



MULTNOMAH COUNTY OREGON

LAND USE AND TRANSPORTATION PROGRAM

1600 SE 190TH Avenue Portland, OR 97233

PH: 503-988-3043 FAX: 503-988-3389

http://www.co.multnomah.or.us/dbcs/LUT/land_use

NOTICE OF DECISION

This notice concerns a Planning Director Decision on the land use case(s) cited and described below.

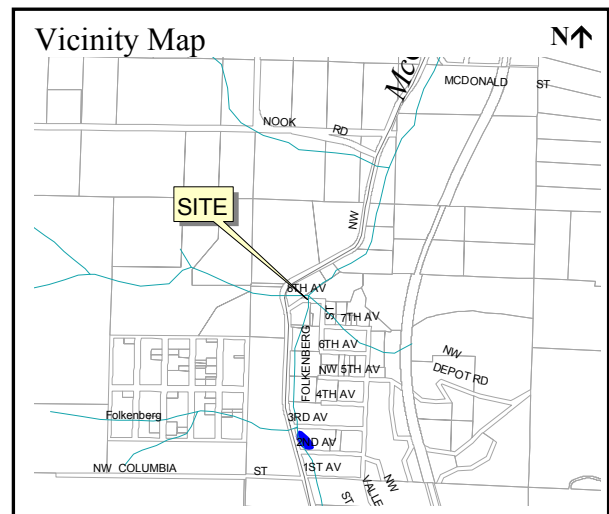
Case File: T2-04-079

Permit: Significant Environmental Concern,
Hillside Development and Flood
Development Permit associated with a
bridge replacement project.

Location: (no address) R99999-9937
8th Avenue
Sec 30BB, T2N, R1W, W.M.

Applicant: Mike Phillips
Multnomah County Transportation
1600 SE 190th Avenue
Portland, Oregon 97233

Owner: Multnomah County



Summary: This is a request to replace an existing local access bridge on 8th Avenue within Rural Residential zoned land in the West Hills Rural Plan area. The request is subject to the Significant Environmental Concern review for stream protection, a Hillside Development and Flood Development Permit review (**Multnomah County Code, MCC 33.5500 – 33.5525, 33.4500 - 33.4575 & 29.600 – 29.611**).

Decision: **Approved, with conditions.**

Unless appealed, this decision is effective Tuesday, February 8th, 2005 at 4:30 PM.

Issued by:

By: _____
Adam Barber, Planner

For: Karen Schilling - Planning Director

Date: Tuesday, January 25, 2005

Opportunity to Review the Record: A copy of the Planning Director's Decision, and all evidence submitted associated with this application, is available for inspection, at no cost, at the Land Use Planning office during normal business hours. Copies of all documents may be purchased at the rate of 30-cents per page. The Planning Director's Decision contains the findings and conclusions upon which the decision is based, along with any conditions of approval. For further information on this case, contact Adam Barber, Staff Planner at 503-988-3043.

Opportunity to Appeal: This decision may be appealed within 14 days of the date it was rendered, pursuant to the provisions of **MCC 37.0640**. An appeal costs \$250 and must state the specific legal grounds on which it is based. To obtain appeal forms or information on the procedure, contact the Land Use Planning offices at 1600 SE 190th Avenue (Phone: 503-988-3043). This decision cannot be appealed to the Land Use Board of Appeals (LUBA) until all local appeals are exhausted.

This decision is final at the close of the appeal period, unless appealed. The deadline for filing an appeal is **Tuesday, February 8th, 2005 at 4:30 pm**.

Applicable Approval Criteria: Multnomah County Code (MCC): **MCC 33.3100 – 33.3185**, Rural Residential Zone District; **MCC 33.5500 – 33.5525**, Hillside Development Permit; **MCC 33.4500 – 33.4575**, Significant Environmental Concern; Chapter 37 – Administration and Procedures.

Copies of the referenced Multnomah County Code sections can be obtained by contacting our office at 503-988-3043 or by visiting our website at:

http://www.co.multnomah.or.us/dbcs/LUT/land_use/index.shtml

Scope of Approval

1. Approval of this land use permit is based on the submitted written narrative(s) and plan(s). No work shall occur under this permit other than that which is specified within these documents. It shall be the responsibility of the property owner(s) to comply with these documents and the limitations of approval described herein.
2. **This land use permit expires two years from the date the decision is final** if; (a) development action has not been initiated; (b) building permits have not been issued; or (c) final survey, plat, or other documents have not been recorded, as required.

Conditions of Approval

The conditions listed are necessary to ensure that approval criteria for this land use permit are satisfied. Where a condition relates to a specific approval criterion, the code citation for that criterion follows in parenthesis.

1. **The property owner shall record a copy of the Notice of Decision cover sheet and conditions of approval (pages 1 -3 of this decision) with the Multnomah County Recorder within 30 days of the date this decision becomes final. This decision will become final February 8th, 2005 at 4:30 pm if no appeal is filed. A copy of the recorded document shall be submitted to the Land Use Planning Office prior to the building permit sign-off (MCC 37.0670).**
2. **Either Mike Odom, P.E., or Mike Phillips, P.E. shall observe the site and verify in writing that the geotechnical recommendations outlined in the Foundation Engineering, Inc. August 31, 2004 Geotechnical Site Reconnaissance Report (Exhibit A7) and related letter from**

Foundation Engineering dated December 13, 2004 (Exhibit A11) have been followed (MCC 33.5515(F)(3)). The use of services from any other Professional Engineer will first need to be approved by the Planning Director in order to meet this condition of approval.

