MORGAN CIVIL ENGINEERING, INC.

PO Box 358, Manzanita, OR 97130
ph: 503-801-6016
www.morgancivil.com

July 8, 2020

Stanley Roberts
Stan.milliman@gmail.com

Re: Construction for Tax Lot 600 and Nenana Avenue, City of Cannon Beach, Oregon
Project #19-02-Pat

Dear Mr. Roberts:

A new single-family dwelling is proposed on Tolovana Park Block 1 Lot 13, Tax Lot 600. Access to the property will be attained entirely from Nenana Avenue, a public right-of-way platted as part of Tolovana Park Subdivision in 1908. The previous access is shown on the existing conditions site plan; this access served a home constructed in the early 1900s as the home of the architect who designed the adjacent log cabin. The new access will be constructed to meet today's engineering design standards.

HAZARDS

A geologic site investigation report dated 4/10/2019 was prepared by R. Warren Krager, Certified Engineering Geologist to address Cannon Beach Municipal Code 17.50.040.A.1. In this report, R. Warren Krager, CEG, recommended that the owner retain the services of Don Rondema, Geotechnical Engineer, to provide recommendations for site development and address the criteria of CB Section 17.50. The owner also retained the services of Civil Engineer Jason Morgan, Morgan Civil Engineering to provide site design, Geotechnical Engineer Troy Hull to provide recommendations for the roadway design, and Eric Watson, Structural Engineer to design the recommended facilities.

To address Cannon Beach Code Section 17.50.040.A.2, engineering reports provide discussion on the feasibility of the proposed development and include findings and conclusions for: the design and location of structures (Don Rondema, PE, GE, Troy Hull, PE, GE, and Eric Watson, PE, SE), the design and location of roads (Troy Hull, PE, GE, Don Rondema, PE, GE, and Eric Watson, PE, SE), the design and location of utilities (Jason Morgan, PE, CE), land grading practices (Jason Morgan, PE, CE), including excavation and filling (Don Rondema, PE, GE, Troy Hull, PE, GE, Eric Watson, PE, SE, and Jason Morgan, PE, CE), stormwater management (Eric Watson, PE, SE, and Jason Morgan, PE, CE), and vegetation removal and replanting (Troy Hull, PE, GE, and Jason Morgan, PE, CE).

DESIGN PROFESSIONALS

Warren Krager, Certified Engineering Geologist, provided Consultation and Plan Review to address Cannon Beach Code 17.50.040.A.3.B.

Troy Hull, PE, GE, Earth Engineers, Inc. provided Geotechnical Engineering Recommendations for the Public Road Improvement to Nenana Avenue and Geotechnical Engineering for the Staging Area.

Don Rondema, MS, PE, GE, Geotech Solutions, Inc. provided Geotechnical Engineering recommendations for the House Design.

Plan Review Reports are provided by Don Rondema, MS, PE, GE, Troy Hull, PE, GE, and Warren Krager, CEG. These reports recommend that the utility design meets the requirements of Section 17.50.040.3.b. which require: "The geologic investigation report and engineering report to specify engineering and construction methods which will eliminate the hazard or will minimize the hazard to an acceptable level."

Eric Watson, Miller Consulting Engineers, Inc. provided Structural Engineering for the Road, Driveway, and House.

Jay Raskin, Architect, FAIA, provided the Site Plan and the Architectural Plans.

Jason Morgan, PE, Morgan Civil Engineering, Inc., provided Civil Engineering drawings for the Road and Driveway Footprint and Profile, Stormwater Drainage, Utilities, and Grading.

David Sip, ISA Certified Arborist and Risk Assessor, Ecologic Tree, Inc, prepared a report to support the removal of trees to construct the home, vehicular access, and utility access and assure the protection of trees to be retained both on the subject property and off-site.

Jack L. White II, PLS, S&F Land Services, Inc. provided the topographic, boundary and tree survey documentation for this project.

CONTRUCTION CONTRACTORS

Rich Elstrom Construction, Inc. will provide the team to build the residence.

PLI Systems, Inc., under owner Jorge Castañeda, will provide oversight over of the right-of-way construction and oversight over the Grading, Excavation, Tree Removal, and Utility Construction.

Under the direction of PLI Systems, Inc., Concrete Structures, Inc. is anticipated to provide concrete services for the road and driveway piers and the house micro-piles.

Bob McEwan Excavating, Inc. under Mike McEwan, is anticipated to provide Grading, Excavation, Utility Construction and Tree Removal services.

INSPECTIONS

Jack L. White, PLS, S&F Land Services, Inc. will survey the locations for all grading and constructed facilities, including the construction fence, staging area, micropiles, piers, house corners, and utilities, to ensure they are placed precisely in the approved locations.

