

# PLANNING PRINCIPLES FOR LAYOUT & DESIGN OF LOCAL STREETS

Currently, the complete network of local streets is planned incrementally through the review and approval of individual subdivisions. City staff must make decisions on the location and design of future streets with each request for approval of a new subdivision. Typically, these decisions must be made without a comprehensive understanding of how those streets will connect with other future streets or how they should connect with the existing street system. This approach leaves city staff, developers and local residents unsure about how the completed local street system in any given area will work.

The following planning principles were used in the development of the Eugene Local Street Plan and are the foundation for recommended code and policy changes. The principles are also intended to guide City of Eugene staff in making street planning decisions when reviewing development proposals. Discussion of these principles and recommendations for their implementation are included in the following section on Street Pattern and Design.

The order in which the planning principles are listed are not intended to imply an order of importance.

- 1. Streets should be designed to efficiently and safely accommodate emergency fire and medical service vehicles.**
- 2. Local streets should be designed to function safely, while minimizing the need for extensive traffic regulations, control devices, and enforcement.**
- 3. New streets should be designed to meet the needs of pedestrians and encourage walking as a transportation mode.**
- 4. Local streets should be interconnected to provide for efficient provision of utility services and to provide for more even dispersal of traffic.**
- 5. The local street circulation pattern should provide connections to and from activity centers such as schools, commercial areas, parks, employment centers, and other major attractors.**
- 6. Local street design should be responsive to topography and other natural features and should avoid or minimize impacts to water-related resources and wildlife corridors.**
- 7. The pavement area of local streets should be minimized, consistent with efforts to reduce street construction and maintenance costs, stormwater runoff, and environmental impacts of street construction.**
- 8. The range of local street types should be broad enough to allow a great deal of flexibility for residential developers, thus discouraging the construction of private streets.**
- 9. Local street layout should permit and encourage efficient lot layout and attainment of maximum densities.**

10. **The function of the local street should be readily apparent to the user through its appearance and design.**
11. **The layout of a local street system should not create excessive travel lengths.**
12. **Local circulation systems and land development patterns should not detract from the efficiency of adjacent collector or arterial streets. The local street system should be designed for a relatively uniform low volume of traffic, i.e., provide for optimum dispersal. Collectors, however, should be designed to accommodate peak periods of demand.**
13. **Large scale, high-canopy street trees should be planted on local streets to create attractive and healthy neighborhood environments. Damage to street trees resulting from utility line placement and repair, and from new home construction, should be minimized.**
14. **Streets identified as future transit routes should be designed to safely and efficiently accommodate transit vehicles, thus encouraging the use of public transit as a transportation mode.**
15. **Where appropriate, utilize the street system and its infrastructure as an opportunity to convey and treat stormwater runoff.**

Sources consulted in development of these principles include Residential Streets, published in 1991 by the American Society of Civil Engineers, National Association of Homebuilders, and the Urban Land Institute; Performance Streets: A Report on Supplemental Street Standards for Residential Neighborhoods in Houston prepared in 1994 by Peter H. Brown Civic Design; Performance Streets: A Concept and Model Standards for Residential Streets, prepared by the Bucks County, Pennsylvania Planning Commission (1980); and the City of Boulder, Colorado Residential Access Program materials (1994).



Figure 2. *Road construction on Lambert Street South in West Eugene.*

# LOCAL STREET CLASSIFICATIONS AND DESIGN STANDARDS

## Applicable Planning Principles:

- *New streets should be designed to meet the needs of pedestrians and encourage walking as a transportation mode.*
- *Local streets should be interconnected to provide for efficient provision of utility services and to provide for more even dispersal of traffic.*
- *Local street design should be responsive to topography and other natural features and should avoid or minimize impacts to water-related resources and wildlife corridors.*
- *The pavement area of local streets should be minimized, consistent with efforts to reduce street construction and maintenance costs, stormwater runoff, and environmental impacts of street construction.*
- *The range of local street types should be broad enough to allow a great deal of flexibility for residential developers, thus discouraging the construction of private streets.*
- *Local street layout should permit and encourage efficient lot layout and attainment of maximum densities.*
- *Local streets should be designed to function safely while minimizing the need for extensive traffic regulations, control devices, and enforcement.*
- *The function of the local street should be readily apparent to the user through its appearance and design.*
- *Local circulation systems and land development patterns should not detract from the efficiency of adjacent collector or arterial streets. The local street system should be designed for a relatively uniform low volume of traffic that provides for optimum dispersal. Collectors, however, should be designed to accommodate peak periods of demand.*
- *Where appropriate, utilize the street system and its infrastructure as an opportunity to convey and treat stormwater runoff.*

