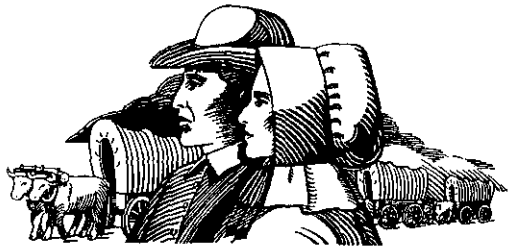
CITY OF OREGON CITY

PLANNING COMMISSION

320 WARNER MILNE ROAD OREGON CITY, OREGON 97045
TEL 657-0891 FAX 657-7892



AGENDA

City Commission Chambers - City Hall
October 8, 2001 at 7:00 P.M.

PLANNING COMMISSION MEETING

7:00 p.m. 1. **CALL TO ORDER**

7:05 p.m. 2. **PUBLIC COMMENT ON ITEMS NOT LISTED ON AGENDA**

7:10 p.m. 3. **APPROVAL OF MINUTES**: September 10, 2001 *(Mailed Separately)*

7:15 p.m. 4. **HEARINGS:**
PD 00-01 (Quasi-Judicial): Approval of a 29-unit residential Planned Unit Development, to include 17 single-family and 12 duplex units/Lowell Wittke/16281 S. Oak Tree Terrace/Clackamas County Assessor's Map 2S-2E-28A, Tax Lots 1712, 1714, 1717 and 1722 **(Continued from September 10, 2001)**

8:00 p.m. **L 01-04 (Legislative):** City of Oregon City/Adoption of the Oregon City Waterfront Master Plan as an Ancillary Document to the Oregon City Comprehensive Plan

8:45 p.m. **OLD BUSINESS**

9:00 p.m. 5. **NEW BUSINESS**

A. Staff Communications to the Commission

9:05 p.m. **B. Comments by Commissioners**

9:10 p.m. 6. **ADJOURN**

NOTE: HEARING TIMES AS NOTED ABOVE ARE TENTATIVE. FOR SPECIAL ASSISTANCE DUE TO DISABILITY, PLEASE CALL CITY HALL, 657-0891, 48 HOURS PRIOR TO MEETING DATE.

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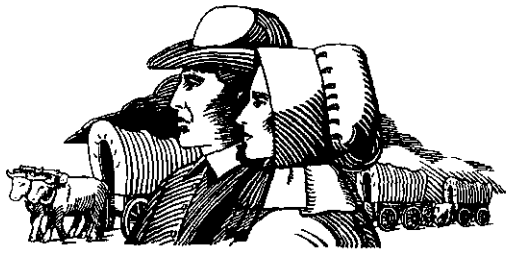

MEMORANDUM
Date: October 3, 2001

FILE NO.:	L-01-04
HEARING TYPE:	Legislative
APPLICANT:	City of Oregon City
REQUEST:	Review and Recommendation of Approval of the Oregon City Waterfront Master Plan
LOCATION:	Approximately 328 acres beginning at 5th Street travelling north along the Willamette River to its confluence with the Clackamas River, easterly along the Clackamas River to Interstate I-205. The boundary then travels south and southwest along I-205 to McLoughlin Boulevard where it runs along McLoughlin Boulevard to 5th Street.
RECOMMENDATION:	Approval
REVIEWER:	Maggie Collins

BACKGROUND:

The Waterfront Master Plan is an outcome of direction of the Oregon City Downtown Community Plan, adopted in January 2000. The Waterfront Master Plan fills in the general direction for the Clackamette Cove and Clackamas Park subarea of the Downtown Community Plan Study Area.

The City set forth these goals for this Master Plan study area:

- Enhance habitat and riparian area
- Integrate open spaces
- Create development themes
- Increase employment opportunities

- Increase the tax base
- Identify public projects.

The Waterfront Master Plan final draft now in front of the Planning Commission does not identify specific changes to the Comprehensive Plan Map or to existing Zoning Districts within the study area. Rather, the Master Plan proposes concepts for the various uses and functions within the study area, with recommendations for additional planning work in future phases.

PROCESS STEPS

Two public hearings are scheduled for the Planning Commission. The first on October 8 will provide a presentation of the Plan and opportunity for Commissioners to ask questions and clarify concepts. In addition, the Commission will take public testimony. At the second public hearing, scheduled for October 22, 2001, the Planning Commission will receive the Planning Division staff report, take public testimony and additional information, and if possible, prepare and vote on a recommendation to the City Commission.

This process will be repeated at two public hearings scheduled in front of the City Commission, on November 7 and November 21, 2001.

APPLICABLE CRITERIA

A. Statewide Planning Goals: Goal 5 (Open Spaces, Scenic and Historic Areas, and Natural Resources); Goal 6 (Air, Water and Land Resources Quality); Goal 8 (Recreational Needs); Goal 9 (Economic Development); Goal 10 (Housing); Goal 12 (Transportation); and Goal 15 (Willamette River Greenway).

B. Oregon City Comprehensive Plan Elements. Citizen Participation; Housing; Commerce and Industry; Natural Resources; Natural Hazards; Parks and Recreation; Willamette River Greenway; and Transportation.

C. Metro Regional Framework Plan and Applicable Documents.

D. Goals and Policies in the Oregon City Downtown Community Plan.

E. Goals and Policies in the Oregon City Parks and Recreation Master Plan.

F. Applicable Criteria in the Oregon City Transportation System Plan.

ATTACHMENT

Oregon City Waterfront Master Plan Executive Summary, August 2001

OREGON CITY WATERFRONT MASTER PLAN
Executive Summary
August 2001

Centered at the confluence of the Willamette and Clackamas Rivers, Oregon City's waterfront area includes some of the region's most spectacular natural environments. The rich history and valuable natural assets of the waterfront district contribute to its extraordinary environmental, recreational, and economic opportunities. Given the site's unique characteristics and proximity to the heart of downtown Oregon City, revitalization of this area is key to shaping the future of the City.

The Downtown Community Plan, August 1999, refers to Oregon City's waterfront as "one of the great landscape alliances of Oregon: a historic city next to a beautiful river surrounded by a spectacular natural setting." The Community Plan calls for reestablishment of viable connections for all modes of transportation to the waterfront site as well as measures to open up the waterfront and recapture the resource for the entire community to enjoy. In response to this vision, the City of Oregon City set forth the following goals for the Waterfront Master Plan Study:

- Enhance habitat and riparian areas
- Integrate open spaces
- Create development themes
- Increase employment opportunities
- Increase the tax base
- Identify public projects

Based on these goals the Oregon City Waterfront Master Plan was developed through an interactive and ongoing public process. Feedback from open public workshops and stakeholder interviews, as well as continued work with city staff and a Technical Advisory Committee, contributed to the creation of the overall vision, goals and physical plan for the revitalization of Oregon City's waterfront area.

The primary focus of the resulting Master Plan is to balance the interplay of the natural environment with the economic potential of public and private development within the area. The plan highlights openspace improvements and mixed use redevelopment within the waterfront district. Partnerships, such as collaboration with an expanding Tri Cities facility, are

encouraged to reach community goals. In addition, the plan emphasizes the need to build connections within the waterfront area as well as to extend these connections to adjacent community interests including the downtown core and the End of the Oregon Trail Exhibit.

Openspace improvements for the waterfront area build on the existing natural environment while enhancing recreational opportunities for the entire Oregon City community. Habitat restoration at Clackamette Cove and along the banks of the Willamette River at Clackamette Park will restore these once rich environmental resources. The establishment of no-wake boating in Clackamette Cove and the creation of a pedestrian trail tracing the shoreline will allow visitors to be submersed in the natural environment only moments from downtown. Visitors crossing the Clackamas on Highway 99 will be greeted by a green city entry with a new gateway building complex on McLoughlin Boulevard announcing the presence of Clackamette Park. The existing dump station will be relocated to allow for an improved park entry welcoming visitors to the river's edge. New group picnic facilities will replace the existing RV Park and additional boat trailer parking will ease parking congestion for fishing and boating enthusiasts. A waterfront trail system will link Clackamette Park to both the shoreline of the Willamette to the south and the restored habitats of Clackamette Cove to the east.

Within the green framework created by these openspace improvements, a mixed use zone integrating the existing Oregon City Shopping Center will create a re-energized urban edge along the east side of McLoughlin Boulevard. Combining housing, commercial/retail and potentially office as markets develop, this redeveloped district will serve as a new pedestrian oriented community related to the waterfront area as well as providing additional retail opportunities for the residents of Oregon City at large. Retail bordering McLoughlin will be reconfigured to create an active urban streetscape while new housing will be oriented toward Clackamette Cove to capitalize on the waterfront housing market and provide a community presence on the Cove. Multiple connections throughout the mixed use district will facilitate easy pedestrian and vehicular circulation.

Connecting the revitalized waterfront district to the larger community of Oregon City is paramount for the long-term success of the project. The Waterfront Master Plan envisions the redevelopment of McLoughlin as a regional boulevard enhanced

with street trees, widened pedestrian walks and traversed by pedestrian crossings linking the waterfront to the downtown city grid. A pedestrian Promenade borders the river along McLoughlin Boulevard's western edge, at times cantilevering over the riverbank to provide views of the Willamette River and Oregon City Falls. The Promenade would serve as a multi-modal connection from the newly enhanced waterfront district to downtown Oregon City. Other primary connections noted by the plan include the enhancement of 17th Street to promote circulation with tourist interests south of Interstate 205 and exploration of opportunities for pedestrian connections at the nearby historic train depot. In addition, the extension of a trail system north from the restored Clackamette Cove would complete pedestrian connections to the openspaces of Gladstone via the pedestrian river crossing on the Clackamas.

In order to achieve the ambitious goals set forth in the Waterfront Master Plan, the development of partnerships with public and private entities is encouraged. As restoration of Clackamette Cove and redevelopment of a mixed use district move forward, current opportunities exist to collaborate with Tri Cities in their expansion of facilities adjacent to the waterfront area. Current expansion plans open the door for the creation of public ballfields south of the existing Tri Cities facility as well as the construction of a demonstration wetland system near the Cove that may also be made accessible to the public. Such partnerships will maximum the benefits for both private enterprise and the residents of Oregon City.

To achieve the vision developed by the Oregon City community and presented in the Waterfront Master Plan, a strategy that seeks to capitalize on existing resources and emphasizes attainable goals is necessary. The plan proposes the following elements to develop a strategy for success:

- Make a 'Great Plan', i.e. a comprehensive plan that will serve as a motivating vision that captures the imagination of stakeholders
- Define a series of attainable projects within the plan
- Solicit stakeholder input and encourage ownership
- Support committed ongoing city and private sector leadership
- Determine development standards for the area
- Enhance communication and develop partnerships

The Waterfront Master Plan is intended to provide a framework for the implementation of identified projects, to assist with

the acquisition of necessary funding and to serve as a guide for decisions that seek to enhance and capitalize on the valuable natural assets of the waterfront district while supporting recreational and economic benefits for the community of Oregon City. Through continued discussion and collaboration between the City and its residents, the Oregon City waterfront can become a truly unique and captivating gateway to the City's downtown as well as a valuable community resource for generations to come.

CITY OF OREGON CITY

COMMUNITY DEVELOPMENT DEPT.

320 WARNER MILNE ROAD OREGON CITY, OREGON 97045
TEL 657-0891 FAX 657-7892

Staff Report Addendum
October 1, 2001

FILE NO:	**PD 00-01**
FILE TYPE:	Quasi-Judicial
HEARING DATE:	October 8, 2001 7:00 p.m., City Commission Chambers 320 Warner Milne Road Oregon City, Oregon 97045
APPLICANT	Lowell Wittke Construction 16281 S. Oak Tree Terrace Oregon City, OR 97045
REPRESENTATIVE:	WB Wells and Associates 4230 NE Fremont Street Portland, OR 97213
REQUEST:	Preliminary Plan for a phased Planned Unit Development of 29 units on 20 lots (17 single family and 12 multi-family units).
LOCATION:	16281 S Oak Tree Terrace; Clackamas County Tax Map 2S-2E-28A, Tax Lot 1717 and 1722
REVIEWER:	Gillian Zacharias, AICP, Consulting Planner Maggie Collins, Planning Manager Jay Toll, Senior Engineer Nancy Kraushaar, City Engineer
RECOMMENDATION:	Addition of Condition of Approval 24 in Exhibit A, to read as follows: 24. The applicant shall submit evidence to demonstrate that schools, fire and police services and facilities have adequate capacity to serve the project.

CITY OF OREGON CITY

COMMUNITY DEVELOPMENT DEPT.

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Staff Report
October 1, 2001

FILE NO:	**PD 00-01**
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LOCATION:	16281 S Oak Tree Terrace; Clackamas County Assessor's Map 2S-2E-28A, Tax Lots 1717 and 1722
REVIEWER:	Gillian Zacharias, AICP, Consulting Planner Maggie Collins, Planning Manager Jay Toll, Senior Engineer Nancy Kraushaar, City Engineer
RECOMMENDATION:	Approval with Conditions (Exhibit A)

CRITERIA:

Comprehensive Plan
Section "C" Housing
Section "F" Natural Resources
Section "I" Community Facilities

Municipal Code
Chapter 16.12 Minimum Improvements and Design Standards for Land Divisions
Chapter 17.08 "R-10" Single-Family Dwelling District
Chapter 17.44 Unstable Soils and Hillside Constraint Overlay District
Chapter 17.49 Water Resource Overlay District
Chapter 17.64 Planned Development

NOTE: Chapter 17.64 requires a PUD application and proposal to comply with the above sections of the Oregon City Comprehensive Plan and Municipal Code. Rather than "nest" the sections within Chapter 17.64, the required sections are presented in chronological order and cross-referenced within the review of Chapter 17.64 in the latter portion of the staff report.

BASIC FACTS:

1. **Location.** The development site is at the terminus of S Oak Tree Terrace, just south of Holcomb Boulevard (Exhibit B). Clackamas County Tax Assessor map 2S-2E-28A identifies the site as Tax Lots 1717 and 1722.

2. **Existing Conditions.** The 8.35-acre site comprises two heavily vegetated, vacant tax lots at the end of S Oak Tree Terrace. Evidence of a small paved road previously used for site access cuts across the property, but is overgrown. The site slopes downhill from the north to south across the site. The site is roughly bisected by a natural drainageway that flows into the Livesay Drainage Basin. The Livesay Drainage Basin ultimately drains to Abernathy Creek. The upper portion of the drainageway has been impacted by adjacent agricultural uses and grading associated with a dirt road. The lower portion of the drainage remains in a more natural state. The applicant's material includes a wetland delineation report by Fishman Environmental Services LLC that identifies a wetland at the north part of the drainageway (Exhibit E, Oak Tree Estates Wetland Delineation and Water Resources Report, T2S, R2E, Section 28, NE ¼, WM, Clackamas County, Oregon, March 2001).

   Steep slopes characterize most of the site. The site is identified on the Geologic Hazards Map of Canby and Oregon City. According to the applicant's calculations 3 acres of the 8.3 acre site include slopes that are greater than 25 percent.

3. **Zoning and the surrounding land use pattern.** The subject property is zoned "R-10" Single-Family Dwelling District.

North: The two properties to the north of the subject site are zoned "R-10" Single-Family Dwelling District. One parcel is vacant while the other property is developed with a single-family dwelling.

East: The property to the east is zoned "R-10" Single-Family Dwelling District and is developed with a single-family dwelling.

South: Three properties abut the subject property to the south. All parcels are zoned Clackamas County "FU-10" Future Urbanizable 10-Acre minimum and developed with single-family dwellings.

West: The property to the west is zoned "R-10" Single-Family Dwelling District and is vacant.

4. **Background**. In 2000, the applicant submitted a preliminary PUD plan which staff and other agencies reviewed. Staff were prepared to recommend denial because the plan did not meet criteria for approval with respect to:
   - meeting the intent of the PUD ordinance,
   - identifying and mitigating impacts on the Water Quality Resource Area (WQRA),
   - addressing stormwater runoff, and
   - the lack of sight distance at Holcomb Boulevard.

   The applicant subsequently revised the plan to address the City's concerns (Exhibit C, Reduced Plans). There would be 2 fewer units on a smaller footprint than than originally proposed. More of the steeply sloped area is preserved as open space compared to the original proposal. To meet the multi-family component, three 4-plexes are proposed, rather than duplexes as in the original proposal. A new, and more thorough, wetland delineation report and conceptual mitigation plan was submitted. Improvements to correct sight distance deficiencies at the Holcomb/Oak Tree Terrace intersection were not proposed.

5. **Description of Proposed Project.** The Preliminary Planned Unit Development (PUD) consists of 29 dwelling units (17 single-family lots and 12 multi-family units on 3 lots). As described in the applicant's narrative (Exhibit D), the new PUD would be developed in three phases, with 4 units to be developed in Phase 1, 8 units in Phase 2, and the remainder in Phase 3.

   Access to the site would be from an extension of S Oak Tree Terrace across the site in an east-west direction. The applicant proposes to stub the extension of S Oak Tree Terrace to the western property line. The applicant proposes a street stub and a cul-de-sac (Wittke Lane and Wittke Court) to provide access to the two "clusters" of development to the south of S Oak Tree Terrace. All three streets would be public streets with sidewalks on one side. The applicant proposes less than the standard right-of-way dedication and complete improvements for all proposed streets.

   The PUD includes 3.6 acres of open space in two tracts containing a Water Quality Resource Area (WQRA) and the steepest slopes on the site. Open space accounts for 45 percent of the gross site area. The proposed open space is of passive character. The applicant states that the proposed open space is too steep to accommodate walking paths.

6. **Density considerations.** The applicant is proposing a 29-unit Planned Unit Development. Planned Unit Developments are permitted in the R-10 Single-Family Dwelling District but they must comply with the requirements of Chapter 17.64.

   Under Section 17.64.030, a development proposal may be processed as a PUD as long as the development proposes at least 80 percent of the gross density allowed by the underlying zone. The subject property could accommodate 36 units at 4.4 units per gross acre under the "R-10" Single-Family Dwelling District density requirements. Eighty percent of 36 is 29 dwelling units, which is what is proposed.

   Section 17.64.040(H) requires that between 20 and 50 percent of the "net developable area" be residential uses other than single family dwellings. The 17 single-family dwelling units are on approximately 100,000 square feet of developable area. The three 4-plex buildings (12 multi-family units) are proposed on approximately 47,000 square feet of developable area. Therefore, the multi-family units are built on 32 percent of the "net developable area" and meet the requirements.

7. **Adjustments to the "R-10" Dimensional Standards.** All dimensional standards that would otherwise apply to a property or development may be adjusted in the context of a PUD without a separate variance application. The only two items that may not be adjusted are the setbacks around the perimeter of the PUD, and the minimum density requirement of 80 percent of the maximum density of the underlying zone. The Preliminary Plan proposes a density of 29 units and a perimeter setback that meet the standards.

8. **Comments**. Transmittals on the proposed PUD application were sent to affected agencies, the Park Place Neighborhood Association, and affected property owners. All comments received from agencies are incorporated in the Analysis and Findings section below and attached to this report.

   The Park Place Neighborhood Association submitted letters dated September 4 and September 21, 2001 (Exhibit I). The letters each raised several similar objections:
   - lot sizes are too small for being next to the Urban Growth Boundary (UGB); they should be a minimum of 10,000 square feet,
   - the density is too high, is in excess of the "carrying capacity of the land", and could cause slope movements and landslides,
   - the area supports birds and wildlife,
   - the proposal could add rental units when the association believes the area contains a disproportionate share of non owner-occupied units, and
   - minimal sight distance creates a dangerous situation at the Oak Tree Terrace/Holcomb Boulevard intersection.

Staff response. The Neighborhood Association would prefer larger lots next to the UGB. The Planning Commission has affirmed a policy that states that 10,000 square foot lots are appropriate next to the UGB as a transition area between smaller lots in the City and the rural areas. However, the PUD allows a density transfer from constrained portions of a site to buildable areas as a way to

encourage infill development, which is also a priority of the City and the region. In this case, smaller lots are balanced by having half of the site in open space. The proposed density is 80 percent of what is allowed by the underlying zone.

PUDs allow development that is consistent with state, regional, and local goals for infill and conservation of open space where appropriate. OCMC Section 17.64.010 states that one of the purposes of a PUD is "to protect and enhance public safety on sites with natural or other hazards and development constraints through the clustering of development on those portions of a site that are suitable for development." The PUD is, therefore, an appropriate approach to development on this site due to the topographic constraints. Section 17.64.040(H) requires mixed uses other than single family residences within a PUD, so the multi-family units are appropriate. The OCMC does not distinguish between rented or owner-occupied units in PUD developments. The Oregon City Municipal Code does not prohibit single-family or multi-family units, whatever the form of ownership, from being rented. The density of 29 units on this site is the minimum allowed by the Code and the Comprehensive Plan and is appropriate.

The portion of the site proposed for development has been analyzed by geotechnical engineers and determined to be buildable. The applicant's geotechical report reported no observed evidence of slope instability The Oregon City Municipal Code provides for development on steep slopes and requires oversight by a registered geotechnical engineer.

The Association expresses concern about the preservation of treed areas as habitat for birds and other wildlife. The open space will be preserved in an open space tract as part of a Water Quality Resource Area. Therefore, the proposal will result in conserving wildlife habitat.

City staff also has concerns about sight distance at Holcomb Boulevard, which is discussed below.

ANALYSIS AND FINDINGS

Consistency with Comprehensive Plan

Housing Goal: *Provide for the planning, development, and preservation of a variety of housing types at a range of prices and rents.*

The proposed PUD development would provide 29 residences on 20 lots, 17 single family dwellings and three 4-plexes which satisfies the Housing Goal for a variety of housing types.

Community Facilities Goal: *Serve the health safety education and welfare and recreational needs of all Oregon City Residents through the planning and provision of adequate community facilities.*

No limitation on capacity has been identified by the public service agencies that cannot be overcome through construction of improvements as required by the City.

Policy No. 5: *The City will encourage development on vacant buildable land within the City where urban facilities and services are available or can be provided.*

The proposed PUD utilizes the vacant buildable land that can be served by the City's facilities.

Natural Resources Goal: *Preserve and manage our scarce natural resources while building a livable urban development.*

The proposed PUD attempts to preserve and integrate the existing natural resources into the residential development by conserving nearly half of the site in open space. Although the approximately 3 acres preserved as open space is not active open space, the natural environment will add to the livability of the surrounding development. There will be impacts on the water quality resource area on the northern part of the site where the access road will be built in portions of the wetland. However, these uses are allowed in the water quality resource area if they meet the standards of Chapter 17.49 and provide mitigation. The applicant submitted an analysis of impacts on the wetland and a conceptual mitigation plan (Water Resources Report Addendum, Fishman Environmental Services, LLC, July 2001, Exhibit F). Fishman determined that impacts on the water resources would be minor with mitigation.

Staff finds that the proposed project is generally consistent with applicable goals and policies of the Oregon City Comprehensive Plan.

Oregon City Municipal Code
Chapter 16.12, Minimum Improvements and Design Standards for Land Divisions
Chapter 17.08, "R-10" Single-Family Dwelling District
Chapter 17.44, "US" Unstable Soils and Hillside Constraint Overlay District
Chapter 17.49, Water Resource Overlay District
Chapter 17.64, Planned Development

16.12 Minimum Improvements and Design Standards for Land Divisions
[Section 17.64.120 (B) requires that PUDs meet the applicable standards of this chapter.]
This chapter requires all land divisions to be in conformance with the policies and design standards established by Chapter 16.12 and other applicable city regulations and plans. City staff evaluated the proposed PUD plan against the minimum improvements and design standards and found that the plan meets the requirements for such issues as connectivity, circulation, grades, and angles, except that the topography precludes compliance in some areas. Only exceptions to the standards based on topography or other site or regulatory constraints are discussed in the following paragraphs. Sections of the Code that are met by the proposed project or are not applicable are not discussed.

16.12.030 Street design—Minimum right-of-way

The new streets and the extension of Oak Tree Terrace are local streets, requiring a pavement width of 32 to 34 feet and right-of-way width of 40 to 50 feet. The applicant proposes streets that vary in the pavement and right-of-way width: from 20 to 32 feet and 28 to 44 feet, respectively. The streets are narrower to limit the amount of grading on the slopes, and filling of the wetland to accommodate an arch culvert. Narrower than standard streets are allowed under the provisions for Constrained Local streets (Section 16.12.060). The criteria for constrained streets are that the Comprehensive Plan designation must be low density residential and that the streets meet the standards of 16.12.060. The project complies with these requirements.

16.12.060 Street design—Constrained local streets

The proposed streets generally do not exceed the minimum requirements for constrained local streets and have been reviewed and approved by the City Engineer. One portion of the Wittke Lane right-of-way would be 28 feet wide, less than the minimum in Table 16.12.060. However, the proposed width is preferable. The road is close to the WQRA, and the narrow right-of-way width will minimize grading and impacts on the WQRA.

16.12.100 Street design—cul-de-sac

The proposed cul-de-sac, Wittke Court, is necessary to serve the lots and meet density requirements. No through-street is practical due to the increasing steepness of the site and the WQRA (unnamed tributary to Abernethy Creek) on the southern portion of Tax Lot 1722. Because of steep slopes, no pedestrian or bicycle connections are provided for connectivity in that area. Wittke Court is approximately 160 feet long, less than the 350-foot maximum length.

16.12.180 Street design—Planter strips

No planter strips are proposed, due to the need to have narrow streets. For that reason, sidewalks are provided on one side of the street only. Because there are hundreds of trees in the open space tracts, staff do not feel that trees or planter strips are needed.

16.12.200 Blocks—Length

The proposed project does not connect with any existing streets on adjacent properties because the properties are undeveloped. It is not known, therefore, whether the longest block proposed—the extension of Oak Tree Terrace between Wittke Lane and the western property line—will result in a block length or block perimeter that exceeds the maximums once adjacent through-streets are built. However, site topographic and natural resource constraints combined with the minimum density regulations of the PUD ordinance precludes a different configuration.

16.12.290 Building site—Setbacks and building location

Setbacks for the single-family and multi-family lots are established on the Preliminary Lot Layout with Dimensions (Sheet 3, Exhibit C). The setbacks will be less than the standards for garages or dwellings in some cases, as part of the PUD approval and shall be shown on the preliminary plat or guaranteed through deed restrictions or easements.

16.12.310 Building site—Protection of trees

The applicant's narrative states that 227 trees out of a total of 332 trees surveyed would be retained. Due to grading on the individual lots, not all trees outside of the building envelope would be retained. However, due to the preservation of a large tract of treed open space, removal of designated trees outside the building area will be permitted. The applicant will be required to submit a tree removal and protection plan.

16.12.350 Minimum improvements—Public facilities and services
E. Sidewalks

Sidewalks on only one side of the streets would be provided, to minimize the street footprint and grading on the slopes and over the WQRA.

Finding: Based on the analysis, the proposed project complies with the applicable standards of Title 16, except in cases where site constraints preclude compliance, as discussed above and as allowed by the code.

17.08 "R-10" Single-Family Dwelling District
[Section 17.64.120 (B) requires that PUDs meet the applicable standards of this chapter.]
17.08.040 Dimensional standards.

Without adjustment from a PUD or variance approval, residential development in the "R-10" district must comply with the dimensional standards in this section. The applicant is requesting adjustments to the development standards of the underlying district (refer to discussion under Chapter 17.64.040). The dimensions not proposed to be adjusted are the maximum height and the rear and side yard setbacks around the perimeter of the PUD. No houses in excess of 2.5 stories or 35 feet are proposed. A 10-foot setback is proposed at the perimeter of the PUD.

Finding: The proposed project meets two applicable standards of the "R-10" district. The exceptions are permitted by Chapter 17.64.

Chapter 17.44 Unstable Soils and Hillside Constraint Overlay District
[Section 17.64.120 (B) requires that PUDs meet the applicable standards of this chapter.]
17.44.060 Development standards.
Notwithstanding any contrary dimensional or density requirements of the underlying zone, the following standards shall apply to the review of any development proposal subject to this chapter:
A. All developments shall be designed to avoid unnecessary disturbance of natural topography, vegetation and soils.

The applicant proposes to use retaining walls, steep vertical roadway alignments (Oak Tree Terrace), hammerheads for emergency vehicle turnaround, tight horizontal reverse curves (Wittke Lane), narrow roadway widths in select locations, limited driveway areas (fourplexes on Lots 18, 19, and 20), limited on-street parking, and a planned unit development configuration to achieve this standard.

Finding: The development proposal meets this standard.

To the maximum extent practicable as determined by the review authority, tree and ground cover removal for residential development on individual lots shall be confined to building footprints and driveways, to areas required for utility easements and for slope easements for road construction, and to areas of geotechnical remediation. Temporary protective fencing shall be established around all trees and vegetation designed for protection prior to the commencement of grading or other soil disturbance.

Grading will be required to construct the road and flatten building sites to accommodate the residential units. By installing retaining walls, the applicant is proposing less grading than otherwise would be required. Because of the grading, some trees not within the building footprint but within the grading footprint, will be removed. Staff is satisfied that the minimum number of trees would be removed. The applicant must submit a tree removal and preservation plan, identifying which trees specifically would be removed, and which protected. Methods of protecting the trees during construction shall also be provided.

Finding: The applicant can meet the standard by complying with Condition of Approval 7.

B. Designs shall minimize the number and size of cuts and fills.

The applicant's grading plan minimizes cuts and fills by avoiding the steepest portions of the site, modifying standard street widths and slopes, minimizing parking areas, and using retaining walls to achieve workable grades for infrastructure and developable lots. Cut and fill volumes have been thoughtfully controlled to fit the terrain.

Finding: The development proposal meets this standard.

C. Toes of cuts and fills shall be set back from boundaries of separate private ownerships at least three feet, plus one-fifth of the vertical height of the cut or fill. An exception to this requirement may be granted so long as the review authority determines there is a negligible risk of landslide, slump or erosion and a slope easement is provided.

The intent of this standard is to reduce impacts of development site grading on adjacent property owners and reduce hazard potential. Proposed grading is generally set back at least three feet plus one-fifth of the vertical height of the cut or fill and therefore meets this standard.

Finding: The development proposal meets this standard.

D. Except in connection with geotechnical remediation plans approved in accordance with this chapter, cuts shall not remove the toe of any slope that contains a known landslide or is greater than twenty-five percent.

The proposed grading plan does not appear to remove the toe of known landslides or slopes greater than 25 percent and therefore meets this standard.

Finding: The development proposal meets this standard.

E. Any structural fill shall be designed by a suitably qualified and experienced civil or geotechnical engineer licensed in Oregon in accordance with standard engineering practice. The applicant's engineer shall certify that the fill has been constructed as designed in accordance with the provisions of this chapter.

The applicant submitted a geotechnical report on the site's existing conditions (Exhibit J, Geotechnical Investigation by ADaPT Engineering, Inc., July 18, 2000). The geotechnical report submitted for the application is outdated relative to the proposed grading plan, but the current application indicates that licensed civil and geotechnical engineers will coordinate the design, inspection and certification of site fills. The proposed application can meet this standard by complying with the condition of approval requiring that a licensed civil and geotechnical engineer coordinate the grading design and construction and certify that the grading is structurally sound.

Finding: The applicant can meet the standards by complying with Conditions of Approval 1 and 22, which includes compliance with Engineering Policy 00-01 (Exhibit K).