3. The property owner shall maintain best erosion control practices through all phases of development. Erosion control measures are to include the installation of sediment fences/barriers at the toe of all disturbed areas and post construction re-establishment of ground cover. Straw mulch, erosion blankets, or 6-mil plastic sheeting shall be used as a wet weather measure to provide erosion protection for exposed soils. All erosion control measures are to be implemented as prescribed in the current edition of the *Erosion Prevention Sediment Control Plans Technical Guidance Handbook*, copies of which are available for purchase at our office, or through the City of Portland.
4. All disturbed areas shall be stabilized (by re-seeding or mulching) within 14-days of the completion of ground disturbance. At least eight willows shall be planted along the stream banks immediately after construction as illustrated in Exhibit A3.
5. The property owner is responsible for removing any sedimentation caused by development activities from all neighboring surfaces and/or drainage systems. If any features within adjacent public right-of-way are disturbed, the property owner shall be responsible for returning such features to their original condition or a condition of equal quality.
6. On-site disposal of construction debris is not authorized under this permit. Spoil materials removed off-site shall be taken to a location approved for the disposal of such material by applicable Federal, State and local authorities. This permit does not authorize dumping or disposal of hazardous or toxic materials, synthetics (i.e. tires), petroleum-based materials, or other solid wastes which may cause adverse leachates or other off-site water quality effects.
7. The County may supplement described erosion control techniques if turbidity or other down slope erosion impacts result from on-site grading work. The Portland Building Bureau (Special Inspections Section), the local Soil and Water Conservation District, or the U.S. Soil Conservation Service can also advise or recommend measures to respond to unanticipated erosion effects.

Note

Once this decision becomes final, applications for building permits may be made with the City of Portland. **When ready to have building permits signed off, call the Staff Planner, Adam Barber, at (503)-988-3043 to schedule an appointment.** Multnomah County must review and sign off building permit applications before they are submitted to the City of Portland. Six (6) sets each of the site plan and building plans are required at the building permit sign-off.

Notice to Mortgagee, Lien Holder, Vendor, or Seller:

ORS Chapter 215 requires that if you receive this notice it must be promptly forwarded to the purchaser.

DECISION OF THE PLANNING DIRECTOR

Findings of Fact

1.0 Summary of Request

Staff: The project area (i.e. timber bridge) is near the intersection of Cornelius Pass Road and 8th Avenue in western Multnomah County. This timber bridge provides the sole access to roughly five residential properties in Folkenburg Community and is visibly rotted and in need of replacement. The proposed bridge replacement will include pre-cast concrete bridge panels supported by spread footings to provide a wider, single span bridge capable of providing emergency access in the event of fire.

2.0 Vicinity and Property Description

Staff: The project will occur within the 8th Avenue road right-of-way where 8th Avenue crosses McCarthy Creek roughly 200-feet to the northeast of the Cornelius Pass Road/8th Avenue intersection (Exhibit A1). The immediate area around the project site is defined by low density residential development of the Folkenburg Community. This small residential community surrounded by sparsely developed forest land. The project site is located within an incised stream valley as topography to the west and east rise a few hundred feet forming two distinct knolls. Average slopes of the construction area are relatively flat, estimated at 10%. Slopes adjacent to the stream bank reach 60% grade. The site geology in the vicinity of bridge consists of 2-feet of silty gravel over soft to medium stiff alluvial silt which grades downward into a silty gravel alluvium. Shall bedrock lying under these strata consists of weak to medium strong, weathered and jointed basalt encountered at a depth of roughly 7.5 feet.

3.0 Noticing Requirements

Upon receipt of a complete application, notice of the application and an invitation to comment is mailed to the applicant, recognized neighborhood associations and property owners within 750-feet of the subject tract (MCC 37.0530(B)).

Staff: Notice of the proposal was mailed on November 3rd, 2004 in accordance with the requirements set forth in **MCC 37.0530(B)**. No written comments on the project were received by the end of the comment deadline.

4.0 Lot of Record

4.1 MCC 34.3370 and 34.0005(L)(12) states, a Lot of Record, For the purposes of this district is a parcel, lot, or group thereof which when created and when reconfigured satisfied all applicable zoning and land division laws.

Staff: The work area is within the 8th Avenue right-of-way and does not involve a specific parcel of land. Road right-of-way is not subject to the Lot of Record provisions.

5.0 Ownership Authorization

- 5.1 Proof of record ownership of the tract and the representative's authorization must be demonstrated to process any land use application (**MCC 37.0590(A) & (C)**). A signature provided by Michael Phillips (Multnomah County Engineering Services Manager), is provided on the General application form presented as Exhibit A2. This signature provides adequate authorization for the County to process this request.

6.0 Rural Residential (Review Use)

Replacement of a bridge qualifies as a review use in the Rural Residential zone district, subject to the following:

- 6.1 **The Placement of Structures necessary for continued public safety (MCC 33.3125(G));**

Staff: The new bridge structure is necessary to provide safe vehicular travel over McCarthy Creek. This project qualifies as a review use according to **MCC 33.3125(G)**.

7.0 Dimensional Requirements – Rural Residential Zone

- 7.1 **Maximum Structure Height - 35 feet (MCC 33.3155(C)).**

Staff: The new bridge will be less than 35-feet tall as illustrated on the structural elevations presented as Exhibit A3.

8.0 Significant Environmental Concern Permit (General Application Materials)

- 8.1 **An application for an SEC permit shall include the following: A written description of the proposed development and how it complies with the applicable approval criteria of MCC 33.4560 through 33.4575 (MCC 33.4520(A)(1)).**

Applicant: "See Site Plan and Area Maps".

Staff: The required written description of the project has been provided by the applicant, presented as Exhibit A4 to this decision.

- 8.2 **An application for an SEC permit shall include a map of the property showing (MCC 33.4520(A)(2): (a) Boundaries, dimensions, and size of the subject parcel; (b) Location and size of existing and proposed structures; (c) Contour lines and topographic features such as ravines or ridges; (d) Proposed fill, grading, site contouring or other landform changes;**

Applicant: "See Site Plan and Area Maps".

Staff: All required maps have been provided. This information will be addressed and referenced on a point specific basis within this decision.