## Discussion:

**Design Flexibility:** Local streets are currently defined as those streets whose primary function “is to provide access to properties fronting on the street.” Little recognition is given to the many functions actually provided by the local street system, including those related to providing a framework for distinctive neighborhoods; providing a visual setting and entryway for homes; providing a place to walk, bicycle and park vehicles; and providing a place to meet neighbors and acquaintances.

# FUTURE STREETS MAP

## Discussion:

In the course of this study, City staff identified approximately 8,000 acres of undeveloped land on the fringes of existing developed areas within which future growth will occur. All of this land is within Eugene's Urban Growth Boundary. One of the most important objectives of this study was to identify the general location of future residential collector streets and other important (non collector) local street connections on this undeveloped land.

The City of Eugene currently lacks a plan to guide the location and construction of future local streets. As mentioned earlier, the local street system is currently planned incrementally as part of the review of individual subdivision applications. City staff must make decisions on the location and design of future streets without a comprehensive understanding of how those streets will connect with other future streets or how they should connect to the existing street system. This approach leaves city staff, developers, and local residents unsure about how the completed local street system in any given area will work, creates anxiety and concern for residents of the area, delays approval of development applications, and drives up engineering and processing costs. The following maps identify the general location of those future streets.

The process for identifying future street needs resulted in identification of some streets that will likely function as full collector streets. This plan recommends that those streets identified as future full collectors be referred for adoption to the TransPlan Update process.

It should be noted that the proposed street alignments shown on the following maps represent the location of the most important future local streets; there was no attempt, in this process, to lay out the complete network of all local streets. The location and design of most local streets will still be determined as part of the subdivision approval process.

It is also important to note that the proposed street alignments are general in nature. They are not intended to represent the exact future alignments, as those can only be determined following more extensive study, including geo-technical analysis. That analysis will be done as part of the subdivision planning process; it was not done as part of the Eugene Local Street Plan. However, the mapping process that produced those general alignments included consideration of existing topography, wetlands, drainageways, and other natural features, including the pattern of existing development.

The following maps show the location of wetland designations in the West Eugene area and stream corridors throughout the city. These elements were added to the maps for illustrative purposes in an attempt to show the relationship between wetland/stream areas and proposed new streets. Wetland boundaries shown on the maps are approximate and are included for reference only. **Wetland designations may be subject to change through amendments to the West Eugene Wetlands Plan. Adoption of the Proposed Local Street Plan map by the Eugene City Council will not indicate Council endorsement of any wetland recommendation; these are being considered in a separate process.**

**Recommendations:**

1. Amend Chapter 9 of the Eugene Code to adopt the City of Eugene Local Street Plan Map which will guide decisions concerning the location of local streets in future development areas.
2. Refer full collector streets identified on the City of Eugene Local Street Plan map to the TransPlan Update process.

The following maps show the city divided into eight regions, identified as Bethel/Danebo, Northwest Industrial, Santa Clara, Willakenzie, Garden Way/Laurel Hill, South Hills, Timberline, and West Eugene. Proposed future local streets for each area are shown on the respective maps for those regions.