F. Retaining walls shall be constructed in accordance with the Uniform Building Code adopted by the state of Oregon.

Retaining walls are proposed for the site. The applicant's geotechnical engineer's report includes recommendations for retaining wall construction; however the geotechnical report is outdated relative to the proposed grading plan. The applicant can meet this standard by complying with Condition 6 which requires that constructed retaining walls meet Oregon Uniform Building Code requirements and the recommendations of an updated geotechnical report.

Finding: The applicant can meet the standards by complying with Conditions of Approval 6 and 22, which includes compliance with Engineering Policy 00-01 (Exhibit K).

G. Roads shall be the minimum width necessary to provide safe vehicle and emergency access, minimize cut and fill and provide positive drainage control. The review authority may grant a variance from the city's required road standards upon findings that the variance would provide safe vehicle and emergency access and is necessary to comply with the purpose and policy of this chapter.

The applicant proposes to construct three streets that vary in pavement width from 20 feet to 32 feet and to have a sidewalk on one side only. These cross-sections are considered constrained relative to standard City roadway widths and cross-sections for local streets. Such deviations from the standards are appropriate on this site to reduce grading and runoff. Emergency vehicle access to the development is achieved by hammerheads.

Finding: The proposal meets this standard.

H. Unless the property is developed as a planned development pursuant to Chapter 17.64, density shall be determined as follows:

The project is being developed as a planned development pursuant to Chapter 17.64; therefore, this section does not apply.

Finding: The section does not apply to the proposed project.

I. For those portions of the property with slopes of twenty-five to thirty-five percent between grade breaks:

1. The maximum residential density shall be limited to two dwelling units per acre; provided, however, that where the entire site is less than one-half acre in size, a single dwelling shall be allowed on a lot or parcel existing as of January 1, 1994 and meeting the minimum lot size requirements of the underlying zone;

The application proposes limited disturbance for portions of the site where slopes are greater than 25 percent (Lots 15, Wittke Lane, and Lots 4, 5, and 6) (see Sheet 6 of 9). The Planned Unit Development nature of the application has reduced the development on slopes greater than 25 percent. In addition, less than 50 percent of 4000 square feet of lots with slopes greater than 25 percent are proposed for grading, vegetation removal, or structure or impermeable structure coverage.

Finding: The proposed project meets the standard.

2. No more than fifty percent or four thousand square feet of the surface area of an individual lot or parcel, whichever is smaller, shall be graded or stripped of vegetation or covered with structures or impermeable surfaces.

No one lot is proposed that contains more than 50 percent of land with a slope greater than 25 percent.

Finding: The proposed project meets the standard.

J. For those portions of the property with slopes over thirty-five percent between grade breaks:

1. Notwithstanding any other city land use regulation, development other than roads, utilities, public facilities and geotechnical remediation shall be prohibited; ...

The proposal indicates no site disturbance for portions of the site where slopes are greater than 35 percent. The multi-unit lots (Lots 18, 19, and 20) and designated open space contain slopes greater than 35 percent (see Sheet 6 of 9). The proposed conservation easement and open space designation meets the intent of this standard and therefore this standard is met.

Finding: The proposed project meets the standard.

2. To the maximum extent practicable as determined by the review authority, the applicant shall avoid locating roads, utilities, and public facilities on or across slopes exceeding thirty-five percent.

The design calls for a small portion of Wittke Lane to be built across slopes between 25 and 35 percent. Roads and utilities are not proposed for slopes exceeding 35 percent.

Finding: The proposed project meets the standard.

K. The review authority shall determine whether the proposed methods of rendering a known or potential hazard site safe for construction, including proposed geotechnical remediation methods, are feasible and adequate to prevent landslides or damage to property and safety. The review authority shall consult with the city's geotechnical engineer in making this determination. Costs for such consultation shall be paid by the applicant. The review authority may allow development in a known or potential hazard area as provided in this chapter if specific findings are made that the specific provisions in the design of the proposed development will prevent landslides or damage. The review authority may impose any conditions, including limits on type or intensity of land use, which it determines are necessary to assure that landslides or property damage will not occur.

The intent of this standard is to prevent hazardous development that impacts public property and safety. The proposal acknowledges the City's authority and discretion over geotechnical decisions regarding the development. The City Engineer has reviewed the plans and the applicant's geotechnical report and found that they generally comply with City standards. The applicant shall comply with all of the recommendations of the geotechnical report as well as an updated report for the current application.

The proposal will meet this requirement by complying with Conditions of Approval 2 to 5 that require: 1) an updated geotechnical report, 2) the grading plan for each lot shall be reviewed and approved by the project geotechnical engineer; 3) the foundation excavation and cuts and fills shall be inspected and approved by the project geotechnical engineer; and 3) new fill slopes greater than 25 percent shall be certified for stability by the project geotechnical engineer.

Finding: The applicant can meet the standard by complying with Conditions of Approval 2 through 5.

Chapter 17.49 Water Resource Overlay District
[Section 17.64.120 (B) requires that PUDs meet the applicable standards of this chapter.]
17.49.030 Applicability.
A. This chapter shall apply to development in the water quality resource area overlay district, which may also be referred to as the "Water Resources Overlay District" in this code...
C. These standards are in addition to any other applicable standards of this code.
1. Applications for subdivisions, partitions and planned developments shall demonstrate compliance with these standards as part of the review proceedings for those developments;

The intent of the development standards is to assure water quality resources are protected when development occurs in the overlay district. The subject site is almost entirely within the Water Resource Overlay District. As the proposed project is a planned development, the project must comply with this chapter.

Finding: This section of the code applies to the subject site as described above in 17.49.030.C.1.

17.49.040 Administration.
A. This chapter establishes a water quality resource area overlay district, which is delineated on the water quality and flood management areas map attached and incorporated by reference as a part of this document. The official map is on file in the office of the city recorder.
1. The Oregon City local wetland inventory, as amended, shall be a reference for identifying areas subject to the water quality resource area overlay district.

A stream and no wetlands are identified on the City's Water Quality and Flood Management Areas map. The boundary of the water quality resource area overlay district almost covers the entire site.

Finding: The Oregon City Local Wetland Inventory does not identify any wetlands on the site. It does show the unnamed tributary to Abernethy Creek that traverses the site at the south portion.

2. Applicants are required to provide the city with a field-verified delineation of the water quality resource areas on the subject property as part of their application...

The applicant submitted two wetland delineation reports, the first completed by Rita N. Mroczek and the second by Fishman Environmental Services, LLC. The Mroczek report was first submitted with the original PUD design and did not meet the standards required by this chapter. Fishman Environmental Services was retained by the applicant to complete the Mroczek report. However, in the course of their investigation, Fishman biologists came to different conclusions about the boundary of the wetland on the site and revised the boundaries in their March 2001 report (Exhibit E). The March report was based on the original PUD plan, however. After the revised PUD plan was developed and following consultation with City of Oregon City staff, Fishman evaluated the impacts from the new design and issued a Water Resources Report Addendum (July 30, 2001) to the March 2001 report. The following analysis and findings are based on the Fishman report and July 30, 2001 addendum.

As noted previously, a north-south topographic drainage is present in the central portion of the site. An unnamed tributary to Abernethy Creek flows west along the south edge of the site. Three seeps were found on the site, but do not feed the wetland or the stream. The City's Local Wetland Inventory (LWI) map shows the unnamed tributary as a stream in the south portion of the site but no wetlands are indicated on the site on the LWI map.

According to the Fishman report, a small (0.08 acre) emergent wetland was delineated both north and south of the paved access road into the site. The wetland is culverted under the road in an 18-inch culvert and continues for approximately 120 feet downslope. The wetland extends upslope of the culvert to the property line and continues off-site to the north. Wetland is also present east of the culvert and confined to a narrow roadside ditch on the north side of the access road. Wetlands were determined to be present only in the upper portion of the topographic drainage, and the remainder was determined to be non-wetland. The topographic drainage, which is shown on the City's Water Quality and Flood Management Areas map as stream, continues downslope of the wetland for approximately 400 feet until it joins the unnamed tributary. Hydrology in the drainage appears to be mostly subsurface and there is no defined channel; the Fishman biologists do not believe it is accurate to identify the topographic drainage as a tributary of Abernethy Creek.

However, the City Engineer has determined that the drainage is an intermittent stream. A seep west of the drainage was evaluated and found to be upland due to the lack of wetland vegetation and soils. Two other seeps were identified east of the drainage. According to the Fishman report, the seeps do not contribute to a wetland or the unnamed tributary to the south.

Since the WQRA map and the LWI map do not indicate the presence of wetlands, the question arises as to whether the identified emergent wetland should be considered a protected water feature and added to the WQRA map or excluded from review under this chapter. The criteria for adding Title 3 Wetlands to the map are found in Section 17.49.090(D):

D. Adding Title 3 Wetlands.

1. Within ninety days of receiving evidence that a wetland meets any of one of the criteria in this section, the city shall provide notice to interested parties of a public hearing at which the city will review the evidence.

2. A wetland and its vegetated corridor shall be included in the water quality resource area overlay district if the wetland meets any one of the following criteria:

a. The wetland is fed by surface flows, sheet flows or precipitation, and has evidence of flooding during the growing season, and has sixty percent or greater vegetated cover, and is over one-quarter acre in size; or the wetland qualifies as having "intact water quality function" under the 1996 Oregon Freshwater Wetland Assessment Methodology; or

b. The wetland is in the flood management area, and has evidence of flooding during the growing season, and is five acres or more in size, and has a restricted outlet or no outlet; or the wetland qualifies as having "intact hydrologic control function" under the 1996 Oregon Freshwater Wetland Assessment Methodology; or

c. The wetland or a portion of the wetland is within a horizontal distance of less than one-fourth mile from a water body which meets the Department of Environmental Quality definition of water quality limited water body in OAR Chapter 340, Division 41 (1996). (Ord. 99-1013 §10(part), 1999)

The wetland does not meet criterion (b). It is unlikely to meet criterion (c). The wetland is less than 0.25 acres, so does not meet the first part of criterion (a). The question is whether the wetland qualifies as having "intact water quality function" under the 1996 Oregon Freshwater Wetland Assessment Methodology and so would qualify as a Title 3 wetland under the latter part of criterion (a). The Fishman report is unclear as to how the wetland may comply with these criteria. In the absence of further information, City staff have determined that the wetland area does constitute a protected water resource feature.

Finding: The protected Water Quality Resource Areas are the wetlands, the north-south drainage and the unnamed tributary along the south boundary.

3. The standards for development contained in this chapter are applicable to areas located within a water quality resource area. Applications for development on a site located in the water quality resource area overlay district may request a determination that the subject site is not in a water quality resource area and this is not subject to the standards of Section 17.49.050.

a. *Applicants for a determination under this section shall submit a site plan meeting the following requirements:*

Finding: The applicant submitted a site plan meeting the requirements of this section.

4. Compliance with Federal and State Requirements.
a. If the proposed development requires the approval of any other governmental agency, such as the Division of State Lands or the U.S. Army Corps of Engineers, the applicant shall make application for such approval prior to or simultaneously with the submittal of its development application to the city engineer...

Proposed fill in wetlands may require Oregon Division of State Lands or U.S. Army Corps of Engineer permits. The agencies will not review the proposal until application for fill permit is filed. The applicant acknowledges that any permit issued by the City pursuant to this chapter shall not become valid until other agency approvals have been obtained or determined not to be necessary.

Finding: The applicant can meet the standard by complying with Condition of Approval 17.

17.49.050 Water quality resource area standards.
This section applies to water quality resource areas within the water quality resource area overlay district.
A. The purpose of this section is to protect and improve the beneficial water uses and functions and values of water quality resource areas.
B. The water quality resource area is the vegetated corridor and the protected water feature. The width of the vegetated corridor is specified in Table 17.49-1. At least three slope measurements along the water feature, at no more than fifty-foot increments, shall be made for each property for which development is proposed. Depending on the slope measurements, the width of the vegetated corridor may vary.

The March 2001 report by Fishman shows the locations of several slope measurements along the drainage, wetlands, and springs on Figure 5. The measurements show that the slope varies along the drainage but is generally under 25 percent. In places where the slope is greater than 25 percent, the slope was measured to the break in the 25 percent slope.

Table 17.49-1 establishes the vegetated corridor widths that protect identified water features. Intermittent streams require a vegetated corridor width of either:

- 15 feet from edge of bankfull flow (with adjacent slopes under 25 percent and draining less than 100 acres) or
- 50 feet from edge of bankfull flow or from break in the 25 percent grade (where slopes are over 25 percent).

The Fishman report describes the vegetated corridor widths for the water features on the subject site. The slopes vary from under 25 percent to over 25 percent in some areas, with a break in the 25 percent grade that is upslope from the drainage. In general the applicant has delineated a corridor that ranges from 50 feet from the trough of the drainage to 50 feet from the break in the grade (east of the drainage) which amounts to a width of over 150 feet. Due to the revised site plan that reduces the site impact, the vegetated corridor is even wider in some areas. The applicant's Water Resource Plan (last sheet, Exhibit C) shows the vegetated corridor corresponding to the vegetated corridor widths determined by the slope measurements and Table 17.49-1.

Finding: The proposed project meets the standard.

C. Uses Permitted Outright.
1. Stream, wetland, riparian and upland enhancement or restoration projects; and farming practices as defined in ORS 30.930 and farm uses, excluding buildings and structures, as defined in ORS 215.203;...
D. Uses Under Prescribed Conditions
E. Provisional Uses. The following uses are allowed in the water quality resource area subject to compliance with the application requirements and development standards of subsections G and H of this section:
1. Any use allowed in the base zone, other than those listed in subsection C and D of this section;
3. Roads to provide access to protected water features or necessary ingress and egress across water quality resource areas;
5. Walkways and bike paths (see subsection (H)(5) of this section);

Sections (C), (D), and (E) establish permitted, prescribed, and provisional uses. The proposed uses in the WQRA are a wetland and riparian corridor enhancement, a road crossing, a sidewalk, and residential development. The natural areas enhancement is a permitted use. The remaining uses are provisional uses under paragraphs (1), (3), and, (5) above.

Finding: The proposed uses are allowed in the WQRA.

G. Application Requirements. Applications for provisional uses in the water quality resource area must provide the following information in a water resources report in addition to the information required for the base zone.
1. A topographic map of the site at contour intervals of five feet or less showing a delineation of the water quality resource area, which includes areas shown on the city water quality and flood management areas map.

The Water Resources Plan (last sheet of Exhibit C) shows topography at 2-foot intervals and the delineation of the WQRA. The City's Water Quality and Flood Management Areas map boundaries are not shown because for the most part they completely encompass the subject site.

2. The location of all existing natural features including, but not limited to, all trees of a caliper greater than six inches diameter at a height of four feet, natural or historic drainages on the site, springs, seeps and outcroppings of rocks, or boulders within the water quality resource area;

The Tree Survey and Landscape Plan (Sheet 9, Exhibit C) shows existing trees with species and size identified and other features are shown on the Existing Features plan (Sheet 2).

3. Location of Title 3 wetlands. Where Title 3 wetlands are identified, the applicant shall follow the Division of State Lands recommended wetlands delineation process. The delineation shall be prepared by a professional wetlands specialist;

Title 3 wetlands are shown on Figures 2 and 3 of the Fishman addendum (Exhibit F).

4. An inventory and location of existing debris and nuisance plants;

The Fishman March 2001 report states that no man-made "debris" was observed in the WQRA. Two invasive species were noted, Himalayan blackberry and English holly. These were not mapped, according to the report, because they were not listed on Oregon City's Nuisance Plant List. However, Section 17.49.020 defines "Invasive non-native," "nuisance," "prohibited" or "noxious vegetation" as plant species that have been introduced and, due to aggressive growth patterns and lack of natural enemies in the area where introduced, spread rapidly into native plant communities, or which are listed as invasive, nuisance, prohibited or noxious plants on the Oregon City nuisance plant list." Therefore, the two invasive plants observed would be considered nuisance plants for the purpose of this chapter. When the mitigation plan is developed, the applicant shall provide a map of the nuisance plants.

5. An assessment of the existing condition of the water quality resource area in accordance with Table 17.49-2;

The Water Resources Report Addendum assesses the condition of the wetland and the vegetated corridor that follows the drainage. The wetland is a disturbed emergent area that is culverted at one point. It has low structural diversity and low habitat diversity and is small, all factors that contribute to a low habitat value for wildlife. No fish habitat is present. The biologists assessed the condition of the drainage vegetated corridor as "degraded" due to the coverage of the site by non-native species: blackberry (30%), bentgrass (20%), and tall fescue (20%). Coverage over 10% by non-native species constitutes a "degraded" condition in Table 17.49-2.

6. An inventory of vegetation, including percentage ground and canopy coverage;

An inventory of vegetation is provided in the Fishman addendum, page 3 (Exhibit F).

7. An analysis of the impacts the proposed development may have on the water quality resource area. This discussion shall take into account relevant natural features and characteristics of the water quality resource area, including hydrology, soils, bank stability, slopes of lands abutting the water resources, hazards of flooding, large trees and wooded features. The discussion shall identify fish and wildlife resources that utilize or inhabit the impact area in the course of a year and the impact of the proposed development on water resource values;

The Water Resources Report Addendum analyzes the impacts on the WQRA. The revised site development plan affords much greater protection of the site's natural features than the previous plan. The hydrology of the wetland area may be slightly decreased since a part of it will be filled, thus reducing the drainage basin area feeding into the wetland. Soils should not be affected with the installation and maintenance of erosion prevention and control methods. Bank stability has been addressed by others [in the geotechnical report], and the use of a retaining wall will help maintain bank stability as well as the slopes of the land abutting the water resource. The hazard of flooding will not increase.

While some trees will be removed for site development, many large trees and wooded features will be protected in the open space tract. The site does not provide fish habitat but may support downstream fish habitat by the generation of woody debris, the augmentation of water flow, and providing water quality filtration. The site provides wildlife habitat for small songbirds and other birds, and small to medium size mammals, including deer. The proposed development should not affect usage of the water resource area by wildlife. The proposed development leaves a large open space tract that maintains a wildlife travel corridor for movement through the area and protects a large number of trees and shrubs used by birds for perching, feeding, over, and nesting. The use of retaining walls rather than fill slopes will greatly increase the protection of the landscape below the development. The use of an open-bottom arch culvert will restore the wetland's integrity underneath the road crossing.

8. An analysis of the impacts the proposed development will have on the water quality of affected water resources, taking into account relevant natural features and characteristics of the water quality resource area;

The Water Resources Report Addendum analyzes the impacts on water quality as follows: Development impacts on water resources will be limited by the proposed storm water system. The storm water system will be divided into two systems which will avoid concentrating storm water outfall in one location. Each system in Wittke Court and Wittke Lane will collect the storm water runoff in catch basins and route the water to an underground detention system that will limit the release rates to the pre-development rate. After passing through the detention systems, the storm water will be routed through mechanical storm water quality devices such as stormcepters, storm water filters or other approved devices. The devices will remove pollutants form the water prior to outfall. After passing through the water quality devices the storm water will be routed to an outfall consisting of a perforated pipe located in a rock-filled trench. The trench will be constructed level with the existing grade at the outfall and will serve as both an energy dissipator and a flow spreader. Essentially the outfall will work by directing the storm water into the perforated pipe at the bottom of the trench. Storm water will rise to the top of the trench when it will be spread over the length of the trench and flow downhill in a sheet flow rather than a concentrated flow.

The City will require the applicant to propose an adjustment to the storm water system to convey some of the treated runoff to the wetland area to replace flows.

While a portion of the wetland is proposed to be filled (0.05 acres or 2,052 square feet), the mitigation plan for both the fill in the wetland and development within the adjacent vegetated corridor will replace the lost functions on the site. The wetland would be mitigated by enhancing the remaining wetland, and creating additional wetland areas to the north and south of the remaining wetland. The vegetated corridor will be enhanced in that area as well. The improved vegetated corridor would provide better water quality function and protect the WQRA from further development. Additional protected areas on the site contribute to mitigation for impacts on the vegetated corridor at the extension of Oak Tree Terrace and residential development on adjacent lots.

9. An analysis of measures which feasibly can be taken to reduce or mitigate the impact of the proposed development on the water quality resource area and their vegetated corridors, including proposed drainage and erosion control measures, and an analysis of the effectiveness of these measures;

The Water Resources Report Addendum analyzes conceptual mitigation for impacts on the WQRA. The original conceptual mitigation plan contained in the March 2001 report has been voided by the revised PUD design. Wetland impacts were reduced by the revised plan compared to the original PUD design. Retaining part of the wetland on the site allows a better mitigation plan by enhancing the remaining wetland and creating new wetland immediately adjacent. Creation of a wetland area at a 1.5 to 1 ration requires 3,078 square feet (0.07 acres). The applicant (through the Fishman addendum) proposes a conceptual mitigation plan and vegetated corridor enhancement plan at this stage. Figures 2 and 3 in the Addendum show the proposed mitigation areas.

After the PUD design has receive preliminary approval, a final mitigation plan shall be developed and submitted to the City and to affected regulatory agencies, including the Division of State Lands and the Army Corps of Engineers in conjunction with a wetland fill and removal permit application.

10. The water resources report shall be prepared by one or more qualified professionals including a wetlands biologist or hydrologist whose credentials are presented in the report;

The water resource report was prepared by C. Mirth Walker, a Professional Wetland Scientist and Stacy N. Benjamin, a wetland ecologist, both with Fishman Environmental Services, LLC. The water resources addendum was prepared by C. Mirth Walker.

11. Alternatives analysis demonstrating that:
a. No practicable alternatives to the requested development exist that will not disturb the water quality resource area,

A discussion of alternatives analysis was provided by WB Wells in the applicant's narrative and in the Fishman report, illustrating that no practicable alternatives exist that would not disturb the water quality resource area. The most buildable portion of the site (the area with the least steep slopes) lies on both sides of the wetland and drainage. To provide access to the buildable portion on the west side of the drainage, a road must cross the drainage. The road could not be routed around the wetland because the wetland extends to the north property line. To the south are steeper slopes that would require significantly more amounts of grading and fill. Lots on the west side of the WQRA are required to meet the minimum density required by the PUD and "R-10" standards. For example, 46 percent of the net developable area lies east of the drainage, with the remaining developable area to the west. PUD standards require at least 50 percent of the net developable area to be built with single-family dwellings. Consequently, there would not be a way to meet the development standards without providing access across the WQRA.

b. Development in the water quality resource area has been limited to the area necessary to allow for the proposed use,

The road width across the WQRA has been reduced to 20 feet with a sidewalk on one side only. An arch culvert will be installed to protect the drainage course and wetland function and walls are proposed on both sides of the road to limit the amount of grading needed to support the roadway. Development of single-family dwellings on lots 1, 2, 3, and 4 (within the vegetated corridor) would be offset by enhancement of the corridor next to the wetland and by provision of additional corridor further south where the corridor is of higher quality and closer to the unnamed tributary.

c. The water quality resource area can be restored to an equal or better condition in accordance with Table 17.49-2,

The discussion of the mitigation plan in the Fishman Addendum and below in the response to paragraph H.1, indicates that the WQRA can and will be restored to an equal or better condition in accordance with Table 17.49-2.

d. It will be consistent with a water quality resource area mitigation plan,

The proposed project is consistent with the conceptual mitigation plan.

e. An explanation of the rationale behind choosing the alternative selected, including how adverse impacts to resource areas will be avoided or minimized and mitigated,

The rationale for choosing the selected design is that site and regulatory constraints preclude any other design. There is no practicable alternative to the proposed design that would meet all of the standards for steep slopes, for minimum density and mixed uses under the PUD and "R-10" designations, and for avoidance of the WQRA. Impacts on the wetland and adjacent corridor are less significant with the proposed road crossing and lot development compared to potential impacts on the vegetated corridor and steep slopes if the road and lots were to avoid the wetland and be built on the steeper slopes. Therefore, greater potential adverse impacts have been avoided or minimized by the current design. Mitigation has been discussed elsewhere in this staff report.

f. For applications seeking an alteration, addition, rehabilitation or replacement of existing structures...

The Fishman report maintains that the WQRA can be restored to an equal or better condition in connection with the proposed development. The impact analysis discusses the rationale and how impacts are planned to be mitigated.

12. A water quality resource area mitigation plan shall be prepared by a registered professional engineer, landscape architect, biologist, or other person trained or certified to determine that the vegetated corridor meets the requirements of Table 17.49-2 and shall contain the following information:
a. A description of adverse impacts that will be caused as a result of development,
b. An explanation of how adverse impacts to resource areas will be avoided, minimized, and/or mitigated in accordance with, but not limited to, Table 17.49-2,
c. A list of all responsible parties including, but not limited to, the owner, applicant, contractor or other persons responsible for work on the development site,
d. A map showing where the specific mitigation activities will occur,
e. A maintenance program assuring plant survival for a minimum of three years,

c. A list of all responsible parties including, but not limited to, the owner, applicant, contractor or other persons responsible for work on the development site,
d. A map showing where the specific mitigation activities will occur,
e. A maintenance program assuring plant survival for a minimum of three years,
f. An implementation schedule, including timeline for construction, mitigation, mitigation maintenance, monitoring, reporting and a contingency plan. All in-stream work in anadromous fish-bearing streams shall be done in accordance with the Oregon Department of Fish and Wildlife in-stream timing schedule.

The Fishman Addendum describes potential adverse impacts from the proposed project and how the potential adverse impacts on the WQRA can be minimized or mitigated at a conceptual level only. The Addendum states that A list of responsible parties will be prepared after site development approval. Figures 2 and 3 of the Addendum show where mitigation will occur. A maintenance program assuring plant survival for a minimum of three years will be developed as part of the monitoring requirement. The mitigation plan will detail the implementation schedule, including the timeline for construction, mitigation, maintenance, monitoring, reporting, and will contain a contingency plan. Monitoring reports shall be submitted to the Division of State Lands, Army Corps of Engineers (if required) and the City of Oregon City for 3 years after mitigation implementation. A final plan meeting these standards will be required following approval of the PUD.

Finding: The applicant can meet the standards by complying with Condition of Approval 18.

H. Development Standards. Applications for provisional uses in the water quality resource area shall satisfy the following standards:
1. The water quality resource area shall be restored and maintained in accordance with the mitigation plan and the specifications in Table 17.49-2.

The WQRA is proposed to be mitigated by replacement of wetlands that would be filled and by vegetated corridor enhancement to account for intrusions into the vegetated corridor on the north side of the site. The conceptual plan mitigation is compared with the requirements for degraded corridors (Table 17.49-2) in the following table.

Table 17.49-2: Degraded corridor mitigation	Proposed
1. Restore and mitigate according to approved plan using non-nuisance plantings from the Oregon City native plant list.	The existing and created wetland area will be planted with Oregon ash saplings at a density of 1-3 every 100 square feet. Pacific ninebark shrubs will be planted on 10-foot centers. An appropriate native grass seed mix will be specified and spread over all bare soil areas in the wetland area. Plugs of spreading rush will be planted in created wetland areas.
2. Inventory and remove debris and noxious materials.	No debris or noxious materials on site.
3. Remove non-native species and revegetate with non-nuisance plantings from the Oregon City native plant list.	Non-native vegetation areas will be flagged in the field and the top 6 to 12 inches will be scraped to remove roots and vegetation debris. Three to four inches of top soil removed from upland forest areas on the site (no blackberry canes) will be placed in the graded areas to provide nutrients and organic matter for plants.
4. Vegetate disturbed and bare areas with appropriate plants from the Oregon City native plant list.	After removal of non-native vegetation in the vegetated corridor immediately adjacent to the wetland area, an appropriate upland grass seed mix will be specified and spread over all bare soil in the vegetated corridor. Vine maple saplings and sword fern will be planted at an appropriate density. Non-native vegetation on steep slopes would be removed by hand to avoid destabilizing the slopes.
5. Plant and seed to provide one hundred percent surface coverage.	Total number of plants to be installed to obtain coverage would be determined in the final mitigation plan.

Finding: The applicant can meet the standards by complying with Conditions of Approval 17, 18, and 19.

2. Existing vegetation shall be protected and left in place. Work areas shall be carefully located and marked to reduce potential damage to the water quality resource area. Trees in the water quality resource area shall not be used as anchors for stabilizing construction equipment.

All vegetation not within graded areas must be protected and left in place. Work areas will be required to be marked to reduce potential damage to the WQRA. Trees in the water quality resource area shall not be used as anchors for stabilizing construction equipment.

Finding: The applicant can meet the standards by complying with Condition of Approval 19.

3. Where existing vegetation has been removed, or the original land contours disturbed, the site shall be revegetated during the next planting season. Nuisance plants, as identified in the Oregon City nuisance plant list, may be removed at any time. Interim erosion control measures such as mulching shall be used to avoid erosion on bare areas. Removed nuisance plants shall be replaced with plants from Oregon City's native plant list by the next planting season.

Existing vegetation would generally be removed in the manner described in the table in paragraph H.1, above. A more detailed program for nuisance vegetation removal, including location of non-native plants proposed for removal, erosion control "Best Management Practices", and a replanting schedule will be required for the final mitigation plan.

Finding: The applicant can meet the standards by complying with Condition of Approval 18.

4. Prior to construction, the water quality resource area shall be flagged, fenced or otherwise marked and shall remain undisturbed except as allowed in subsection E of this section. Such markings shall be maintained until construction is complete.

The applicant's narrative confirms that the WQRA will be marked prior to construction and remain undisturbed except where provisional uses are being constructed. Markings will remain in place until construction is complete.

Finding: The applicant can meet the standards by complying with Condition of Approval 19.

5. Walkways and bike paths:
a. A gravel, earthen, tree bark product, or equivalent walkway or bike path shall not be constructed closer than ten feet from the boundary of the protected water feature. Walkways and bike paths shall be constructed so as to minimize disturbance to existing vegetation. Where practicable, a maximum of fifty percent of the trail may be within thirty feet of the protected water feature.
b. A paved walkway or bike path shall not be constructed closer than ten feet from the boundary of the protected water feature. For any paved walkway or bike path, the width of the water quality resource area must be increased by a distance equal to the width of the paved path. Walkways and bike paths shall be constructed so as to minimize disturbance to existing vegetation. Where practicable, a maximum of twenty-five percent of the trail may be within thirty feet of the protected water feature; and
c. A walkway or bike path shall not exceed twelve feet in width.

No walkways other than the pedestrian way provided as part of the roadway are proposed to be built. The standards in (5) address walkways that parallel or, at least, do not cross the protected water feature. In this case, there would be a sidewalk that crosses the drainage alongside the roadway, which is allowed as a provisional use. The walkway is necessary for pedestrian safety and will be the minimum width required. No other walkways are proposed within the WQRA.

Finding: The proposed project meets the standard.

6. Stormwater quantity control and quality control facilities.
a. Except for flood control facilities designated by adopted Oregon City stormwater master plans, the stormwater quantity control and quality control facility may encroach a maximum of twenty-five feet into the outside boundary of the water quality resource area of a protected water feature, (maximum allowable encroachment to be proportionally reduced for applicable intermittent stream vegetated corridor).

The applicant's Storm Drainage Plan (Sheet 8, Exhibit C) shows a flow spreader outfall trench that would encroach 15 feet into the vegetated corridor at the end of Wittke Lane. The encroachment is necessary to direct the stormwater flow into the natural depression at that location.

b. The area of encroachment must be replaced by adding an equal area to the water quality resource area on the subject property.

