staff: The dock is designed to float above the flood stage of the river. Damage should be limited to collision impact damage.

(e) For areas that are fully enclosed below the lowest floor and that are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

Staff: The floatation foam will be encapsulated to prevent water from entering.

1. Designs for meeting this requirement must either be certified by a registered professional engineer or architect and must meet or exceed the following minimum criteria:

- a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.**
- b. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.**

Staff: The docks are designed to float on the surface of the water. No openings are provided.

(C) Nonresidential Structures.

New construction and substantial improvement of any commercial, industrial or other non-residential structure shall:

- (1) Have the lowest floor including basement, elevated at least one foot above the base flood level; or, together with attendant utility and sanitary facilities, shall:**

- (a) Be floodproofed such that the structure, including the attendant utility and sanitary facilities, shall be substantially impermeable to the passage of water to an elevation at least one foot above the base flood level; and**

Staff: The docks are designed to be substantially impermeable. No utilities or sanitary facilities are proposed or will be allowed without further review.

- (b) Have structural components capable of withstanding hydrostatic and hydrodynamic loads, effects of buoyancy, flood depths, pressures, velocities and other factors associated with the base flood; and**

Staff: The docks are designed to float above the floodwaters but remain attached to the pilings. The hundred year flood is at 27 ft. The pilings rise five feet higher to 32 ft.

- (c) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied.**

Staff: The professional engineer has signed the Floodproofing certificate, but has crossed out the words “anticipated debris impact forces”. This would seem to indicate that the dock is not designed to withstand impacts to it during flood events. A condition has been placed that specifies that prior to construction of the dock, an engineer either certify the design or redesign the structure to meet the requirements.

- (2) Provide an as-built elevation survey of the lowest floor completed by a State of Oregon Registered Professional Engineer or Land Surveyor certifying that the structure's lowest floor was elevated to at least one foot above the base flood level; or submit a stamped documentation by a State of Oregon Registered Professional Engineer certifying the structure has been built in compliance with MCC 29.606(C)(1)(a) through (c).**

- (a) The as-built elevation survey or stamped documentation shall be submitted to Multnomah County Land Use Planning prior to occupancy of the structure.**

Staff: An as-built survey has been required to verify that the pilings are a minimum of three feet above flood stage to prevent the dock from breaking loose and becoming a hazard to downstream structures and watercraft.

- (b) Prior to issuance of a building permit or start of development, a performance bond or cash deposit of \$1000.00 shall be required to assure that the as-built elevation survey or stamped documentation is submitted. The bond/deposit may be used to obtain the elevation survey or documentation, without notice, if it is not completed and submitted prior to occupancy or use of the structure or development. The performance bond or cash deposit shall be released upon submittal of the as-built elevation survey or stamped documentation, unless utilized to obtain compliance.**

29.607 Floodway Requirements

In areas identified as floodway on the Flood Boundary and Floodway Maps, the following restrictions, in addition to the requirements of MCC 29.606, shall apply:

(A) No development shall be permitted that would result in any measurable increase in base flood levels.

(1) Encroachment into the floodway is prohibited, unless a detailed step backwater analysis and conveyance compensation calculations, certified by a Registered Professional Engineer, are provided which demonstrates that the proposed encroachment will cause no measurable increase in flood levels (water surface elevations) during a base flood discharge.

Staff: There will be four 12-3/4 inch pilings placed within the floodway. This totals 4.25 ft displacement of water in the floodway. The amount of water being displaced in the Willamette is not significant enough to cause any measurable increase in base flood levels.