

ORDINANCE NO. 2012

AN ORDINANCE adopting a Comprehensive Plan in accordance with the goals and requirements of Chapter 36.70A, Revised Code of Washington, also known as the Growth Management Act.

WHEREAS, the City of Camas is required to update its Comprehensive Plan in accordance with the goals and requirements of Chapter 36.70A, Revised Code of Washington, the Growth Management Act ("GMA"); and

WHEREAS, the City's GMA Comprehensive Plan is required to include maps and a descriptive text covering the objectives, principles and standards used to develop the essential elements of the plan; and

WHEREAS, GMA requires that the City's Comprehensive Plan be developed by following the county-wide planning policies adopted by Clark County and that it be coordinated with neighboring jurisdictions; and

WHEREAS, GMA directs the City to propose, and Clark County to adopt an urban growth area (an area within which urban growth is encouraged and outside of which only non-urban growth can occur); and

WHEREAS, GMA requires that the City designate critical areas and natural resource lands, and adopt protective regulations for such critical areas and natural resource lands; and

WHEREAS, the adoption of the City's Comprehensive Plan must be processed in compliance with the State Environmental Policy Act (SEPA), and include an analysis of the cumulative effects of development in the City; and

WHEREAS, GMA requires that the City establish procedures for early and continuous public participation in the development of the Comprehensive Plan and in the development regulations implementing such plans; and

WHEREAS, copies of the City's proposed Comprehensive Plan are required to be and have been submitted to the State at least sixty (60) days prior to final adoption, and the plan must be transmitted to the State within ten (10) days after final adoption;

NOW, THEREFORE, the City Council of the City of Camas do ordain as follows:

## I

ADOPTION OF FINDINGS OF FACT

The Council finds that all GMA prerequisites for the adoption of the City's Comprehensive Plan have been met and adopt the following findings:

A. Required Elements of the Plan. The City of Camas Comprehensive Plan includes the following required elements: land use, housing, capital facilities, utilities, and transportation. In addition, the plan also contains the following optional elements: economic development, and parks, recreation, open space and trail/bikeway.

B. Critical Areas Designation and Regulation: The City adopted interim ordinances to identify and protect environmentally sensitive areas in August of 1991.

C. Public Participation: The public participation requirements of the Growth Management Act have been met. The public participation process included interviews with individuals and representatives of the county, city and school district, the formation of a steering committee, community meetings before the steering committee to review plan recommendations and components, discussions at ward meetings, parks board review, and official public hearing and adoption process for the Planning Commission and the City Council.

D. State Environmental Policy Act: The City has complied with the environmental review process required under SEPA. A draft Environmental Impact Statement on the preferred community framework plan was completed in November, 1992. A final Environmental Impact Statement was issued and adopted by the Board of County Commissioners in May of 1993. A draft supplemental Environmental Impact Statement was issued on the twenty (20) year Comprehensive Plans of the City of Camas and all jurisdictions in Clark County and Clark County itself in June, 1994. Numerous comments on the draft Environmental Impact Statement were received, evaluated and incorporated into a final Supplemental Environmental Impact Statement issued in September, 1994.

E. Record of Process: The factual data used to develop the Comprehensive Plan and Land Use Map is contained in the Comprehensive Plan. All Planning Commission and City Council workshops, meetings and public hearings have been advertised in the local paper, and all such proceedings were taperecorded. Audio tapes are on file. The interim ordinances to identify and protect sensitive areas were adopted in August of 1991 following public hearings before the Planning Commission and the City Council. The interim urban growth boundary was adopted by the City Council on August 30, 1993, and by the Board of County Commissioners on October 29, 1993, following public hearings. The final Urban Growth Boundary proposal of the City was submitted to the County Commissioners following public hearings and deliberation on October 10, 1994. The Board of County Commissioners will take final action on the final Urban Brown Boundary before January 1, 1995.

F. Internal Consistency: The Comprehensive Plan is internally consistent, and its policies among its various elements are complementary and not contradictory. Said policies further the goals of the Growth Management Act.

G. Concurrency: The Comprehensive Plan meets the concurrency requirement of the Growth Management Act.

H. Inter-jurisdictional Coordination: The Comprehensive Plan is consistent with adopted county-wide planning policies as set forth in the community framework plan of Clark County.

I. Coordination With Other Plans: The Comprehensive Plan is coordinated with those of neighboring jurisdictions. Environmental documents were developed jointly by Clark County and all municipalities located within the county.

J. Amendment: The Comprehensive Plan provides adequate review and amendment procedures. Amendments will not be considered more than once each year.

K. Goals of Growth Management: The Comprehensive Plan addresses the goals of the Growth Management Act to its policies and implementation

procedures. It encourages development in urban areas where adequate public facilities exist or can be provided in an efficient manner. It encourages efficient transportation systems that are based on regional priorities and are coordinated with county and other city comprehensive plans. It encourages the availability of affordable housing to all economic segments of the population, and promotes a variety of residential densities and housing types. The plan encourages economic development and the creation of a diverse array of employment opportunities. The plan encourages the retention of open space and the development of recreational opportunities, parks, and trails/bikeways. The plan seeks to protect the environment and enhance the State's quality of life, primarily by instituting specific sensitive lands protection measures combined with land use policies intended to contain sprawl, reduce vehicle miles traveled, and prevent water degradation. The plan seeks to ensure that necessary public facilities and services required to support development will be adequate to serve development at the time development is available for occupancy and use without decreasing current service levels below locally established minimum standards.

## II

ADOPTION

That document entitled "City of Camas Comprehensive Plan, December 31, 1994" and Comprehensive Land Use Map, a copy of which document and map is on file with the office of the City Clerk for public inspection, is hereby adopted as the Growth Management Act Comprehensive Plan for the City of Camas.