The proposed WQRA area exceeds the minimum required by this chapter, by an amount greater than the encroachment proposed for the facility.

c. All stormwater shall be collected on-site and passed through a treatment facility, such as a detention/composting facility or filter as approved by the city engineer in consultation with planning staff, prior to being discharged into the water quality resource area.

The applicant proposes underground treatment through man-made structures such as filter.

d. The water quality resource area shall not be subject to a significant negative impact as a result of changes to existing hydrologic connections.

Treated stormwater runoff would be collected from impervious surfaces and dispersed at the site of the two outfalls, continuing to flow downhill towards the Abernethy Creek system. The applicant will be required to review the stormwater system to attempt to direct stormwater runoff from Oak Tree Terrace to the stream headwater area to compensate for loss of flows from filling in wetland for the roadway. Also, the drainage outfall on the west side of the site should be redirected so that it flows into the existing swale evidenced by the topography.

Finding: The applicant can meet the standards by complying with Condition of Approval 13.

7. Additions, Alterations, Rehabilitation and Replacement of lawful structures.

No additions, alterations, rehabilitation or replacement of lawful structures is proposed.

Finding: The section does not apply to the proposed project.

8. Off-Site Mitigation.

Mitigation would be provided on-site.

Finding: The section does not apply to the proposed project.

I. Vegetated Corridor Width Reduction. A reduction in the width of the vegetated corridor required by Table 17.49-1 may be allowed as part of a Type III proceeding under the following conditions:

No reduction in the corridor width is requested. The wetland reports have identified seeps to the west and east of the north-south drainage. Because slopes adjacent to the seeps are under 25 percent, only a 15-foot corridor is required. The applicant is providing a 40-foot width, which exceeds the minimum standard.

Finding: The section does not apply to the proposed project.

17.49.060 Subdivisions and partitions.
A. The purpose of this section is to amend the City regulations governing land divisions to require that new subdivision and partition plats delineate and show the water quality resource area as either a separate tract or part of a larger tract that meets the requirements of subsection (D) of this section.

The proposed project shows the Water Quality Resource Areas (and some extra slope areas) as separate tracts (A and B).

B. The standards for land divisions in a water quality resource area overlay district shall apply in addition to the requirements of the city land division ordinance and zoning ordinance, provided that for partitions the minimum lot area, minimum average lot width, and minimum average lot depth standards of the base zone may be superseded in order to allow for a transfer of density pursuant to Section 17.49.070.

The standards for land divisions can be met by compliance with the Conditions of Approval.

C. Prior to preliminary plat approval, the water quality resource area shall be shown either as a separate tract or part of a larger tract that meets the requirements of subsection (D) of this section, which shall not be a part of any parcel used for construction of a dwelling unit.

The WQRA is shown as a separate tract and is not proposed to be used for any dwelling units.

D. Prior to final plat approval, ownership of the water quality resource area tract shall be identified to distinguish it from lots intended for sale. The tract may be identified as any one of the following:
1. Private open space held by the owner or a homeowners association; or
2. For residential land divisions, private open space subject to an easement conveying stormwater and surface water management rights to the city and preventing the owner of the tract from activities and uses inconsistent with the purpose of this document; or
3. At the owners option, public open space where the tract has been dedicated to the city or other governmental unit; or
4. Any other ownership proposed by the owner and approved by the city manager.

Prior to final plat approval, the applicant shall submit proposed ownership of the tracts to meet this section.

Finding: The applicant can meet the standard by complying with Condition of Approval 20.

Chapter 17.64 Planned Unit Development

17.64.010 Purpose.

[...]The purposes of this chapter are:

A. To promote an arrangement of land uses, lot sizes, lotting patterns, housing and development types, buildings, circulation systems, open space and utilities that facilitate the efficient and economic use of land and, in some instances, a more compact, pedestrian-oriented, mixed use urban design. Specifically, this can be accomplished through the PUD process with mixed-use developments. The objective of allowing a mix of residential, commercial and office uses is to provide an integrated urban community whereby each of the parts compliments one another to produce a cohesive whole; and

The proposed project creates a more effective use of the subject site through the PUD regulations than would be created with a subdivision through the "R-10" development standards. Larger but fewer single-family lots could be created without using the PUD process because the steeper slopes are unbuildable. Using the proposed buildable area of 3.34 acres, a maximum of 14 single-family units could be built based on the minimum lot size, as opposed to the proposed 29 units. To attempt to provide 29 units at the standard 10,000 square foot lot size (not accounting for geotechnical feasibility) would result in less compact development and much less open space. Therefore, "R-10" zoning regulations would result in a less efficient use of land. The design is somewhat compact, clustered along the north half of the site. A mix of residential uses would be provided, with 12 multi-family and 17 single-family units proposed. The street widths are reduced, using a constrained local street section that is narrower, further reducing impervious surface and preserving more of the existing topography.

B. To preserve existing natural features and amenities and provide useful common open space available to the residents and users of the proposed PUD. Specifically this can be accomplished through the PUD process by preserving existing natural features and amenities, or by creating new neighborhood amenities.

The primary purpose of this PUD is to provide for clustering of development on a site with significant constraints. However, the revised site plan for the subject site does result in more open space than was originally proposed or would be available under a conventional subdivision layout. Approximately 3.6 acres would be in open space, although the site is too heavily vegetated and steeply sloped to provide active open space for residents.

C. To protect and enhance public safety on sites with natural or other hazards and development constraints through the clustering of development on those portions of a site that are suitable for development.

The subject site contains geotechnically hazardous areas, specifically very steep slopes up to a 40 percent grade (refer to Geotechnical Investigation by AdaPT Engineering, Inc., Exhibit J). No indications of unstable slopes were found. The risk of liquefaction is considered to be low. The proposed project would construct dwellings on the areas of the site with lower gradient slopes (<25 percent) and with less alteration of the existing topography than in the previous design (where City staff had a major concern).

D. To provide flexibility for dimensional requirements of underlying zones or overlay districts to better achieve the purposes of a PUD.

The applicant has taken advantage of the flexibility provided by the PUD provisions for adjusting dimensional standards of the underlying "R-10" district. None of the proposed lots would meet the all of the "R-10" development standards. The purpose of the adjusted standards is to accommodate smaller lots on the more buildable portions of the site, leaving the steepest and most heavily treed areas in open space.

Finding: The proposed project meets the purposes of the PUD district.

17.64.030 Applicant's option.
A development proposal may be processed as a PUD at the applicant's option, and is offered as an alternative process for residential development; provided, that at least eighty percent of the gross density allowed by the underlying zone is met. If the property bears a PUD overlay designation, the property may be developed only in accordance with this chapter...

The development proposal is for a PUD and meets the criteria for 80 percent of the gross density allowed by the underlying zone. The site is 8.35 acres and 4.4 units per acre are allowed by the "R-10" district, for a total of 36 units. Eighty percent of 36 is 29 units, which is the number of units proposed. No PUD overlay designation has been applied to the property.

Finding: The project meets the standard.

17.64.040 Permitted uses and basic PUD requirements.
This section provides the uses allowed in a PUD as well as the basic elements required of all PUDs.

A. Uses Permitted Outright. Notwithstanding the use provisions of the underlying residential zone, the following uses and their accessory uses are allowed outright as part of the PUD:
1. Detached single-family dwellings and duplexes on individual lots;
2. Attached single-family dwellings and multiple-family dwellings, such as townhouses, condominiums, common wall units and right-of-way houses;
3. Public or private parks and playgrounds, community buildings and/or outdoor recreational facilities, such as swimming pools and tennis courts;
4. Indoor recreational facilities, such as racquetball or tennis courts, fitness centers or swimming pools;
5. Common public and private open space;
6. Hiking and/or bicycle riding trails;
7. Accessory structures and uses permitted in the existing underlying zone.

The proposed project contains lots for single-family and multi-family dwellings and private open space, all of which are permitted outright under paragraphs 1, 2, and 5 of Section 17.64.040(A). The applicant's response to this code section (Exhibit D, Page 6) indicates that rowhouses on individual lots are allowed. However, the lot layout on Sheet 3 (Exhibit C), shows the 4 plexes on large lots, not individual lots. If individual (fee simple) lots are proposed for each multi-family unit,

subsequent subdivision approval for those lots would need to be obtained. Both types of multi-family units are permitted in the PUD.

Finding: The proposed uses are permitted.

B. Conditional Uses. Notwithstanding the use provisions of the underlying residential zone, all uses allowed outright in the neighborhood commercial zone are allowed, with appropriate conditions, as part of a PUD. A separate conditional use permit is not required for these uses so long as the applicant demonstrates that:

The applicant does not propose any commercial use.

Finding: The section does not apply to the project.

C. Adjustments to Dimensional Standards. All dimensional standards that would otherwise apply to a property or development may be adjusted in the context of a PUD without a separate variance application. In all developments, the perimeter of the development shall meet the underlying zone's setbacks. However, unless an adjustment is specifically requested and explained in the PUD application or recommended by the city, the dimensional standards of the underlying zone will apply. The applicant may request, and the decision maker may approve, adjustments from all dimensional requirements of the underlying zone except that gross density shall not be less than eighty percent of the gross density allowed by the underlying zoning designation. Adjustments from all other dimensional standards may be allowed if the adjustment(s), in the context of the entire PUD and in conjunction with any mitigation, better achieve the purposes and requirements of this chapter than would strict compliance with the dimensional standards of the underlying zone; and if allowing the adjustment(s) does not significantly adversely affect adjacent properties. Adjustments granted pursuant to this section are not subject to the requirements in Chapter 17.60 of this code.

The applicant requests adjustments to the dimensional standards of the "R-10" district. All of the underlying zone setbacks around the perimeter of the PUD (primarily 20-foot rear setbacks) are met. As discussed earlier, the proposal meets the minimum density required by the PUD regulations of 29 units (80 percent of underlying zone requirement of 36 units on 8.35 acres).

The Code standards and the proposed standards as requested in the applicant's narrative are compared in the table below. The applicant notes that lots 15 and 17 and have average depths and widths below the requested minimum due to a desire to limit grading on steeper adjacent slopes and in the WQRA. The proposed new standards approximate those for the "R-6" district. The adjustment is required because the lots are approximately half of the size of lots in the underlying zone, closer to the size of lots in the "R-6" district. Within the context of the PUD, the reductions are required because the lots are smaller to meet the density requirements while minimizing grading and other site disturbance on steep slopes. In terms of overall impact, there would not be significant adverse impacts on adjacent properties because the reductions in setbacks would be offset by the large area that will remain as open space. In addition, a large district of "R-6" zoning lies to the east, which has similar lot areas and setbacks.

Standard	"R-10" District	Proposed	"R-6" District
Minimum Lot Area	10,000 square feet	5,000 square feet	6,000 square feet
Average Lot Width	75 feet	55 feet	60 feet
Average Lot Depth	100 feet	85 feet	100 feet
Minimum Front Yard	25 feet	18 feet	20 feet
Minimum Corner Side Yard	20 feet	15 feet	15 feet
Minimum Rear Yard	20 feet	20 feet (unchanged)	20 feet
Minimum Side Yard	10 feet on one side 8 feet on other side	10 feet on perimeter of PUD (unchanged)	9 feet one side 5 feet other side

The applicant provided a table of all of the proposed lot dimensions, on page 8 of Exhibit D.

Finding: The proposed project meets the standards.

D. Open Space and Landscaping. The applicant shall provide at least twenty percent of the total gross area as common open space for the recreational needs of the development's residents either on-site or off-site and in close proximity to the development (within one-quarter mile). The open space area may be in private ownership. A portion of the required open space may be used as a buffer between different uses. No less than twenty feet in width shall be used for transitional buffers in addition to the underlying zone setback. The open space shall provide for a mix of passive and active uses. Passive uses include, but are not limited to sitting benches, picnicking, reading, bird watching and natural areas. Active uses include, but are not limited to playgrounds, basketball, baseball, running and walking areas. Land area to be used for the open space area and landscaping that is required in this section shall not include streets, rights-of-way, driveways, parking spaces or public facilities. Unless otherwise allowed, the applicant shall also provide an irrevocable legal mechanism for the maintenance of the open space and any related landscaping and facilities. The applicant shall submit, for city review and approval, all proposed deed restrictions or other legal instruments used to reserve open space and maintenance of open space and any related landscaping and facilities.

The proposed project would create 45 percent of the site area in private open space, consisting of the steepest slopes on the site. The proposal exceeds the minimum standard of 20 percent. The open space would provide passive uses such as viewing wildlife. Sidewalks have been planned for the south and west on the more southern street portions so that views will be accessible for pedestrians. Active uses could consist of walking, if residents choose. However, no paths are proposed, due to steep slopes and a desire to preserve the natural areas from intrusion and human disturbances. In general, the site constraints tend to preclude provision of active open space areas, given the desire to minimize human disturbance of the WQRA. Since the area devoted to open space is more than double the requirement, staff finds that the code requirement could be met by enhancing the passive recreation experience.

For example, park benches at the east end of the Wittke Court turnaround, across from Lot 4 and Tract A, and across from the multi-family units would be appropriate. In addition, wildlife

enhancements such as bat and bird nesting houses could be provided. The Oregon Department of Fish and Wildlife recently published *Naturescaping,* a book that provides information and plans for attracting wildlife in an urban setting. The applicant is encouraged to review the publication and incorporate some of features that would be appropriate for the area. Therefore, in lieu of providing active recreation space, the applicant shall propose, for staff approval at the construction stage, additional amenities within the developed portion of the site to enhance the passive open space experience.

A maintenance agreement will be required to be submitted at the stage of final PUD plan approval.

Finding: The applicant can meet the standard by complying with Condition of Approval 10.

E. Timely Provision of Public Services and Facilities. As part of the preliminary PUD plan, the applicant shall demonstrate, or provide a suitable guarantee of, adequate capacity in each of the following public services or facilities to serve the proposed PUD:

1. Water;
Holcomb Boulevard contains a 16" water line and Oak Tree Terrace contains a 1.5" water line for approximately half of the length. The applicant proposes to extend an 8" line in Oak Tree Terrace from Holcomb through the site, with two stubs extending down Wittke Court and Wittke Lane. No looping of the water system was proposed and no water system calculations were provided. Pressure reducing valves may be required.

2. Sanitary sewer;
There is an existing 8-inch sanitary sewer running through the project site. The sewer runs from the northern boundary of the project site south along the drainage swale, bends towards the west and exits the project site at about the center of the western boundary. The applicant proposes to relocate half of an existing sanitary sewer line to within the proposed street system. The new sanitary sewer would be in Oak Tree Terrace, then follow Wittke Court to connect to the existing pie that extends outside the property. The applicant did not indicate any sewer connections or extensions to adjacent properties. The applicant shall provide proof of final payment of the Sanitary LID assessments prior to final plat recordation.

3. Stormwater management;
The site is in the Livesay Drainage Basin as designated in the City's Drainage Master Plan. The City Engineer noted in his comments that potential impacts from stormwater drainage are significant because of the steep slopes draining to Livesay Creek and eventually to Abernethy Creek, which is an anadromous salmon-bearing stream.

The applicant has proposed to drain the site into two detention systems consisting of underground detention piping. The applicant's narrative and site plans propose a combination of detention pipes, water quality devices (such as underground filters) and an outfall consisting of an underground perforated pipe in a drain rock filled trench to disperse the runoff as a sheet flow rather than a concentrated flow.

The detention systems are located at the southern ends of the two dead end roads to the south. The detention systems are proposed to drain through quantity control manholes, then through mechanical water quality devices, and discharged to flow spreaders further south on the site. As both of the detention and water quality facilities are shown in phase three, it is not apparent how the applicant intends to provide detention and water quality during construction of phases one and two. However, the tabular information provided by the applicant indicates that 85 percent of the utilities would be constructed for Phase 1. The applicant is required to ensure that adequate stormwater facilities will be provided for each phase of development. In addition, the outfall for Wittke Court should be relocated to place outfall within the swale indicated by the topography. Recharge of the wetlands/stream headwater at the road crossing shall be provided by diverting stormwater runoff in the area as much as possible to the wetland area.

4. Traffic system and transportation infrastructure, including streets, roads, transit, pedestrian and bicycle facilities;
Oak Tree Terrace is classified as a Local Street by the Oregon City Transportation System Plan, which requires a minimum right-of-way width of 42 to 54 feet and a minimum pavement width of 20 to 32 feet. Currently, Oak Tree Terrace appears to have a 60-foot right-of-way and pavement approximately 36 feet wide to the north of the project site.

The applicant has proposed constrained right-of-way widths throughout the site. For the extension of Oak Tree Terrace, a 36-foot right-of-way width is proposed, for Wittke Lane right-of-way widths ranging from 28 to 44 feet are proposed, and for Wittke Court right-of-way widths ranging from 35 to 40 feet are proposed. All proposed right-of-way widths are constrained to better match the existing grade and minimize required grading.

The applicant has proposed various pavement widths throughout the site. For the extension of Oak Tree Terrace, a 28-foot pavement width narrowing to a 20-foot width crossing the open space, then widening again to a 28-foot width is proposed. For Wittke Lane, a 20-foot pavement width widening to a 44-foot width just before the fire truck turn-around, then narrowing to a 28-foot width is proposed. It is not clear what the purpose of the 44-foot pavement width is. For Wittke Court a 32-foot pavement width is proposed for its entire length. All proposed streets have curbside sidewalks and shed street sections to better match the existing grade and minimize required grading.

Parking will be allowed on both sides of streets with 32 feet or more of pavement width. Parking will be allowed on one side of streets with between 26 and 32 feet of pavement width. Parking will not be allowed on streets with less than 26 feet of pavement width.

Emergency vehicle turn-arounds will have to be approved by Tualatin Valley Fire and Rescue.

The applicant submitted a Traffic Impact Analysis (TIA) (Exhibit G). The Traffic Impact Study has been reviewed by the City and David Evans and Associates and it has been determined that the applicant's traffic impact analysis meets the City's requirements. The City's consulting Traffic Engineer noted that the traffic generated from the proposed PUD will not have a significant impact on the existing transportation system; however, the project will contribute traffic that will eventually cause a need for improvements at the intersection of Holcomb Boulevard/Abernethy Road and Redland Road and the intersection of Redland Road/Highway 213.

There are sight distance problems at the intersection of Oak Tree Terrace and Holcomb Blvd. pointed out in the TIA and addressed by David Evans and Associates and Clackamas County. Currently there is 200 feet of sight distance from Oak Tree Terrace looking west down Holcomb Blvd., and 300 feet of sight distance from Oak Tree Terrace looking east down Holcomb Blvd. The required sight distance is 350 feet, in each direction, for Holcomb Blvd. at this location according to Clackamas County. According to the TIA, improvements in sight distance will require extensive pruning of vegetation. It is not clear whether all of the pruning can be accomplished on the road right-of-way, or whether the required sight distance can be achieved by pruning of vegetation alone.

Clackamas County has recommended denial of this application.

Sight distance issues have not been adequately addressed at the intersection of Oak Tree Terrace and Holcomb Blvd. Specific solutions to the sight distance issues should be provided to the City.

5. Schools; and
6. Fire and police services.
The applicant did not submit evidence to demonstrate that the local school, fire, and police districts have adequate capacity to serve the new units.

Summary: Water, sanitary sewer, and transportation facilities are adequate to serve the proposed development. The applicant proposed one storm sewer easement between lots 13 and 14, and two open space tracts north and south of Oak Tree Terrace. Additional easements and tracts will be required with the proposed layout. For example, public utility, street tree easements, and a reserve strip tract at the western end of Oak Tree Terrace will be required. Additional easement/tracts may also be required and will be determined with the review of construction plans. The applicant can comply with a determination of schools, fire and police service capacity by complying with Condition of Approval 24.

Finding: No limitation on capacity has been identified that cannot be overcome by the construction of improvements required by the City, including Conditions of Approval 11 through 16.

F. If the applicant elects to guarantee that any particular public service or facility will have adequate capacity, the required capacity shall exist prior to issuance of building permits. The decision maker may require the applicant to provide special or oversized sewer or water lines, roads, streets or other service facilities if necessary to meet standards in the city's facility master plans or to allow for the orderly and efficient provision of public facilities and services. If oversizing is required, the applicant may request reimbursement from the city for oversizing based on the city's reimbursement ordinance and fund availability.

No oversizing will be required by the City.

Finding: The section does not apply to the project.

G. Relationship to the Natural and Physical Environment. Streets, buildings and other site elements shall be designed and located to preserve the maximum number of significant trees (i.e., those trees six inches or greater in diameter, measured four feet from the ground), significant natural resources, jurisdictional wetlands, and natural (i.e., natural features). These natural features shall not be disturbed after submittal of a complete land use application for as long as the application is active or until public infrastructure construction is approved and accepted by the city engineer. An exception to this ban on disturbing natural features is allowed if planned disturbances are included in the city-approved construction plans or if the Corps of Engineers or the Oregon Division of State Lands issues a permit that affects natural features. Development shall be designed, constructed and maintained in accordance with the unstable soils and hillside constraint overlay district and the water quality resources areas overlay district where applicable.

The PUD plan was re-designed to better situate development away from the steepest slopes with the result that more open space, sensitive areas, and trees will be preserved. A tree survey was conducted and the results indicate that 68 percent of the existing trees on the site would remain. Some wetland (0.08) will be filled, but the fill area would be mitigated on the open space Tracts by enhancing the wetlands and vegetated corridor. The proposed development has been evaluated against the requirements of Chapters 17.44 and 17.49.

Finding: The proposed project can meet the standard by complying with Conditions of Approval 7 and 17 through 20.

H. Mixed-use. To ensure development within a PUD contains the correct blend of mixed uses, no more than eighty percent, but at least fifty percent, of the total net developable area shall consist of single-family residential development. Twenty percent of the net developable area shall consist of residential uses other than single family dwellings. If the subject property is ten acres or more, it may contain neighborhood commercial uses. If common wall units are proposed, a minimum of thirteen thousand square feet is required for up to, but not more than four common wall units, and a minimum of seven thousand square feet is required for every two common wall units. In no cases, shall a detached single-family residential lot be smaller than five thousand square feet.

According to the applicant, the total net developable area is 3.34 acres (145,490 square feet). Eighty percent and 50 percent of the net developable area are 2.7 and 1.67 acres (116,392 and 72,745 square feet), respectively. All of the single family lots add up to 2.3 acres (98,243 square feet). The 4-plex (common-wall) units are on three lots totalling 1.08 acres (46,877 square feet). None of the multi-family lots are under 13,000 square feet. Therefore, the proposed project meets the minimum standards for mixed uses in PUDs.

Finding: The project meets the standard.

17.64.050 Density bonuses.
No density bonus has been requested by the applicant.

Finding: The section does not apply to the proposed project.

17.64.120 Preliminary PUD plan approval criteria.

The decision maker shall approve an application for preliminary PUD plan if the following criteria are met:

This section identifies five preliminary PUD plan approval criteria (Sections 17.64.120 A-E, below), each of which must be met in order to approve an application for a Preliminary PUD Plan. Staff analysis of each criterion includes the relevant Oregon City Municipal Code Section under that particular approval criterion.

A. The proposed preliminary PUD plan is consistent with the purposes and requirements of this chapter set forth in Sections 17.64.010 and 17.64.040, and any applicable goals or policies of the Oregon City comprehensive plan;

Compliance with Sections 17.64.010 and 17.64.040 and applicable goals or policies of the Oregon City Comprehensive Plan has been addressed above in the respective sections.

Finding: The applicant can meet the standards by complying with the Conditions of Approval.

B. The proposed preliminary PUD plan meets the applicable requirements of the underlying zoning district, any applicable overlay zone, such as Chapters 17.44 or 17.49, and applicable provisions of Title 16 of this code, unless an adjustment from any of these requirements is specifically allowed pursuant to this chapter;

Compliance of the proposed project with Chapters 17.08, 17.44, and 17.49 have been addressed above.

Finding: The applicant can meet the standards by complying with the Conditions of Approval.

C. Any phasing schedule proposed by the application must be reasonable and shall not exceed five years between approval of the final PUD plan and the filing of the final plat for the last phase. Dedication or preservation of open space or natural features, in a form approved by the city, must be recorded prior to the issuance of building permit(s) for existing tax lots of the first phase of any multi-phase PUD;

Phasing is demonstrated in the applicant's tabular information provided for Section 17.64.110 (page 14 of the narrative, Exhibit D). The applicant proposes to construct the development in three phases, with completion by the end of 2006. This is within the maximum of five years. It is not clear why only 0.19 acres of open space would be in place by 2002 and the remainder not be fully implemented until the end of 2006, given that the open space is to be largely left intact. The applicant shall make all improvements for the open space area, particularly the mitigation associated with fill in the wetland, prior to issuance of building permits for any lots of the first phase. In addition, the stormwater facilities are shown primarily in Phase 3 but will be required to be in place prior to construction of dwellings and streets in Phase 1.

Finding: The applicant can meet the standards by complying with Conditions of Approval 9 and 12.

D. The applicant has demonstrated that all public services and facilities have adequate capacity to serve the proposed development, or adequate capacity is assured to be available concurrent with development;

The issue of adequate capacity in all public services and facilities has been discussed above, in Section 17.64.040(E).

Finding: The applicant can meet the standards by complying with the PUD Conditions of Approval.

E. All adjustments from any applicable dimensional requirement requested by the applicant or recommended by the city are justified, or are necessary to advance or achieve the purposes and requirements of this chapter better than would compliance with the dimensional requirements of the underlying zoning. (Ord. 00-1005 §11, 2000: Ord. 97-1024 §1(part), 1997)

The applicant's proposed adjustments to the dimensional standards of the underlying zone have been discussed above. All of the adjustments requested are essentially driven by the constraints of the site, and the minimum density requirement of 80 percent of the underlying zone density. The site could not be developed at the density required and stay out of the most steeply sloped area of the site, and still maintain the standard dimensional requirements; the dimensional standards would not allow enough buildable area on the smaller lots.

Finding: The project meets the standard.

17.64.140 Design review.
The common-wall 4-plexes on lots 18, 19, and 20 would need to obtain Site Plan and Design Review approval through a Type II process. If the 4-plexes are proposed to be zero lot-line units in fee simple ownership, land division would be required to place the units on separate lots.

CONCLUSION AND RECOMMENDATON:

Based on the analysis and findings contained in this staff report, staff concludes that the proposed Oak Tree Estates (Wittke) Planned Unit Development can, with conditions, be made to satisfy the applicable standards of the Oregon City Municipal Code.

Therefore, staff recommends that the Planning Commission approve with conditions the requested Oak Tree Estates (Wittke) Planned Unit Development (Casefile #PD 00-01), for the property located at 16281 S. Oak Tree Terrace, Clackamas County Tax Map 2S-2E-28A, Tax Lots 1717 and 1722.

EXHIBITS:

A. Conditions of Approval
B. Tax Assessor/Vicinity Map
C. Applicant's Set of Reduced Plans (full-sized plans on file)
D. Applicant's Narrative
E. Wetland Delineation and Water Resources Report, Fishman Environmental Services, March 2001(on file)
F. Water Resources Report Addendum, Fishman Environmental Services, July 2001
G. Traffic Impact Analysis (summary excerpt only), Group Mackenzie, July 24, 2000 (full report on file)
H. Engineering Division Comments
I. Letters from Park Place Neighborhood Association (September 21, 2001)
J. GeoTechnical Investigation, AdaPT Engineering, Inc. (now GeoPacific Engineering), July 18, 2000 (on file)

PD 00-01
October 3, 2001

EXHIBIT A
Conditions of Approval
File No. PD 00-01

Geotechnical.

1. The applicant shall ensure that a licensed civil and geotechnical engineer coordinate the grading design and construction and certify that the grading is structurally sound.
2. The applicant shall provide an updated geotechnical report.
3. The grading plan for each lot shall be reviewed and approved by the project geotechnical engineer.
4. The foundation excavation and cuts and fills shall be inspected and approved by the project geotechnical engineer.
5. New fill slopes greater than 25 percent shall be certified for stability by the project geotechnical engineer.
6. The applicant's constructed retaining walls shall meet Oregon Uniform Building Code requirements and the recommendations of an updated geotechnical report.

PUD requirements.

7. The applicant must submit a tree removal and preservation plan, identifying which trees specifically would be removed, and which protected. Methods of protecting the trees during construction shall also be provided.
8. The setbacks that are less than the standards for garages or dwellings shall be shown on the preliminary plat or guaranteed through deed restrictions or easements..
9. The applicant shall make all improvements for the open space area, particularly the mitigation associated with fill in the wetland, prior to issuance of building permits for any lots of the first phase.
10. In lieu of providing active recreation space, the applicant shall propose for staff approval some additional amenities within the developed portion of the site to enhance the passive open space experience.
11. The applicant shall provide proof of final payment of the Sanitary LID assessments prior to final plat recordation.
12. The developer shall provide detention and water quality systems that conform to current City standards.
13. The applicant shall revise the storm water system to direct stormwater runoff from Oak Tree Terrace to the stream headwater area to compensate for loss of flows from filling in wetland for the roadway. Also, the drainage outfall on the west side of the site shall be redirected so that it flows into the existing swale evidenced by the topography.
14. Public utility easements shall be dedicated to the public on the final plat in the following locations: Ten feet along all street frontages, rear lot lines, and the project boundary, and five feet along all side lot lines. Easements required for the final engineering plans shall also be dedicated to the public on the final plat. The side and rear lot line requirements can be waived once utility locations have been identified and the need for side and rear lot line easements is determined by the City Engineer to be unnecessary except where identified by said utilities.

EXHIBIT
A

Transportation improvements.

15. The applicant shall show a reserve strip dedicated to the City at the end of Oak Tree Terrace. This reserve strip shall be noted on the plat to be automatically dedicated as public right-of-way upon the approval of right-of-way dedication and/or City land use action approval of the adjacent property.
16. The applicant must obtain Oregon City and Clackamas County approval of proposed site distance improvements for the intersection of Oak Tree Terrace at Holcomb Boulevard prior to approval of construction plans.

Water Quality Resource Area.

17. The applicant must process and obtain approval for wetland and stream mitigation from the Corps of Engineers, Division of State Lands, and any other applicable agencies prior to approval of construction plans. Copies of approvals shall be supplied to the City. Failure to do so shall be a justification for the City to prevent the issuance of a construction, or building permit or to revoke a permit that has been issued for this project.
18. The applicant shall submit a final mitigation plan for impacts on the Water Quality Resource Area (WQRA), detailing the implementation schedule, including the timeline for construction, mitigation, maintenance, monitoring, reporting, and containing a contingency plan. The final plan will include the location of non-native plants proposed for removal. Monitoring reports shall be submitted to the Division of State Lands, Army Corps of Engineers (if required) and the City of Oregon City for 3 years after mitigation implementation. All responsible parties connected with the WQRA mitigation plan shall be identified.
19. All vegetation not within graded areas shall be protected and left in place. Work areas shall be marked to reduce potential damage to the WQRA. Trees located within WQRA boundaries shall not be used as anchors for stabilizing construction equipment. Markings will remain in place until construction is complete.
20. The WQRA areas shall be placed in separate tracts. Prior to final plat approval, the applicant shall submit proposed ownership of the open space/WQRA tracts to meet the requirements of OCMC 17.64.060(D).

General Conditions.