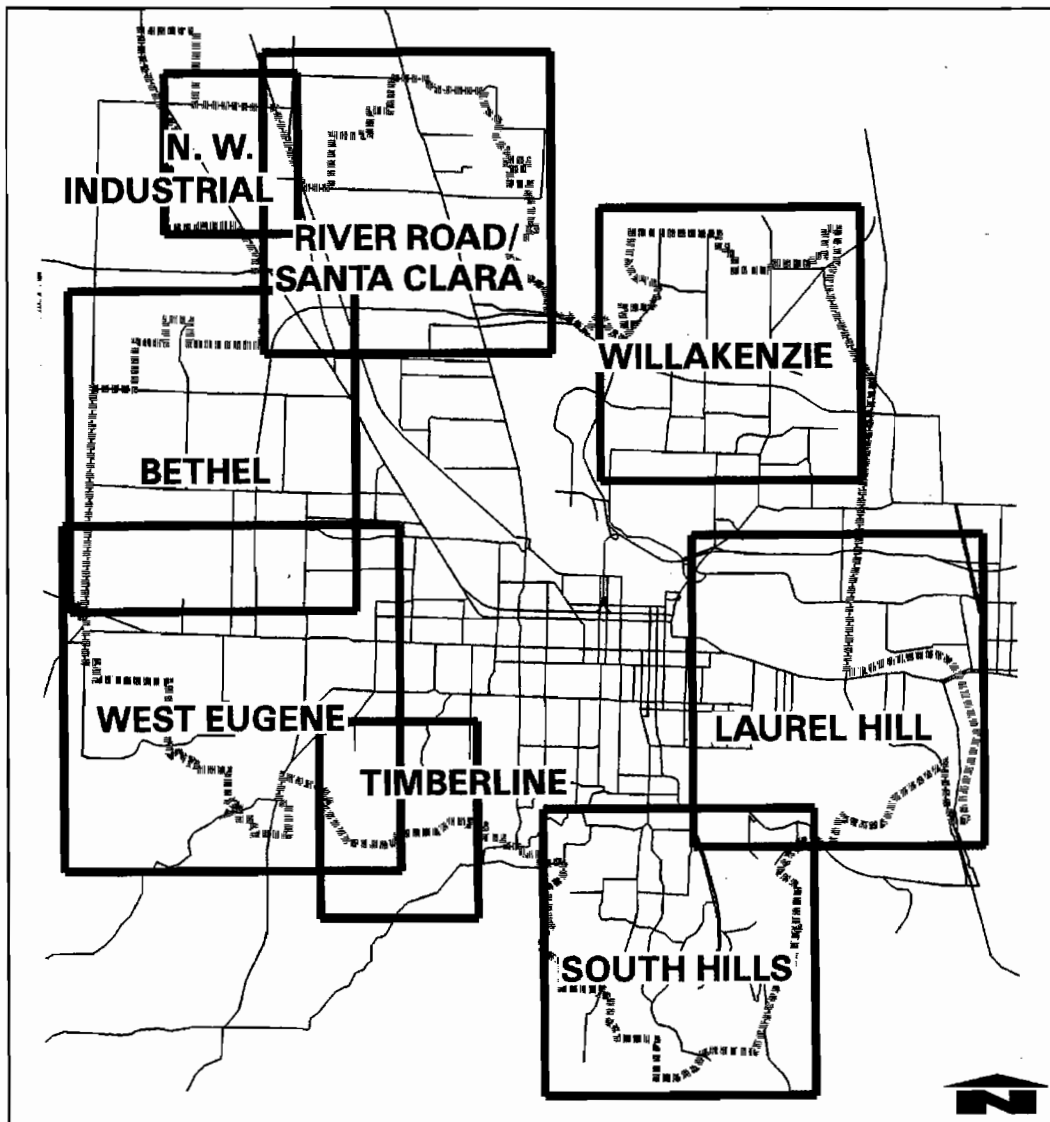