- 8.3 **Location and predominant species of existing vegetation on the parcel, areas where vegetation will be removed, and location and species of vegetation to be planted, including landscaped areas (MCC 33.4520(A)(2)(e));**

Applicant: "See Site Plan and Area Maps. There is no vegetation that needs removal to complete the work, only grasses. We intend to construct a drainage swale planted with native grasses, which will enhance the area. The area surrounding the stream has small caliper willow and alder, and Western Red Cedar further back. These species will not be impacted. There is a small amount of invasive Himalaya Blackberry abutting the stream."

Staff: As stated by the applicant above, ground disturbance will only impact grasses located along the side of the road and adjacent to the stream. No trees will be removed during construction although the construction area is surrounded by willow, alder and cedar. The applicant proposes re-establishing all disturbed areas with native grasses to help filter storm water runoff. The applicant proposes planting at least eight willow trees adjacent to the creek, as illustrated in Exhibit A3.

- 8.4 **Location and width of existing and proposed roads, driveways, and service corridors (MCC 33.4520(A)(2)(f));**

Staff: This information is illustrated in Exhibit A4. The existing gravel drive (8th Avenue) is currently 20-feet wide. Since the existing bridge is only 12-foot wide, it creates a vehicular "bottle neck" which will be improved with the wider bridge design proposed. The new bridge will be at least 15-feet wide, as required by the Tualatin Valley Fire and Rescue Deputy Fire Marshall (Exhibit A5).

9.0 Significant Environmental Concern Permit (Streams)

- 9.1 **In addition to other SEC Permit submittal requirements, any application to develop in a Stream Conservation Area shall also include: (1) A site plan drawn to scale showing the Stream Conservation Area boundary, the location of all existing and proposed structures, roads, watercourses, drainageways, stormwater facilities, utility installations, and topography of the site at a contour interval equivalent to the best available U.S.Geological Survey 7.5' or 15' topographic information (MCC 33.4575(C)(1);**

Applicant: "See Site Plan and Area Maps".

Staff: As illustrated in Exhibit A6, all development will be occurring within the Stream Conservation Area.

- 9.2 **A detailed description and map of the Stream Conservation Area including that portion to be affected by the proposed activity. This documentation must also include a map of the entire Stream Conservation Area, an assessment of the Stream Conservation Area's functional characteristics and water sources, and a description of the vegetation types and fish and wildlife habitat (MCC 33.4575(C)(2);**

Applicant: "See Site Plan and Area Maps".

Staff: The information illustrating these amenities is presented as Exhibit A3 and A6. No significant vegetation will be removed to complete the work. Only roadside grasses will be disturbed and invasive blackberry adjacent to the creek. The applicant intends to construct a drainage swale planted with native grasses, which will enhance the area by providing excellent terrestrial insect habitat adjacent to the stream. It is well documented that terrestrial insects living in riparian vegetation become a significant summer time food source to trout species. The area surrounding the stream has small caliper willow and alder, and Western Red Cedar further back which provide good wildlife habitat for larger animals passing through the corridor.

The functional characteristic of the riparian area is good with a wide range of habitat cover and vegetation types. There is a small amount of Himalaya Blackberry abutting the stream which, although considered invasive, does provide food and cover for numerous song bird species. The cobbled stream bed of McCarthy creek has a moderate gradient and is well shaded by riparian vegetation providing a range of subaquatic nymph food sources to any resident fish species. McCarthy Creek's riparian area has been identified by Multnomah County's Goal 5 inventory as a resource worth preserving and consequently has been protected with the Significant Environmental Concern zoning overlay.

9.3 A description and map of soil types in the proposed development area and the locations and specifications for all proposed draining, filling, grading, dredging, and vegetation removal, including the amounts and methods (MCC 33.4575(C)(3);

Applicant: "See Geological Report. There will be no draining dredging. Any disturbed areas will be reseeded with native grasses... We intend to remove invasive vegetation and replace with native wetland trees enhancing the area with the net effect of reduction of peak stream flows"

Staff: A geotechnical feasibility report prepared by Foundation Engineering, Inc. provides the required information. A copy of the report dated August 31, 2004 is presented as Exhibit A7. According to the report, the site geology consists of 2-feet of silty gravel over soft to medium stiff alluvial silt which grades downward into a silty gravel alluvium. Shall bedrock under these stata consists of weak to medium strong, weathered and jointed basalt at a depth of roughly 7.5 feet below current ground level. The Goble Soil Unit is mapped within the project area (Multnomah County Soil Survey).

9.4 A study of any flood hazard, erosion hazard, and/or other natural hazards in the proposed development area and any proposed protective measures to reduce such hazards as required by (E)(5) below (MCC 33.4575(C)(4);

Applicant: "The replacement bridge will be a concrete structure with abutments located beyond the existing stream banks. The old bridge and piers that are in the stream will be removed allowing the stream to flow freely. The existing bridge piers catch debris and cause erosion around the existing abutments."

Staff: The project site is not mapped within the FEMA designated 100-year floodplain, although the site is located within a flood prone area of McCarthy creek. According to the Multnomah County Soil Survey; soils in the construction area consist of the Goble Soil Unit (17C and 17D) documented as having severe development locations due to

steep slopes and wetness. The Goble Soil Unit has a reported average erosion factor (K) equal to 0.37 for the entire soil profile – considered to represent a moderate erosion potential. Erosion potential towards the upper 14-inches is typically slight with an average K equal to 0.28 (Multnomah County Soil Survey). A geotechnical feasibility report prepared by Foundation Engineering, Inc. provides geotechnical recommendations for construction tailored to this specific site and subsurface conditions. A copy of the report dated August 31, 2004 is presented as Exhibit A7.