21. The applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement.
22. The applicant is responsible for this project's compliance with Engineering Policy 00-01 (attached). The policies pertain to any land use decision requiring the applicant to provide any public improvements.
23. The applicant is responsible for coordinating with the Tualatin Valley Fire and Rescue, East Division to ensure the project's compliance with all applicable Fire Code standards.

CITY OF OREGON CITY

ENGINEERING POLICY 00-01
Guidelines for Development

EFFECTIVE: April 10, 2000

PREPARED BY

COMMUNITY DEVELOPMENT DEPARTMENT

320 Warner-Milne Road

Post Office Box 3040

Oregon City, Oregon 97045-0304

Telephone: (503) 657-0891

Engineering Division

Applicability. This policy applies to applicants for land use decisions and site plan reviews with regard to providing public improvements and submittal of documentation. The following sections outline some of the important requirements and helpful hints for those unfamiliar with providing public improvements as required by the Oregon City Municipal Code and Oregon City Public Works Standards. This is not an all-inclusive list of City requirements and does not relieve the applicant from meeting all applicable City Code and Public Works Standards.

Availability of Codes and Standards. Copies of these City Codes and Standards are available at City Hall for a nominal price. Some engineering firms in the local metropolitan area already own these Codes and Standards to enable them to properly plan, design, and construct City projects.

General

- Applicants shall design and construct all required public works improvements to City Standards. These Standards include the latest version in effect at the time of application of the following list of documents: Oregon City Municipal Code, Water Master Plan, Transportation Master (System) Plan, Sanitary Sewer Master Plan, and the Drainage Master Plan. It includes the Public Works Design Standards, which is comprised of Sanitary Sewer, Water Distribution System, Stormwater and Grading, and Erosion Control. This list also includes the Street Work Drawings, Appendix Chapter 33 of the Uniform Building Code (by reference), and the Site Traffic Impact Study Procedures. It may also include the City of Oregon City Review Checklist of Subdivision and Partition Plats when the development is a Subdivision, Partition, or Planned Unit Development.

Water (Water Distribution System Design Standards)

- The applicant shall provide water facilities for their development. This includes water mains, valves, fire hydrants, blow-offs, service laterals, and meters.
- All required public water system improvements shall be designed and constructed to City standards.
- The Fire Marshall shall determine the number of fire hydrants and their locations. Fire hydrants shall be fitted with a Storz metal face adapter style S-37MFL and cap style SC50MF to steamer port. This adapter is for a 5-inch hose. All hydrants to be completed, installed, and operational before beginning structural framing. Hydrants shall be painted with Rodda All-Purpose Equipment Enamel (1625 Safety Orange Paint) and all chains shall be removed from the fire hydrants.
- Backflow prevention assemblies are required on all domestic lines for commercial buildings, all fire service lines, and all irrigation lines. Backflow prevention assemblies are also required on residential domestic lines greater than or equal to 2-inch diameter. These assemblies are also required where internal plumbing is greater than 32 feet above the water main. The type of backflow prevention device required is dependent on the degree of hazard. City Water Department personnel, certified as cross connection inspectors, shall determine the type of device to be installed in any specific instance. All backflow prevention devices shall be located on the applicant's property and are the

property owner's responsibility to test and maintain in accordance with manufacturer's recommendations and Oregon statutes.

- The applicant shall verify that there are no wells on site, or if any wells are on the site prior to connecting to the public water system, the applicant shall:
  - Abandon the well per Oregon State requirements and provide copies of the final approval of well abandonment to the City; or
  - Disconnect the well from the home and only use the well for irrigation. In this case, the applicant shall install a back flow preventor on the public service line. The applicant shall also coordinate with the City water department to provide a cross connection inspection before connecting to the public water system.

Sanitary Sewer (Sanitary Sewer Design Standards)

- The applicant shall provide sanitary sewer facilities to their development. This includes gravity mains, manholes, stub outs, and service laterals.
- All required public sanitary sewer system improvements shall be designed and constructed to City standards.
- Applicant must process and obtain sanitary sewer system design approval from DEQ.
- Any existing septic system on site shall be abandoned and certification documentation provided from Clackamas County before recording the plat or obtaining a certificate of occupancy.

Stormwater (Stormwater and Grading Design Standards)

- The applicant shall provide stormwater and detention facilities for their development. This includes the stormwater mains, inlets, manholes, service laterals for roof and foundation drains, detention system if necessary, control structure if necessary, inflow and outflow devices if necessary, and energy dissipaters if necessary.
- The applicant shall design and construct required public stormwater system improvements to City standards. Each project is to coordinate with the City Drainage Master Plan, the Public Works Stormwater and Grading Standards, and the appropriate individual Basin Master Plan (if adopted) and incorporate recommendations from them as directed.
- The applicant shall design the stormwater system to detain any increased runoff created through the development of the site, as well as convey any existing off-site surface water entering the site from other properties.
- The applicant shall submit hydrology/detention calculations to the City Engineering Division for review and approval before approval of construction plans. The applicant shall provide documentation to verify the hydrology and detention calculations. The applicant shall show the 100-year overflow path and shall not design the flow to cross any developed properties.

Dedications and Easements

- The applicant shall obtain and record all off-site easements required for the project before City approval of construction plans.

Streets

- The applicant shall provide street facilities to their site including within the site and on the perimeter of the site where it borders on existing public streets. This includes half- and full-street width pavement as directed, curbs, gutters, planter strips or tree wells as directed, street trees, sidewalks, and bicycle lanes (when required by the type of street classification). This also includes city utilities (water, sanitary and storm drainage facilities), traffic control devices, centerline monumentation in monument boxes, and street lights in compliance with the City Code for Oregon City and its various Master Plans. Half-street improvements include an additional 10-foot wide pavement past the centerline subject to City review of existing conditions.
- After installation of the first lift of asphalt, applicant shall provide asphalt berms or another adequate solution, as approved by the City Engineering Division, at storm catch basins or curb inlets on all streets. This ensures positive drainage until the applicant installs the second lift of asphalt.
- All street names shall be reviewed and approved by the City (GIS Division 657-0891, ext.168) prior to approval of the final plat to ensure no duplicate names are proposed in Oregon City or the 9-1-1 Service Area.
- All street improvements shall be completed and temporary street name signs shall be installed before issuance of building permits.
- The applicant is responsible for all sidewalks in their development. The applicant may transfer the responsibility for the sidewalks adjacent to the right-of-way as part of the requirement for an individual building permit on local streets. However, failure to do so does not waive the applicant's requirement to construct the sidewalks. Applicant shall complete sidewalks on each residential lot within one year of City acceptance of public improvements for the project (e.g.; subdivision, partition, or Planned Unit Development) unless a building permit has been issued for the lot.
- Applicant shall install sidewalks along any tracts within their development, any pedestrian/bicycle accessways within their development, along existing homes within the development's property boundaries, and all handicap access ramps required in their development at the time of street construction.
- Street lights shall typically be owned by the City of Oregon City under PGE plan "B" and installed at the expense of the applicant. The applicant shall submit a street light plan, subject to City and PGE approval, prepared by a qualified electrical contractor. Streetlights shall be placed at street intersections and along streets at property lines. The required lights shall be installed by a qualified electrical contractor. Streetlights are to be spaced and installed per recommendations of the Illuminating Engineering Society of North America as published in their current issue of IES, RP-8 to provide adequate lighting for safety of drivers, pedestrians, and other modes of transportation. Streetlights shall be 100-watt high-pressure sodium fixtures mounted on fiberglass poles with a

25-foot mounting height unless otherwise specified. The applicant shall dedicate any necessary electrical easements on the final plat. All streetlights and poles shall be constructed of material approved by PGE for maintenance by PGE.

Grading And Erosion Control

- The applicant's engineer shall submit rough grading plan with construction plans. The engineer shall certify completed rough grading elevations to +/- 0.1 feet. For single family residential developments, a final residential lot-grading plan shall be based on these certified grading elevations and approved by the City Engineer before issuance of a building permit. If significant grading is required for the residential lots due to its location or the nature of the site, rough grading shall be required of the developer before the acceptance of the public improvements. (See Geotechnical section for cut and fill certification issues on building lots or parcels) There shall not be more than a maximum grade differential of two (2) feet at all site boundaries. Final grading shall in no way create any water traps, or create other ponding situations. Submit one copy (pertinent sheet) of any residential lot grading for each lot (e.g., 37 lots equals 37 copies).
- Applicants shall obtain a DEQ 1200c permit when their site clearing effort is over five (5) acres, as modified by DEQ. Applicant shall provide a copy of this permit to the City before any clearing efforts are started.
- An Erosion Prevention and Sedimentation Control Plan shall be submitted for City approval. Applicant shall obtain an Erosion Control permit before any work on site.
  - Dewatering excavations shall not be allowed unless the discharge water meets turbidity standards (see next bullet) or is adequately clarified before it enters on-site wetlands, drainage courses, and before it leaves the site. Discharge from man-made, natural, temporary, or permanent ponds shall meet the same standard.
  - Construction activities shall not result in greater than 10 percent turbidity increase between points located upstream and downstream of construction activities.
  - Effective erosion control shall be maintained after subdivision site work is complete and throughout building permit issuance.
  - Plans shall document erosion prevention and control measures that will remain effective and be maintained until all construction is complete and permanent vegetation has been established on the site.
  - Responsible party (site steward) for erosion control maintenance throughout construction process shall be shown on the Erosion Control Plan.
  - Staff encourages applicant to select high performance erosion control alternatives to minimize the potential for water quality and fish habitat degradation in receiving waters.

Geotechnical

- Any structural fill to accommodate public improvements shall be overseen and directed by a geotechnical engineer. The geotechnical engineer shall provide test reports and certification that all structural fill has been placed as specified and provide a final

summary report to the City certifying all structural fill on the site before City approval and acceptance of public improvements.

- Any cut or fill in building lots or parcels beyond the rough grading shall be subject to the Building Division's requirements for certification under the building permit.

Engineering Requirements

- Design engineer shall schedule a pre-design meeting with the City of Oregon City Engineering Division before submitting engineering plans for review.
- Street Name/Traffic Control Signs. Approved street name signs are required at all street intersections with any traffic control signs/signals/striping.
- Applicant shall pay City invoice for the manufacture and installation of permanent signs for street names and any traffic control signs/signals/striping.
- Bench Marks. At least one benchmark based on the City's datum shall be located within the subdivision.
- Other Public Utilities. The applicant shall make necessary arrangements with utility companies for the installation of underground lines and facilities. The City Engineer may require the applicant to pay these utility companies to use trenchless methods to install their utilities in order to save designated and marked trees when the utility crosses within a dripline of a tree marked, or identified, to be saved. Applicant to bear any additional costs that this may incur.
- Technical Plan Check and Inspection Fees. The current Technical Plan Check and Inspection Fee shall be paid before approval of the final engineering plans for the required site improvements. The fee is the established percentage of a City-approved engineer's cost estimate or actual construction bids as submitted by the applicant. Half of the fee is due upon submitting plans for final approval; the other half is due upon approval of the final plans.
- It is the City's policy that the City will only provide spot check inspection for non public-funded improvements, and the applicant's engineer shall provide inspection and surveying services necessary to stake and construct the project and prepare the record (as-built) drawings when the project is complete.
- Applicant shall submit two (2) sets of final engineering plans for initial review by the City Engineering Division to include the drainage report (wet signed by the responsible engineer), and the cost estimate with half of the Technical Plan Check fee. The engineering plans shall be blackline copies, 24" x 36". Blueline copies are not acceptable.
- For projects such as subdivisions, partitions, and Planned Unit Developments, the applicant shall submit a completed copy of the City's latest final subdivision and partition plat checklist, and a paper copy of the preliminary plat.
- Two (2) copies of any revised documents (in response to redlined comments) will be required for subsequent reviews, if necessary.
- The applicant shall submit, for the final City approval, six (6) copies of the plans with one full set wet signed over the engineer's Professional Engineer Oregon stamp.

- Minimum Improvement Requirements. Applicant shall provide a surety on land division developments for uncompleted work before a plat is recorded as required by a Land Division Compliance Agreement (available in hard copy or electronic version from City Engineer office). This occurs if the applicant wishes to record the final plat before completion of all required improvements. Surety shall be an escrow account or in a form that is acceptable to the City Attorney.
- Upon conditional acceptance of the public improvements by the City, the applicant shall provide a two-year maintenance guarantee as described in the Land Division Compliance Agreement. This Maintenance Guarantee shall be for fifteen (15) percent of the engineer's cost estimate or actual bids for the complete public improvements.
- The applicant shall submit a paper copy of the record (as-built) drawings, of field measured facilities, to the City Engineer for review before building permits are issued beyond the legal limit. Upon approval of the paper copy by the City Engineer, applicant shall submit a bond copy set and two 4-mil mylar record drawings sets.
- The applicant shall submit one full set of the record (as-built) drawings, of field measured facilities, on AutoCAD files on CD-ROM or 3.5-inch diskette, in a format acceptable to the City Engineer, and include all field changes.
- One AutoCAD file of the preliminary plat, if applicable, shall be furnished by the applicant to the City for addressing purposes. A sample of this format may be obtained from the City Geographical Information System Division. This information, and documents, shall be prepared at the applicant's cost.
- The applicant's surveyor shall also submit, at the time of recordation, a copy of the plat on a CD-ROM or 3.5-inch diskette to the City in a format that is acceptable to the City's Geographic Information System Division.
- The City reserves the right to accept, or reject, record drawings that the City Engineer deems incomplete or unreadable that are submitted to meet this requirement. The applicant shall be responsible for all costs associated with meeting this condition. The applicant shall ensure their engineer submits the record drawings before the City will release final surety funds or residential building permits beyond the legal limit.
- Final Plat Requirements, if applicable. The final plat shall comply with ORS 92.010 through 92.190, and City Code. In addition the following requirements shall be required:
  - The applicant, and their surveyor, shall conform to the City's submittal and review procedures for the review and approval of plats, easements, agreements, and other legal documents associated with the division of this parcel.
  - Show the City Planning File Number on the final plat, preferably just below the title block.
  - A blackline copy of the final plat illustrating maximum building envelopes shall be submitted to the Planning Division concurrently with submittal of the plat to ensure setbacks and easements do not conflict.
  - Use recorded City control surveys for street centerline control, if applicable.
  - Tie to City GPS Geodetic Control Network, County Survey reference PS 24286, and use as basis of bearings. Include ties to at least two monuments, show measured versus record, and the scale factor. Monuments may be either GPS stations or other

monuments from prior City control surveys shown on PS 24286. If ties are to prior City control surveys, monument ties shall be from the same original control survey. The tie to the GPS control can be part of a reference boundary control survey filed for the land division.

- Show state plane coordinates on the Point of Beginning.

- The civil construction drawings, once approved by the City Engineering Division, shall have an approval period of one year in which to commence with construction. The plans and drawings shall be valid, once the City Engineer holds the preconstruction conference and construction activity proceeds, for as long as the construction takes. If the construction drawings expire before construction commences, the applicant shall ensure the civil construction documents and plans conform to the latest Standards, Specifications, and City Codes that are in place at the time of the update. The applicant shall bear the cost associated with bringing them into conformance, including additional technical plan check and review costs.
- The applicant shall include a statement in proposed Conditions, Covenants, and Restrictions (CC & R's), plat restrictions, or some other means acceptable to the City Attorney for:
  - Maintaining surface runoff patterns established for each lot,
  - Maintaining any proposed private storm lines or detention, and
  - Conformance by individual lot owner to the City's erosion control standards when establishing or renovating landscaping.
  - The applicant shall submit the proposed method and statement to the Planning staff for review and approval, before final plat approval.
- Construction vehicles and other vehicles associated with the development shall only use the entrance as approved by the City Engineering Division to enter their site and these vehicles shall park or wait on the construction site. The applicant should provide a specified area of off street parking for the site's construction workers which meets the erosion/sedimentation control measures. Supplier vehicles and trailers (hauling vehicles) and actual construction vehicles shall not park, or wait, in such a manner that would block or hinder access for emergency vehicles. This includes private vehicles belonging to construction workers, supplier vehicles and trailers, and actual construction vehicles.
- Site construction activity is to only occur between 7:00 AM and 6:00 PM on Monday through Friday; between 9:00 AM and 6:00 PM on Saturday. No site improvement construction activity is allowed on Sunday. Construction activity includes all field maintenance of equipment, refueling, and pick up and delivery of equipment as well as actual construction activity.
- The applicant shall ensure that all applicable outside agencies are contacted and any appropriate approvals obtained for the construction of the project. The applicant shall supply copies of approvals to the City. Failure to do so shall be a justification for the City to prevent the issuance of a construction or building permit or to revoke an issued permit for this project.
- The applicant shall be responsible for paying all fees associated with the recording of documents such as non-remonstrance agreements, easements, and dedications.

- Should the applicant, or any assigns or heirs, fail to comply with any of the conditions set forth here, the City may take the appropriate legal action to ensure compliance. The applicant shall be responsible for any City legal fees and staff time associated with enforcing these conditions of approval.

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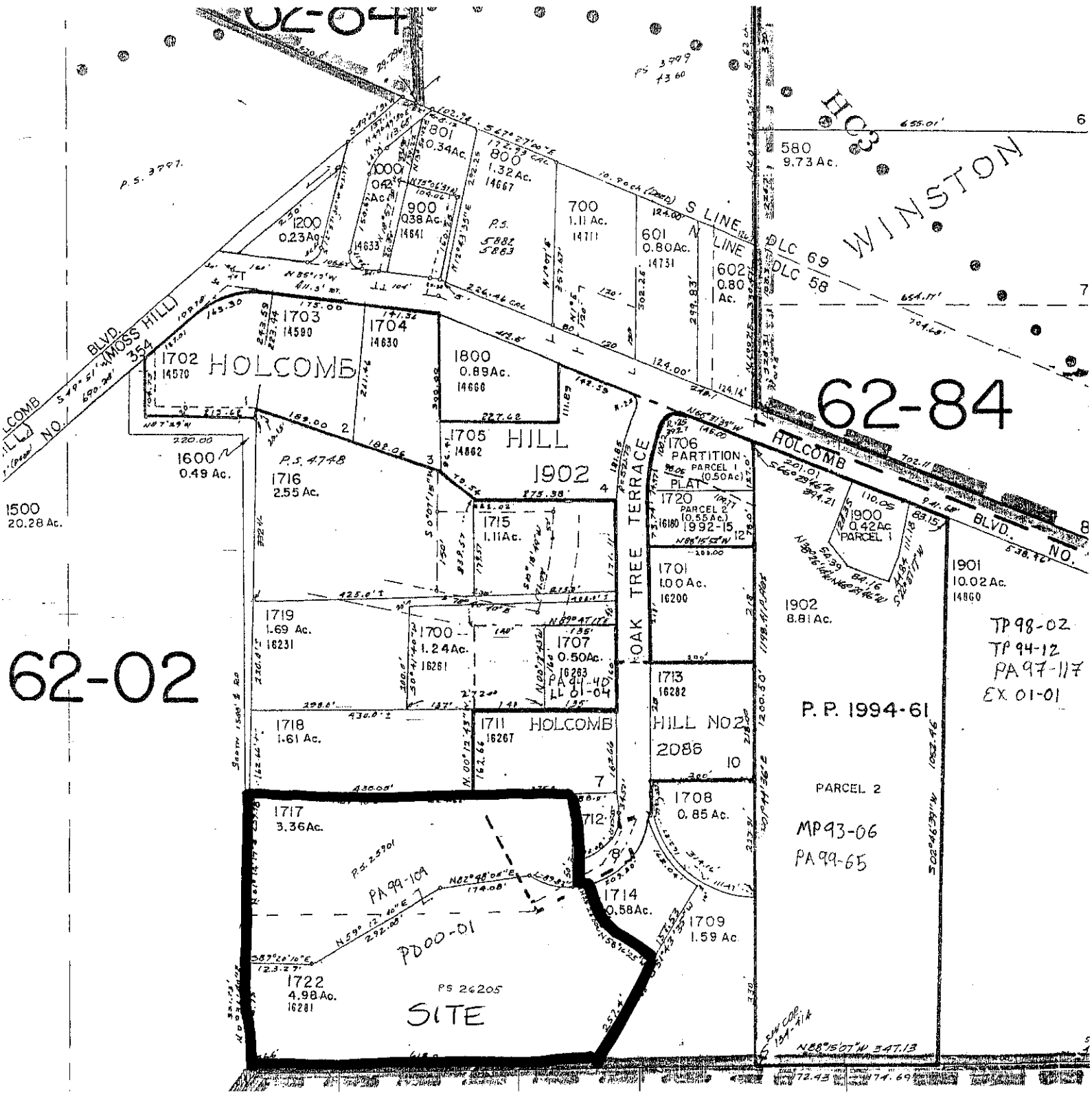


EXHIBIT B

PD 00-01

PRELIMINARY IMPROVEMENT PLAN

for

OAK TREE P.U.D.

located in

OREGON CITY, CLACKAMAS COUNTY, OREGON

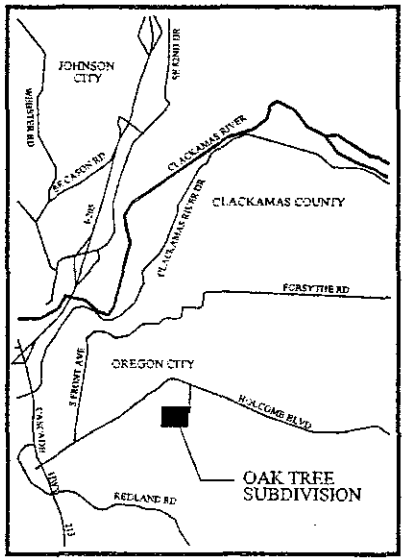
T2S, R2E, S28, TAX LOTS 1717 & 1722

OWNER/DEVELOPER

LOWELL WITTKE
16281 S. OAK TREE TERRACE
OREGON CITY, OREGON, 97045
PHONE: 657-7641

ENGINEER

WB WELLS AND ASSOC.
4230 NE FREMONT ST
PORTLAND, OREGON 97213
PHONE:284-5596
FAX: 284-5530
CONTACT: BRAD SCHLEINING
brads@wbwells.com



VICINITY MAP
N.T.S.

SHEET INDEX

REVISIONS:

DRAWN BY:
DATE: 7-8-09
CHECKED BY:
SCALE: 1" = 40'
PLOT DATE: 8-11-09
JOB NO. 09-143
FILE: P:\09-143\PLANS\09_143_COVER.DWG

COVER SHEET
OAK TREE P.U.D.

OREGON CITY, CLACKAMAS COUNTY, STATE OF OREGON
CITY FILE #: PD09-01 & SUB09-01

FOR:
LOWELL WITTKE

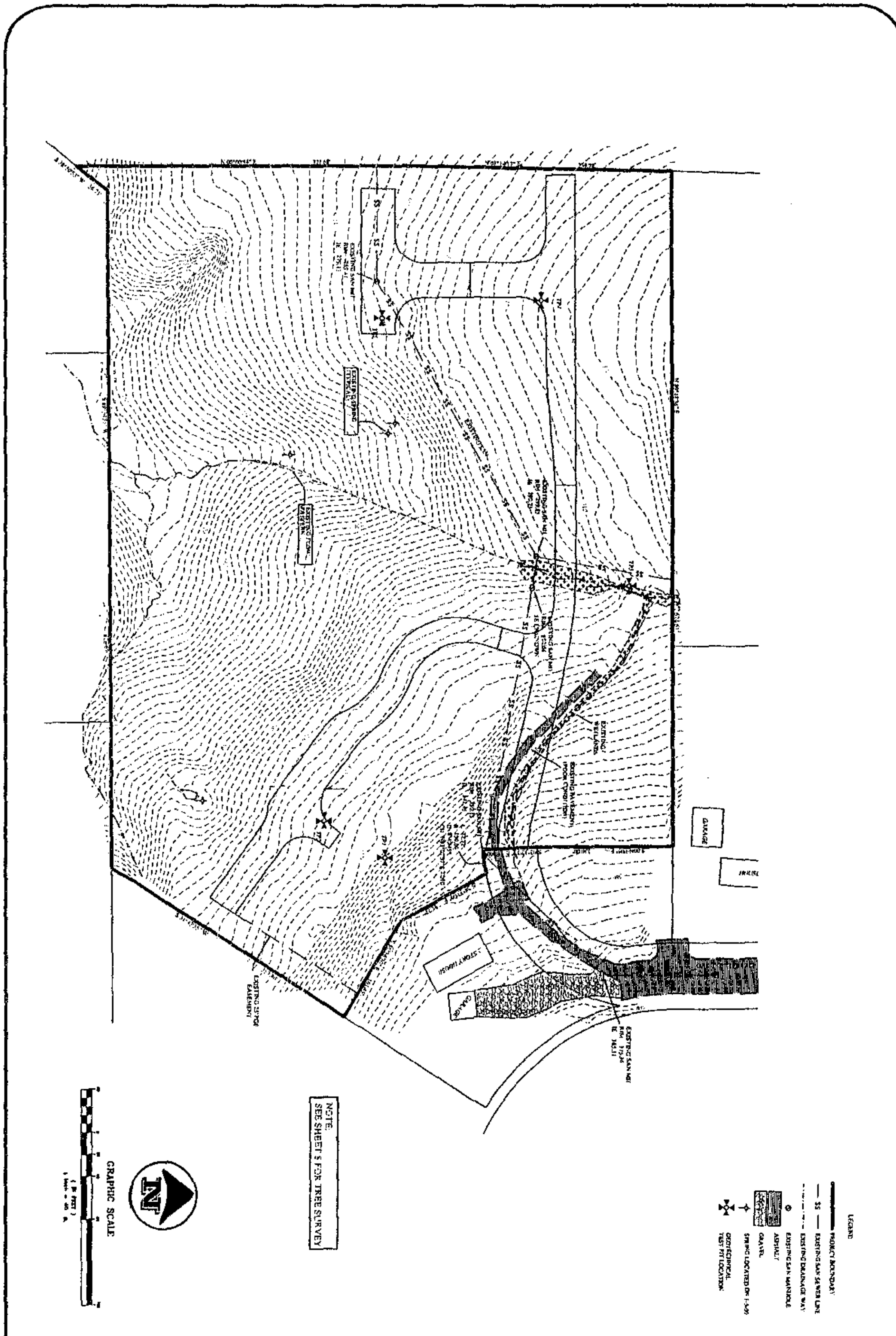
16281 S. OAK TREE TERRACE, OREGON CITY, OREGON 97045

W.B. WELLS and associates inc.
ENGINEERS SURVEYORS PLANNERS
4230 NE FREMONT STREET
PORTLAND, OREGON 97213
PHONE (503) 284-5596
FAX (503) 284-5530
EMAIL info@wbwells.com

SHEET 1 OF 9

EXHIBIT C

10-00 CP



SHEET 2 OF 9

W.B. WELLS
and associates inc.
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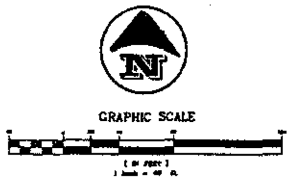
PHONE (503) 284-5896
FAX (503) 284-8530
EMAIL: info@wbwells.com

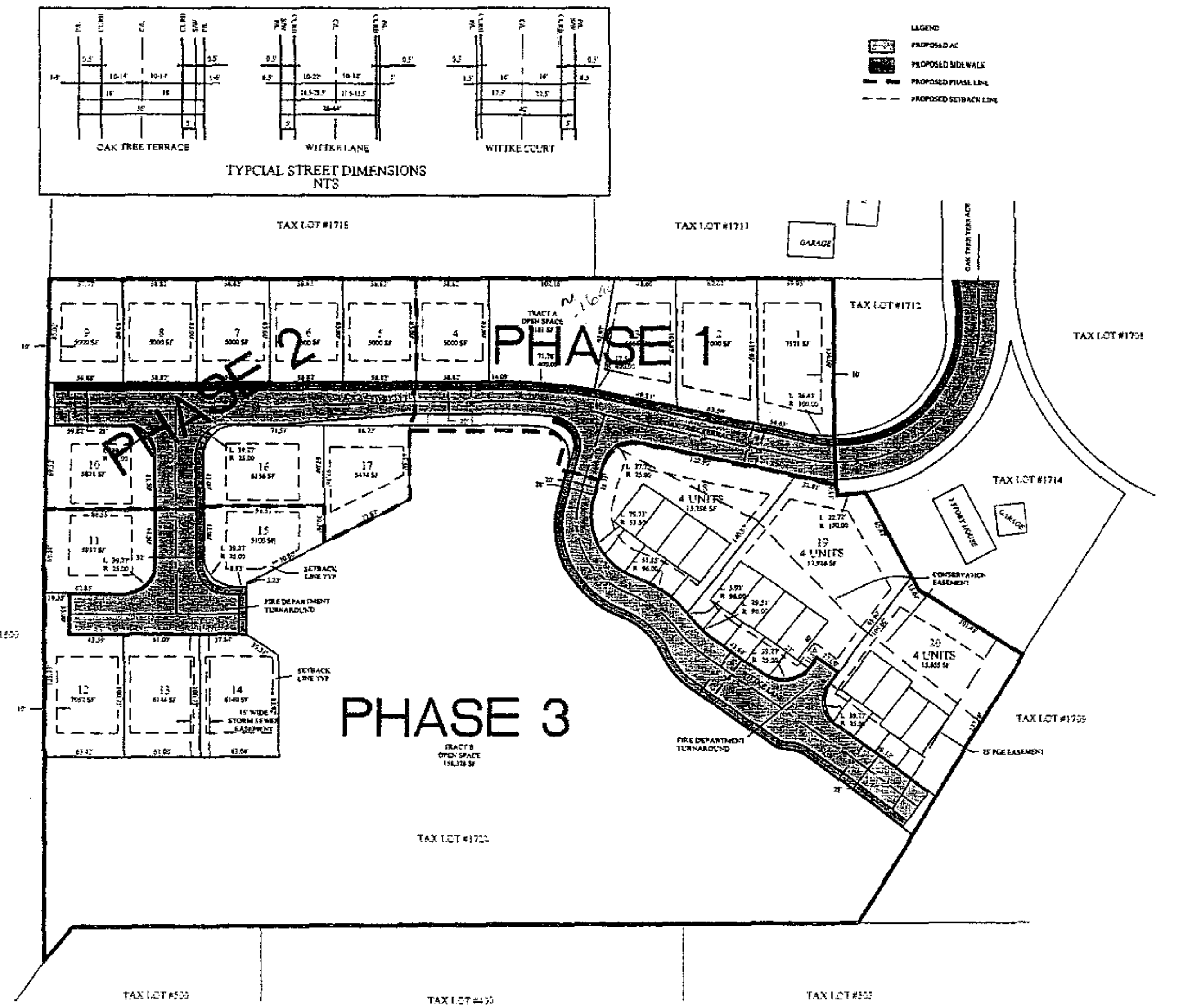
EXISTING FEATURES
OAK TREE P.U.D.

OREGON CITY, CLACKAMAS COUNTY, STATE OF OREGON

FOR:
LOWELL WITTKE

REVISIONS:	
DRAWN BY:	CHECKED BY:
DATE: 7-6-01	SCALE: 1" = 40'
PLOT DATE: 8-1-01	JOB NO: 99-143





NOTES

1) EXISTING PROPERTY IS ZONED R10. MODIFIED R4 STANDARDS ARE PROPOSED.