## III

REPEAL

The existing City of Camas Comprehensive Plan and elements thereof are hereby repealed, effective December 31, 1994.

## IV

EFFECTIVE DATE

This ordinance, being an exercise of a power specifically

delegated to the legislative body, is not subject to referendum. The Comprehensive Plan and Land Use Map adopted by this ordinance shall not be effective until December 31, 1994.

V

SUBMISSION TO STATE

The planning director is hereby directed to send a copy of the plan and land use map to the Washington State Department of Community Development within ten (10) days after adoption of this ordinance.

VI

VALIDITY OF PENDING ACTIONS

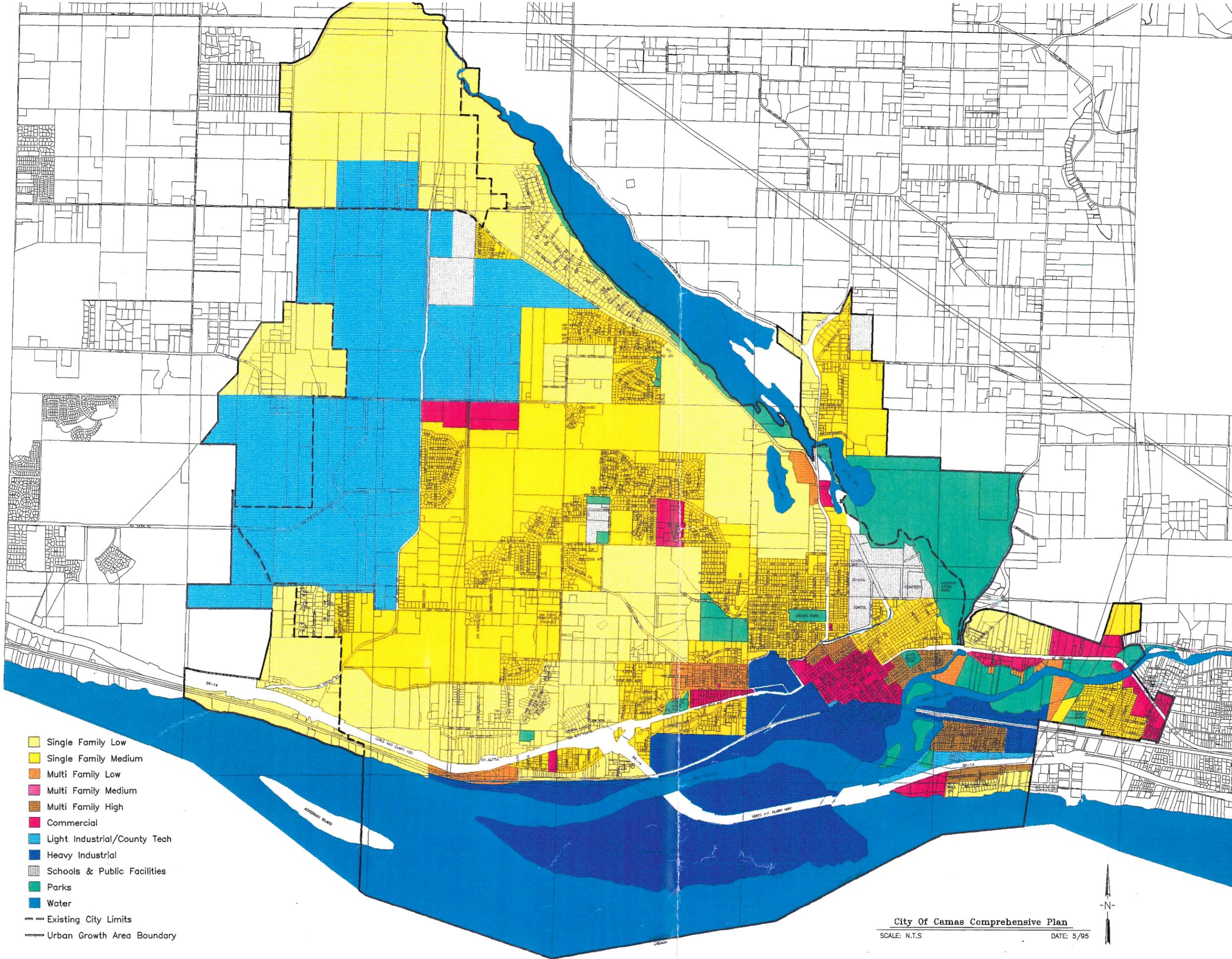
Repeal of the current City of Camas Comprehensive Plan pursuant to this ordinance shall have no effect on, nor shall it invalidate any action or pending action taken with regard to said Comprehensive Plan prior to the effective date of this ordinance.

PASSED by the Council and APPROVED by the Mayor this 12 day of December, 1994.