- 9.5 **(MCC 34.4575(D)(1)(a)-(c)): For stream resources designated "3-C" the applicant shall demonstrate that the proposal: (1) Will enhance the fish and wildlife resources, shoreline anchoring, flood storage, water quality and visual amenities characteristic of the stream in its pre-development state, as documented in a Mitigation Plan. A Mitigation Plan and monitoring program may be approved upon submission of the following: (a) A site plan and written documentation which contains the applicable information for the Stream Conservation Area as required by MCC 33.4575 (C); (b) A description of the applicant's coordination efforts to date with the requirements of other local, State, and Federal agencies; (c) A Mitigation Plan which demonstrates retention and enhancement of the resource values addressed in MCC 33.4575 (D) (1);**

Applicant: "The new structure will be built with the abutments beyond the stream banks allowing the stream to flow freely under the structure. The new structure will not be a restriction to the stream flow and will enhance the area making it more habitable to fish and wildlife. In addition, the old structure is built on piers located within the flow area of the stream bed. These piers will be removed to erect the new structure. With the removal of the piers, the stream will be allowed to flow freely and naturally. No construction will take place in a forested area and no tree removal is anticipated. No mitigation plan is required. Monitoring will not be required."

Staff: Since McCarthy Creek is designated a Goal 5 protected 3-C resource, this standard applies. The existing bridge piers are located in the creek bed itself obstructing flows and increasing flood potential in the event debris is lodged against the piers. The new bridge design is a span type structure utilizing spread footings installed in the stream bank rather than the stream bed. The old piers will be removed prior to installation of the new span bridge, increasing flood conveyance of this reach and restoring the creek bed to a more natural, pre-developed condition. This in itself will enhance fish and wildlife resources of the construction area and reduce flood potential.

All disturbed areas are currently grass and will be re-seeded with native grasses after construction. The applicant has proposed planting at least eight willows along the stream banks, as illustrated in Exhibit A3, in order to enhance the diversity of riparian vegetation and help to stabilize the stream banks. No trees or any other significant vegetation will be impacted by the project. As such, the impact to the riparian area will be minimal and the net result will be positive as a result of the bridge span design and willow plantings. This standard is met.

- 9.6 **An annual monitoring plan for a period of five years which ensures an 80 percent annual survival rate of any required plantings (MCC 34.4575(D)(1)(d)).**

Applicant: "No construction will take place in a forested area and no tree removal is

anticipated. No mitigation plan is required. Monitoring will not be required."

Staff: As discussed in the previous section, an annual monitoring plan is not necessary as only grass will be disturbed during construction and native grasses will be used to stabilize disturbed areas.

- 9.7 **The following design specifications shall be incorporated, as appropriate, into any developments within a Stream Conservation Area (MCC 34.4575(E)): (1) A bridge or arched culvert which does not disturb the bed or banks of the stream and are of the minimum width necessary to allow passage of peak winter flows shall be utilized for any crossing of a protected streams**

Applicant: "See Site Plan and Area Maps."

Staff: The proposed design has incorporated use of a pre-cast spanned deck in the attempt minimize disturbance to the stream bed and banks. The two footing holes will be excavated outside of the stream bed. Approximately 123 cubic yards of excavation will occur which will be taken off-site to minimize erosion potential.

- 9.8 **All storm water generated by a development shall be collected and disposed of on-site into dry wells or by other best management practice methods which emphasize groundwater recharge and reduce peak stream flows (MCC 34.4575(E)(2)):**

Applicant: "The existing facility is a pervious wooden structure that allows runoff from the structure to enter a roadside ditch where it is filtered by native grasses. We intend to remove invasive vegetation and replace with native wetland trees enhancing the area with the net effect of reduction of peak stream flows."

Staff: Storm water from the new deck surface will be concentrated into an engineered, vegetated drainage swale designed to infiltrate and clean runoff prior to entering the creek flow. Native grasses will help filter contaminants such as petroleum products from the runoff prior to recharging the stream flow. The drainage swale location and design is presented in Exhibit A3.

- 9.9 **Any exterior lighting associated with a proposed development shall be placed, shaded or screened to avoid shining directly into a Stream Conservation Area (MCC 34.4575(E)(3)).**

Applicant: "No exterior lighting will be incorporated into this project."

Staff: No lighting is proposed.

- 9.10 **Any trees over 6" in caliper that are removed as a result of any development shall be replaced by any combination of native species whose combined caliper is equivalent to that of the trees removed (MCC 34.4575(E)(4)).**

Applicant: "No trees over 6-inches in caliper will be removed as a result of this project. The area surrounding the stream has small caliper willow and alder, and Western Red Cedar farther back. These species will not be impacted."

Staff: No trees over 6-inch caliper will be removed. The applicant has proposed planting at least eight willow trees in the riparian area in an attempt to enhance streamside diversity.

9.11 **MCC 34.4575(E)(5): Satisfaction of the erosion control standards of MCC 33.5520.**

Staff: The erosion control standards of **MCC 33.5520** are evaluated in the next section of the decision dedicated to the Hillside Development Permit application.

9.12 **MCC 34.4575(E)(6): Soil disturbing activities within a Stream Conservation Area shall be limited to the period between June 15 and September 15. Revegetation/soil stabilization must be accomplished no later than October 15. Best Management Practices related to erosion control shall be required within a Stream Conservation Area.**

Applicant: "We anticipate no soil disturbance outside the window of June 15 and September 15."

Staff: As referenced in **MCC 34.4575(E)**, this standard has been provided as guidance when found to be appropriate by the Planning Director. The intent of adhering to this timeframe is to minimize impact to the riparian area by restricting construction to times when rainfall and stream flows are typically lower. Adverse impacts to a water body during construction typically include erosion and flooding damage.

If the bridge replacement is postponed until June 15th, a significant risk of bridge failure during high winter flows is a distinct possibility according to the applicant who is an Oregon Licensed Professional Engineer. It is conceivable that the rotted bridge could become displaced from its foundation and either partially block or re-direct flows of McCarthy Creek during high water this winter. This could have a significant impact on downstream properties in the form of flooding and bank scour and erosion.