LOT SUMMARY

LOTS: 1-17 SINGLE FAMILY RESIDENCES
UNITS: 18-29
TOTAL UNITS 29

LOTS 3.34 ACRES - 40% OF GROSS DEVELOPABLE AREA
OPEN SPACE 3.8 ACRES - 45% OF GROSS DEVELOPABLE AREA
PUBLIC ROW 1.26 ACRES - 15% OF GROSS DEVELOPABLE AREA

TOTAL AREA 8.4 acres - 100% GROSS DEVELOPABLE AREA
NET DEVELOPABLE AREA 3.34 ACRES
SINGLE FAMILY 2.5 ACRES - 75% OF NET DEVELOPABLE AREA
MULTI FAMILY 0.84 ACRES - 25% OF NET DEVELOPABLE AREA

PROPOSED SETBACKS

SINGLE FAMILY
FRONT YARD - 15'
SIDE YARDS - 5'
CORNER - 15
REAR YARD - 20'

MULTI FAMILY
FRONT YARD - 20'
SIDE YARDS - 7.5'
CORNER - 15'
REAR YARD - 20'

SEE SHEET 4 FOR PROPOSED SETBACKS TO WETLANDS AND DRAINAGE FEATURES

PRELIMINARY LOT LAYOUT WITH DIMENSIONS
OAK TREE P.U.D.
OREGON CITY, CLACKAMAS COUNTY, STATE OF OREGON
CITY FILE #: PD00-01 & ZC00-01
FOR:
LOWELL WITTKE
14381 S. OAK TREE TERRACE, OREGON CITY, OREGON 97045

REVISIONS:	
DRAWN BY:	CHECKED BY:
DATE: 7-8-01	SCALE: 1" = 40'
PLOT DATE: 8-1-01	JOB NO. 99-143
FILE:	

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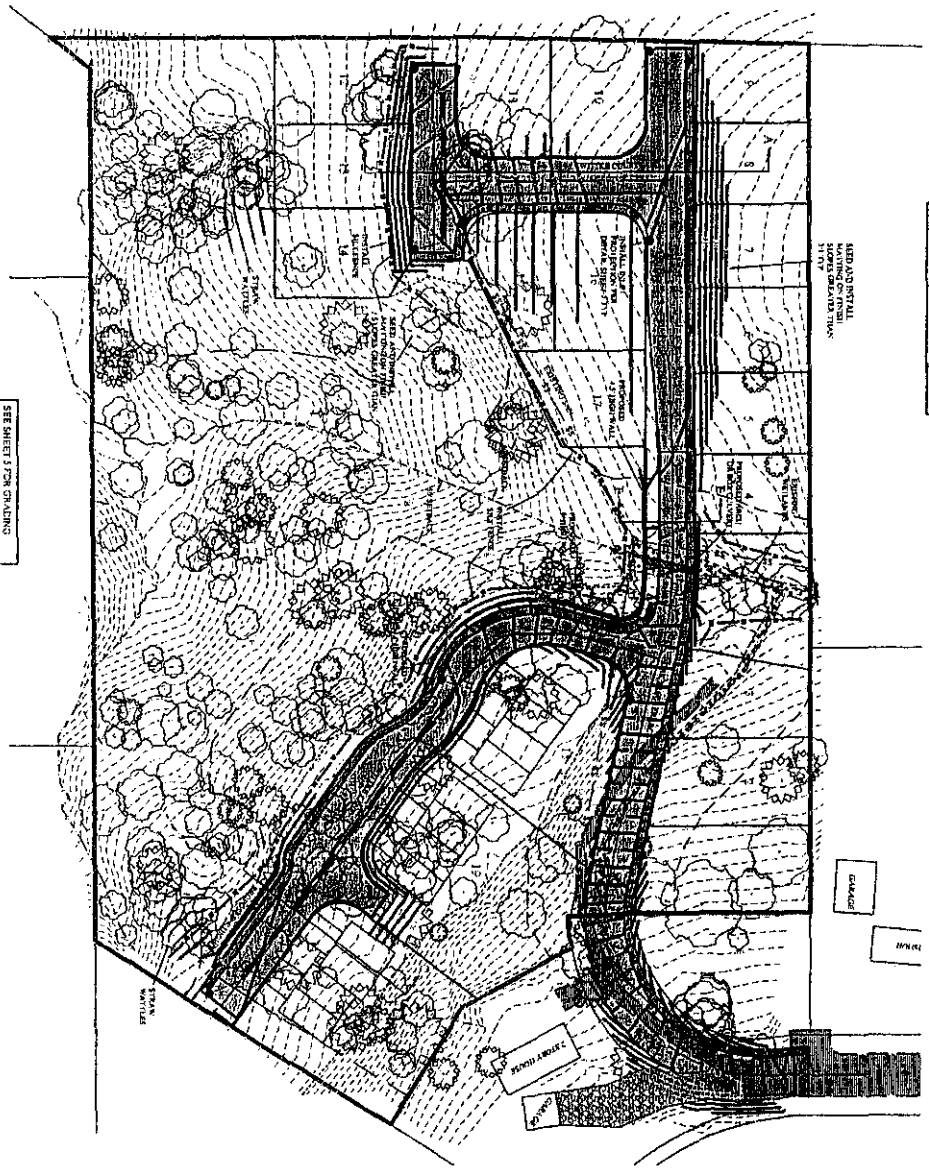

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EMAIL: info@wbwells.com

PRELIMINARY GRADING AND EROSION CONTROL PLAN
OAK TREE P.U.D.
OREGON CITY, CLACKAMAS COUNTY, STATE OF OREGON
CITY FILE #: P1500 01 & WR01
FOR
LOWELL WITTKE
16281 S. OAK TREE TERRACE, OREGON CITY, OREGON 97045

REVISIONS:

DRAWN BY:	CHECKED BY:
DATE: 7-6-01	SCALE: 1" = 40'
PLOT DATE: 8-1-01	JOB NO: 99-143

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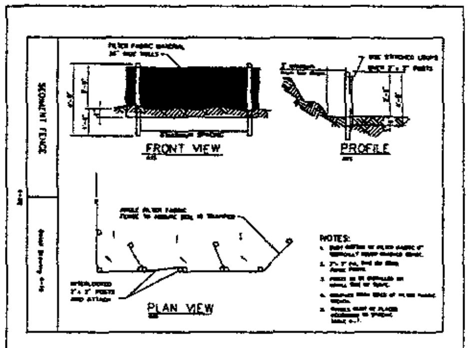

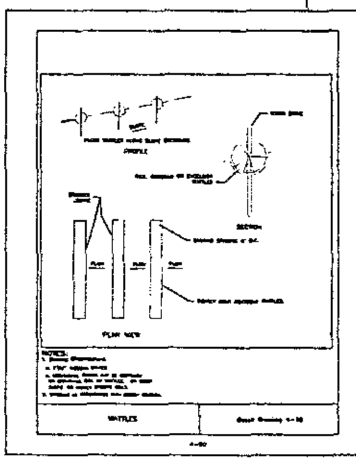

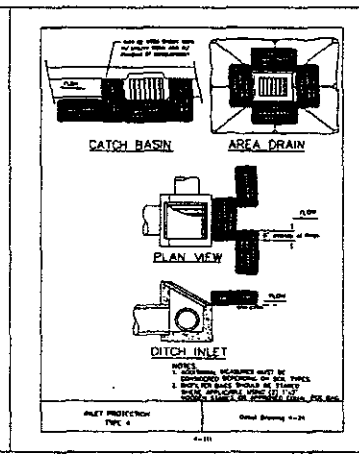

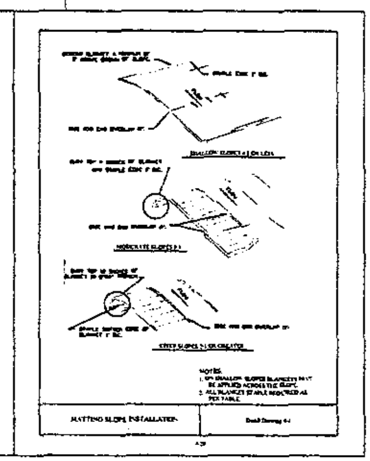

EROSION CONTROL NOTES

1. OWNER OR DESIGNATED PERSON SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
2. THE IMPLEMENTATION OF THESE ESC PLANS AND CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED BY THE LOCAL JURISDICTION, AND VEGETATION/ LANDSCAPING IS ESTABLISHED. THE DEVELOPER SHALL BE RESPONSIBLE FOR MAINTENANCE AFTER THE PROJECT IS APPROVED UNTIL THE LOTS ARE SOLD.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE MARKINGS SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
4. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATE STANDARDS.
5. THE ESC FACILITIES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.
6. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
7. AT NO TIME SHALL SEDIMENT BE ALLOWED TO ACCUMULATE MORE THAN 1/3 THE BARRIER HEIGHT. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATIONS SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
8. STABILIZED GRAVEL CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
9. STORM DRAIN INLETS, BASINS, AND AREA DRAINS SHALL BE PROTECTED UNTIL PAVEMENT SURFACES ARE COMPLETED AND/OR VEGETATION IS RE-ESTABLISHED.
10. PAVEMENT SURFACES AND VEGETATION ARE TO BE PLACED AS RAPIDLY AS POSSIBLE.
11. SEEDING SHALL BE PERFORMED NO LATER THAN SEPTEMBER 1 FOR EACH PHASE OF CONSTRUCTION.
12. IF THERE ARE EXPOSED SOILS OR SOILS NO FULLY ESTABLISHED FROM OCTOBER 1ST THROUGH APRIL 30TH, THE WET WEATHER EROSION PREVENTION MEASURES WILL BE IN EFFECT. SEE THE EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL (CHAPTER 4) FOR REQUIREMENTS.
13. THE DEVELOPER SHALL REMOVE ESC MEASURES WHEN VEGETATION IS FULLY ESTABLISHED.
14. ALL FILL ON EXISTING SLOPES GREATER THAN 5H:1 SHALL BE KEYED AND BENCHED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR THE PROJECT.
15. ALL CUT AND FILL SLOPES OF 3:1 OR GREATER SHALL BE SEEDED AND MATTED PER DETAIL IMMEDIATELY UPON COMPLETION OF GRADING IN THAT AREA. ALL OTHER EXPOSED AREAS SHALL BE HYDROSEEDED UNLESS OTHER PLANTINGS ARE SHOWN ON THE LANDSCAPE PLAN.

W.B. WELLS
and associates inc.
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PHONE (503) 284-5896
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EMAIL: info@wbwells.com

EROSION CONTROL NOTES AND DETAILS
OAK TREE P.U.D.
OREGON CITY, CLACKAMAS COUNTY, STATE OF OREGON
CITY FILE #: PD00-01 & SD00-01
FOR:
LOWELL WITTKE
14321 S. OAK TREE TERRACE, OREGON CITY, OREGON 97045

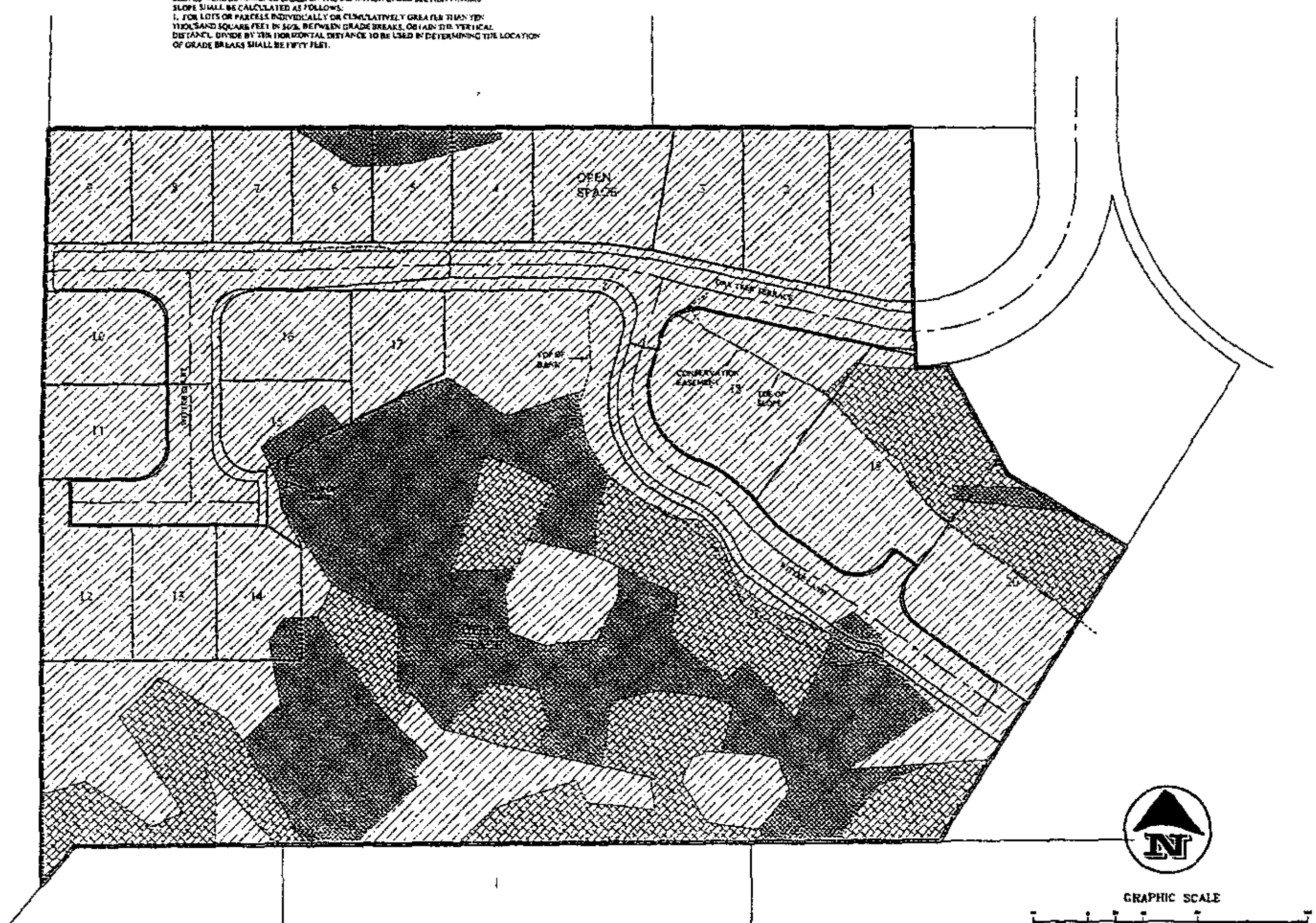
REVISIONS:

DRAWN BY:	CHECKED BY:
DATE: 7-6-01	SCALE: 1" = 40'
PLOT DATE: 8-1-01	JOB NO. 99-143

LEGEND:

0-25% SLOPE	5.29 ACRES
25-35% SLOPE	1.66 ACRES
35%+ SLOPE	1.40 ACRES
TOTAL	8.35 ACRES

NOTE:
SLOPES WERE DETERMINED BASED ON THE DEFINITION UNDER SECTION 17.44.025
SLOPE SHALL BE CALCULATED AS FOLLOWS:
1. FOR LOTS OR PARCELS INDIVIDUALLY OR CUMULATIVELY GREATER THAN TEN THOUSAND SQUARE FEET IN SIZE, BETWEEN GRADE BREAKS, OBTAIN THE VERTICAL DISTANCE, DIVIDE BY THE HORIZONTAL DISTANCE TO BE USED IN DETERMINING THE LOCATION OF GRADE BREAKS SHALL BE FIFTY FEET.



SLOPE ANALYSIS
OAK TREE P.U.D.

OREGON CITY, CLACKAMAS COUNTY, STATE OF OREGON
CITY FILE #: PZ00-01 & TP00-01

FOR:
LOWELL WITTKE
16361 S. OAK TREE TERRACE, OREGON CITY, OREGON 97045

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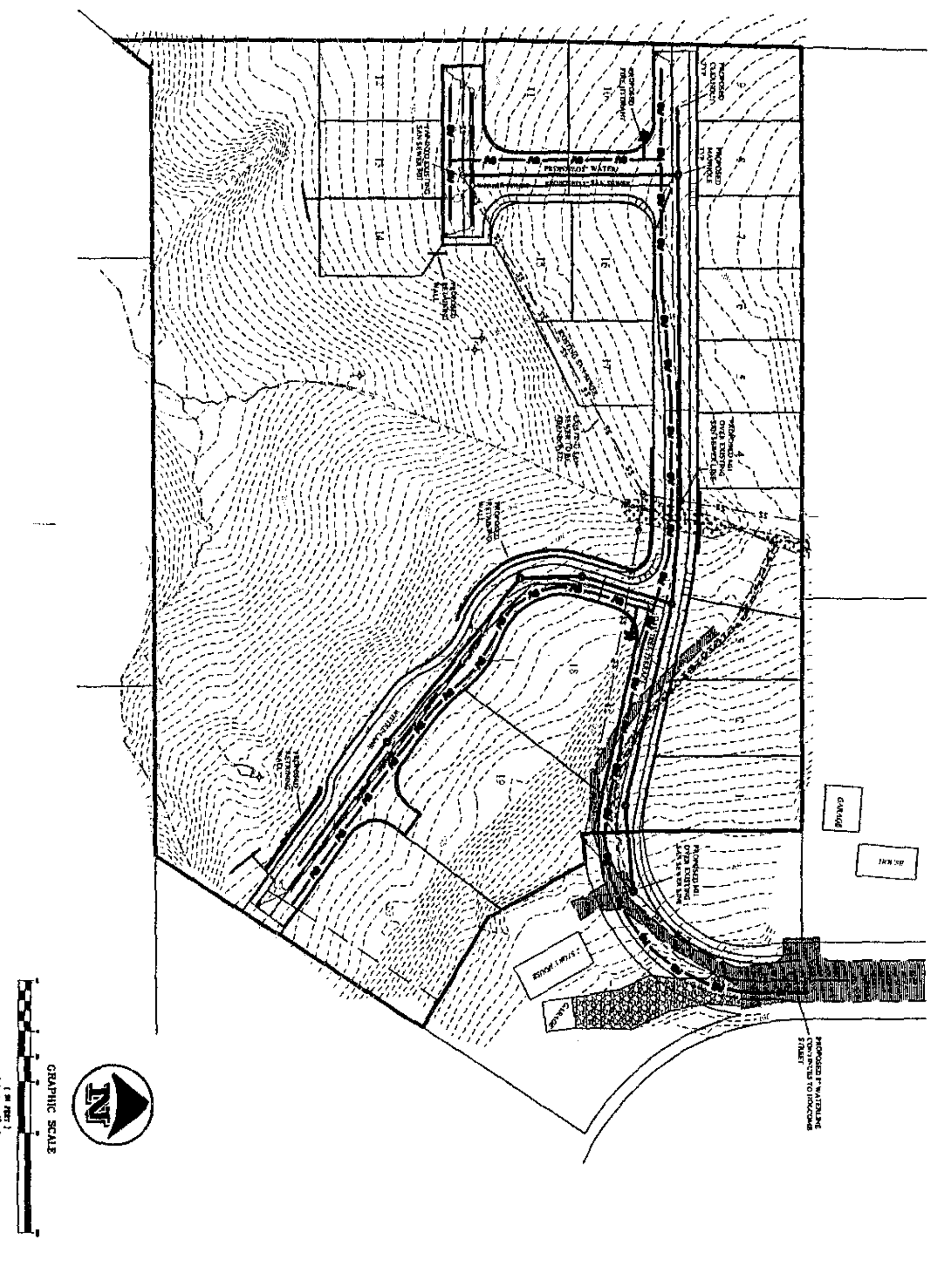
REVISIONS:

DRAWN BY:	CHECKED BY:
DATE: 7-8-01	SCALE: 1" = 40'
PLOT DATE: 8-1-01	JOB NO. 99-143



SHEET 7 OF 9

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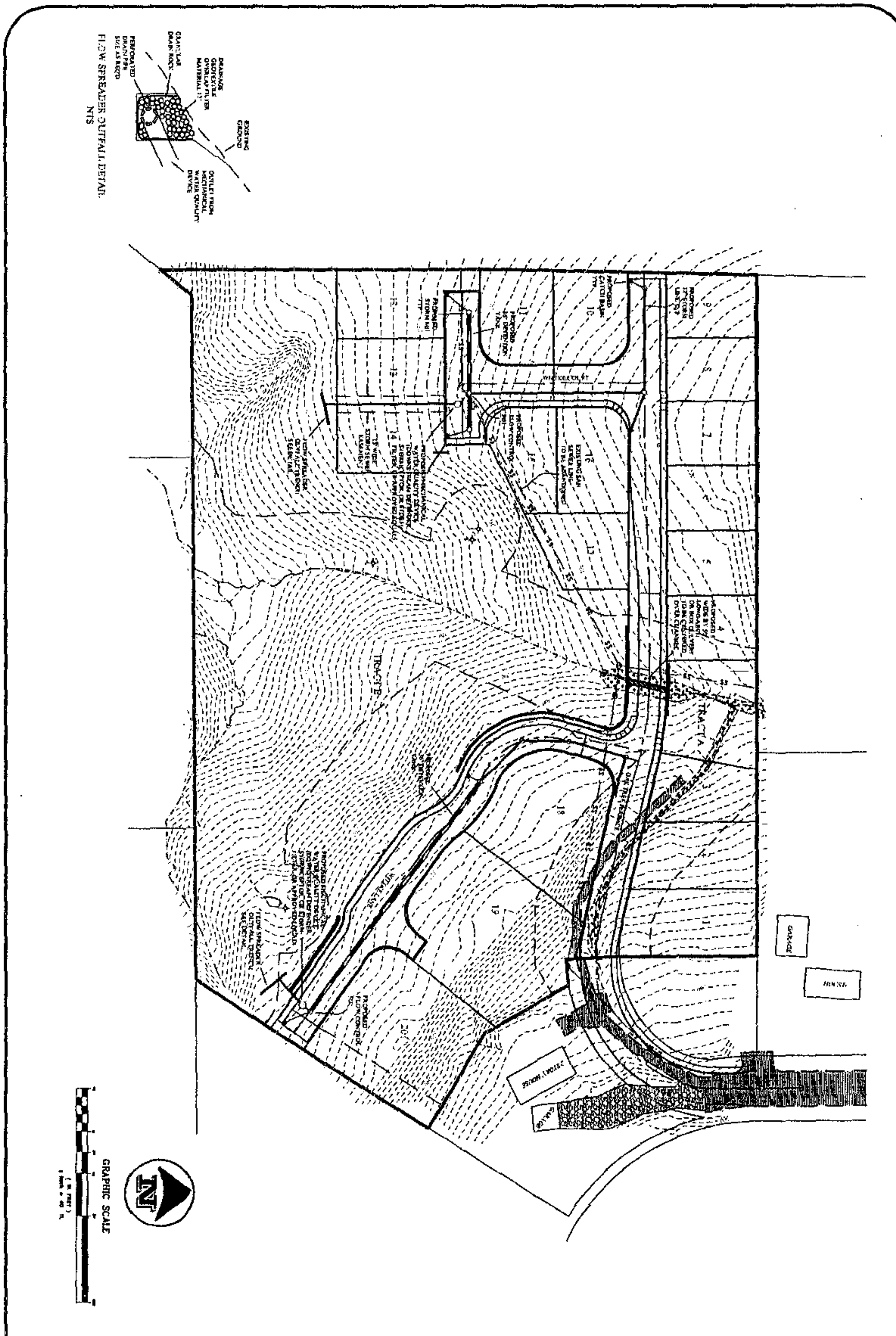
SANITARY SEWER AND WATERLINE PLAN
OAK TREE P.U.D.

OREGON CITY, CLACKAMAS COUNTY, STATE OF OREGON
CITY FILE #: PD00-01 & W00-01

FOR:
LOWELL WITTKE

REVISIONS:	
DRAWN BY:	CHECKED BY:
DATE: 7-6-01	SCALE: 1" = 40'
PLOT DATE: 8-1-01	JOB NO: 99-143



STORM DRAINAGE PLAN
OAK TREE P.U.D.

OREGON CITY, CLACKAMAS COUNTY, STATE OF OREGON
CITY FILE #: PD00-01 & W00-01

FOR:
LOWELL WITTKE

W.B. WELLS
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REVISIONS:

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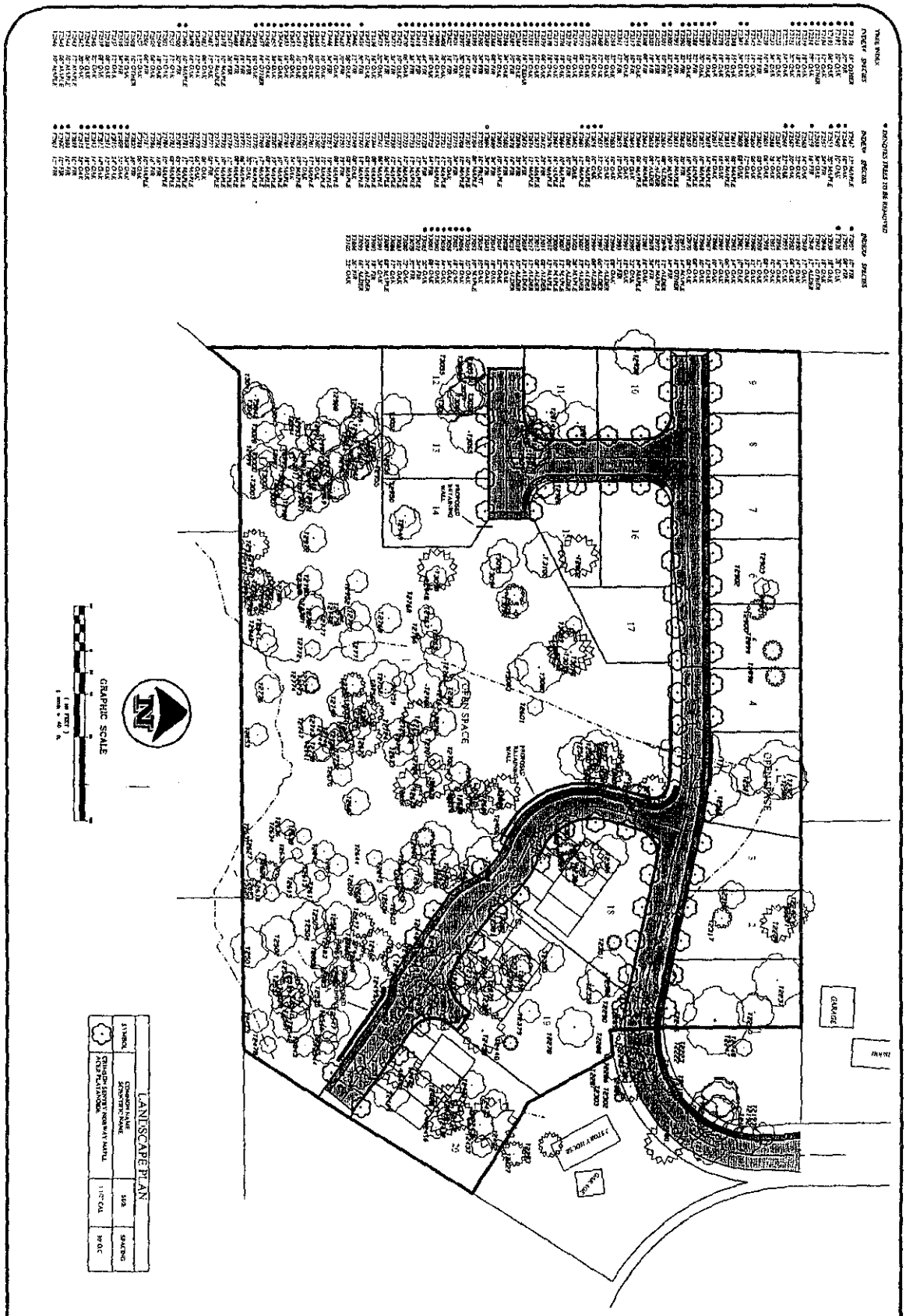
DATE: 7-6-01	SCALE: 1" = 40'
PLOT DATE: 8-1-01	JOB NO: 99-143



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TREE SURVEY AND LANDSCAPE PLAN
OAK TREE P.U.D.
OREGON CITY, CLACKAMAS COUNTY, STATE OF OREGON
CITY FILE #: 7000-01 & 9108-01
FOR:
LOWELL WITTKE
16291 S. OAK TREE TERRACE, OREGON CITY, OREGON 97045

REVISIONS:

DRAWN BY:	CHECKED BY:
DATE: 7-6-01	SCALE: 1" = 40'
PLOT DATE: 8-1-01	JOB NO: 99-143
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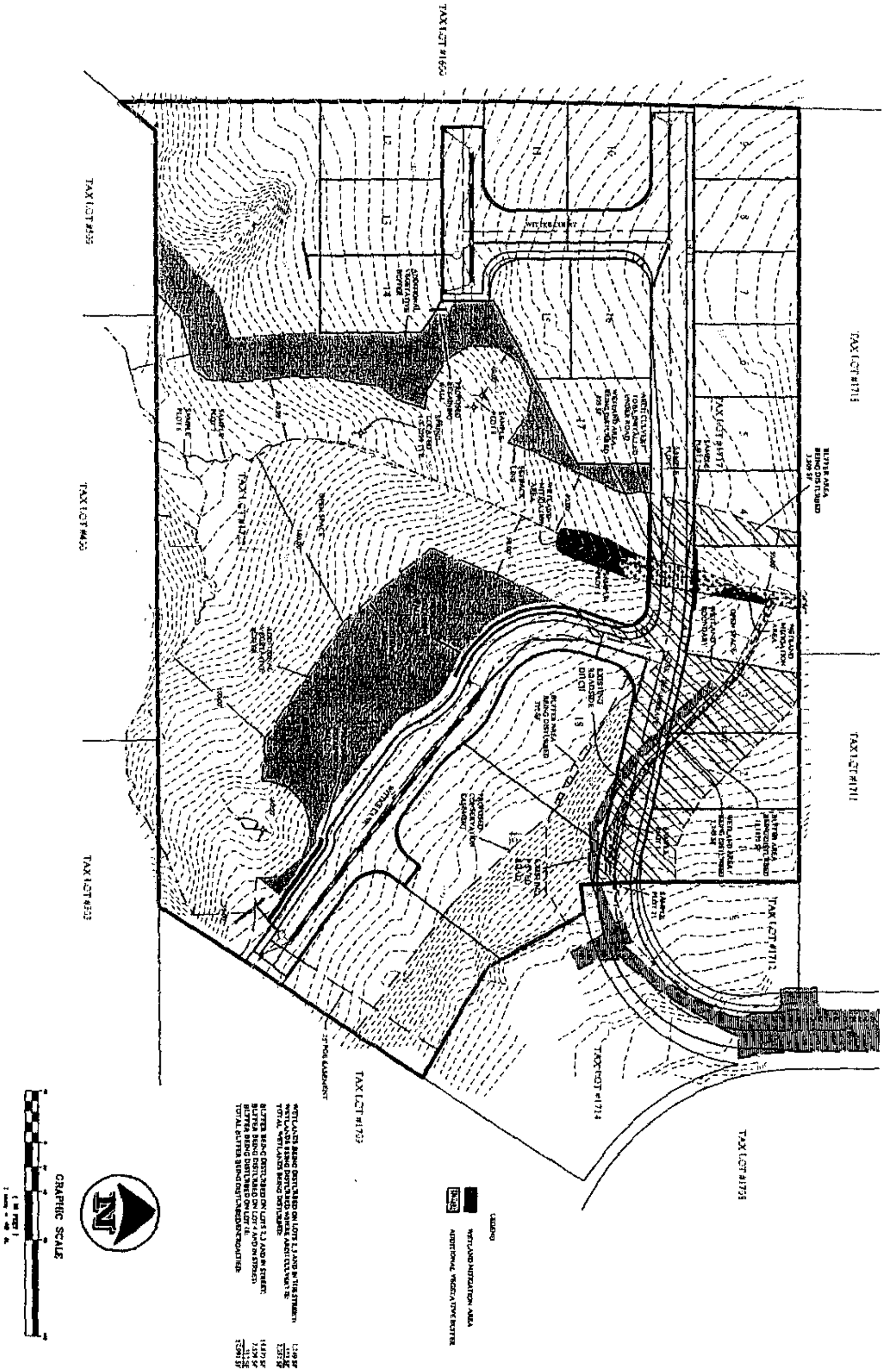
SHEET 9 OF 9



WATER RESOURCES PLAN
OAK TREE P.U.D.