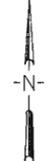
SIGNED: [Signature]  
Mayor

ATTEST: [Signature]  
Clerk

APPROVED as to form:  
[Signature]  
City Attorney



- Single Family Low
- Single Family Medium
- Multi Family Low
- Multi Family Medium
- Multi Family High
- Commercial
- Light Industrial/County Tech
- Heavy Industrial
- Schools & Public Facilities
- Parks
- Water
- Existing City Limits
- Urban Growth Area Boundary



# Affidavit of Publication

STATE OF WASHINGTON )  
 COUNTY OF CLARK )

I, Michael Gallagher, being first duly sworn, depose and say that I am the owner, editor, publisher of The Post-Record, a weekly newspaper. That said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the superior court in the county in which it is published and it is now and has been for more than six months prior to the date of the publication hereinafter to, published in the English language continuously as a weekly newspaper in Camas, Clark County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication

of said newspaper, that the ORDINANCE NO. 2012

a printed copy of which is hereto annexed, was published in the entire issue of said newspaper for One successive and consecutive weeks in the following issues;

Issue date Dec. 20, 1994

Issue date \_\_\_\_\_

The fee charged for the above publication was:

\$ 146.58

Michael J. Gallagher  
 Publisher

Subscribed and sworn to before me this 21st

day of December, 19 94

Beverly J. Webster  
 Notary Public in and for the State of Washington, Residing at Camas, Washington

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## III REPEAL

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## V SUBMISSION TO STATE

The planning director is hereby directed to send a copy of the plan and land use map to the Washington State Department of Community Development within ten (10) days after adoption of this ordinance.

## VI

### VALIDITY OF PENDING ACTIONS

Repeal of the current City of Camas Comprehensive Plan pursuant to this ordinance shall have no effect on, nor shall it invalidate any action or pending action taken with regard to said Comprehensive Plan prior to the effective date of this ordinance.

PASSED by the Council and APPROVED by the Mayor this 12th day of December, 1994.

SIGNED: Dean Dossett, Mayor  
 ATTEST: /s/Joan M. Smith, Clerk  
 APPROVED as to form:  
 /s/Roger D. Knapp  
 City Attorney  
 No. 3592—Dec. 20, 1994



PUBLICATION

THE FOLLOWING PUBLICATION: ORDINANCE NO. 2012  
RESOLUTION NO. \_\_\_\_\_  
NOTICE \_\_\_\_\_

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SIGNITURE OF PERSON RECEIVING PUBLICATION: J. Hamm

## CITY OF CAMAS COMPREHENSIVE PLAN

This plan is being submitted by the City of Camas in compliance with the Washington State Growth Management Act.

Throughout this entire process there has been a program of public participation which is described in Chapter II. It is important to note that representatives of Clark County participated with the Steering Committee. The Planning Commission held a second round of public hearings after the DEIS was issued in June. With the publication of the Final EIS, City Council will begin its public hearing process on October 10, 1994, with the intent to adopt late November or early December.

The SEPA compliance was accomplished jointly through the preparation of a Draft Supplemental Environmental Impact State coordinated by Clark County, Department of Community Development, Planning Division, which was published June 15, 1994. The Final EIS is currently being completed. Comments prepared in response to the DEIS review have been included in this draft of the plan and will be integrated into the final text.

Throughout the planning process elected officials and staff of the City of Camas have participated on numerous coordinating committees to insure interjurisdictional consistency. Meetings were held with both Vancouver and Washougal to review growth boundary and land use issues. As indicated previously, representatives of Clark County's Planning Division also met with the City of Camas' Steering Committee.

The objective has been to develop a comprehensive plan for the City which met the intent and requirements of both the Growth Management Act and the Clark County Framework Plan Policies. It is felt that this has been accomplished while maintaining the small town character quality of Camas for current and future residents.

# CITY OF CAMAS

## I. INTRODUCTION

Introduction.....	1
What Planning Is and Why Do It .....	1
Organization of the Comprehensive Plan .....	2
Growth Management Act .....	3
Consistency with State, County, and Local Goals.....	4
State Planning Goals .....	4
County Planning Goals .....	4
Study Area.....	5
Urban Growth Area and its Identification.....	5
Growth Management Act Requirements .....	5
Clark County Requirements .....	6
Identification Criteria.....	7
Conclusion.....	9

## II. PUBLIC INVOLVEMENT

Steering Committee.....	1
Public Meetings and Hearings.....	1
Newspaper and other Resources.....	2

## III. BACKGROUND

Historical Setting.....	1
Early Camas History .....	1
A New Century .....	2
Post-War Camas .....	3
Physical Form.....	5
Physical Characteristics — Constraints and Setting.....	5
Topography.....	5
Geology.....	5
Soils .....	6
Hydrology .....	7
Climate .....	7
Critical Areas .....	7
Streams and Watercourses.....	7
Wetlands .....	7
Frequently Flooded Areas .....	8
Aquifer Recharge Area .....	8
Geologically Hazardous Areas .....	8
Wildlife Habitat Conservation Areas .....	10
Resource Lands .....	10
Mining.....	11
Agriculture.....	11
Existing Land Uses.....	12
Agriculture.....	12
Residential .....	12
Commercial.....	13
Industrial.....	14
Transportation and Circulation.....	14
Employment and the Economy.....	16
Historical and Existing Employment .....	16
Location of Employment.....	18
Projected Employment .....	19

# CITY OF CAMAS

Commercial Building Permit Activity .....	20
Downtown.....	20
Population .....	21
Historical and Existing Population.....	21
Population Age Distribution .....	22
Projected Population.....	23
Residential Building Permit Activity.....	24
Governmental Jurisdictions.....	25
Clark County .....	25
City of Vancouver .....	25
City of Washougal.....	25
Clark County PUD .....	25
Port of Camas/Washougal .....	25
Fire Districts.....	25
Camas School District.....	26

## IV. LAND USE ELEMENT

The Goals of this Plan.....	1
Urban Growth Area .....	1
Sub-Area Analysis.....	2
Potential-Interim UGA .....	3
Proposed Urban Growth Area .....	3
Plan Concept .....	5
Residential .....	7
Commercial.....	10
Industrial.....	12
Urban Resource Extraction .....	13
Land Use.....	14

## V. HOUSING ELEMENT

Introduction.....	1
Background.....	2
Wages and Income.....	2
Housing Costs and Types .....	3
Factors Affecting Housing Quality .....	5
Social Factors .....	7
Needs.....	10
Policies.....	12
Actions .....	13