The Design Professionals will provide continuous and intermittent inspections over, and written certification reports for, all facilities.

PERFORMANCE BOND AND SURETY

Nenana Avenue is a Public Right-of-Way. As requested by the City, a Surety Bond will be provided as may be required for public works projects under ORS 279C.380 for contractors constructing public projects that exceed a construction cost of $100,000. The contractor PLI Systems, Inc. will provide a Construction Bond and Insurance to guarantee the work will be conducted as approved by the City. The property owner will provide a letter of credit from their financial institution to guarantee that the funds necessary to complete this work as approved by the City are available. The construction cost of this project includes inspections by the design professionals and oversight by the City.

STREETS

Traffic Control:

The construction goal is to limit the need for disruption and flagging on Hemlock Street to daytime hours for one or two days at a time during three stages of the project: Staging Area Construction, Utility Construction, and Road Panel Installation. Short-term lane closures will be conducted during unloading of equipment and materials, when needed. Traffic control will be coordinated with the City Public Works Department and Fire Department.

Construction Access:

In order to access the site without the need to request the closure of Hemlock Street for any extended amount of time, this project proposes to construct a staging area and access ramp on Tax Lot 1200, owned by the City. This ramp will be removed, and the site returned to a stable vegetated condition, at the end of the project.

Construction of the staging area will take five days. Construction of the staging area will require daytime flagging, or the shut-down of Hemlock Street S-Curves, for approximately two days. For staging area construction, the guardrail and posts will be removed for the whole construction area. Chain-link fencing and cones will be installed for traffic safety. A chain and lock across the access to the staging area and the gravel access will prevent trespass when there is not supervision by an approved contractor. The gravel construction access, as shown on the vegetation removal plan (Sheet C3), will be extended in order to provide access for tree removal and grading.

Inspection of the Construction Access will be provided by Troy Hull, GE, Earth Engineers, Inc.

UTILITIES

Utilities have been designed to meet the requirements of Cannon Beach Municipal Ordinances Title 13 Utility Code.

The utilities to serve the property, water, sewer, gas, power, and telecommunications, will be installed in the Nenana Avenue right-of-way, consistent with the City standards for material, depth, and separation.

The water line will be a 2” polyethylene pipe. This will serve the needs of the development including residential fire sprinklers.

The sewer system will include a duplex grinder pump and a pressurized line in the Nenana Avenue right-of-way and a cleanout and gravity line in the Hemlock Street right-of-way to feed the sewer main pipe.

Natural Gas will be installed under the supervision of NW Natural.

Power will be installed under the supervision of Pacific Power.

Telecommunications providing access to telephone, high speed internet, and cable will be installed under the supervision of Charter Spectrum.

Fire protection service will be served by the installation of a dry standpipe with one end at the intersection of Hemlock Street and Nenana Avenue, and the second at the edge of Nenana Avenue at the property.

Continuous inspection of utility construction will be provided by Jason Morgan, PE, Morgan Civil Engineering, Inc.

GRADING

Site Preparation:

Prior to the start of work, highly visible 3.5-foot tall construction fence will be installed around the entire project area. The purpose of this fence is to ensure that construction activity does not trespass onto areas where vegetation will be retained, sensitive areas so designated by the Geotechnical Engineers and Arborist, or the adjacent properties Tax Lot 500 and Tax Lot 1300. Silt fencing will be installed inside of the construction fence where shown to prevent sedimentation of downslope areas.

Prior to placement of the construction fence, Jack L. White, II, S&F Land Services, Inc. will survey and flag the boundaries of the Nenana Avenue right-of-way to assure the construction barrier is placed in the correct area.

The City will be contacted to inspect the prepared ROW. Arborist David Sip, and Jason Morgan, Civil Engineer, Morgan Civil Engineering, Inc., and Geotechnical Engineers Don Rondema and Troy Hull will inspect the project site preparation.

Grading:

A Grading Plan has been designed to meet the requirements of CB Code 17.50.040.A.2, and the recommendations of Don Rondema, MS, PE, GE, of Geotech Solutions, Inc. for the house, and Troy Hull, PE, GE, of Earth Engineers, Inc. for the road and driveway.

Jack L. White, II, S&F Land Services, Inc. will survey and flag the location of the project areas before work in each area begins including and not limited to the H-piles for the staging area, the piles for the road and driveway, and the micro-piles for the house to ensure it occurs where approved.