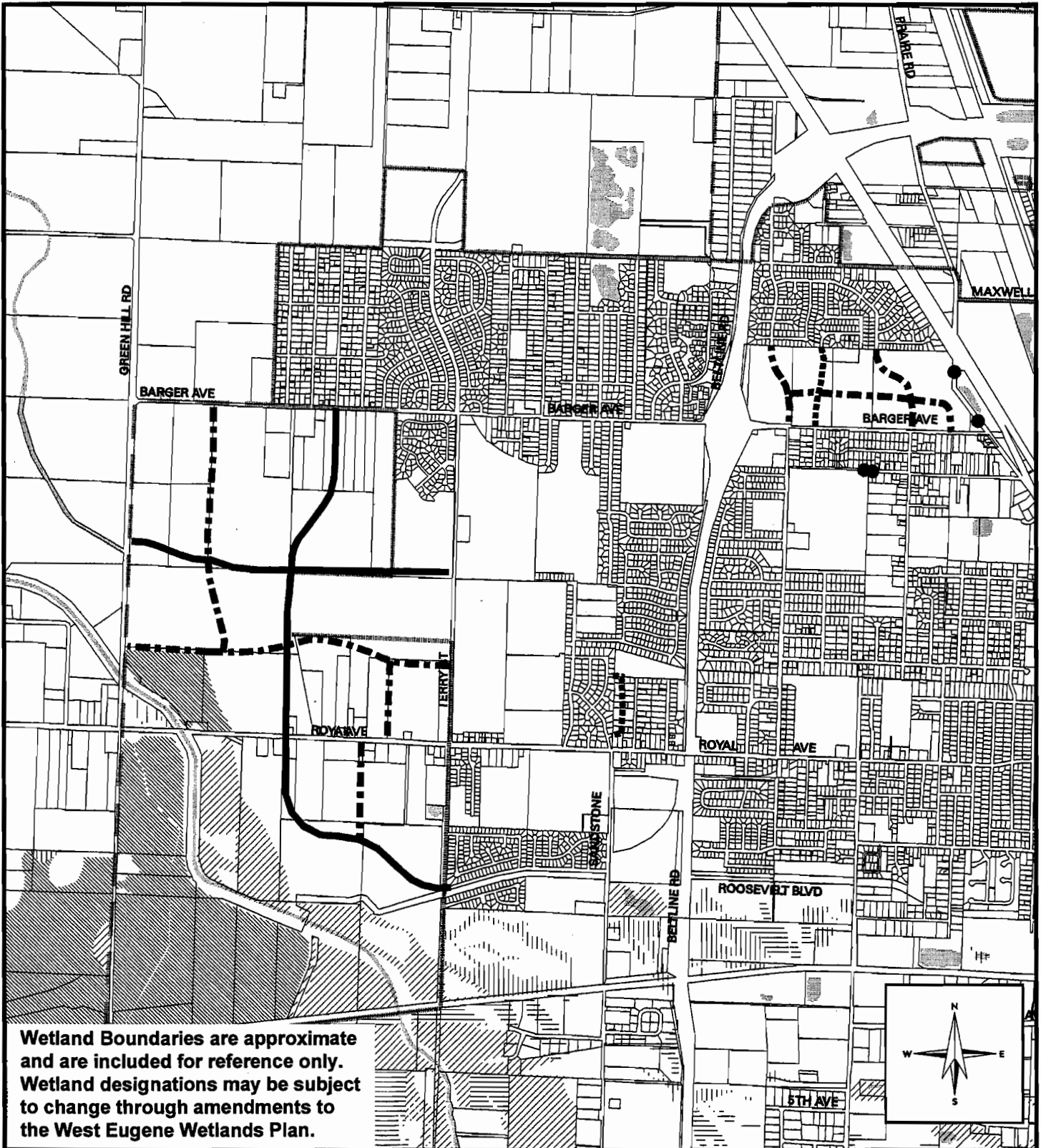