FOR:
LOWELL WITTKE

REVISIONS:	
DRAWN BY:	CHECKED BY:
DATE: 7-6-01	SCALE: 1" = 40'
PLOT DATE: 8-1-01	JOB NO: 99-143

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SHEET 1 OF 1

OAK TREE ESTATES

A 29 Unit Planned Development

Submitted to:
Oregon City Community Development Department

Applicant:
Lowell Wittke Construction
16281 S Oak Tree Terrace
Oregon City, OR 97045
Phone and Fax: 657-7641

Representative:
WB Wells and Associates
4230 NE Fremont St.
Portland, OR 97213
Phone 284-5896
Fax 284-8530

August 2000
(revised March 2001)
(revised July 2001)

EXHIBIT D

PD 00-01

CONSULTANT INDEX

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Lowell Wittke
16281 S. Oak Tree Terrace
Oregon City, OR 97045
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GEOPACIFIC ENGINEERING INC (Formerly ADAPT) — GEOTECHNICAL
Warren Krager
17700 SW Upper Boones Ferry Rd, Suite 100
Portland, OR 97224-7010
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GROUP MACKENZIE — TRAFFIC ENGINEER
Brent Ahrend
0690 SW Bancroft
Portland, OR 97201
(503) 224-9560 FAX 228-1285

Fishman Environmental Services, LLC — WETLAND SCIENTIST
Mirth Walker, PWS, Wetlands Program Manager
434 NW Sixth Avenue, Suite 304
Portland, OR 97209-3600
(503) 224-0333 FAX 224-1851

Application Table of Contents

City of Oregon City
Community Development Department
320 Warner Milne Road
Oregon City, OR 97045

Application: Planned Development which proposes 31 new housing units

Zoning: R-10

Acreage: 8.35 acres (388,734sf)

Location: 16281 S. Oak Tree Terrace, Oregon City

Representative: WB Wells and Associates, 4230 NE Fremont, Portland 97213

Owner/Applicant: Lowell Wittke, 16281 S. Oak Tree Terrace, Oregon City, OR 97045; Phone and Fax: 657-7641

Legal: T2S, R2E, S28 Tax Lots 1717 and 1722 (Tax Map 2 2E 28A)

Pre-Application: PA 99-109

Overall Proposal: The owner of this property is proposing to develop 8.35 acres as a planned unit development. The PD requires that 80% of the gross acreage be developed with a density that is consistent with the R10 base zone. The owner is proposing a total of 29 housing units with 20 lots. 17 units will be single family residences and 12 units (3 4-plexes) will be clustered multi-family. Oregon City requires that Planned Developments include a minimum of 20% of the net developable area be multi-family housing and that 20% of the gross area be reserved as open space. The site plan has exceeded these requirements. 45 % of the gross area has been preserved in open space. The housing density has been divided between single family with 75% of the net developable area (17 units) and multi-family 25% of the net developable area (14 units) providing more efficient land utilization on a site that has steep slopes.

Site Description: The site has its development challenges and this is a major reason that the PD structure is appropriate for the site development. Slopes are steep in numerous places and the topography drains to the center of the property creating water resource areas. All lots proposed on the site plan have suitable building areas. This has been confirmed by the geo-technical report (attached).

The majority of the steep and water resource areas have been reserved as open space and separate tracts. The site's major environmental impact occurs when continuation of Oak Tree Terrace requires the developer to fill an existing drainage way that has been delineated as a wetland. The drainage way will need to be filled and culverted in order to extend the road across the property. The remaining drainage area will be preserved in a separate tract and restoration plantings will be provided for the impacted area. Otherwise drainage ways and unsuitable slopes have been avoided and left natural to the maximum extent possible.

Density Calculations: 80% of the 8.35 acre property provides an area of 290,980 sf. Under R10 zoning (minimum of 10,000 sf lots) this would amount to a total 29 units for the PUD. The applicant has proposed 29 units (80%). A minimum of 20% and a maximum of 50% of the net developable area is required to be dedicated to multi-family housing in a PUD. The net developable area (lot area minus right of ways and open space) of the site is 3.34 acres. These include 17 single family lots (75% of the net developable area) and 12 units on 3 4-plex lots (25%).

Site Plan: The proposed site layout plan provides for a continuation of Oak Tree Terrace and new roads branch off at two points to the south to create single family and multifamily housing clusters. The PD's major open space area separates the two clusters with natural terrain. Both streets serving the clusters are proposed to be public streets with sidewalks on one side. The PUD single family lots are sized with the lot area, width, depth and setback standards of the R6 zone in mind but have been reduced in order to accommodate the natural resources and slopes on the site. The lot configurations tend to be a little wider than deep as this fits the character of the site and the applicant is asking for adjustments to the R10 standards in order to protect the natural resource areas. Parking for the multifamily and duplex structures will be provided for in a 2 car garage within the units.

Neighborhood: Park Place is represented by Julie Puderbaugh (661-5093). The applicant elected not to hold a formal meeting with the neighborhood.

Chapter 17.64 – Planned Development

17.64.010 PUD Purpose

Response: The development of this property is proposed as a Planned Development (PD) because it is better suited to the purpose of the PD than as a traditional R10 subdivision due to the existing topography and natural site conditions. The site plan allows for flexibility in lot layout and size and it promotes an efficient site design which preserves existing natural features. The proposed site plan has reduced street widths with sidewalks on only 1 side to further preserve natural features. A large reservation of open space is being proposed to compensate for the building areas and the added density promotes more intense utilization of suitable land for housing. Walls have been proposed to limit the amount of grading required in the steep areas and a setbacks to the existing drainage ways of the site been proposed. The width of the Oak Tree Terrace roadway has also been reduced at the drainage crossing and an Arch Culvert will be installed to protect this drainageway.

17.64.040 Permitted Uses and Other PUD Requirements

A. Permitted Uses

Response: Detached single family and rowhouses on individual lots are allowed.

C. Adjustments to dimensional standards

Response: The Oak Tree Terrace PD lots are sized with the lot area, width, depth and setback standards similar to the R6 zone with an emphasis on smaller lots in order to protect the existing natural resources and slopes located on the site.

The applicant requests adjustments to the R10 dimensional standards as allowed by the code. These adjustments are necessary in order to protect existing natural features of the site and still adhere to the density requirements of the PD.

The depth reduction of the lots will also cause a need for a reduction in the setbacks in order to provide buildable lots. Currently the R10 zone requires a lot width of 75 feet, a lot depth of 100 feet and a lot area of 10,000 square feet.

The applicant is proposing the following adjustments to the lot size standards for the single family lots: A lot area of 5,000 square feet (as allowed by the PD code), a minimum lot width of 55 feet and a minimum lot depth of 85 feet. The proposed lots tend to be more of a square shape than a rectangular shape in order to better fit with the contours of the land. Two of the lots, lots 15 and 17, each have an average depth or width dimension that falls less than this standard due to topographical constraints and a need to protect the natural resources found on this parcel. These proposed standards are fairly proportional to the standards of the R6 zone which was the intent. For the multifamily lots the PD Code states that a minimum of 7,000 square feet is required for two common wall units and 13,000 square feet for up to 4 common wall units which is what was used to size the remaining multifamily lots.

The following table provides information about lot size and dimensions for all lots proposed in the PUD. As intended under the proposed layout , lot areas do vary and range in size from 5,000 square feet to over 15,000 square feet.

The setback standards required by the R10 zone are: Front yard – 25 feet, Side yard – 10 and 8 feet, Corner side yard – 20 feet, and Rear yard – 20 feet. The base zone setbacks would limit the buildable portions of lots with square footages at 50% of the base zone, therefore the applicant is proposing the following adjustments to the base zone setback standards for the single family lots: Front yard – 18 feet , Side yard – 5 feet, Corner side yard – 15 feet, and Rear yard – 20 feet (unchanged). The exterior side yards for lots 1, 9 and 12 are proposed to be at 10 feet to match that of the underlying zone. For the multifamily lots the applicant is proposing the following setbacks: Front yard – 20 feet (unchanged), Side yard – 7.5 feet (0' on attached units), Corner side yard – 15 feet, and Rear yard – 20 feet (unchanged). The exterior side yard for lot 20 will be 25' due to an existing easement. These setbacks are requested in order to provide suitable building areas on the proposed lots.

Below is a list of lot area, width and depth for each lot in the PUD

	Proposed Dimensions			Proposed Setbacks			
Lot	Area	Width	Depth	Front	Side	St. Side	Rear
1	7,571	59.95	124.96*	18	5/10	N/A	20
2	7,000	62.01	112.89*	18	5	N/A	20
3	5,666	57.72*	99.39*	18	5	N/A	20
4	5,000	58.82	85	18	5	N/A	20
5	5,000	58.82	85	18	5	N/A	20
6	5,000	58.82	85	18	5	N/A	20
7	5,000	58.82	85	18	5	N/A	20
8	5,000	58.82	85	18	5	N/A	20
9	5,000	58.82*	85.01*	18	5/10	N/A	20
10	5,821	69.52	86.55	18	5	15	20
11	5,937	69.51	86.55	18	5	15	20
12	7,052	63.42	100.75	18	5/10	N/A	20
13	6,146	61	100.75	18	5	N/A	20
14	6,140	63.04	100.75	18	5	N/A	20
15	5,100	48.88*	96.57	18	5	15	20
16	6,336	67.00	96.57	18	5	15	20
17	5,474	68.72	79.66*	18	5	N/A	20
18	13,296	121+/-	120+/-	20	7.5	15	20
19	17,926	115+/-	140+/-	20	7.5	N/A	20
20	15,655	111.62*	137.76	20	7.5/25	N\A	20

* Denotes average dimension for lot +/- Denotes approx. dimension

D. Open Space and Landscaping:

Response: The applicant has provided 45% open space area in the PD layout. The minimum PD requirement is 20% open space. This open space includes a mixed use of both active and passive uses. Passive uses will include bird watching and natural areas. The applicant has located the sidewalks to the south and east on the lower streets in order to provide view areas for the open space. Active uses will include walking within the natural areas. No paths are proposed in order to preserve the open space in its natural state. Aside from the areas disturbed during construction, no new landscaping or landscaping features are proposed. At time of PD final approval the applicant will submit, for City review and approval, a maintenance agreement for the open space area.

E. Timely Provision of Public Services and Facilities:

Response: Evidence that adequate capacity for these services (which include water, sanitary sewer, stormwater management and traffic management) is available to serve the PD has been provided under Section 17.64.100B in the narrative and on the Preliminary Utility Plan drawings. A Traffic Impact Analysis by Group McKenzie has been submitted as a separate document.

F. Public Service or facility guarantee

Response: The applicant, upon preliminary approval, will work with the city to determine that the public services provided are adequate for the existing site and that over-sizing will not be required.

G. Relationship to the Natural and Physical Environment:

Response: Every effort has been made to preserve trees, drainage ways, steep slopes and water resources in undeveloped areas of the site. This has been accomplished by preserving an ample amount of open space and by including 25% of the net developable area in multifamily housing.

A preliminary grading plan indicates areas and degree of impact from development construction. The grading and its impacts have been significantly reduced from the original plans for this development. Roads have been lowered and widths reduced, walls have been added and the total amount of fill required has been reduced to a great extent in order to protect the natural features of the site. The grading plan is a preliminary plan and construction details and direction in regards to benching of fill and construction inspection will be provided with the final construction drawings submitted to the city for review.

17.64.050 Density bonuses and density transfers

Response: The applicant is not seeking a density bonus for this PD,

17.64.070 Pre-Application Conference

Response: Pre-application conference 99-109 was held on January 5, 2000. 1 copy of the notes are included with this application.

17.64.080 Preliminary PUD Application

Response: The written narrative, drawings and separate studies included with this application constitute a compilation of the preliminary materials required for a PD application submission.

17.64.090 Required Plans

Response: The following plans have been submitted with this application: Site Plan; Natural Features Plan; Topography, Preliminary Utility Plans, Grading and Storm Drainage Plan; Erosion Control Plan; Tree Survey.

17.64.100 Preliminary PUD Plan – Narrative Statement
A. PUD Description

Response: The owner of this property is proposing to develop 8.35 acres as a planned development. The PD requires that 80% of the gross acreage (388,734sf) be developed with a density that is consistent with the R10 base zone. The owner is proposing the minimum density of 29 housing units with 20 lots. 17 units will be single family residences and 12 units (4-plexes on 3 lots) will be clustered multi-family. Oregon City requires that Planned Developments include a minimum of 20% of the net developable area (3.34 acres) be multi-family housing and that 20% of the gross area (8.4 acres) of the property be reserved as open space. The site plan has exceeded these requirements. 45% (3.8 acres) of the gross area has been preserved in open space. The housing density tabulation results in 75% single family (17 units on 2.5 acres) and 25% multi-family (12 units on 0.84 acres). Consolidation of housing helps provide more efficient land utilization on a site that has steep slopes and natural resource areas.

The proposed site layout plan provides for a continuation of Oak Tree Terrace as a public street. It branches off at two points to the south to create the single family and multi-family housing clusters. The PD's major open space area separates the two clusters with natural terrain. Both new streets serving the clusters will be public streets with reduced widths and sidewalks on only one side.

The applicant is proposing the following adjustments to the lot size standards for the single family lots: A lot area of 5,000 square feet (as allowed by the PD code), a minimum lot width of 55 feet and a minimum lot depth of 85 feet. Two of the lots, lots 15 and 17, each have an average width or depth dimension that falls less than this proposed standard due to topographical constraints and a need to protect the natural resources found on this parcel. Most of these lots tend to be more of a square shape than a rectangular shape in order to better fit with the contours of the land. For the multifamily lots the PD Code states that a minimum of 7,000 square feet is required for two common wall units and 13,000 square feet for up to 4 common wall units which is what was used to size the remaining multifamily lots.

The setback standards required by the R10 zone are: Front yard – 25 feet, Side yard – 10 and 8 feet, Corner side yard – 20 feet, and Rear yard – 20 feet. The base zone setbacks would limit the buildable portions of lots with square footages at 50% of the base zone, therefore the applicant is proposing the following adjustments to the base zone setback standards for the single family lots: Front yard – 18 feet , Side yard – 5 feet, Corner side yard – 15 feet, and Rear yard – 20 feet (unchanged). The exterior side yards for lots 1, 9 and 12 are proposed to be at 10 feet to match that of the underlying zone. For the multifamily lots the applicant is proposing the following setbacks: Front yard – 20 feet (unchanged), Side yard – 7.5 feet (0' on attached units), Corner side yard – 15 feet, and Rear yard – 20 feet (unchanged). The exterior side yard for lot 20 will be 25' due to an existing easement. These setbacks are requested in order to provide suitable building areas on the proposed lots.

The proposed open space will serve as a natural and passive recreation area. The remaining water resource value of the open area should ideally be protected from too much intrusion. The impacted water resource area (north of Oak Tree Terrace between lots 3 and 4 will be replanted and bank stability restored. The area will be kept in a separate tract as will the open space to the south and maintenance agreements will be submitted with final PUD approval.

The site will be fully improved with public services and this is evident in the preliminary utility drawing which is attached.

B. Timely Provision of Public Services and Facilities

Response: details are shown on the Preliminary Utility Plan

<u>Water:</u> A 16 inch water line exists in Holcomb Rd.. The applicant will extend an 8" line up Oak tree terrace to this line and provide two stubs down the proposed new north south streets to service the planned development.

<u>Sanitary Sewer:</u> There is an existing sanitary sewer that runs through the site. However half of it will be relocated and rebuilt within the streets to service the lot configuration proposed for this planned development. The new sanitary sewer will run down Oak Tree terrace and then turn down the cul-de-sac road and connect to the existing pipe that extends outside the property.

<u>Storm Sewer, Water Detention and Drainage Facilities:</u>
Storm water management on a site this steep is challenging and of great concern. The proposed plan uses a mixture of

services and strategies to ensure that runoff is controlled and erosion prevented. The proposal is to use both detention systems such as an underground detention pipe along with mechanical water quality devices such as Stormfilters, Stormcepters or other devices as approved by the City Engineer. The drainage will then outfall to a special outfall comprised of an underground perforated pipe in a drain rock filled trench trench which will be used to disperse the runoff in a sheet flow rather than a typical concentrated flow.

Traffic and Streets: The grading plan for the new streets has been included in the drawings. Streets will have reduced right of way and pavement widths with sidewalks on only one side. A traffic impact analysis has been done for the site and is under separate cover. The study indicates the site can handle the additional traffic from the new development and access to Holcomb Rd. is sufficient.

C. Approval Criteria and Justification for Adjustments

Response: The development of this property is consistent and complies with the requirements of Sections 17.64.010 and 17.64.040 and the Oregon City comprehensive plan. Sections 17.64.010 and 17.64.040 have been addressed within this narrative under the appropriate section numbers above.

The Oregon City comprehensive plan requires this site to be developed meeting the R10 zoning requirements. The backbone of this requirement is the need to achieve the density. As stated in this narrative, this site must accommodate a minimum of 29 units. The proposed plan of 29 meets this goal.

Due to the topographic constraints on the site, it could not be developed at the R10 density and still meet the dimensional requirements of the underlying R10 zone. For this reason we have adopted dimensional standards as allowed by the PD code using the R6 zoning requirements as a guide. Because of the topographic constraints and the need for public streets, we need to have the flexibility to reduce the lot depth to 85' as opposed to the R10 zone standard of 100'. This lot depth reduction leads to a need for a setback reduction in order to accommodate a reasonable home footprint.

Without the adjustments requested, this property could not be developed and meet the PD and R10 density requirements as outlined in the Oregon City Code. As a result, these adjustments help in allowing Oregon City to

meet its density requirements under Metro's 2040 plan and thus its comprehensive plan requirements.

D. Geologic Hazards

Response: A qualified geo-technical scientist has assessed the site and submitted a geo-technical report which is included with this application.

E. Water Resources

Response: A qualified wetlands scientist has delineated the site and submitted a wetland delineation report included with this application. A summary of the water resource issues is provided in this narrative under Section 17.49 as well as in the wetlands report. An addendum to this report has also been provided.

F. Historic, Archeological, Geological, Scenic Resources and Significant Trees

Response: The site does not have any culturally significant resources. A complete tree survey has been submitted with the application.

G. Covenants Conditions and Restrictions (CC&R's)

Response: Any applicable CC&R's will be submitted prior to final PUD approval. This will include guidelines governing a homeowner's association. The area designated as Open Space will remain open space tract that is excluded from future development. Oak Tree Terrace is the continuation of a public street and should be maintained by the City.

17.64.110 Preliminary PUD Plan –

A. **Response: Tabular information**

AREA	ACREAGE	% OF GROSS AREA
Gross Area of PUD	8.35 acres	100%
ACREAGE BY USE		
Lots	3.34 acres	40%
Open Space	3.80 acres	45%
Public ROW	1.26 acres	15%

AREA	ACREAGE	% OF NET AREA
Net Developable Area	3.34 acres	100%
ACREAGE BY USE		
Single family lots	2.50 acres	75%
Multifamily lots	0.84 acres	25%

B. **Response: Tabular information**

DESCRIPTION	PHASE I	PHASE II	PHASE III
TIMING	2001-2002	2002-2004	2004-2006
ACREAGE	1.09	1.29	5.96
NUMBER OF RESIDENTIAL UNITS	4	8	17
NON-RESIDENTIAL AREA	0	0	0
OPEN SPACE AREA (acres)	0.19	0	3.63
% OF UTILITIES DEVELOPED	85%	90%	100%
% OF STREETS DEVELOPED	24%	50%	100%

C. **The gross density for the site, based on PUD standards requires 80% development of housing units based on the underlying zone. 80% of 8.35 acres under R10 zoning is 290,980 sf. This land area would require 29 units. The applicant has proposed 29 units.**

D. **Response: Tabular information**

SLOPE	SLOPE AREA (acres)	IMPERVIOUS AREA (acres)
0.0% TO 24.9%	5.29	1.32
25.0% TO 34.9%	1.66	0.048*
OVER 35.0%	1.40	0.001

* This represents the amount of slope area on buildable areas (outside of setbacks) on the proposed lots. Actual impervious areas will be no greater than this number.

17.64.120 Preliminary PUD plan approval criteria

A. **Response: The development of this property is consistent and complies with the requirements of Sections 17.64.010 and 17.64.040 and the Oregon City comprehensive plan. Sections 17.64.010 and 17.64.040 have been addressed within this narrative under the appropriate section numbers above, and compliance with the Oregon City comprehensive plan is addressed in Section 17.64.100C above.**

B. **Response: Aside from the adjustments requested under Section 17.64.040C in this narrative, this development meets the applicable requirements of the underlying zoning district and has been developed at a density that is consistent with the underlying R10 zoning. Compliance with the Water Resources Overlay District is addressed in Section 17.49 of this narrative and the Unstable Soils and Hillside Constraint Overlay District is addressed in Section 17.44 of this narrative.**

C. **Response: The phasing plan as shown in Section 17.64.110B is reasonable and does not exceed 5 years. Dedication or preservation of the open space will be addressed at final PUD approval**

D. **Response: Evidence that adequate capacity for these services (which include water, sanitary sewer, stormwater management and traffic management) is available to serve the PD has been provided under Section 17.64.100B in the narrative and on the Preliminary Utility Plan drawings. A Traffic Impact Analysis by Group McKenzie has been submitted as a separate document.**

E. **Response: All of the adjustments to the applicable dimensional requirements are necessary to achieve the purposes and requirements of this chapter. Due to the topographic constraints of the site, the lots could not be developed at the density required by the underlying R10 zone without the necessary adjustments that were requested and still protect the natural resources and slope areas on the site. Direct**

compliance with the dimensional requirements of the underlying zone would make the property undevelopable at the underlying zones required density.

17.64.140 Site Plan and Design Review

Note: It is understood that single family proposal do not need design review.

RESPONSE: Three 4-plexes are proposed on 3 lots for this PD project. The applicant will present a sample building layout and building elevations with a description of building materials to the principal planner prior to final approval of the building permit. Each unit in the 4-plex will have a garage that provides the two (2) off-street parking spaces. There will be additional parking available in the driveways of the units. As a result each 4-pllex unit will have a minimum of 3 parking spaces available.

CHAPTER 17.44 UNSTABLE SOILS AND HILLSIDE CONSTRAINT OVERLAY

17.44 Purpose

Response: The applicant concurs that a conservative approach to development of this site is appropriate because areas of the property do have steep slopes. At the same time the geo-technical report included with this application verifies that the proposed development area will not cause a potential landslide hazard. Guidelines for construction from the geo-technical report have been suggested. After the city reviews this report, appropriate standards for building on this site can be determined. Clustering development in the less steep areas allows density to be met and leaves a large percentage of land as natural areas.

17.44.030 Applicability and Procedures

Response: The provisions of this chapter apply in conjunction with the Oak Tree Terrace PD land use application.

17.44.050 Development Permit Application

Response: As required by this section the following drawings and reports have been provided with this application:

A. Site plan with topography; trees, water resources, drainage ways, and steep slopes.

B. Grading plan for roads and cut and fill soil ratios.

C. Buildings will be single family residences, duplexes and attached housing. No buildings are proposed at this time. Locations and sizes of potential multifamily buildings are shown on the plans to demonstrate there is suitable building area for multifamily structures. Elevations and other building details will be provided at the time of building permit application for these lots.

D. Excavation and fill cross section diagram

E. Erosion control plan addressing items (a) through (g) as required.

F. Hydrology Report

G through H. A geotechnical report which includes hydrology, geology and soil analysis and which meets the requirements of Clackamas County

17.44.060 Development Standards

A. As stated in this section the purpose of the standards serve to avoid unnecessary disturbance of topography, vegetation and soils. To the maximum extent possible tree and ground cover removal for residential lots shall be confined to building footprints and driveways, utility and road construction.

Response: The major consideration for designing the PD layout was to meet density requirements for the PUD while leaving the natural resource and slope areas as undisturbed as possible. This has been done by reducing average lot sizes and locating development on the less steep terrain. There is a long north to south drainage way which runs through the center of the site and the extension of Oak Tree Terrace will cross it. Other than this crossing the steepest areas on the site have been left as open space.

B. Designs shall minimize cuts and fills.

Response: Cut and fill estimates for the roadway and preliminary grading have been submitted with this application. The grading activity for construction has been greatly limited in comparison to the initial submittal for this subdivision. Walls have been planned in order to reduce grading activities even further. Grading for each lot will conform on an individual basis to the existing permit process at Oregon City.

C. Toes of cuts and fills shall be set back from boundaries of separate private ownership at least 3 feet plus one-fifth of the vertical height of the cut and fill.

Response: The builder will comply with this standard on a lot by lot basis under the building permit process. This will apply to the entire site boundary and it's relationship to adjacent residential properties.

D. Except in connection with approved plans for geo-technical remediation, cuts shall not remove the toe of any slope that contains a known landslide or is greater than 25%.

Response: The applicant will comply with this standard and submit geo-technical remediation plans where required or where the slope would exceed 25%. The geo-technical report confirmed that no known landslide hazards exist in the proposed grading areas.

E. Any structural fill shall be designed by a qualified civil or geo-technical engineer...

Response: A preliminary grading plan has been provided for this project. This preliminary grading plan shows proposed grades for the purpose of planning in order to show that this proposal can be constructed. A final grading and erosion control plan will be prepared with the engineering plans for this development should it get approved. The final plan which is subject to the City's review will be designed by a licensed civil engineer in accordance with the geotechnical report for this project. All proposed fills will be inspected and certified by either the civil or geotechnical engineer for the project.

F. Retaining walls shall be constructed in accordance with the Oregon's Uniform Building Code.

Response: Retaining walls (shown on the grading plan) will be required for construction of the roadways in order to minimize fill slopes and grading activities. The construction of these walls will meet the requirements of the Oregon Uniform Building Code and walls over 4' in height will be designed by a licensed structural engineer at the time of final plan submittal for construction permits.

G. Roads shall be minimum width to provide safe vehicle and emergency access while minimizing cut and fill to provide positive drainage.

Response: The proposed roads have reduced right of ways and pavement widths with sidewalks on only one side of the street to minimize grading. The proposed road widths are suitable for public streets and safe emergency vehicle access while at the same time they will assist in limiting the amount of grading required for this development.

H. Density

Response: The property is being developed as a Planned Development and is exempt from this sub-section.

I. Property with slopes of twenty five to thirty five percent slopes between grade breaks:

1. Density limits:

   Response: Density and Building limits of planned development apply.

2. Grading and Vegetation removal limits:

   Response: Lots 14, 15, 4, 5 and 6 have slopes of this range in them but these sloped areas cover a small portion of these lots

(646 square feet on lot 14, 1095 square feet on lot 15, 468 square feet on lot 4, 1456 square feet on lot 5, and 1010 square feet on lot 6). A majority of the sloped areas on these lots are also located within building setbacks which will further limit the impact. The applicant agrees that no more than 50% or 4000 sf of the surface area of an individual lot (whichever is smaller) will be stripped of vegetation or covered with structures or impermeable surfaces.

J. For the portions of the property with slopes over 35% between grade breaks.

1. Development is prohibited with exceptions: Roads, utilities, public facilities and geotechnical remediation.

Response: No development other than those approved will be located on property with slopes over 35% between grade breaks. The only parcels which contain slopes over 35% are the multifamily parcels. A conservation easement is shown on the site plan to restrict development on these slopes. Even with the conservation easement over the sloped area, it can be seen on the site plan that there is more than adequate room for building construction on these parcels.

2. To the maximum extent possible, avoid locating utilities, roads, and public utilities on these slopes:

Response: The applicant has avoided locating utilities and roads on these slopes to the maximum extent possible. The purpose of the PD was to leave as much of the steep slope property alone, while developing the less steep portions. Only a small portion of Wittke Lane and the grading associated with it encroach on the steep slope areas (120 square feet). The location of Wittke lane was determined by locating the roadway above the top of slope as tied in the field. All other streets are out of these areas. The proposed utilities have been located outside of the steep slope areas, including the storm outfalls.

K. Review authority discretion for geo-technical re-mediation and construction:

Response: The applicant acknowledges the reviewer's authority and discretion over geo-technical re-mediation decisions.

17.44.070 Access to Property

Response:

A. Shared driveways are shown for the multifamily lots. Additional requirements for shared driveways may be placed on the remaining lots.

B. Reduced road widths have been proposed to reduce road construction impacts. In addition a shed street section was used on the roadways and walls are proposed to further limit the amount of grading associated with this development. Driveway designs will be addressed at the time of home construction.
C. Points of Access to arterials and collectors have been minimized.
D. The City Engineer will verify that emergency services are adequate.

17.44.080 Utilities

Response: New utilities will be placed underground and utility construction impact will be minimized as much as practical. Utility locations shall be located in areas of road construction except for the storm drainage outfalls which are located out of the road areas but also out of steep slope areas.

17.44.090 Stormwater Drainage

Response: A stormwater drainage plan and a hydrology report have been submitted with this application. Although the hydrology report was done for an alternate design it shows the basic runoff numbers and shows that the stormwater can be handled on site. A final stormwater report will be prepared for the final design of the subdivision. Our current proposal is to first detain the stormwater runoff and then to treat the stormwater by routing it through a mechanical storm water quality device. There will be two locations for detention and treatment, one on each lower street. The drainage will then outfall to a special outfall comprised of an underground perforated pipe in a drain rock filled trench trench which will be used to disperse the runoff in a sheet flow rather than a typical concentrated flow. Preliminary details of this outfall are shown in the preliminary plans. The Final storm drainage design shall meet the requirements of the City of Oregon City and shall be approved by the City Engineer prior to construction.

17.44.100 Construction Standards

Response A-G: The applicant has read and acknowledged the purpose of the construction standard section and agrees to comply with these standards at the time construction is initiated.

Chapter 17.49 – Water Quality Resource Area Overlay

17.49.010 PUD Purpose

Response: The developer of Oak Tree Estates PUD acknowledges that the purpose of this chapter is to protect and improve water quality, to support beneficial water uses and to protect the functions and values of existing and newly established Water Quality Resource Areas. Compliance with the standards of this overlay zone is being submitted concurrently with the planned development application. A wetlands report has been included in the application materials. All information provided in the narrative response to this section and in the preliminary site plan has referenced the analysis of the wetlands report prepared by Mirth Walker of Fishman Environmental.