Vegetation Removal:

Vegetation will be removed from the Staging Area, Nenana Avenue right-of-way project area, driveway site and house site. Tree stumps will remain where they will not interfere with the construction of deck piers, grade beams, or utilities. No vegetation is planned for removal beyond the construction fence.

Vegetation Restoration:

Where vegetation is disturbed during the project, it will be re-established through specific methods at the end of the project. Gravel will be removed, as practical, in the staging area, and the area will be hydroseeded. The construction access pathway underneath the bridge road will be retained for access to at grade utilities and will perform as erosion control.

As the Fire Department determines is necessary for fire access, a 3-foot wide gravel path will be constructed around the house. The remainder of the disturbed area will be landscaped.

Tree Removal and Protection:

A report to address the requirements of Cannon Beach Municipal Code Section 17.70 Tree Removal and Protection and Section 12.36.020.A. Tree Maintenance by the City has been prepared by David Sip, ISA Certified Arborist, Ecologic Tree, Inc.

Where trees are located within the project boundaries, they will be cut down. Tree stumps will be removed only where they interfere with the placement of necessary structures. Where tree stumps can be retained, they will benefit the soil structure and microbiology.

ISA Certified Arborist David Sip will work with the construction team to protect trees outside the project boundaries. According to his report, David will continuously observe the use of an air spade to excavate an excavation boundary trench at the project site. David will perform clean cuts to all encountered tree roots in order to prevent adverse effects to trees in the vicinity that will be retained including trees just outside of the boundaries of the project area.

ISA Certified Arborist David Sip will issue a written certification report when the air spade trench is complete and the clean cuts to tree roots are complete and further excavation can occur without concern of damage to adjacent trees.

Excavation:

The amount of soil excavation in the right-of-way will be confirmed in the field by Troy Hull, PE, Earth Engineers, Inc. The amount of soil excavation on the private property will be confirmed in the field by Don Rondema, GE, Geotech Solutions, Inc. The area of excavation is designed on the Grading Plan. In general, the amount of excavation will be very limited to retain as much site vegetation and topsoil microbiology as possible to support regrowth of vegetation.

Stormwater Drainage:

Stormwater Drainage collection and discharge has been designed to meet the requirements of CB Code 17.50.040.A.2, and the recommendations of Don Rondema, MS, PE, GE, of Geotech Solutions, Inc. for the house and Troy Hull, PE, GE, of Earth Engineers, Inc. for the road and driveway.

Roadway and Driveway: Water runoff from the roadway and driveway surface will be collected by scuppers and directed to collection pipes that run alongside the piers and then diffused on the slope as shown on the Drainage Plan (7/8/2020; Sheet C6). Water collected at the driveway intersection with the house will be collected and dispersed by diffusion as shown on the Drainage Plan (7/8/2020; Sheet C6).

House: Water runoff from the residential roof will be collected and directed to energy dissipation pads as shown on the Drainage Plan (7/8/2020; Sheet C6). Foundation Drains are shown on the Architectural Plans and the Drainage Plan (See Sheet C6).

Impervious surfaces: Water runoff from impervious surfaces will be collected and directed to collection locations and dispersed with diffusion pipes as shown on the Drainage Plan (7/8/2020; Sheet C6). Foundation Drains are shown on the Architectural Plans and the Drainage Plan (Sheet C6).

Vegetation Removal / Re-vegetation

Cannon Beach Code requires that vegetation removal be kept to a minimum and that the work area of the project is bounded to prevent unnecessary vegetation removal.

Vegetation removal will be kept to a minimum as shown on Sheet C3, 7/8/2020 (Morgan) .

Revegetation will be conducted as soon as earth work is completed. Troy Hull in his staging plan identifies revegetation plan for the staging area. A hydroseed mix has been provided by PLI Systems, Inc.

Drainage Maintenance Plan

Annually, in July of each year, retain an appropriately qualified Civil Engineer to evaluate the Stormwater collection and disposal system to determine if they are working as needed, whether they need to be repaired, or whether they need to be modified. Check all collection and discharge locations in Nenana Avenue and private property.

Obtain a permit from the City before starting any construction, even for the repair of existing approved facilities. Complete all necessary repairs or modifications before the next wet weather season begins, preferably by September 30 of each year.

Please contact me if you have any questions or more information.

Sincerely,

MORGAN CIVIL ENGINEERING, INC.

Jason R. Morgan, PE
Professional Engineer

REGISTERED PROFESSIONAL ENGINEER 63055 OREGON JANUARY 15, 2002 JASON R. MORGAN

RENEWAL DATE: DECEMBER 31, 2020

cc: Project File #19-02-Pat

<V:\19-02-Pat\Reports\Roberts Construction Narrative.docx>