Figure 48. *Index Map*


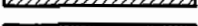




Wetland Boundaries are approximate and are included for reference only. Wetland designations may be subject to change through amendments to the West Eugene Wetlands Plan.

**Proposed Street Classifications**

-  Full Collector
-  Residential Collector
-  Local Street
-  Culdesac
-  City Limits
-  Urban Growth Boundary
-  Water Features

**Wetland Recommendations**

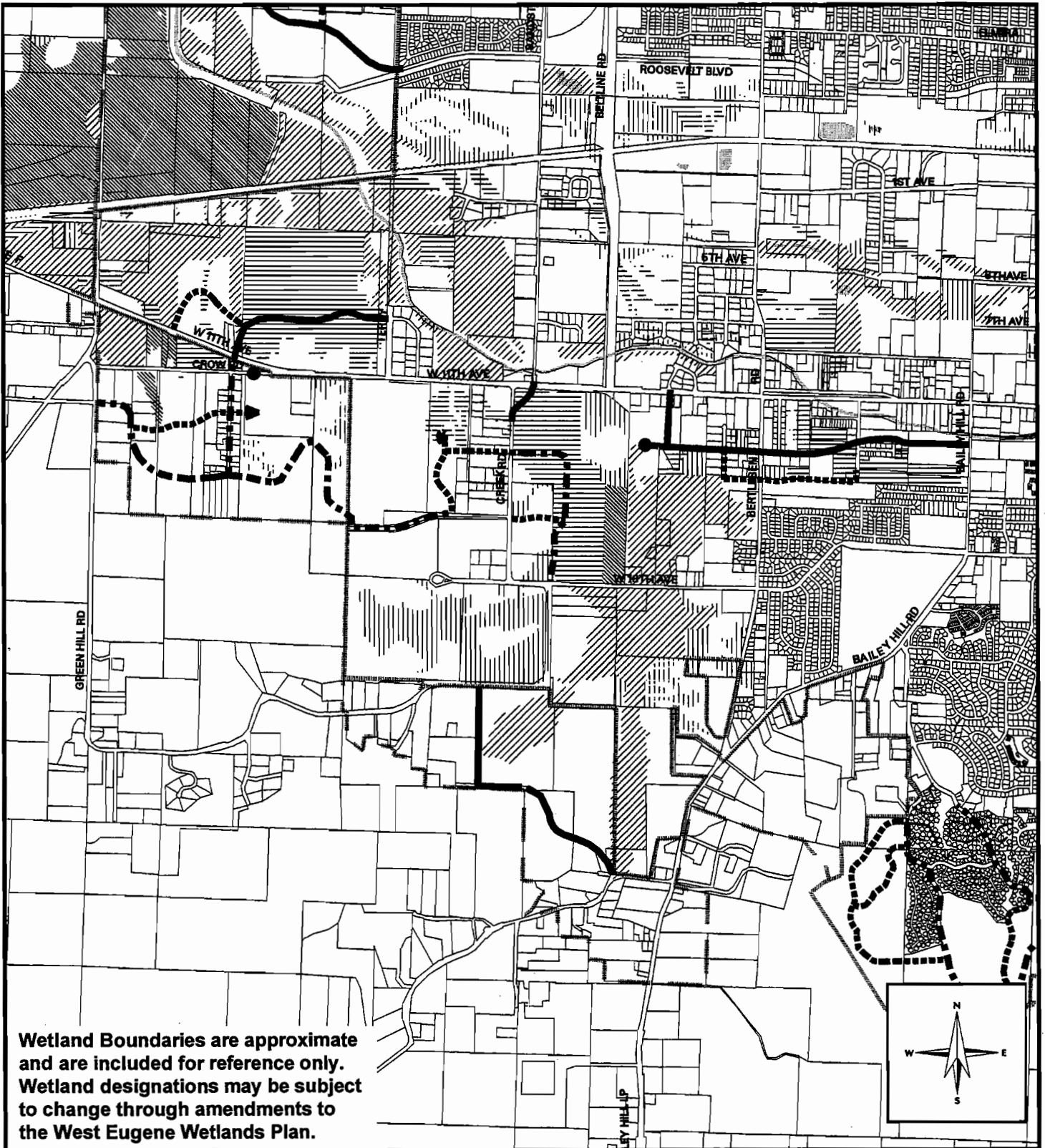
-  Protect
-  Mitigate
-  Future Fill
-  Undesignated

**CITY OF EUGENE**

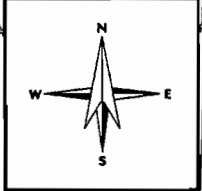
**Proposed Local Street Plan**

**Bethel / Danebo**








Produced By City of Eugene Public Works Engineering Information Team August 1995







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**Proposed Street Classifications**