17.49.030 Applicability

Response: The proposed PUD development must comply with the regulations of this chapter because the property is zoned with the Water Quality Overlay District designation.

17.49.040 Administration

A 2. Applicants are required to provide the City with a field verified delineation of the Water Quality Resource Areas on the subject property in their application.

Response: The applicant has provided this information for the City to review. See site plans and separate wetlands report by Fishman Environmental which is included with this application.

A 4(a). Compliance with federal and state regulations.
The applicant is responsible for making application for necessary state or federal approval in conjunction with the submittal of their development application.

Response: The applicant acknowledges that any permit issued by the City pursuant to this chapter shall not become valid until other agency approvals have been obtained or those agencies indicate that such approvals are not required.

17.49.050 Water Quality Resource Area Standards

A. The standards serve to protect and improve the beneficial water uses and functions and values of the Water Quality Resource Areas.

B. The Water Quality Resource Area is the vegetated corridor and the protected Water Feature. The width of the vegetated corridor is specified in Table 1.

Response: Vegetated Corridor Boundaries are included in the wetlands report (and addendum) by Fishman Environmental as well as on the preliminary plans for the project.

C. Uses Permitted Outright.

Response: Stream, wetland, riparian and upland enhancement is allowed. See Fishman Environmental wetlands report (and addendum) for wetland enhancement.

D. Uses Under Prescribed Conditions.

Response: None are proposed

E. Provisional Uses
The following uses are allowed in the Water Quality Resource Area subject to compliance with the application requirements and development standards of subsections G and H.

Response: The uses listed below apply directly to this development.

1. **Any use allowed in the R10 base zone.**
2. **Roads to provide necessary ingress and egress across Water Quality Resource Areas.**
3. **New public or private utility facility construction.**
4. **Walkways and bike paths.**

F. Prohibited Uses

Response: No prohibited uses are proposed.

G. Application requirements:

Applications for Provisional Uses in the Water Quality Resource Area must provide the following information in a water resources report in addition to the information required for the base zone.

Response: The road crossing is necessary to provide ingress and egress to the site and cannot be avoided. The applicant has been able to reserve 45% open space (25% beyond the requirement) to allow for the natural function and values of the property to remain undisturbed. The additional 25% of open space is intended to compensate for the roadway disturbance and to protect the site's valuable natural resources. In addition the applicant will mitigate the roadway crossing with restoration plantings and

enhancement of the damaged area. A separate Water Quality Resource Mitigation Plan has been addressed in the wetlands report and a final mitigation plan will be prepared upon approval of this application. See the wetlands report for a more detailed response to this item.

The water resources report has been prepared by a qualified professional whose credentials are listed in the report. The wetlands scientist (using the topographic survey) has provided responses to the requirements of items 1 through 12. Please see wetlands report (and addendum) by Fishman Environmental. Trees requested under Item 2 are shown on the Tree survey by WB Wells and Associates, Inc. Other Items not addressed by Fishman Environmental's reports are addressed below.

1. **A map has been prepared and is shown in the wetlands report and addendum. This map is also shown in full scale on the preliminary drawings.**
2. **Trees are shown on the Tree Survey map supplied within the preliminary drawings.**
3. **All wetlands are identified in Fishman Environmental's reports.**
4. **The location of existing debris and nuisance plants are identified in Fishman Environmental's reports.**
5. **An assessment of the existing conditions is contained within Fishman Environmental's reports.**
6. **An inventory of vegetation is contained within Fishman Environmental's reports.**
7. **This assessment is contained within Fishman Environmental's reports.**
8. **These impacts are identified within Fishman Environmental's reports.**
9. **This analysis is contained within These impacts are identified within Fishman Environmental's reports.**
10. **The water resources report was prepared by a Professional Wetland Scientist and a Wetland Ecologist whose credentials are presented in the report.**
11. **Alternatives Analysis. The applicant is proposing only allowed provisional uses within the water resource area.**
    a. **No practical alternatives exist that will not disturb the water quality resource area. Due to the existing slopes on the site, the road must be brought through the area shown. Any roads constructed below the resource areas would require massive amounts of structural fill in order to support the roadway. Since the wetlands extend all of the way to the north property line, there is no room to run above them.**
    b. **The development in the resource areas has been limited to the greatest extent possible. The road width across the**

resource area has been reduced to 20' and there is a sidewalk on one side only rather than both. In addition an arch culvert is being installed to protect the existing drainage and walls are proposed on both sides of the road to limit the amount of grading that is needed in order to construct the roadway. Without these walls the grading required would further impact the wetlands areas.

c. **Mitigation will allow the area to be restored to an as equal or better condition in accordance with the table. The mitigation proposal is identified in Fishman Environmental's reports.**
d. **The proposed development is consistent with the water quality resource area mitigation plan identified in Fishman Environmental's reports.**

12. **Mitigation has been addressed in These impacts are identified within Fishman Environmental's reports.**

H. Development Standards
Applications for provisional uses in the Water Quality Resource Area shall satisfy the following standards.

Response: The applicant has worked to provide evidence that each standard listed below, relevant to this development, will be satisfied to the fullest extent when the development is built.

1. **The resource area shall be mitigated as described in the wetlands report by Fishman Environmental.**
2. **Existing vegetation will be protected and work areas will be controlled so as to reduce damage to surrounding vegetation.**
3. **Where vegetation is removed or contours altered the site affected will be replanted as soon as possible during the next planting season.**
4. **The Water Quality Resource Area will be marked prior to construction and remain undisturbed except where provisional uses are being constructed. Markings will remain in place until construction is complete.**
5. **Walkways will not be constructed within 10 feet of the boundary of the protected resource unless allowed and approved as part of the provisional use.**
6. **Provisions of the storm water quantity and quality control facilities (6a to 6d) have been met and may be reviewed on the utility site and storm water plan. No existing structures are planned to be altered or redesigned in this project. The previously proposed water quality pond within the resource area that was shown in previous submittals has been removed. Two separate detention and water quality systems are shown within the lower streets.**

7. **Off-site mitigation will not be necessary for this project. All mitigation will be performed on-site.**

I. Vegetation Corridor width reduction

Response: This is not requested in this PUD application.

17.49.060 Subdivisions and Partitions

Response: This application is being submitted for a Planned Development and certain requirements of this chapter do not apply. The wetlands impacted by the road construction will be mitigated in an area that will be part of the open space tract.

17.49.070 Density Transfers

Response: The applicant is not requesting any density transfers.

17.49.080 Variances

Response: No variances are requested in this application.

17.49.090 Map Administration

Response: No mapping amendments or modifications to resource areas are requested with this application. No Title 3 wetlands will be added.

Fishman Environmental Services, LLC
CONSULTANTS IN ECOLOGY AND NATURAL RESOURCE MANAGEMENT

WATER RESOURCES REPORT ADDENDUM

OAK TREE ESTATES (WITTKE PROPERTY)

T2S, R2E, SECTION 28 NE 1/4, W.M.

CLACKAMAS COUNTY, OREGON

Prepared for:

Lowell Wittke

and

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EXHIBIT F

PD 00-01

July 2001

FES Project 00121

WATER RESOURCES REPORT ADDENDUM
OAK TREE ESTATES (WITTKE PROPERTY)
CITY OF OREGON CITY FILE NO. PD 00-01: OAK TREE PUD
JULY 30, 2001

This report addendum addresses proposed site development changes that have evolved since the wetland delineation and water resources report was prepared in March of 2001. These changes are a result of extensive design review by the City of Oregon City and redesign by W.B. Wells and provide more protection for water resources on the site.

The size of the delineated wetland on the site was 0.08 acre. The project proposes to fill 0.05 acre (2,052 SF) of wetland, partly with an open-bottom arch culvert (comprises 0.02 acre (803 SF) of the total calculated fill area) under the proposed paved roadway, in order to access the western portion of the site. The new revised site plan avoids most of the steep slopes and drainage areas on the site. Road widths have been reduced and the number of units have been reduced as well as moved upslope to avoid steeply sloped areas. The project design now incorporates a retaining wall to reduce the amount of grading and fill on steep slopes. A 50 foot setback is maintained from all water features on the site except for the road crossing area and associated wetland fill area, and the springs on the site, which have a 40 foot setback.

The City of Oregon City reviewed the *Oak Tree Estates (Wittke Property) Wetland Delineation and Water Resources Report* prepared by Fishman Environmental Services, LLC in March of 2001, and identified several areas needing expansion (Staff Report, May 7, 2001). This addendum addresses these needs.

The City noted that the site contains an unnamed drainage way that is identified as a significant resource within Oregon City and is listed in the Inventory of Water Resources in Ordinance 93-1007 (see Figure 1). The unnamed drainage swale is part of the Livesay Drainage Basin, which drains to Abernethy Creek, a known anadromous salmon-bearing stream. The upper portion of the drainage has been impacted by off-site agricultural uses and a dirt road. It joins another unnamed drainage near the south boundary of the site.

Oregon City code 17.49.050(G)(1) requires a map that delineates the water quality resource areas, including the protected water features and the vegetated corridors. Figure 2 shows the revised water resource map; the March 2001 report attempted to identify features that met wetland criteria defined by the Division of State Lands and the US Army Corps of Engineers, and also as defined by the City of Oregon City in its Water Resources Overlay District Water Quality Resource Area Standards. The revised figure treats all water resources on the site as jurisdictional, even though not all of them meet Division of State Lands wetland determination criteria or "waters of the state" criteria or the definitions in the standards. Vegetated corridors have been mapped and are 40 feet from the springs; 50 feet from the delineated wetland, and range from 50 feet to 150 feet in steep slope areas from the two unnamed drainages on the site. It should be noted that a portion of the 50 foot vegetated corridor around the delineated wetland is proposed for filling. Proposed encroachment into the vegetated corridors on the site are as follows:

Lots 2, 3 and in the street:	18,870 SF
Lot 4 and in the street:	3,809 SF
Lot 18:	312 SF
Total Buffer Encroachment:	22,991 SF

Additional vegetated corridor area extends into Lots 18 and 19; a conservation easement across this area is being proposed to protect the slopes.

Mitigation for the vegetated corridor impact will occur in the remaining corridor and downslope of the wetland. A larger vegetated corridor can also be depicted on the site plan in the southwest corner of the site below Lots 12-14 and to the east of the drainage below Lots 18-20.

17.49.050(G)(4) requires an inventory and location (map) of nuisance plants on the site. The two invasive plants noted on the site, Himalayan blackberry and English holly, are not listed as nuisance plants on the Oregon City Native Plant List. As previously noted, Himalayan blackberry was scattered throughout the understory of the Oregon white oak forest, and was the most dense near the existing sewer line, immediately south of the wetland boundary along the topographic drainage, and in open canopy areas, especially in the southeast portion of the site near a recent clear cut. A small amount of English holly was noted in the lower portion of the topographic drainage, near sample plot 7. We believe that a map showing these locations is not required since these plants are not listed as nuisance plants. A site visit will be required to map these locations, if required.

17.49.050(G)(5) requires an assessment of the existing condition of the water quality resource area (comprised of the wetland and the north stream area, as listed in the City's staff report). This wetland area is a disturbed emergent area dominated by spreading rush with areas of soft rush and Himalayan blackberry. The wetland has been disturbed by sewer line placement and is currently culverted under a paved road. A narrow wetland finger extending to the east of the main portion of the wetland is a roadside ditch with soft rush, spreading rush, and red alder and black cottonwood saplings. The wetland receives surface flow from offsite areas to the north, from a very small drainage basin area. The wetland appears to rarely pond water and wetland hydrology is typically displayed by saturated soils. Soils are mapped as Saum silt loam, a non-hydric soil, but display indicators of hydric soils (soils were a black (10YR 2/1) silt loam with clay and dark grayish brown (10YR 4/2) redox concentrations (mottles)). In general, the wetland has low structural diversity and low habitat diversity and is quite small, all factors that contribute to a low habitat value for wildlife. No fish habitat is present. The wetland is located in a sloped drainage within a small basin, so the hydrologic control function (storm water storage) is minimal. By filtering runoff from pasture and developed slopes above, the wetland provides a water quality function. It provides a wildlife travel corridor to undeveloped forest areas to the south.

As stated on page 11 of our March 2001 report, the condition of the existing vegetated corridor was rated as "Good" according to Table 17.49-2 given in the Oregon City Water Resources Area Overlay District standards. The vegetated corridor contains more than 95% cover of trees, shrubs and groundcover (the only non-vegetated area consists of the paved access road). Dominant species noted in the vegetated corridor included:

Trees	**Shrubs**	**Ground Cover**
Oregon white oak (70%)	Himalayan blackberry (30%)	sword fern (40%)
Douglas fir (15%)	beaked hazelnut (15%)	bentgrass (20%)
big-leaf maple (10%)		tall fescue (20%)

Percent canopy cover is approximately 90%. The combination of trees, shrubs, and groundcover is more than 95%. However, while most of the above species are native, the percent cover of non-native species is greater than 10% (non-natives include Himalayan blackberry (30%), bentgrass (20%), and tall fescue (20%)). The vegetated corridor is thus changed to Degraded.

Mitigation requirements include removal of non-native species and revegetation with non-nuisance plantings from the Oregon City native plant list and seeding to achieve one hundred percent ground surface coverage.

17.49.050(G)(7) requires an analysis of the impacts the proposed development may have on the water quality resource area comprised of the drainage swale that dominates the landscape below the proposed main access road. The use of retaining walls rather than fill slopes will greatly increase the protection of the landscape below the development. The use of an open-bottom arch culvert will restore the wetland's integrity underneath the road crossing. The proposed development will not place a storm water quality pond in the existing wetland area between lots 3 and 4, as was previously proposed. The revised site development plan affords much greater protection of the site's natural features than the previous plan. The hydrology of the wetland area may be slightly decreased since a part of it will be filled, thus reducing the drainage basin area feeding into the wetland. Soils should not be affected with the installation and maintenance of erosion prevention and control methods. Bank stability has been addressed by others, and the use of a retaining wall will help maintain bank stability as well as the slopes of the lands abutting the water resource. The hazard of flooding will not increase, based on the information presented in the next paragraph. While some trees will be removed for site development purposes, many large trees and wooded features will be protected in the open space tract. It is our understanding that 227 out of the existing 332 trees (68%) will be preserved on the site. As mentioned previously, the site does not provide fish habitat but may support downstream fish habitat by the generation of woody debris, the augmentation of water flow and providing water quality filtration. The site provides wildlife habitat for small songbirds and other birds, and small to medium size mammals, including deer. The proposed development should not affect usage of the water resource area by

wildlife. The proposed development also leaves a large open space tract that maintains a wildlife travel corridor for movement through the area and protects a large number of trees and shrubs used by birds for perching, feeding, cover, and nesting.

17.49.050(G)(8) requires addressing the impacts the proposed development will have on the water quality of the affected water resources. As W.B. Wells has informed us, the development impacts on water resources on the site will be limited by the following means: The stormwater system for the site will be divided into two systems which will avoid concentrating stormwater in one location. Each of the two systems located in the lower roadways will collect the stormwater runoff in catch basins and route the stormwater to an underground detention system that will limit the stormwater release rates to that of the pre-existing site conditions (undeveloped). After passing through the detention systems the stormwater will be routed through mechanical stormwater quality devices such as stormcepters, stormwater filters or other devices as approved by the City. This will remove pollutants from the water prior to outfall. After passing through the water quality devices the stormwater will be routed to an outfall consisting of a perforated pipe located in a drain rock filled trench. This trench will be constructed level with the existing grade at the outfall and will serve as both an energy dissipator and a flow spreader. Essentially this outfall will work by directing the stormwater into the perforated pipe located near the bottom of the trench. The stormwater will then rise to the top of the trench due to the amount of head pressure developing on the outfall pipe. Once the stormwater reaches the top of the trench it will be spread over the entire length and the stormwater will flow down the hill in a sheet flow rather than a concentrated flow. This system will limit runoff rates to the predeveloped conditions, treat the stormwater for pollutants as required by the system and limit concentrated runoff which is major factor in erosion. As for erosion control, W.B. Wells has developed a plan that utilizes many erosion control measures that are not detailed here.

While a portion of the wetland is proposed for filling, the required mitigation plan for both the wetland fill and the vegetated corridor impact will mitigate and replace the lost functions on the site within and adjacent to the remaining wetland (enhancement) and immediately below and above the existing wetland (creation, and enhancement of the vegetated corridor). The improved vegetated corridor will provide a better water quality function and protect the water quality resource area from the development. Additional protected areas on the site can also contribute to mitigation for the vegetated corridor impacts.

W.B. Wells will address 17.49.050(G)(11), alternative development plans that were considered for the site to avoid impacts on the water resource areas.

17.49.050(G)(12) Mitigation Plan. The original conceptual mitigation plan is hereby discarded, since the site plan has been revised and the wetland impacts reduced. Retaining part of the wetland on the site allows a much better wetland mitigation design, by enhancing what is left and

creating new wetland immediately adjacent to the existing wetland. Creation of wetland area at a 1.5:1 ratio requires 3,078 SF, or 0.07 acre (enhancement credit could be included by enhancing the remaining wetland on the site, which equals 1,518 SF at a 3:1 replacement ratio, providing a mitigation credit of 506 SF). We are again proposing a conceptual mitigation plan, and our office will complete a full-blown wetland mitigation plan and vegetated corridor enhancement plan after the site development plan has been approved by the City, to be submitted to the City and the Division of State Lands and the US Army Corps of Engineers in conjunction with a wetland fill and removal permit application. We respectfully suggest that approval of the site development plan be conditioned, dependent upon the completion of the required mitigation plan. Figure 3 shows the proposed area for wetland creation on the site. Additional vegetated corridor area is shown in Figure 2.

Conceptual Wetland Grading Plan
Non-native vegetation areas will be flagged in the field and the top 6 to 12 inches will be scraped to remove roots and vegetation debris (in wetland and in the vegetated corridor immediately adjacent to the wetland area). Three to four inches of top soil removed from developed upland forest areas on the site (no blackberry canes) will be placed in the graded areas to provide nutrients and organic matter for plants. Final grading plan will be reviewed by an engineer to ensure soil and slope stability.

Conceptual Wetland Planting Plan
The existing and created wetland area will be planted with Oregon ash saplings at a density of 1-3 every 100 SF. Pacific ninebark shrubs will be planted on 10 foot centers. An appropriate native grass seed mix will be specified and spread over all bare soil areas in the wetland area. Plugs of spreading rush will be planted in created wetland areas. The total number of plants to be installed will be calculated.

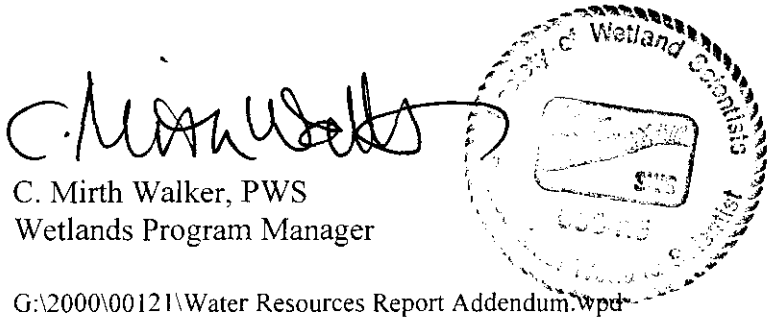
Conceptual Vegetated Corridor Area Enhancement Plan
After removal of non-native vegetation in the vegetated corridor immediately adjacent to the wetland area, an appropriate upland grass seed mix will be specified and spread over all bare soil areas in the vegetated corridor area. Vine maple saplings and sword fern will be planted at an appropriate density in the corridor. Removal of non-native vegetation in the vegetated corridor south of the wetland area shall be done by hand to avoid damage to the sloped site.

This document has discussed how adverse impacts may be caused as a result of development (loss of wetland area by fill - to be mitigated) and W.B. Wells has explained how adverse impacts to resource areas have been avoided, minimized, and/or mitigated in accordance with, but not limited to, Table 17.49-2. A list of all responsible parties including the owner, applicant, contractor or other persons responsible for work on the development site will be prepared after site development approval. The map showing where the specific mitigation activities will occur is

shown in Figures 2 & 3. A maintenance program assuring plant survival for a minimum of three years will be developed as part of the monitoring requirement. The mitigation plan will detail the implementation schedule, including the timeline for construction, mitigation, maintenance, monitoring, reporting, and the mitigation plan will contain a contingency plan. Monitoring reports shall be submitted to the Division of State Lands, the US Army Corps of Engineers (if required), and the City of Oregon City for a period of 3 years after mitigation implementation.

We hope that this addendum addresses the requirements of the City's Water Resources Overlay District Water Quality Resource Area Standards as identified in the May 7, 2001 Staff Report. We will follow through with the required mitigation plan elements upon notification that the project will be approved for development by the City.

Respectfully submitted,



C. Mirth Walker, PWS
Wetlands Program Manager

G:\2000\00121\Water Resources Report Addendum.wpd

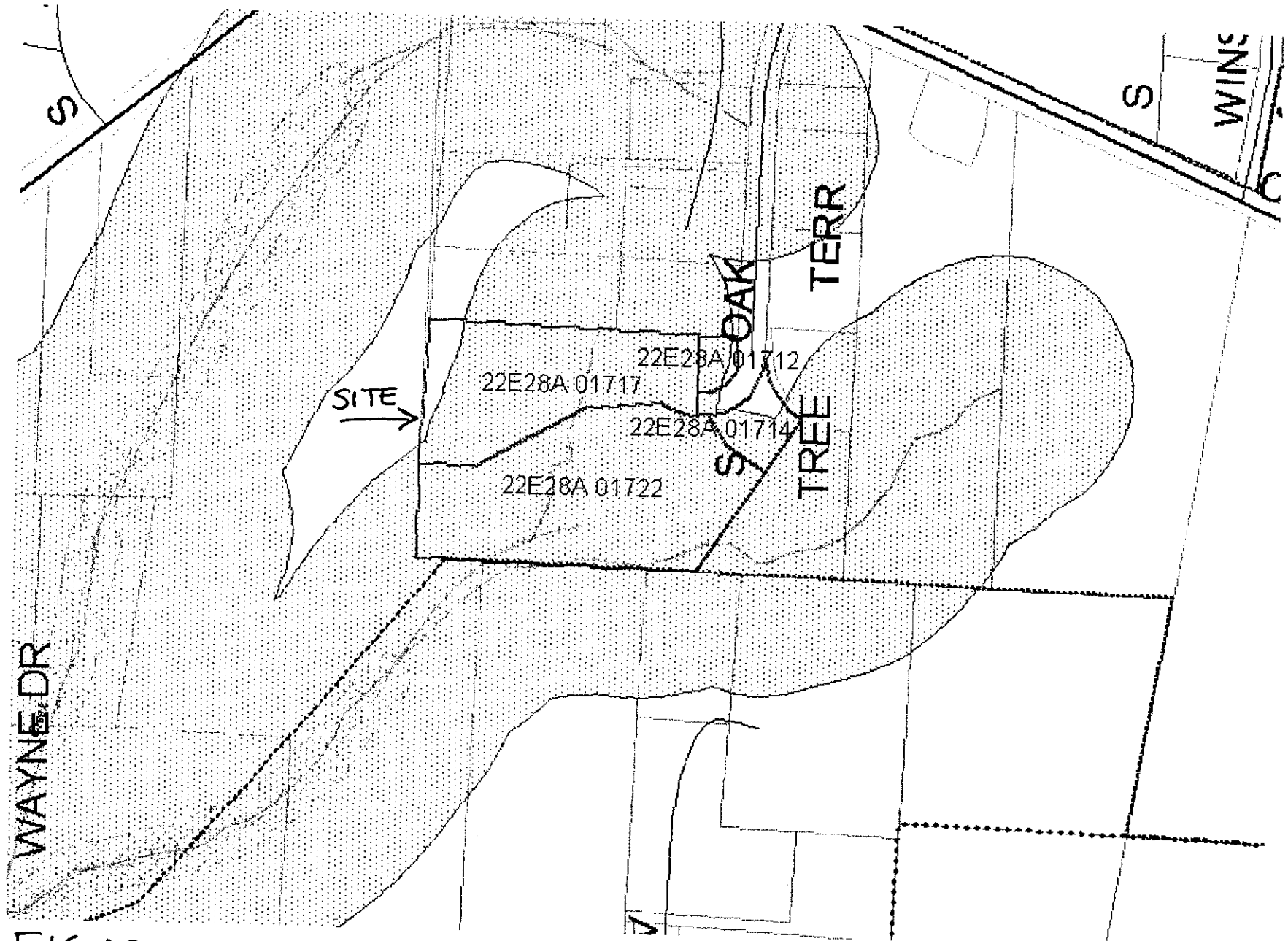


FIGURE 1. OREGON CITY TITLE 3 WETLANDS MAP (METRO).

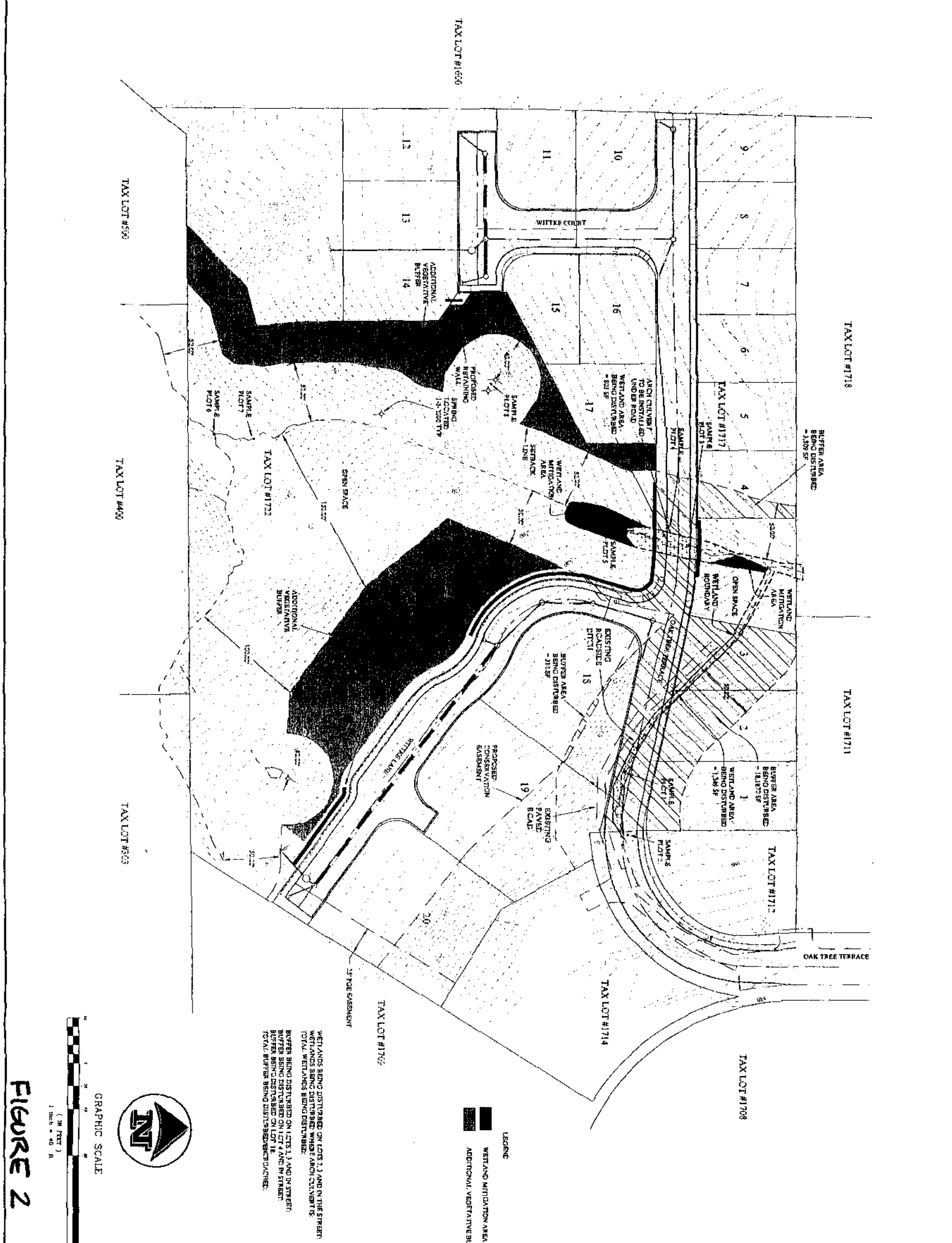


FIGURE 2

REVISIONS:

W.B. WELLS
and associates inc.
ENGINEERS SURVEYORS PLANNERS
4230 NE FREMONT STREET
PORTLAND, OREGON 97213
PHONE (503) 284-5896
FAX (503) 284-8530

WATER RESOURCES PLAN
OAK TREE P.U.D.
OREGON CITY, CLACKAMAS COUNTY, STATE OF OREGON
CITY FILE #: [illegible]

FOR:
LOWELL WITTKE

DRAWN BY:	CHECKED BY:
DATE: 7-6-01	SCALE: 1" = 40'
PLOT DATE: 8-1-01	JOB NO: [illegible]

SHEET 1 OF 1

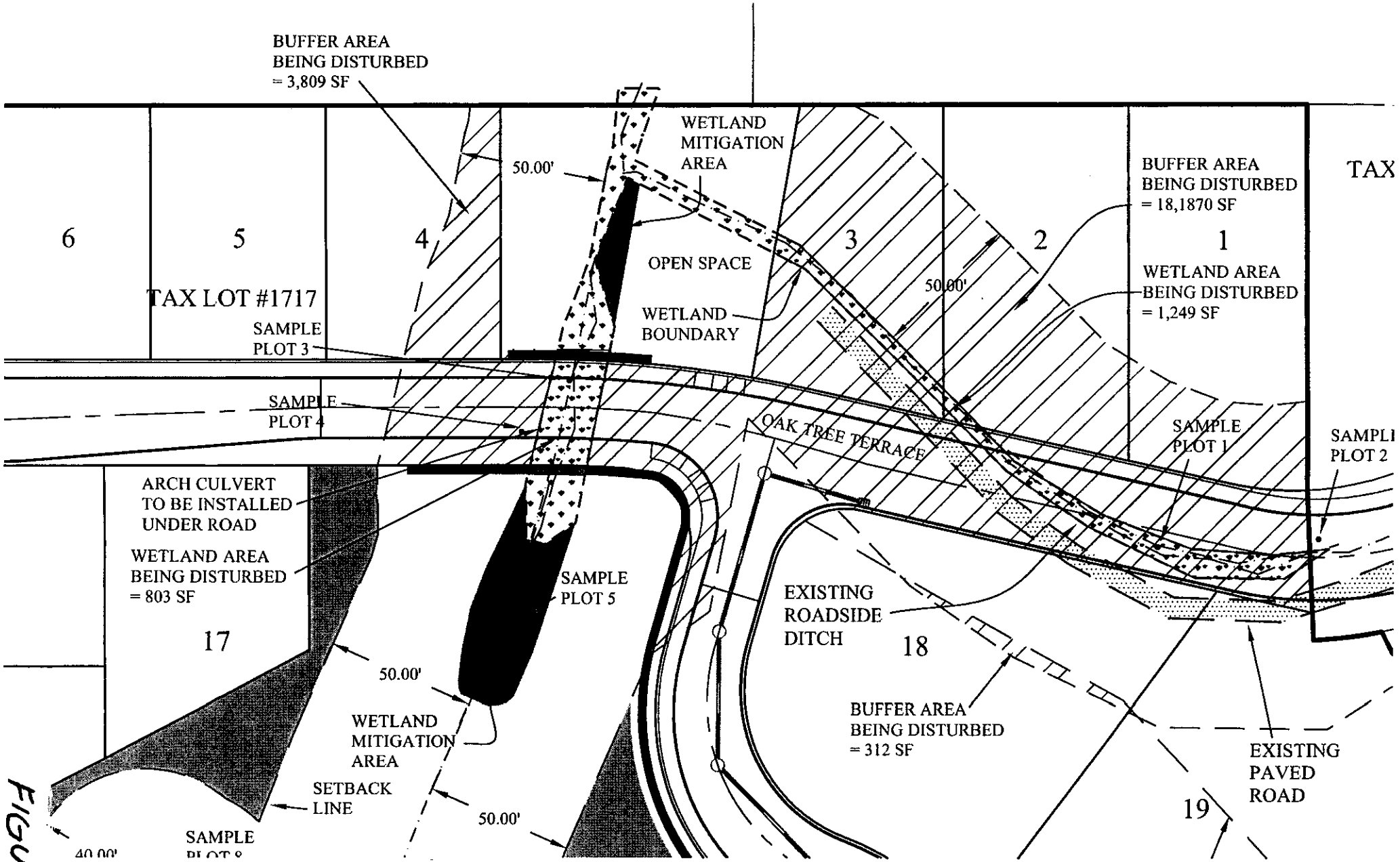


FIGURE 3

FIGURE 3

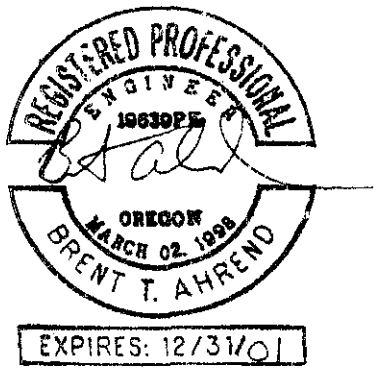
OAKTREE TERRACE SUBDIVISION PUD

TRANSPORTATION IMPACT ANALYSIS

OREGON CITY, OREGON

July 24, 2000

Group Mackenzie Project #000156



PREPARED FOR:

Lowell Wittke

PREPARED BY:

GROUP MACKENZIE

0690 SW Bancroft Street / PO Box 69039 • Portland, OR 97201
Tel: 503.224.9560 • Net: info@grpmack.com • Fax: 503.228.1285

EXHIBIT G

PD 00-01

VIII. CONCLUSIONS AND RECOMMENDATIONS

The proposed Oaktree Terrace Subdivision PUD is located on Oaktree Terrace south of Holcomb Road. Development of the subdivision will include up to 17 single family lots and 14 duplex units. Access will be provided at the existing Oaktree Terrace. If adjacent properties develop in the future, some traffic may reroute to Holcomb Boulevard through the adjacent properties. Sidewalks will be provided along the internal streets within the subdivision.