Ground disturbance will be limited to excavating two footing holes outside of the stream bed and minor ground disturbance on either side of the existing bridge. Approximately 123 cubic yards of excavation will occur which will be taken off-site to minimize erosion potential. All disturbed areas are currently grass and will be re-seeded with native grasses after construction. The applicant has proposed planting at least eight willows along the stream banks, as illustrated in Exhibit A3, in order to enhance the diversity of riparian vegetation and help to stabilize the stream banks.

It is clear in this case that allowing the bridge replacement project to occur as soon as possible significantly reduces the potential of catastrophic erosion and flooding potential within the McCarthy Creek riparian area, thus better aligning with the intent of **MCC 34.4575(E)(6)**. Staff finds the goal of this provision will be best met through the waiver of the suggested development window (soil disturbance and re-vegetation/soil stabilization) outlined in **MCC 34.4575(E)(6)** for the reasons listed above.

Foundation Engineering, Inc. has provided a list of geotechnical recommendations that shall be followed during winter construction (Exhibit A11). This approval is conditioned such that these recommendations are followed.

- 9.13 **MCC 34.4575(E)(7): Demonstration of compliance with all applicable state and federal permit requirements.**

Applicant: "The project is exempt from Oregon's Removal Fill Law because the removal of existing material is less than 50 cubic yards, McCarthy Creek is not deemed an essential indigenous anadromous salmonid habitat or scenic waterway, and the proposed activity is deemed maintenance of a transportation structure as demonstrated below. See SLOPES demonstration of compliance."

Staff: The SLOPES literature referenced by the applicant above is presented as Exhibit A8.

10.0 Hillside Development Permit

- 10.1 **An application for development subject to the requirements of this subdistrict shall include the following (33.5515(A)): A map showing the property line locations, roads and driveways, existing structures, trees with 8-inch or greater caliper or an outline of wooded areas, watercourses and include the location of the proposed development(s) and trees proposed for removal.**

Applicant: "See Aerial Photo"

Staff: See Exhibit A3 for this information.

- 10.2 **An estimate of depths and the extent and location of all proposed cuts and fills (MCC 33.5515(B)).**

Applicant: "See existing and proposed profile. The 112 cubic yards indicated will include the material removed to form the drainage swale. The excavation for the drainage swale is estimated at 0.8 cubic yards. There will be approximately 10 cubic yards of material stockpiled in the area to be revegetated. All other excavated materials will be loaded and hauled away (approximately 100 cubic yards). This material will be taken to a disposal site specified in the special provisions."

Staff: The applicant has outlined the extent of all proposed cuts and fills. The location of cuts and fills is illustrated in Exhibit A3.

- 10.3 **The location of planned and existing sanitary drainfields and drywells (MCC 33.5515(C)).**

Applicant: "Not applicable"

Staff: No planned or existing sanitary drain fields or drywells are proposed and none are known to exist in the construction area.

- 10.4 **Narrative, map or plan information necessary to demonstrate compliance with MCC 33.5520 (A). The application shall provide applicable supplemental reports, certifications, or plans relative to: engineering, soil characteristics, stormwater drainage, stream protection, erosion control, and/or replanting (MCC 33.5515(D)).**

Applicant: "The 8th Street Bridge is a local access timber bridge that has outlived its usefulness. It serves five residences and is located on McCarthy Creek near Old Cornelius Pass Road...We propose to replace the bridge with a clear span concrete deck on piers built beyond the ordinary high water mark. This structure will be designed by a Licensed Engineer registered in the State of Oregon. Cut and fill slopes in excess of 3:1 ratio will be compacted to 98% maximum density to maintain a stable slope. The intent is to remove the existing structure along with the piers that are in stream interrupting the natural flow. The existing bridge is a pervious wooden structure that allows storm water to pass through the stream bed. The new structure allows water to run off the bridge to a roadside ditch where natural grasses filter the water and allow for leaching naturally before entering the stream."

Staff: The applicant's narrative discussing construction protocol is presented as Exhibit A4. The geotechnical report prepared by Foundation Engineering, Inc. is presented as Exhibit A7. The Hillside Development Permit Form-1 Geotechnical Reconnaissance survey is presented as Exhibit A9.

- 10.5 **A Hillside Development permit may be approved by the Director only after the applicant provides (MCC 33.5515(E)(1)): Additional topographic information showing that the proposed development to be on land with average slopes less than 25 percent, and located more than 200 feet from a known landslide, and that no cuts or fills in excess of 6 feet in depth are planned. High groundwater conditions shall be assumed unless documentation is available, demonstrating otherwise; or**

Staff: See response below as slopes exceed 25% in portions of the development area.

- 10.6 **A geological report prepared by a Certified Engineering Geologist or Geotechnical Engineer certifying that the site is suitable for the proposed development (MCC 33.5515(E)(2)); or,**

Staff: A registered Professional Engineer (Michael Phillips) has submitted a Hillside Development Permit Form-1 Geotechnical Reconnaissance Study finding the proposal will not cause stability problems (Exhibit A9). An August 31, 2004 report by Foundation Engineering, Inc. provides geotechnical recommendations that should be adhered to make the site suitable for the proposed development (Exhibit A7). This report was followed up with a list of winter specific geotechnical recommendations (Exhibit A11). Adherence to the relevant geotechnical recommendations is a condition of this approval

- 10.7 **An HDP Form– 1 completed, signed and certified by a Certified Engineering Geologist or Geotechnical Engineer with his/her stamp and signature affixed indicating that the site is suitable for the proposed development (MCC 33.5515(E)(1)).**

Applicant: "See HDP Form-1"

Staff: A completed and signed HDP Form-1 has been submitted (Exhibit A9). The form was signed by Michael Phillips (P.E.), a professional competent in the field of geotechnical engineering.