## VI. TRANSPORTATION ELEMENT

State Highway System.....	1
Local Roadways .....	1
Existing Plans .....	2
SR 500/S.E. Clark County Traffic Analysis .....	2
WSDOT SR 14 Study.....	2
South County Planning Area.....	2
Clark County Road Standards.....	2
Arterial Street System .....	3
Traffic Control Devices .....	4
Accident Summary.....	5
Transit.....	7
Pedestrian and Bicycle Facilities .....	7

# CITY OF CAMAS

Traffic Capacity .....	7
Transportation Program Review .....	8
Evaluation Criteria and Standards.....	8
Traffic Service.....	9
Compatibility .....	9
Benefit-Cost.....	9
Evaluation Matrix .....	9
Future Roadway Network .....	9
Benefit-Cost Ratios.....	12
Evaluation Matrix .....	12
Projected Traffic Volume .....	12
Transit Plan.....	15
Concurrency Management.....	15
Implementation of the Concurrency Management System .....	16
LOS Service Principles.....	16
LOS Service Standard.....	16
LOS Service Approach.....	16
Capacity Allocating Strategy.....	16
Development Review Strategies.....	17
Level of Service (LOS).....	17
Project Prioritization.....	18
Cost Estimates.....	21
Mitigation Payment System.....	23
Impact Fees Calculation for Specific Uses.....	23

## VII. PARKS, RECREATION, OPEN SPACE AND TRAIL/BIKEWAY ELEMENT

Existing Conditions.....	2
Parks .....	2
Greenway and Open Space Network.....	4
Trails and Bikeways.....	5
Indian Campsites.....	6
Parks, Recreation and Open Space Goals and Policies.....	7
Definitions and Standards.....	7
Parks .....	7
Greenways and Open Space.....	8
Trails and Bikeways.....	9
Trails .....	9
On-Road Bicycle Lanes .....	14
Summary .....	14
Recreation facilities .....	15
Needs Analysis.....	16
Analysis of Existing Need .....	16
Analysis of Future Need .....	16
Trail and Bikeway Plan .....	17
Park and Open Space Plan.....	18
Facility Identification and Signage.....	19
Schedule and Concurrency .....	20
Costs .....	21
Funding.....	21

# CITY OF CAMAS

## VIII. PUBLIC FACILITIES, UTILITIES AND SERVICES

Schools.....	2
Existing School District.....	2
Future Needs and Assumptions.....	2
City Facilities.....	4
Fire Protection and Emergency Medical Services.....	4
Existing Fire Department.....	4
Future Needs and Assumptions.....	5
Standards.....	6
Police Protection.....	6
Existing Police Department.....	6
Future Needs and Assumptions.....	6
Standards.....	7
Library.....	7
Existing Library.....	7
Future Needs and Assumptions.....	8
Standards.....	8
City Utilities.....	10
Water.....	10
Description of System.....	10
Surface Water.....	10
Ground Water Wells.....	10
Level of Service Criteria.....	10
Design Consideration.....	10
Flow Requirements.....	10
Construction Criteria.....	11
Current Deficiencies/Excess Capacity.....	11
Major Elements of the Plan.....	12
Water Supply.....	12
Water System Model and Evaluation.....	12
Capital Improvement Plan.....	12
Finance.....	12
Operation and Maintenance Costs.....	13
Capital Costs.....	13
Non-Rate Revenue.....	13
Revenue From Rates.....	13
Sewer.....	14
Description of System.....	14
Level of Service Criteria.....	15
Current Deficiencies/Excess Capacity.....	15
Collection System.....	15
Water Pollution Control Plan—Capacity Limitations.....	15
Major Element of the Plan.....	16
Population, Flow, and Loadings Projections.....	16
Collection System Improvements.....	16
Outfall Dilution and Water Quality Compliance Evaluation.....	17
Infiltration/Inflow Analysis.....	17
Treatment Plant Weak Links.....	17
Sludge Disposal Options.....	17
Financing.....	19
Operation and Maintenance Costs.....	19

# CITY OF CAMAS

Capital Costs .....	19
Non-Rate Revenue.....	19
Revenue From Rates .....	19
Non-Local Revenues .....	19
Policies for Water and Sewer.....	20
Storm Water Drainage.....	20
Solid Waste Disposal.....	20
Utilities.....	21
Existing Conditions and Future Needs.....	21
Electrical .....	21
Natural Gas.....	22
Telecommunications.....	23
Summary.....	23

## IX. CAPITAL FACILITIES PLAN ELEMENT

Structure and Definitions.....	1
Financing of Capital Facilities.....	2
Capital Facilities Plan— Project List (1993–1998).....	3
Inventory of Current Facilities .....	10
Needs Forecast.....	11
Six-Year Finance Plan.....	11
School Impact Fee Calculation.....	12

## X. OPTIONAL ELEMENTS

Economic Development Element.....	1
Introduction.....	1
Background And Existing Conditions.....	1
Downtown.....	1
Commercial Areas .....	1
Industrial Park.....	2
Factors Affecting the Future.....	2
Goals And Policies .....	2
Implementation And Financing Strategies .....	7
Alternative Development Strategies.....	7
Implementation and Financing Strategies .....	7

# **I. INTRODUCTION**

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## INTRODUCTION

In 1993 the City of Camas is a small community of about 7,220 located 12 miles east of Vancouver at the confluence of the Columbia and Washougal rivers in Clark County. In recent years, southwest Clark County area has experienced accelerated growth due to the improved accessibility promoted by the construction of the I-205 bridge between Oregon and Washington. Although this growth is taking place all around the City of Camas, a single industry, James River Mill, still comprises over 64 to 67% of the total assessed valuation of the city.<sup>1</sup>