Trip generation for the new lots will be 285 average daily trips, 24 AM peak hour trips and 29 PM peak hour trips. Approximately 90% of the trips are anticipated to travel west on Holcomb Road towards Redland Road and Highway 213.

Holcomb Road is posted for 40 mph, which requires vehicles turning from Oaktree Terrace to see 400 ft in each direction on Holcomb Road. Sight distance to the west and east on Holcomb Boulevard is limited to 200 feet and 300 feet, respectively. The required 400 feet of sight distance may be provided with extensive pruning of vegetation, possibly including tree removal. It is unclear if this trimming would need to occur outside of the roadway right-of-way. Future development of lots adjacent to the proposed subdivision may provide alternate access to Holcomb Road to the west.

Accident data for the study area intersections and roadways was obtained from ODOT staff for January 1994 through December 1999. The minimum threshold for a high accident risk intersection is 1.0 accidents per million vehicles entering the intersection. All study area intersections have accident rates well below the minimum threshold. No accidents were reported at the intersection of Holcomb Road and Oaktree Terrace.

The signalized intersections of Redland Road at Highway 213 and Redland Road at Holcomb Road are currently operating at a level of service "C" or better. In 2002, with or without the proposed subdivision, these intersections will operate at a level of service "D" or better. Trips from the proposed site will increase the average delay at these intersections by less than one second. In 2009, both intersections will be nearing over-saturation if volumes continue to increase at 3% per year. Future applications should be reviewed to determine when mitigation is needed. Any improvements approved in the draft TSP for Highway 213 may improve the operation of these two intersections.

The intersections of Holcomb Road at Oaktree Terrace and Holcomb Road at Winston Drive are currently operating at a level of service "A" during the AM and PM peak hours. After full development of the site and through 2009, these intersections will operate at a level of service "B" during the peak hours. Peak hour signal warrants are not met for either intersection.

ANALYSIS AND FINDINGS

The applicant has proposed a Planned Unit Development on 8.35 acres consisting of 17 single-family residences and 12 (3 4-plex) units for the above referenced property. The proposed site layout contains 3.8 acres of the site to be preserved as open space. The property contains steep slopes and water resource areas and is located at the southern end of Oak Tree Terrace in Oregon City. The project is to be constructed in three phases.

Engineering staff recommends approval of the proposed Planned Unit Development provided the following recommendations and conditions of approval are followed:

PROVISION OF PUBLIC SERVICES:

WATER.

There is an existing 16-inch water main located in Holcomb Boulevard. There is an existing 1½-inch waterline in Oak Tree Terrace. The 1½-inch waterline runs from Holcomb Boulevard approximately half the length of Oak Tree Terrace. There is an abandoned Clackamas River Water 6-inch water main located in Oak Tree Terrace.

The applicant's proposed waterline plan indicates constructing an 8-inch water main from Holcomb Blvd. down Oak Tree Terrace to the project site, through the site to the western property line, and extending 8-inch stubs down the two proposed streets to the south.

Applicant did not propose looping the water system. Water system calculations were not provided with the application material. Pressure reducing valves may be required at this location.

Applicant has proposed a water system that appears to meet City code with a few modifications.

SANITARY SEWER.

There is an existing 8-inch sanitary sewer running through the proposed project site. The sewer runs from the northern boundary of the project site south along the drainage swale, bends towards the west and exits the project site at about the center of the western boundary.

Applicant has proposed to realign most of the existing sanitary sewer line crossing the property to match the proposed street locations.

EXHIBIT H

Applicant did not indicate any sewer connections or extensions to adjacent properties.

Applicant has proposed a sanitary sewer system that appears to meet City code with a few modifications.

Conditions:

1. Applicant shall provide proof of final payment of the Sanitary LID assessments prior to final plat recordation.

STORM SEWER/DETENTION AND OTHER DRAINAGE FACILITIES.

The site is located in the Livesay Drainage Basin as designated in the City's Drainage Master Plan. Drainage impacts from this site are significant. The site drains to Livesay Creek. Livesay Creek drains to Abernethy Creek, which is an anadromous salmon-bearing stream. Erosion and water quality controls are critical for the development of this site.

There is an intermittent stream running through the center of the site from north to south. The wetland areas have been delineated on the project site. The wetland is located in the northern part of the site along the intermittent stream between proposed lots 3 and 4.

Almost the entire site is located within the Water Quality Resource Area Overlay District. Under the requirements of Chapter 17.49, the applicant must delineate the wetland and stream boundaries and determine the required vegetated corridor width between the wetland and stream boundaries and the proposed development. The vegetated corridor area is to remain undisturbed.

The applicant provided a copy of a Wetland Delineation and Water Resource Report with the previous application that was prepared by Stacy N. Benjamin & C. Mirth Walker with Fishman Environmental Services, and dated March 2001.

The applicant has now submitted a Water Resources Report Addendum for Oak Tree Estates that was prepared by C. Mirth Walker with Fishman Environmental Services, and dated July 2001. The report has been updated for the revised site layout. According to this report, there is an existing 0.08-acre wetland at the northern part of the site, and a drainage swale that dominates the landscape below. There are also four springs located on the site. The main drainage swale drains from north to south down the center of the property, with another drainage swale that drains from east to west along the southern part of the site. Applicant has proposed to fill 0.05-acre of the wetland area, including 0.02-acre to be filled with an open-bottom arch culvert. To mitigate the filled wetlands, the

applicant is proposing to create new wetlands at the northern and southern ends of the existing wetlands. Applicant has proposed providing 50-foot to 150-foot wide vegetated buffer areas along the drainage swale, 40-foot vegetated corridor widths around the springs, and approximately 20-foot to 40-foot vegetated corridor widths along the existing wetland area. To mitigate the reduced vegetated corridor widths, the applicant has proposed increasing the vegetated corridor width by approximately 40 feet on the west side of the main drainage swale, and by approximately 100 feet on the east side of the main drainage swale. The vegetated corridor areas are to be improved by removing non-native species, and replanting with non-nuisance plants from the Oregon City native plant list, and seeding to achieve one hundred percent ground cover.

Applicant has proposed to drain the site into two detention systems consisting of underground detention piping. The detention systems are located at the southern ends of the two dead end roads to the south. The detention systems are proposed to drain through quantity control manholes, then through mechanical water quality devices, and discharged to flow spreaders further south on the site. Both of the detention and water quality facilities are shown in phase three, it is not apparent how the applicant intends to provide detention and water quality during construction of phases one and two.

Applicant has proposed a storm sewer system that appears to meet City code with a few modifications.

Conditions:

2. Developer shall provide detention and water quality systems that conform to current City standards.
3. Developer shall provide vegetated corridor buffer width from Title 3 wetlands in conformance to City requirements.
4. Applicant must process and obtain approval for wetland and stream mitigation from the Corps of Engineers, Division of State Lands, and any other applicable agencies prior to approval of construction plans. Copies of approvals shall be supplied to the City. Failure to do so shall be a justification for the City to prevent the issuance of a construction, or building permit or to revoke a permit that has been issued for this project.

DEDICATIONS AND EASEMENTS.

Oak Tree Terrace is classified a Local Street by the Oregon City Transportation System Plan, which requires a minimum right-of-way (ROW) width of 42-54 feet. Currently, Oak Tree Terrace appears to have a 60-foot ROW to the north of the project site.

Applicant has proposed constrained ROW widths throughout the site. For the extension of Oak Tree Terrace, a 36-foot ROW width is proposed, for Wittke Lane ROW widths ranging from 28 feet to 44 feet are proposed, and for Wittke Court ROW widths ranging from 35 feet to 40 feet are proposed. All proposed ROW widths are constrained to better match the existing grade and minimize required grading.

Applicant proposed one storm sewer easement between lots 13 and 14, and two open space tracts north and south of Oak Tree Terrace. Additional easements and tracts will be required with the proposed layout. For example, public utility, street tree easements, and a reserve strip tract at the western end of Oak Tree Terrace will be required. Additional easement/tracts may also be required and will be determined with the review of construction plans.

Applicant has proposed ROW widths, easements, and tracts that appear to meet City code with a few modifications.

Conditions:

5. Public utility easements shall be dedicated to the public on the final plat in the following locations: Ten feet along all street frontages, rear lot lines, and the project boundary, and five feet along all side lot lines. Easements required for the final engineering plans shall also be dedicated to the public on the final plat. The side and rear lot line requirements can be waived once utility locations have been identified and the need for side and rear lot line easements is determined by the City Engineer to be unnecessary except where identified by said utilities.
6. Applicant shall show a reserve strip dedicated to the City at the end of Oak Tree Terrace. This reserve strip shall be noted on the plat to be automatically dedicated as public ROW upon the approval of ROW dedication and/or City land use action approval of the adjacent property.

STREETS.

Oak Tree Terrace is classified a Local Street by the Oregon City Transportation System Plan, which requires a minimum pavement width of 20 to 32 feet. Currently, Oak Tree Terrace has approximately 36 feet of pavement width to the north of the project site.

Applicant has proposed various pavement widths throughout the site. For the extension of Oak Tree Terrace, a 28-foot pavement width narrowing to a 20-foot width crossing the open space, then widening again to a 28-foot width is proposed. For Wittke Lane, a 20-foot pavement width widening to a 44-foot width just before the fire truck turn-around, then narrowing to a 28-foot width is

proposed. It is not clear what the purpose of the 44-foot pavement width is. For Wittke Court a 32-foot pavement width is proposed for it's entire length. All proposed streets have curbside sidewalks and shed street sections to better match the existing grade and minimize required grading.

Parking will be allowed on both sides of streets with 32 feet or more of pavement width. Parking will be allowed on one side of streets with less than 32 feet and 26 feet or more pavement width. Parking will not be allowed on streets with less than 26 feet of pavement width.

Emergency vehicle turn-arounds will have to be approved by Tualatin Valley Fire and Rescue.

Applicant has proposed a street system that appears to meet City code with a few modifications.

GRADING AND EROSION CONTROL.

Grading and erosion control plans have been revised for the new site layout and resubmitted to the City for review. Applicant has proposed narrower and lower streets and the use of retaining walls to significantly reduce the required grading. The maximum proposed fill is at the northern and southern ends of Wittke Court with approximately 12 feet of fill at each end. Retaining walls are proposed in a few locations with a maximum height of 9 feet. A Geotechnical Investigations prepared by James D. Imbrie, with Adapt Engineering, Inc. and dated July 18, 2000 was submitted with previous application. The Geotechnical Investigation hasn't been revised for new site layout.

Applicant has proposed grading and erosion control that appear to meet City code with modifications.

Conditions:

7. A geotechnical report must be prepared, or the original report revised, to address the new site layout. Report must be submitted to the City for review and approval prior to approval of construction plans.

TRAFFIC AND TRANSPORTATION.

Brent T. Ahrend, with Group Mackenzie, prepared a Transportation Impact Analysis (TIA) for this project dated July 24, 2000. The Traffic Impact Study has been reviewed by the City and David Evans and Associates and it has been determined that the applicant's traffic impact analysis meets the City's requirements and will not have a significant short-term impact on the existing transportation system. However, the project will contribute traffic that will eventually cause the need for

improvements at the intersection of Holcomb Boulevard/Abernethy Road and Redland Road and the intersection of Redland Road/Highway 213.

There are sight distance problems at the intersection of Oak Tree Terrace and Holcomb Blvd. pointed out in the TIA and addressed by David Evans and Associates and Clackamas County. Currently there is 200 feet of sight distance from Oak Tree Terrace looking west down Holcomb Blvd., and 300 feet of sight distance from Oak Tree Terrace looking east down Holcomb Blvd. The required sight distance is 350 feet, in each direction, for Holcomb Blvd. at this location according to Clackamas County. According to the TIA, improvements in sight distance will require extensive pruning of vegetation. It is not clear whether all of the pruning can be accomplished on the road right-of-way, or whether the required sight distance can be achieved by pruning of vegetation alone.

Clackamas County has recommended denial of this application.

Sight distance issues have not been adequately addressed at the intersection of Oak Tree Terrace and Holcomb Blvd. Specific solutions to the sight distance issues should be provided to the City.

Conditions:

8. Applicant must obtain Oregon City and Clackamas County approval of proposed site distance improvements for the intersection of Oak Tree Terrace at Holcomb Boulevard prior to approval of construction plans.

ENGINEERING REQUIREMENTS.

Conditions:

9. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement.
10. The Applicant is responsible for this project's compliance to Engineering Policy 00-01 (attached). The policies pertain to any land use decision requiring the applicant to provide any public improvements.

Park Place Neighborhood Association
15937 S. Swan Avenue
Oregon City, OR 97045

21 September 2001

City of Oregon City
Planning Division
320 Warner Milne Road
Oregon City, OR 97945

ATTN: Planning Commission

RE: Oak Tree Estates PUD (re-transmittal, July 2001)
PD 00-01

Dear Planning Commission Members:

In the re-transmittal dated July 2001, the applicant, Lowell Wittke Construction, proposes to create a PUD consisting of 21 buildings, with 29 dwelling units (including three "4-plex" buildings), at what is now the end of Oak Tree Terrace, off Holcomb Blvd. in the Park Place Neighborhood of Oregon City.

At the Park Place Neighborhood Association (PPNA) General Membership Meeting held on Monday, September 17, 2001, the statements below were endorsed by unanimous vote.

We note that the applicant has made an effort in the re-design to address our concerns about the steep slopes and potentially unstable foundation conditions on this site.

However, many of the other concerns that we addressed in our letter of 19 April 2001 (Exhibit 7 of the Staff Report dated May 7, 2001) have not been addressed in the re-transmittal. These concerns are addressed below.

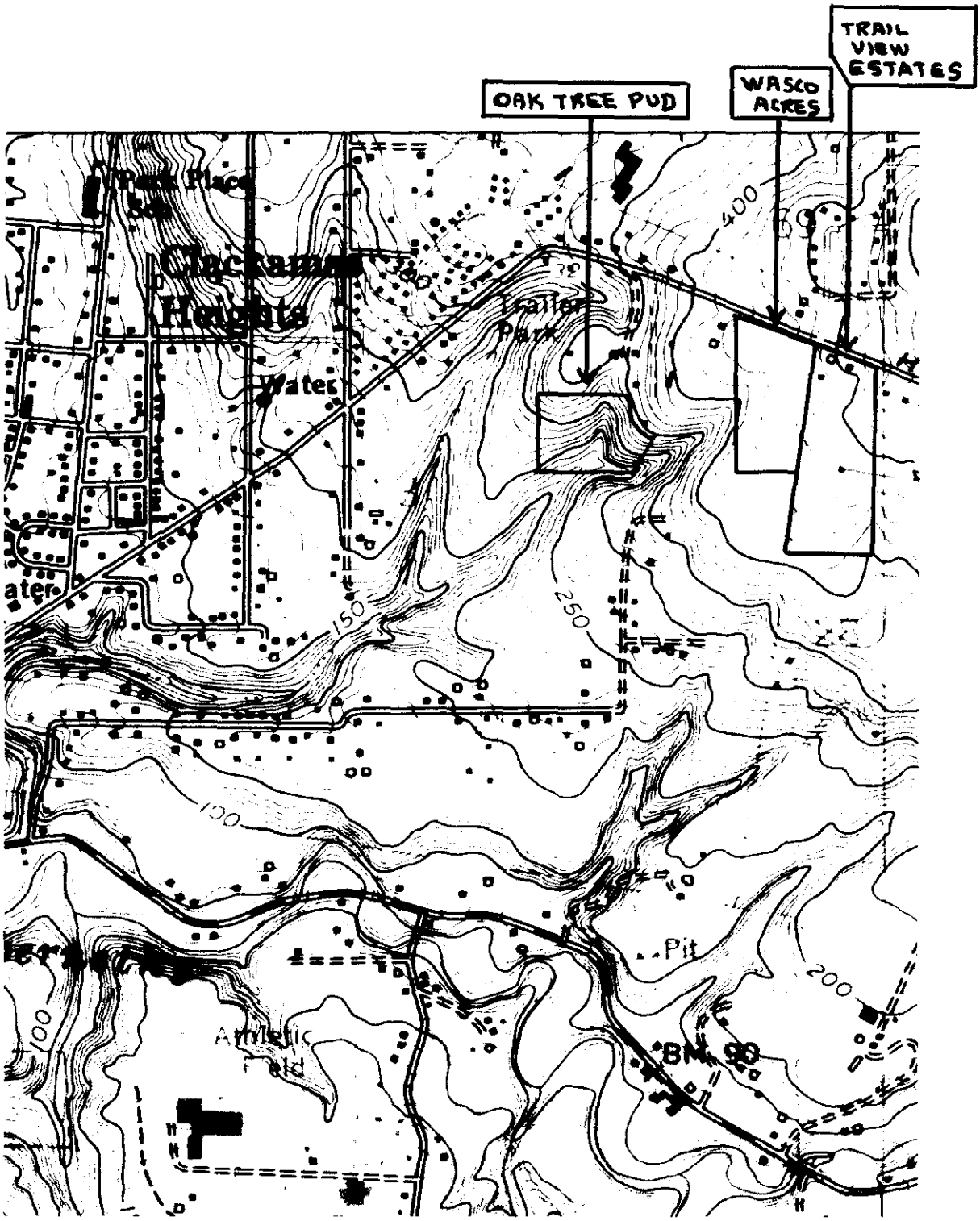
Introduction

The residents of the Park Place Neighborhood feel that the Oak Tree Estates PUD is an inappropriate development for the area. The property is near the Urban Growth Boundary, has very steep topographic slopes, and is presently a haven for bird and animal life among large groves of trees.

As can be seen in the topographic map on the next page, the area proposed for the Oak Tree PUD has very steep slopes. Beginning at about 340 feet elevation, the slopes steepen significantly as the land surface drops steeply to the stream valley below. The two other subdivisions proposed for this general area (Wasco Acres and Trail View Estates) would be located on land with slopes reasonable for development, but the Oak Tree PUD is inappropriately located in an area of steep slopes.

The applicant proposes three "4-plexes" with a total of 12 dwelling units. He does not state whether or not these are to be rental units, but even if they are sold as individual units, there is a strong likelihood that the units will become rental units. There is already a saturation of transitory housing in the neighborhood. The Clackamas County Housing Authority currently boasts some 200 units (housing about 600 people), between the upper and lower housing projects off Holcomb. In addition there are numerous rental units scattered throughout the neighborhood. The neighborhood feels that it has enough rental units and opposes the addition of 4-plexes in this area.

EXHIBIT
I
PD 00-01



USGS Topographic Map (1961, photorevised 1985, contour interval 10 feet) with hand-drawn overlay.

NOTE: Oak Tree Terrace is shown as dashed purple lines to the east of an older road shown with black lines.

Lot Sizes

This property is currently zoned R-10. The PPNA is on record as opposing any lot sizes smaller than 10,000 square feet in new developments near the urban growth boundary of our neighborhood in Oregon City. Oregon City Commissioner Gary Hewitt attended the PPNA meeting on September 17 and, while not directly addressing the Oak Tree Estates PUD, stated that, in his opinion, developments near the urban growth boundary in our neighborhood should be developed at an R-10 density, to provide a transition to rural lands.

We recognize that the proposed PUD will have no more dwelling units on this site than if it were fully developed with 10,000 SF lots. However, this is not a realistic alternative because much of the site has slopes that are too steep for development, even with 10,000 SF lots.

Traffic Safety Concerns

The applicant states that the traffic study indicates the site can handle the additional traffic from the new development and access to Holcomb Rd. is sufficient. We feel that the traffic problem is not a question of traffic volume, but a problem of safety. There are very poor sight distances (both up and down Holcomb) for vehicles exiting Oak Tree Terrace onto Holcomb. These poor sight distances coupled with the fact that many vehicles on Holcomb are being driven at speeds well in excess of the posted 40 MPH speed limit, causes much concern among the neighborhood residents, who are very concerned about the potential for serious accidents at this intersection.

We feel that extensive reconstruction of this intersection and/or traffic signalization will be required to ameliorate this problem and render the intersection safe for travel by vehicles exiting Oak Tree Terrace.

Exhibits 5b and 5f of the Staff Report dated May 7, 2001 address the sight distance issue. Exhibit 5b, a letter from David Evans and Associates (to Colin Cooper of the Planning Division staff) states that:

> "One especially troubling aspect of this development is that it will add additional side-street traffic to the intersection of Holcomb Boulevard and Oak Tree Terrace, an intersection that lacks adequate sight distance."

Exhibit 5f, a letter from Clackamas County Traffic Engineering (to Paul Espe of the Planning Division staff) states that:

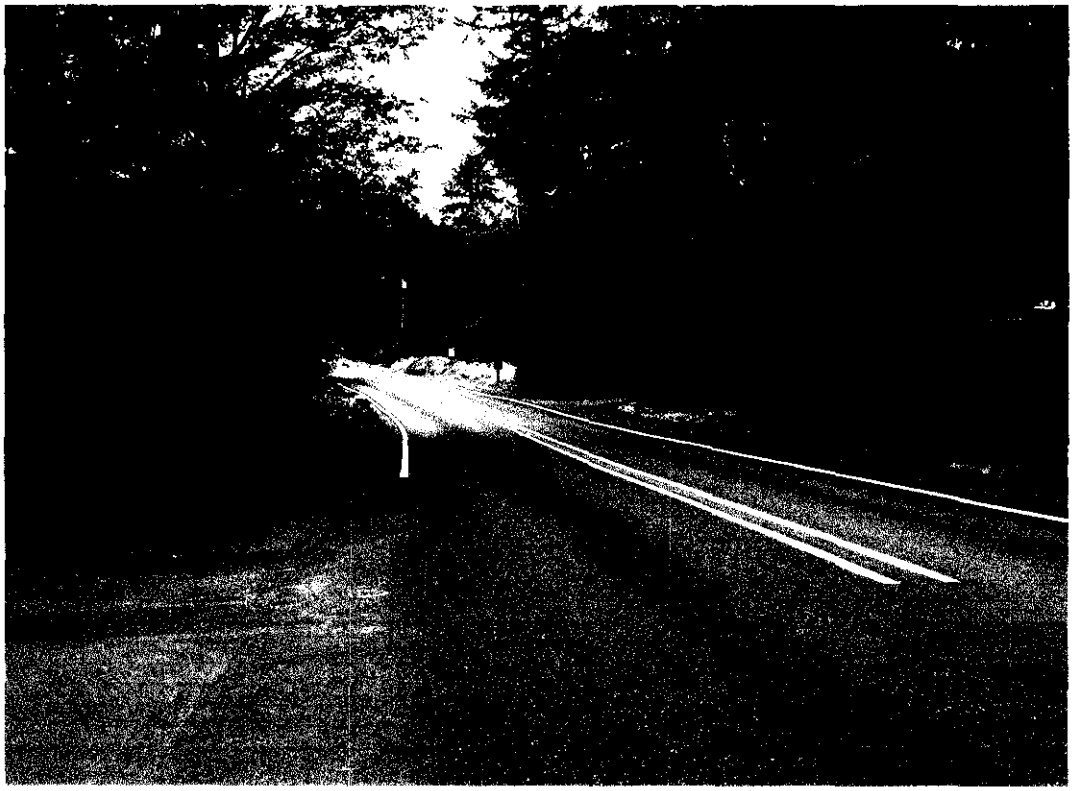
> " . . . sight distance at the intersection of Oaktree Terrace and Holcomb Boulevard is currently inadequate. The applicant's traffic engineer measures existing sight distance at the proposed site access to be 200 feet looking to the west and 300 feet looking to the east. Table 2-9 of the *Clackamas County Roadway Standards* requires a minimum of 350 feet of sight distance in each direction. Sight distance is to be measured at approximately the midpoint of the proposed driveway and 15 feet back from the edge of the travel lane as shown in drawing D200 of our Roadway Standards. It is highly questionable whether or not the applicant can achieve this sight distance with the simple trimming of vegetation. An abrupt hill exists looking east at the intersection of Oaktree Terrace and Holcomb Boulevard. Based on field analysis, it appears that modifications will need to be made to the roadway in order to reach adequate sight distance. Looking to the west, trimming of vegetation may result in adequate sight distance. However, much of the vegetation occurs off site, and may be difficult to maintain."
>
> "Clackamas County Traffic Engineering staff recommends denial of this application at this time."

When these distances are converted to travel times, we find that for vehicles traveling at the posted speed limit of 40 MPH, a sight distance of 200 feet translates to a time of 3.51 seconds from the time a vehicle just begins to come into view and the time it is at the middle of the intersection (for 300 feet, this time is 5.26 seconds).

If a vehicle were to be traveling at 55 MPH (not uncommon for vehicles traveling on Holcomb) a sight distance of 200 feet translates to a time of 2.47 seconds from the time a vehicle just begins to come into view and the time it is at the middle of the intersection (for 300 feet, this time is 3.72 seconds).

The undersigned (Ralph W. Kiefer, Chair, PPNA Land Use Committee) visited this intersection on 18 September 2001 to observe traffic, and took the photographs found on the next two pages.

The photograph at left was taken on 9-18-01 looking west (downhill) from a point 15 feet back from the edge of the travel lane, as specified in the letter from Clackamas County Traffic Engineering. The poor sight distance due to intensive vegetation is evident in this photograph.



The photograph at left was taken on 9-18-01 was taken from the edge of the travel lane, also looking west. At this point, the nose of a car pulling out from Oak Tree Terrace onto Holcomb would be about seven feet into the lane of travel. Visibility is still limited, and just beyond the field of view is a sharp curve to the left (note warning sign in photograph).

The photograph at left was taken on 9-18-01 looking east (uphill) from a point 15 feet back from the edge of the travel lane, as specified in the letter from Clackamas County Traffic Engineering. The poor sight distance due to vegetation is evident in this photograph. There is also a vertical curve (hidden by the vegetation, but shown in the next photograph) that severely limits sight distance.

The photograph at left was taken on 9-18-01 was taken from the edge of the travel lane, also looking east. At this point, the nose of a car pulling out from Oak Tree Terrace onto Holcomb would be about seven feet into the lane of travel. Visibility is severely limited by the vertical curve. The undersigned watched in amazement as a large Federal Express truck came into view heading downhill. It had been hidden from view by the vertical curve.

Steep Slopes and Potentially Unstable Soils

The area has the potential for slope movements and landslides. The addendum to the geotechnical investigation indicates that the area on this site below 260 feet in elevation should be designated a geologic hazard area. We believe that potential hazards exist well above that elevation. Beginning at about 340 feet elevation, the slopes steepen significantly as the land surface drops steeply to the stream valley below. This can be seen by looking at the USGS topographic map of this general area, which provides a broader view of the situation than can be seen on the drawings provided by the applicant.

In an earlier letter to the Planning Commission (Exhibit 7 of the Staff Report dated May 7, 2001) we stated that:

> "Geologically and topographically, this area has many similarities with the southern half of the Newell Creek Canyon (near Highway 213) where significant landslides occurred during 1996 and 1997. The proposed development is located on the Troutdale Formation, which is underlain by the Sandy River Mudstone formation. This is the same geologic setting as in the Newell Creek Canyon."
>
> "It is likely true that the slopes in this area are reasonably stable in a natural state. But, upon development, there will be numerous houses and a considerable amount of fill adding weight to what could potentially be the upper part of slope failures (landslides). Add to this the potential for earthquake-induced slope failures, especially in the steeply sloping fill of this potentially slide-prone site, and there is the possibility of considerable damage to homes that would be located here."

While the re-design of the Oak Tree Terrace PUD may alleviate many of the potential slope movement and landslide problems, we still believe this is a marginal site for development because of its location and steep slopes (see related comments on page 1 and topographic map on page 2).

Summary

In conclusion, the Park Place Neighborhood Association wishes to reiterate that it is opposed to the Oak Tree Estates PUD, for the reasons outlined above – general topographic unsuitability of the site, neighborhood opposition to lot sizes smaller than 10,000 square feet near the urban growth boundary, neighborhood opposition to additional rental units at this site, and extremely serious traffic safety concerns at the intersection of Oak Tree Terrace and Holcomb Boulevard.

Very truly yours,

Ralph W. Kiefer

Ralph W. Kiefer, Chair
PPNA Land Use Committee