- 10.8 **If the HDP Form– 1 indicates a need for further investigation, or if the Director requires further study based upon information contained in the HDP Form– 1, a geotechnical report as specified by the Director shall be prepared and submitted (MCC 33.5515(E)(1)(a)).**

Applicant: “The bridge will be built on spread footings with compacted granular backfill to 98% maximum density.”

Staff: The HDP Form-1 recommends that no additional geotechnical studies are required. This standard is met.

- 10.9 **A geotechnical investigation in preparation of a report required by MCC 33.5515 (E) (3) (a) shall be conducted at the applicant’s expense by a Certified Engineering Geologist or Geotechnical Engineer. The report shall include specific investigations required by the Director and recommendations for any further work or changes in proposed work which may be necessary to ensure reasonable safety from earth movement hazards (MCC 33.5515(F)(1)).**

Applicant: “See geotechnical report”

Staff: A geotechnical investigation and resulting report has been prepared. A copy of the report documenting field observations and recommendations is presented as Exhibit A7. An addendum to this report relating to winter construction methodology is presented as Exhibit A11.

- 10.10 **Any development related manipulation of the site prior to issuance of a permit shall be subject to corrections as recommended by the Geotechnical Report to ensure safety of the proposed development (MCC 33.5515(F)(2)).**

Applicant: “See geotechnical report”

Staff: Noted. The Scope of Approval section of this decision states “Approval of this land use permit is based on the submitted written narrative(s) and plan(s). No work shall occur under this permit other than that which is specified within these documents. It shall be the responsibility of the property owner(s) to comply with these documents and the limitations of approval described herein.” As required by this condition, the work performed must comply with all submitted information, including the geotechnical report presented as Exhibit A7 and the associated letter presented in Exhibit A11.

- 10.11 **Observation of work required by an approved Geotechnical Report shall be conducted by a Certified Engineering Geologist or Geotechnical Engineer at the applicant’s expense; the geologist’s or engineer’s name shall be submitted to the Director prior to issuance of the Permit (MCC 33.5515(F)(3)).**

Staff: A condition of this approval is that “*Either Mike Odom, P.E., or Mike Phillips, P.E. shall observe the site and verify in writing that the geotechnical recommendations outlined in the Foundation Engineering, Inc. August 31, 2004 Geotechnical Site Reconnaissance Report have been followed (MCC 33.5515(F)(3)). The use of services from any other Certified Engineering Geologist or Oregon Licensed Professional*

Engineer will first need to be approved by the County in order to meet this condition of approval.” The required written verification by an Oregon Certified Engineering Geologist or Oregon Licensed Professional Engineer will assure the site conditions are observed and compliance with the geotechnical recommendations provided by Foundation Engineering, Inc. will be accomplished.

- 10.12 The Director, at the applicant’s expense, may require an evaluation of HDP Form–1 or the Geotechnical Report by another Certified Engineering Geologist or Geotechnical Engineer (MCC 33.5515(F)(4)).**

Staff: No such second review is required as the geotechnical reconnaissance report prepared by Foundation Engineering, Inc. adequately describes current site conditions, geotechnical constraints and provides clear recommendations. Site conditions observed December 13, 2004 by Staff did not vary from those described in the August 31, 2004 geotechnical report (Exhibit A7).

- 10.13 Development plans shall be subject to and consistent with the Design Standards for Grading and Erosion Control in MCC 33.5520 (A) through (D). Conditions of approval may be imposed to assure the design meets those standards (MCC 33.5515(G)).**

Applicant: “See 33.5520”

Staff: Noted. See responses to these criteria below.

- 10.14 Fill materials, compaction methods and density specifications shall be indicated. Fill areas intended to support structures shall be identified on the plan. The Director or delegate may require additional studies or information or work regarding fill materials and compaction (MCC 33.5520(A)(1)(a));**

Applicant: “The bridge will be built on spread footings with compacted granular backfill to 98% maximum density.”

Staff: The applicant has noted that structural fill must be compacted to 98% maximum density and must consist of granular backfill. The director finds that additional studies are not required.

- 10.15 Cut and fill slopes shall not be steeper than 3:1 unless a geological and/or engineering analysis certifies that steep slopes are safe and erosion control measures are specified (MCC 33.5520(A)(1)(b));**

Applicant: “These plans were developed by a Registered Engineer.”

Staff: Cut slopes for the footings will exceed 33% grade (3:1). A Registered Engineer, Michael Phillips, has verified in the HDP Form-1 that the proposed development will not create stability problems (Exhibit A9).

- 10.16 Cuts and fills shall not endanger or disturb adjoining property (MCC 33.5520(A)(1)(c));**

Applicant: "The cuts/fills will be outside ordinary high water but will not affect adjoining properties."

Staff: A Registered Engineer, Michael Phillips, has verified in the HDP Form-1 that the proposed development will not create stability problems and will not impact adjoining properties (Exhibit A9).

- 10.17 The proposed drainage system shall have adequate capacity to bypass through the development the existing upstream flow from a storm of 10-year design frequency (MCC 33.5520(A)(1)(d));**

Applicant: "The additional area of the new structure is less than 500 square feet making it exempt from this requirement. The design for the new structure will open the stream bed and restore its natural flow. The water for the deck will discharge into the drainage swale and sheet flow across existing flat area before entering the stream. There are no roadside ditches. The water from the surrounding area sheet flows into surrounding area before entering the stream."

Staff: The proposed design incorporates an engineered, vegetated drainage swale at the northwest corner of the bridge. This swale will collect, partially infiltrate and clean storm water prior to entering McCarthy Creek. The applicant, a Registered Engineer, has verified on a drainage certificate that the drainage improvements have been designed to adequately handle runoff attributed to a storm of 10-year frequency (Exhibit A10).