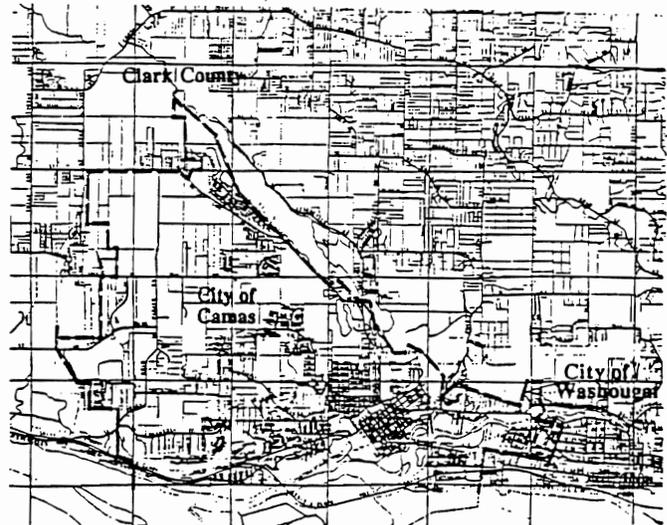
The Comprehensive Plan for the City of Camas provides:

- Policies and recommendations to direct public and private decisions affecting future growth and development
- A flexible framework to adapt to the changing attitudes and resources of the region
- A long-range vision, based on community values and goals, of how citizens want Camas to look and function in the future as well as guidance for achieving that vision
- A tool for making decisions on growth, land use, transportation, public facilities and services, parks, and open space.

The history of comprehensive planning for the City of Camas dates to 1963 when the first plan was prepared. The 1984 Comprehensive Plan was a major update of the City's first plan. In 1988 and 1991 revisions to the Comprehensive Plan were prepared for selected sections due to significant annexations. The revisions to

<sup>1</sup> Clark County Assessor. Includes Camas Power and Boiler since it is located on and leased to James River. James River alone is 64%.

the Comprehensive Plan from 1991 for the Prune Hill Sub-area, Sensitive Areas information and revisions to the City's Comprehensive Parks Plan have been incorporated into this document. This City of Camas Comprehensive Plan updates the entire comprehensive planning document based on changes and revisions that have occurred in the last few years and incorporates the elements required by the new Growth Management Act, described below. Specifically the Prune Hill Subarea plan, sensitive areas information and revisions to the City's Comprehensive Parks Plan have been incorporated into this document. The city limits are shown below.



## WHAT PLANNING IS AND WHY DO IT

Planning is choosing what to do, and how and when to do it. A good explanation of planning comes from a standard business text: "Although the exact future can seldom be predicted and factors beyond control may interfere with the best-laid plans, unless there is planning, events are left to chance. Planning is a demanding process; it requires the conscious determination of courses of action and the basing of

## CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

decisions on purpose, knowledge, and considered estimates.”<sup>2</sup>

Planning is an everyday activity. We plan our vacations, careers, etc. Businesses discovered early that without planning, mistakes showed up as production lines came to a halt because of a missing or inadequate part. Companies also plan cash needs to ensure a smooth flow of funds.

The plan provides a basis for coordinated action by enabling public and private interests to undertake projects with a consistent understanding of community goals and objectives. The plan functions as a working frame of reference for government officials and administrators by establishing community policies and by specifying methods and standards for implementation of these policies. Public facilities, such as sewers, public water, roads, parks, libraries, and fire stations can be planned, and a program for land acquisition and construction can be prepared in advance of needs so that the services will be available when and where they are needed.

These same community policies serve individual property owners and private interest groups as a means of evaluating their individual decisions in light of community objectives. They are able to determine how their individual interests can best be served in a manner which is consistent with the Plan. They are assured by the Plan that once they commit their investment to the land, there will be a reasonable continuity of land policies which will protect their interests.

For these and other reasons, a city needs to plan. The plan must take into consideration the goals of the residents and development factors (economic, physical, governmental, etc.), and devise a program which, if implemented, will fulfill the goals.

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<sup>2</sup> Management - A System and Contingency Analysis of Managerial Functions, Koontz and O'Donnell, 1976.

The plan is not the last word, nor is it the first. Rather, it is an important tool to help the City identify its problems and to take necessary steps to solve them before the cost of a reasonable and desirable solution is beyond the community's economic capabilities. It is a crucial step in avoiding the pitfalls of uncoordinated policies in the process of moving from existing conditions to future possibilities.

The plan is not intended as a rigid system of goals and development policies. Its benefits lie in the fact that it is:

*Long Range:* Looking ahead as far as is practical to anticipate growth and resulting community needs.

*Comprehensive:* Relating and integrating all types of land uses and all necessary public facilities.

*General:* Establishing general locations and approximate areas for the many elements and indicating their relationships to each other and to the population which they will serve.

*Responsive:* Able to adjust to changes of condition, unforeseen circumstances, or new local and regional trends. This will be accomplished through regular updates occurring at least every five years.

### ORGANIZATION OF THE COMPREHENSIVE PLAN

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The City of Camas Comprehensive Plan is organized into the following sections that are titled and generally described as:

#### INTRODUCTION

The overview of Camas' Planning Area's physical location in Clark County, together with a summary of the Plan, its purpose, and use. The larger context of the plan is also discussed: the State's Growth Management Act, the Study Area, the

Urban Growth Area, Consistency with State, County and Local Plans.

#### PUBLIC INVOLVEMENT

The description of citizen involvement in the planning process and relationship to the completed plan.