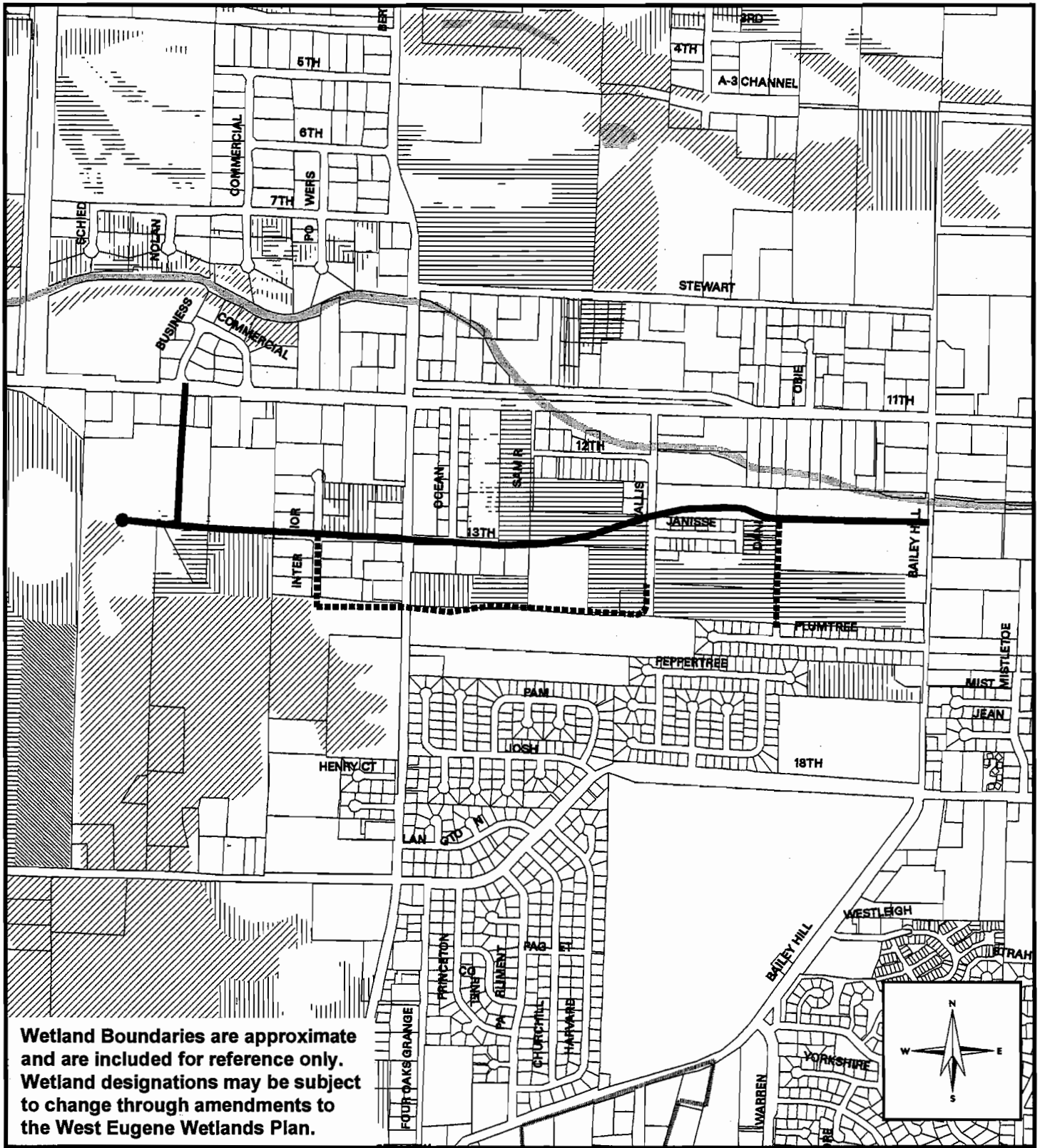
-  Full Collector
-  Residential Collector
-  Local Street
-  Cuidesac
-  City Limits
-  Urban Growth Boundary
-  Water Features

**Wetland Recommendations**

-  Protect
-  Mitigate
-  Future Fill
-  Undesignated








**CITY OF EUGENE**  
**Proposed Local**  
**Street Plan**  
**West Eugene**

Produced By City of Eugene Public Works  
 Engineering Information Team August 1995







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**Proposed Street Classifications**