- 10.18 Fills shall not encroach on natural watercourses or constructed channels unless measures are approved which will adequately handle the displaced streamflow for a storm of 10-year design frequency (MCC 33.5520(A)(1)(e));**

Applicant: "We intend to remove approximately 120 cubic yards of material and replace it with Class 100 riprap. The construction activities will remove the existing wood piers currently located in the stream bed and restore the natural flow of the stream. Given these circumstances, there will be no displaced flow."

Staff: In-water fill is not proposed. The proposed drainage swale located at the northwestern corner of the bridge may require fill to achieve positive grade. This swale is not considered a "channel" as it will vary rarely transport active, measurable flow. The swale will only convey water during times of heavy rain.

- 10.19 On sites within the Tualatin River Drainage Basin, erosion and stormwater control plans shall satisfy the requirements of OAR 340. Erosion and stormwater control plans shall be designed to perform as prescribed by the currently adopted edition of the "Erosion Prevention & Sediment Control Plans Technical Guidance Handbook (1994)" and the "City of Portland Stormwater Quality Facilities, A Design Guidance Manual (1995)". Land-disturbing activities within the Tualatin Basin shall provide a 100-foot undisturbed buffer from the top of the bank of a stream, or the ordinary high watermark (line of vegetation) of a water body, or within 100-feet of a wetland; unless a mitigation plan consistent with OAR 340 is approved for alterations within the buffer area (MCC 33.5520(A)(2)(a));**

Applicant: "See the attached Erosion Control Plan"

Staff: The site is not located in the Tualatin River Drainage Basin but within the McCarthy Creek Drainage Basin. McCarthy Creek drains to Multnomah Channel to the northwest. This standard does not apply.

- 10.20 **Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion, stabilize the soil as quickly as practicable, and expose the smallest practical area at any one time during construction (MCC 33.5520(A)(2)(b));**

Applicant: “The stripping of vegetation will only occur in those areas required for removal of the existing structure and installation of the new bridge. Any removal of vegetation will be replaced with native grasses to allow for filtration and stabilization of the construction areas.”

Staff: The pre-cast bridge design will minimize the amount of ground disturbance as the bridge can be simply put in place rather than constructed piecemeal on-site. The span design eliminates the need to place new piers in the creek which again, minimizes disturbance to the heart of the riparian resource – the creek bed. The majority (over 100 cubic yards) of excavated material from the footings will be immediately hauled off site to minimize erosion and the remaining 10 cubic yards of overburden stockpiled on site will be located as far away from the riparian area as possible and covered with 6-millimeter plastic sheeting when not in use.

- 10.21 **Development Plans shall minimize cut or fill operations and ensure conformity with topography so as to create the least erosion potential and adequately accommodate the volume and velocity of surface runoff (MCC 33.5520(A)(2)(c));**

Applicant: “See Construction Drawings and Erosion Control Plans.”

Staff: The span design eliminates the need for in-water piers and the geotechnical design has been simplified to only two span footings in an attempt to consolidate and minimize the excavations. The overall topography of the riparian area will not be altered as this design spans, rather than re-contours the riparian area.

- 10.22 **Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development (MCC 33.5520(A)(2)(d));**

Applicant: “Straw matting will be used in disturbed areas.”

Staff: Exposed areas will be covered with at least 2-inches of straw matting.

- 10.23 **Whenever feasible, natural vegetation shall be retained, protected, and supplemented (MCC 33.5520(A)(2)(e));**

Applicant: “Invasive species will be replaced with native grasses and trees.”

Staff: The project has been designed to eliminate the need to remove existing alder, willow and cedar trees in the area. This is the most significant riparian vegetation and as

a result, the trees will be retained to help provide a better range of wildlife habitat in the construction area.

- 10.24 **A 100-foot undisturbed buffer of natural vegetation shall be retained from the top of the bank of a stream, or from the ordinary high watermark (line of vegetation) of a water body, or within 100-feet of a wetland (MCC 33.5520(A)(2)(e)(1));**
- 10.25 **The buffer required in 1. may only be disturbed upon the approval of a mitigation plan which utilizes erosion and stormwater control features designed to perform as effectively as those prescribed in the currently adopted edition of the "*Erosion Prevention & Sediment Control Plans Technical Guidance Handbook (1994)*" and the "*City of Portland Stormwater Quality Facilities, A Design Guidance Manual (1995)*" and which is consistent with attaining equivalent surface water quality standards as those established for the Tualatin River Drainage Basin in OAR 340 (MCC 33.5520(A)(2)(e)(2));**

Staff: Ground disturbance must occur within 100-feet of McCarthy Creek as the bridge is only 40-feet long and must cross the creek. Footings have been designed outside of the active channel flow in an attempt to minimize disturbance to the creek. Only grasses will be disturbed during construction, which will be re-established with native grasses that will help stabilize the site and filter overland flow prior to entering the creek. Using grasses to filter runoff is a prescribed method captured in the City of Portland's currently adopted edition of the "Erosion Prevention & Sediment Control Plans Technical Guidance Handbook" and the "City of Portland Storm water Quality Facilities, A Design Guidance Manual."

- 10.26 **Permanent plantings and any required structural erosion control and drainage measures shall be installed as soon as practical (MCC 33.5520(A)(2)(f));**

Applicant: "Upon completion of the structure, permanent plantings of native grasses will be made."

Staff: All disturbed areas will be stabilized with re-seeding and mulch within 14-days of ground disturbance being finalized. Erosion control fencing will be installed prior to construction.

- 10.27 **Provisions shall be made to effectively accommodate increased runoff caused by altered soil and surface conditions during and after development. The rate of surface water runoff shall be structurally retarded where necessary (MCC 33.5520(A)(2)(g));**

Applicant: "The additional area created by the new structure is less than 500 square feet exempting it from this requirement."