#### BACKGROUND CONDITIONS

A summary of Camas's history, physical environment, population and employment trends, and community vision. This background analysis illustrates how physical and environmental factors, existing conditions, and future growth trends will affect development of the Camas Comprehensive Plan.

#### LAND USE ELEMENT

This Element describes land use goals and examines how the land will be used: critical areas, open spaces, residential, commercial, industrial and natural resource land uses, as well as public facilities such as parks, schools, government and safety.

#### HOUSING ELEMENT

Camas wants to ensure that citizens from a wide range of economic levels, age groups, and residential needs have a selection of housing available to them. This element examines the factors affecting the provision of housing, such as wages and income, housing costs and types, quality of housing, and social factors. Needs, Actions, and Policies are outlined to address the gaps in housing.

#### TRANSPORTATION ELEMENT

This element examines the existing roadway system and plans for that system. The system is analyzed relative to accidents and capacity as well as for transit, pedestrians, and bicycles. Based on this analysis it then sets forth projected volumes and a future network.

#### PARKS, RECREATION, AND OPEN SPACE ELEMENT

The purpose of this element is to identify the demands for park and recreation facilities and service, and to develop the long range plan and implementation program. It also integrates the trails and bikeways plan with the parks and open space facilities.

#### PUBLIC FACILITIES, UTILITIES AND SERVICES ELEMENT

Public facilities, utilities and services have an essential role in accommodating growth. This element looks at how these facilities and services will need to grow as well as how they impact other elements of the plan. Included are Schools, City Administrative facilities, City Utilities and Utility districts or companies.

#### CAPITAL FACILITIES PLAN ELEMENT

This element contains the six-year capital facilities plans for the City (General, Equipment, Streets, Water, Sewer, Parks and Open Space) and Schools.

#### OPTIONAL ELEMENTS

These elements are identified as Optional by the Growth Management Act. This section now contains a section on Economic Development. Future elements anticipated, but not now included, are Urban Design and Streetscapes, Conservation of Special Features, and Energy Conservation.

### GROWTH MANAGEMENT ACT

The State of Washington adopted the Growth Management Act (GMA) in July of 1990 and subsequently amended the GMA in July of 1991. These two pieces of legislation comprise the primary guidelines that must be followed by the majority of communities within the State. These pieces of legislation require an inventory of

sensitive areas, an update of comprehensive plans to include a number of specific elements, adoption of regulations to implement the plan, development of countywide planning policies to address issues of a regional nature, and establishment of planning deadlines.

This comprehensive plan has been developed with three objectives in mind:

- Build on the appropriate provisions of the City's existing plan and development regulations;
- Respond to local and county development trends and pressures;
- Address the issues raised in the State Growth Management Acts and Clark County's Countywide Framework Plan.

**CONSISTENCY WITH STATE,  
COUNTY, AND LOCAL GOALS**

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The State's Growth Management Act sets out thirteen statutory goals. The development of Comprehensive Plans is guided by these overall goals, but the detail is shown in the five plan elements — Land Use, Transportation, Housing, Capital Facilities, and Utilities — that are mandated by State legislation. For a community's plan to be valid it must be consistent with the requirements of the Act. Consistency, in this context, means that a plan must not conflict with the state statutory goals, countywide policies, and plans of adjacent jurisdictions. This section reviews the Comprehensive Plan for the City of Camas for consistency with the State Planning Goals, Countywide Framework Plan Policies, and the plans from adjacent communities.

**STATE PLANNING GOALS**

The thirteen statutory goals identified in the State legislation are as follows:

1. Guide urban growth to areas where urban services can be adequately provided;
2. Reduction of urban sprawl;
3. Encourage efficient multi-modal transportation systems;
4. Encourage the availability of affordable housing to all economic segments of the population;
5. Encourage economic development throughout the state;
6. Assure private property is not taken for public use without just compensation;
7. Encourage predictable and timely permit processing;
8. Maintain and enhance natural resource-based industries;
9. Encourage retention of open space and development of recreational opportunities;
10. Protect the environment and enhance the State's quality of life;
11. Encourage the participation of citizens in the planning process;
12. Ensure adequate public facilities and services necessary to support development;
13. Identify and preserve lands and sites of historic and archaeological significance.

**COUNTY PLANNING GOALS**

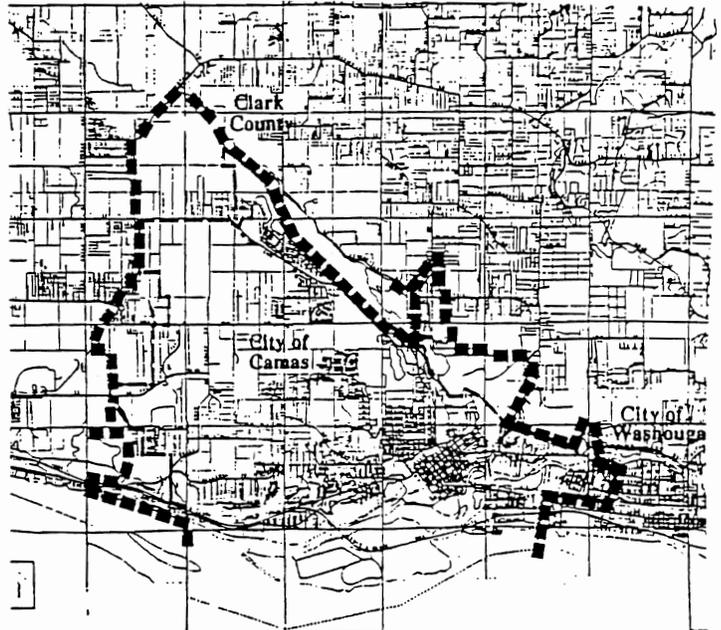
The county adopted a Community Framework Plan that provides policies for developing the more detailed plans, such as this Comprehensive Plan. The Community Framework Plan addresses 13 topics:

- Land Use: Hierarchy of Centers, Urban Areas, and Urban Reserves
- Housing
- Resource Lands
- Rural Lands
- Transportation

- Capital Facilities
- Utilities
- Parks, Recreation, and Open Space
- Annexation and Incorporation
- Economic Development
- Critical Areas
- Community Design
- Historic Preservation

Mayor and City Council as shown on following map. This boundary includes areas to the west and north of the city limits, and encompasses the total area considered for study in this Comprehensive Plan. Within these bounds, the plan analyzes the potential problems and opportunities for development, and recommends land uses, transportation, and policies. It is designed with the primary objective of maintaining a high quality of life and economic base for the residents of the City.

These topics are addressed by the Camas Comprehensive Plan in the appropriate section of the plan. The plan for the Cities of Washougal and Vancouver have been reviewed and Camas's land use pattern is consistent with those neighboring jurisdictions. There are differences over the inclusion of small areas to both the east and the west in the Urban Growth Boundary. There is cooperation and sharing of information between the City and its neighbors. In developing the County Framework Plan and this plan the City has met with the Cities of Vancouver and Washougal, and Clark County Officials. This level of communication helps ensure consistency between jurisdictions plans and capital projects.



### URBAN GROWTH AREA AND ITS IDENTIFICATION

Water service as well as school district boundaries have been established for some time, and extend beyond the City limits. This reinforces the need for coordination with County and other cities for their services and land uses.

Each community is to establish a growth boundary that will accommodate population and employment growth and allow adequate additional space for employment centers, shopping, parks, schools, open space, roads, and utilities, and a certain amount of additional land to allow for a competitive real estate market for all of these uses.

Camas recognizes its place in a larger regional community where collective decisions are necessary to protect and enhance the quality of life we all enjoy. The City will continue to involve itself in regional issues and participate in their resolution.

### GROWTH MANAGEMENT ACT REQUIREMENTS

### STUDY AREA

The Growth Management Act (GMA) defines the following terms:

To facilitate planning, early in the Growth Management process a large preliminary study boundary was established by the

**Urban Growth:** Refers to growth that makes intensive use of land for the location of buildings, structures, and impermeable surfaces to such degree as to be incompatible with the primary use of such land for the production of food, other agricultural products, or fiber, or the extraction of mineral resources. When allowed to spread over wide areas, urban growth typically requires urban governmental services. "Characterized by urban growth" refers to land having urban growth located on it, or to land located in relationship to an area with urban growth on it as to be appropriate for urban growth.

**Urban Growth Areas:** (1) Each county that is required or chooses to adopt a comprehensive land use plan under GMA shall designate an urban growth area or areas within which urban growth shall be encouraged and outside of which growth can occur only if it is not urban in nature. Each city that is located in such a county shall be included within an urban growth area. An urban growth area may include more than a single city. An urban growth area may include territory that is located outside of a city only if such territory already is characterized by urban growth or is adjacent to territory already characterized by urban growth.

(2) Based upon the growth management planning population projection made for the county by the office of financial management, the urban growth areas in the county shall include areas and densities sufficient to permit the urban growth that is projected to occur in the county for the succeeding twenty-year period. Each urban growth area shall permit urban densities and shall include greenbelt and open space areas. Within one year of the effective date of this section, each county required to designate urban growth areas shall begin consulting with each city located within its boundaries and each city shall propose the location of an urban growth area. The county shall attempt to reach agreement with each city on the location of an urban growth area within which the city is located. If such an agreement is not reached with each city located within the urban growth area, the county shall justify in writing why it so designated the area an urban growth area. A city may object formally with the department over the designation of the urban growth area within which it is located. Where appropriate, the department shall attempt to resolve the conflicts, including the use of mediation services.

(3) Urban growth should be located first in areas already characterized by urban growth that have existing public facility and service capacities to

serve such development, and second in areas already characterized by urban growth that will be served by a combination of both existing public facilities and services and any additional needed public facilities and services that are provided by either public or private sources. Further, it is appropriate that urban government services be provided by cities, and urban government services should not be provided in rural areas.

#### CLARK COUNTY REQUIREMENTS

More particularly, Clark County has established the following criteria to be used in determining an Urban Growth Area (UGA):

- The UGA must provide sufficient vacant, buildable urban land to accommodate the 20 year population/employment projection. Land is considered vacant and buildable if it is privately owned, is not covered by 75% or more with environmentally sensitive areas and if it has a structure valued at less than \$10,000.
- The UGA must first encourage growth in areas with existing public services and facilities. Other parts of the UGA will be developed concurrently with or subsequent to the provision of public facilities and services.
- Cities must be located within UGAs. Urban services shall be provided within those areas. Urban levels of service will not be provided outside UGAs.
- Other lands included within UGAs must either be already characterized by urban growth or adjacent to such lands.
- Existing urban densities should be included within UGAs.
- Each UGA must include greenbelts and open space.
- The UGA must provide a local balance of industrial, commercial, and residential lands to minimize impacts upon the transportation network resulting in transportation and energy efficiency, less

noise pollution and improved air and water quality.

- The UGA must not contain areas designated for long-term resource based industries (agriculture, forestry, or mineral production).
- The boundary of the UGA should utilize natural features (such as drainage, steep slopes, open space, and riparian corridors) and existing and proposed infrastructure (such as public services and facility availability, limits and extensions, and jurisdictional and special district boundaries).
- The local jurisdictions must have the anticipated financial capability to provide infrastructure/services needed in the urban growth area over the planning period under adopted concurrency standards.