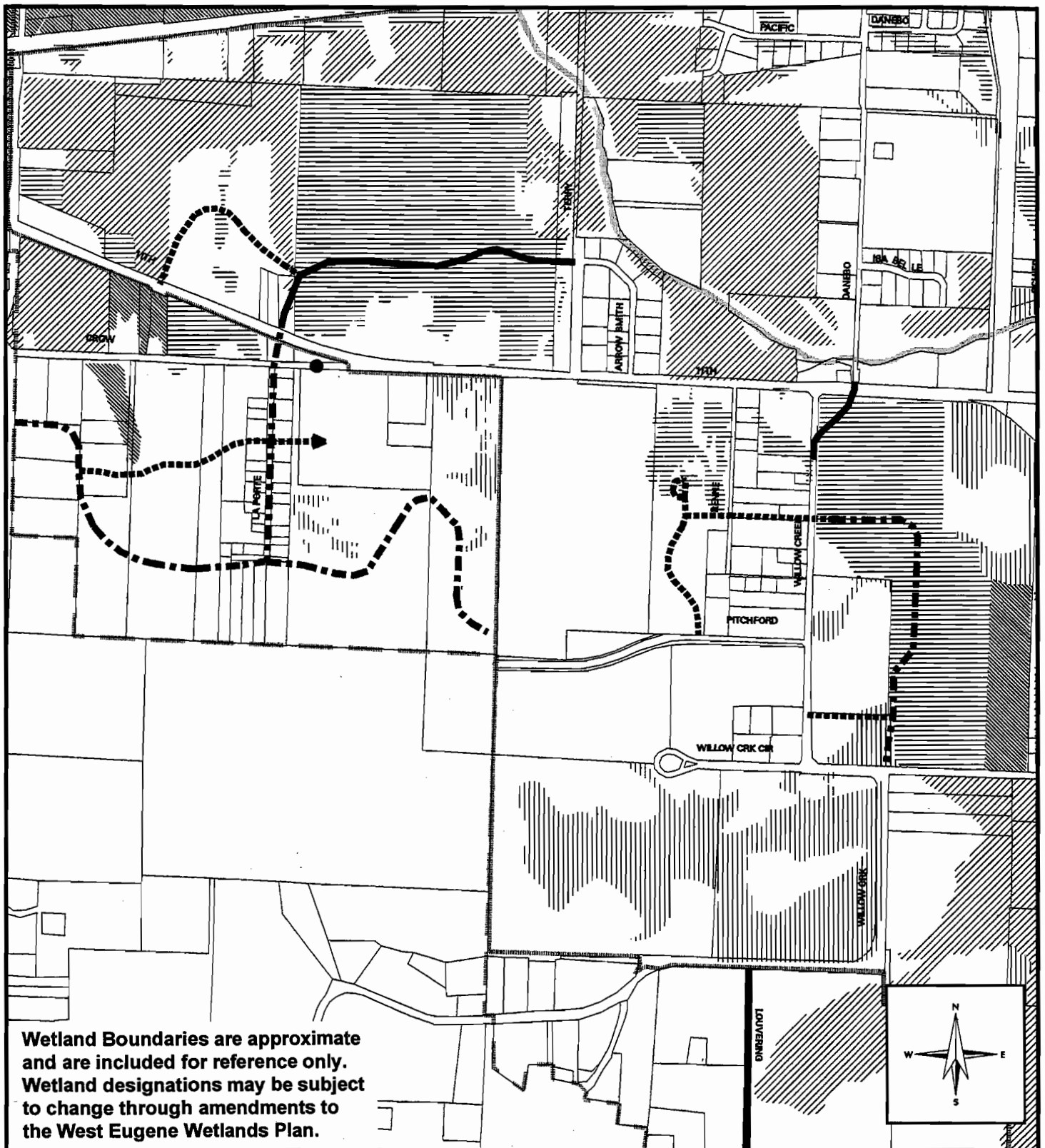
-  Full Collector
-  Residential Collector
-  Local Street
-  Culdesac
-  City Limits
-  Urban Growth Boundary
-  Water Features

**Wetland Recommendations**

-  Protect
-  Mitigate
-  Future Fill
-  Undesignated








**CITY OF EUGENE**  
**Proposed Local**  
**Street Plan**  
**13th Ave Option**

Produced By City of Eugene Public Works  
 Engineering Information Team August 1995







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**Proposed Street Classifications**

-  Full Collector
-  Residential Collector
-  Local Street
-  Cuidesac
-  City Limits
-  Urban Growth Boundary
-  Water Features