Staff: The proposed design incorporates a vegetated drainage swale at the northwest corner of the bridge. This swale will collect, partially infiltrate and clean storm water prior to entering McCarthy Creek. The applicant, a Registered Engineer, has verified on drainage certificate that the drainage improvements have been designed to adequately handle runoff attributed to a storm of 10-year frequency (Exhibit A10).

- 10.28 **Sediment in the runoff water shall be trapped by use of debris basins, silt traps, or other measures until the disturbed area is stabilized (MCC 33.5520(A)(2)(h));**

Applicant: "See erosion control plan."

Staff: Mobilized sediment will be captured by sediment fencing placed adjacent to the watercourse, as illustrated in Exhibit A3. Any turbidity in storm water runoff coming off the bridge deck will be filtered by the vegetated swale design located at the northwest corner of the bridge.

- 10.29 **Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching or seeding (MCC 33.5520(A)(2)(i));**

Applicant: "See erosion control plan."

Staff: The geotechnical report submitted by Foundation Engineering (presented as Exhibit A7) provides recommendations for footing excavation designed to dewater and stabilize excavation. This approval is conditioned such that these recommendations must be followed. Specific recommendations include creating slopes no steeper than 1:1 above the local water table, sandbag and dewater footings for excavations below the water table.

- 10.30 **All drainage provisions shall be designed to adequately carry existing and potential surface runoff to suitable drainageways such as storm drains, natural watercourses, drainage swales, or an approved drywell system (MCC 33.5520(A)(2)(j));**

Applicant: "Runoff water will move to the low point of the bridge into a roadside ditch and filtered through native grasses before entering the waterway."

Staff: The engineered swale will have adequate capacity to handle storm water runoff from the bridge deck during the 10-year event as discussed in detail in previous findings.

- 10.31 **Where drainage swales are used to divert surface waters, they shall be vegetated or protected as required to minimize potential erosion (MCC 33.5520(A)(2)(k));**

Staff: The drainage swale will be vegetated with native grasses to minimize scour and help filter contaminants out of deck runoff prior to entering McCarthy Creek.

- 10.32 **Erosion and sediment control devices shall be required where necessary to prevent polluting discharges from occurring. Control devices and measures which may be required include, but are not limited to: 1. Energy absorbing devices to reduce runoff water velocity (MCC 33.5520(A)(2)(l)(1));**

Staff: Sediment fencing will be placed downhill of all construction. Proper installation of this best management practice is a requirement of this approval.

- 10.33 **Sedimentation controls such as sediment or debris basins. Any trapped materials shall be removed to an approved disposal site on an approved schedule (MCC 33.5520(A)(2)(l)(2));**

Applicant: "See erosion control plan."

- 10.34 **Dispersal of water runoff from developed areas over large undisturbed areas (MCC 33.5520(A)(2)(l)(3)).**

Applicant: "See erosion control plan."

Staff: The bride deck area will not significantly increase and in fact will increase less than 500 square feet. Runoff from this small area will be directed to a vegetated swale which will have adequate capacity to accept the runoff volume. Dispersal of runoff over large areas is not necessary.

- 10.35 **Disposed spoil material or stockpiled topsoil shall be prevented from eroding into streams or drainageways by applying mulch or other protective covering; or by location at a sufficient distance from streams or drainageways; or by other sediment reduction measures (MCC 33.5520(A)(2)(m));**

Applicant: "Disposed material shall be removed from site upon excavation."

Staff: Over 100 cubic yards of excavated material will be taken off site to reduce the amount of stockpiled material retained on site. Approximately 10 cubic yards of overburden will be retained on-site to aid in the engineered swale construction. This material will be covered in 6-millimeter plastic sheeting to minimize erosion potential of the stockpile.

- 10.36 **Such non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handling, disposal, continuous site monitoring and clean-up activities (MCC 33.5520(A)(2)(n)).**

Applicant: "Not applicable"

Staff: The use of pesticides, fertilizers, petrochemicals, solid wastes or construction chemicals is not proposed.

- 10.37 **On sites within the Balch Creek Drainage Basin, erosion and stormwater control features shall be designed to perform as effectively as those prescribed in the "Erosion Prevention & Sediment Control Plans Technical Guidance Handbook (1994)". All land disturbing activities within the basin shall be confined to the period between May first and October first of any year. All permanent vegetation or a winter cover crop shall be seeded or planted by October first the same year the development was begun; all soil not covered by buildings or other impervious surfaces must be completely vegetated by December first the same year the development was begun (MCC 33.5520(A)(2)(o)).**

Applicant: "Not applicable"

Staff: This project is within the McCarthy Creek watershed, a contributor to the larger Multnomah Slough watershed. The site does not drain to the Balch Creek basin. This standard does not apply.

Conclusion

Considering the findings and other information provided herein, this application, as conditioned, satisfies applicable Multnomah County Zoning Ordinance requirements. The new bridge shall be constructed as indicated in the plans approved by this decision, as further indicated in the **Scope of Approval** section of this report.

Exhibits

All materials submitted by the applicant, prepared by County staff, or provided by public agencies or members of the general public relating to this request are hereby adopted as exhibits hereto and may be found as part of the permanent record of this application. Exhibits referenced herein are enclosed, and a brief description of each is listed below:

| <u>Label</u> | <u>Pages</u> | <u>Description</u> |
|--------------|--------------|---|
| A1 | 2 | Vicinity Map |
| A2 | 1 | General Application Form |
| A3 | 8 | Construction Plans |
| A4 | 7 | Written Narrative |
| A5 | 7 | Fire Access Signoff |
| A6 | 1 | 2002 Aerial with SEC zoning overlay |
| A7 | 11 | Foundation Engineering Geotechnical Evaluation |
| A8 | 5 | SLOPES literature |
| A9 | 4 | HDP Form-1 Geotechnical Reconnaissance Survey |
| A10 | 1 | Storm Water Certificate |
| A11 | 1 | Letter from Foundation Engineering, Inc. dated 12/13/04 relating to winter construction methods |