**Wetland Recommendations**

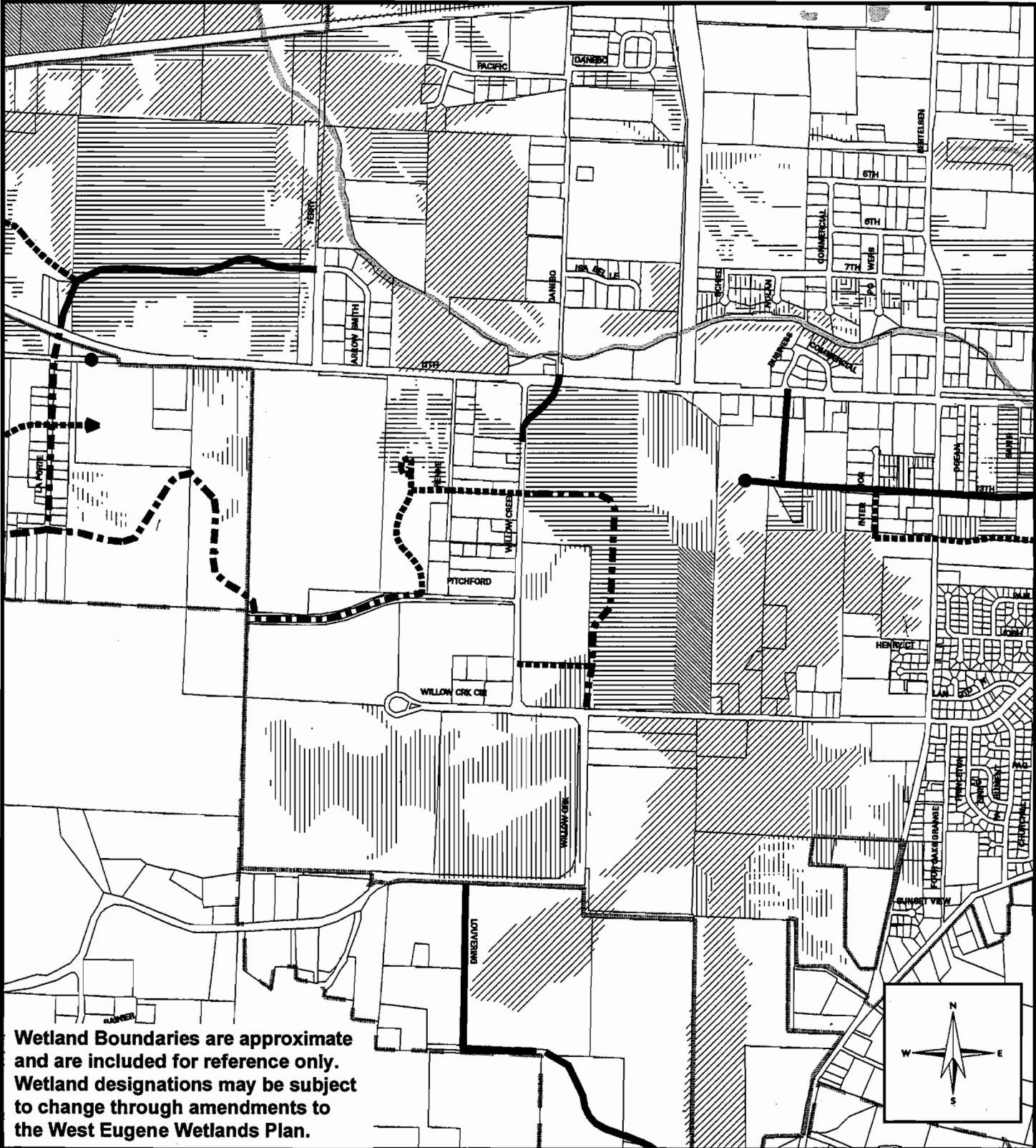
-  Protect
-  Mitigate
-  Future Fill
-  Undesignated

**CITY OF EUGENE**

**Proposed Local Street Plan**








**Pitchford Road Option**

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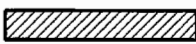





Wetland Boundaries are approximate and are included for reference only. Wetland designations may be subject to change through amendments to the West Eugene Wetlands Plan.

**Proposed Street Classifications**

-  Full Collector
-  Residential Collector
-  Local Street
-  Culdesac
-  City Limits
-  Urban Growth Boundary
-  Water Features

**Wetland Recommendations**

-  Protect
-  Mitigate
-  Future Fill
-  Undesignated

**CITY OF EUGENE**

**Proposed Local Street Plan**

**Willow Creek Option**

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