Clark County has also established the use of an Urban Reserve as an additional element of Urban Growth Areas. The Clark County Framework Plan defines urban reserve areas (land reserved for future development after 20 years), where appropriate, to allow orderly conversion of land adjacent to designated urban growth areas to urban densities, as demonstrated by the need to expand the developable land supply or by regional industrial or public facility needs.

#### IDENTIFICATION CRITERIA

With these definitions and criteria as guides for formulating an urban growth area, the following items were evaluated with citizen input during the review process:

*Population Projections:* The county was supplied with an estimated population growth amount for the next 20 years. The total was then dispersed to the various jurisdictions in the county based on historical growth patterns and future growth potential. The rationale behind this assumption is that location plays a large part in the future growth for any area. The

Cities of Vancouver, Washougal, and Camas are more proximate to the Portland metropolitan area and therefore the population is more likely to settle in these areas before locating in more remote areas.

The City of Camas was allocated 13,600 additional people for the next 20 years. The area may be increased by a Market Factor to ensure there is a surplus of land available for housing and employment needs. (Market Factor is discussed in more detail below.) The Community Framework Plan suggests that a 25% Market Factor be used. Combining the existing population located in the City, the allotment from the County, and 25% market factor, the City's Urban Growth Area should accommodate 24,500 people. The final revised boundary is estimated to accommodate approximately 25,300 people.

*Employment Projections:* It is also necessary to ensure that an adequate supply of jobs is provided to the citizens of the City of Camas. It is not the City's desire to be considered a "bedroom community" of Portland or Vancouver. The City has made large investments in its infrastructure to ensure the existing industry (James River, Inc.) can continue to operate profitably, while also enticing new high technology industries into the business park on the western edge of the City. The objective of the plan is to maintain at least a ratio of 40:60 jobs to people, and ensure a strong and diversified economic base.

It is estimated that the City would have the potential of between 14,000 and 16,500 jobs in the Urban Growth Area.

*Market Factor:* A Market Factor is to ensure the City does not create a false scarcity of housing by limiting the amount of land within the urban area, thus artificially driving up the cost of housing. It is important to have a surplus of land to ensure the housing market remains competitive and healthy. The County Framework Plan discusses a target Market Factor of 25% for residential and 50% for jobs. The City has attempted to meet that requirement in the revised boundary. It

happens that the market factor on residential is about 30%, while the employment is less than the market factor and ratio of jobs to population. Four factors have caused these variations from population and employment projections:

1. In the last two and a half years the City of Camas has approved approximately 2,000 new lots, a large majority of which are not now developed. Their potential population is estimated at 4,500 people. This produces a significant potential which will likely cause the City to exceed projected population estimates;
2. When the interim Urban Growth Area to the west was proposed, the logical, natural boundary was felt to be the greenway. The adoption of the final Urban Growth Area excluded a high density mixed-use center reducing both residential density and jobs;
3. A majority of the light industrial/high technology land is already zoned and in the City. It has an employment potential nearly equal to the allocation;
4. The City of Camas has extensive critical areas with nearly 50% of the land identified as wetlands, steep slopes, streams, and floodways.

*Housing:* The City utilized the comprehensive housing study (CHAS) prepared by Clark County in preparing this specific element. The City's plan results in a mix of multi and single family with an approximate split of 25% multi-family and 75% single family based on existing development, land suitability, and citizen's goals. For the purposes of calculating family size, the City has included duplexes and townhouses in the definition of single family. (With those housing types included, the City is close to the County Framework Plan objective of 60%/40% split). The average density for the Urban Growth Area is estimated to be approximately 5.2 dwelling units per acre. This density is slightly less than the County Framework Plan target density of 6 to 10 units per acre for major centers.

*Open Space:* The City currently requires that single family or multi-family development set aside 30% of the overall project site as open space. The Urban Growth Area takes this into account. In conjunction with the open space requirement, sensitive areas (wetlands, stream courses, steep and unstable slopes) were also estimated. Sensitive areas were subtracted from the total area within the Urban Growth Area total developable acreage.

The Urban Growth Area also anticipates the retention of an open space between the Camas and Vancouver urban areas.

*Parks:* The City requires that approximately 30 acres per 1,000 population be set aside for open space purposes and 5 acres per 1,000 population for active park purposes. The Urban Growth Area contains the amount of acreage needed to support the park acreage to population ratio mentioned above.

*Schools:* Allocations of potential school sites have been made based on assumptions utilized in the Prune Hill Sub-Area plan and preliminary discussion with the Camas School District.

*Capital Facilities:* An integral part of the GMA is the ability of a jurisdiction to service those areas located within its Urban Growth Area. This requirement pertains to schools, transportation, water, sewer, police, and fire for the most part. The goal of the Capital Facilities Plan (CFP) is to meet established level of service and identify the cost and timing of the improvements required to promote the efficient use of resources.

In each section of the plan the required capital facilities over the 20 year period have been identified based on the projected growth and plan standards.

The CFP addresses the needs of the School District and City for a six year window of time, and is updated annually. Studies

have also been commissioned to address the long term needs of the City.

The goals are to provide the most cost efficient system possible while also maintaining continuity and logic of areas serviced. The City has the ability to serve the areas within the Urban Growth Area.

*Natural Features:* Finally the Urban Growth Area considers such natural features as Lacamas Lake, the Greenway, streams and rivers, and topography.

The following map shows the final recommended Urban Growth Area based on the application of the identification criteria.

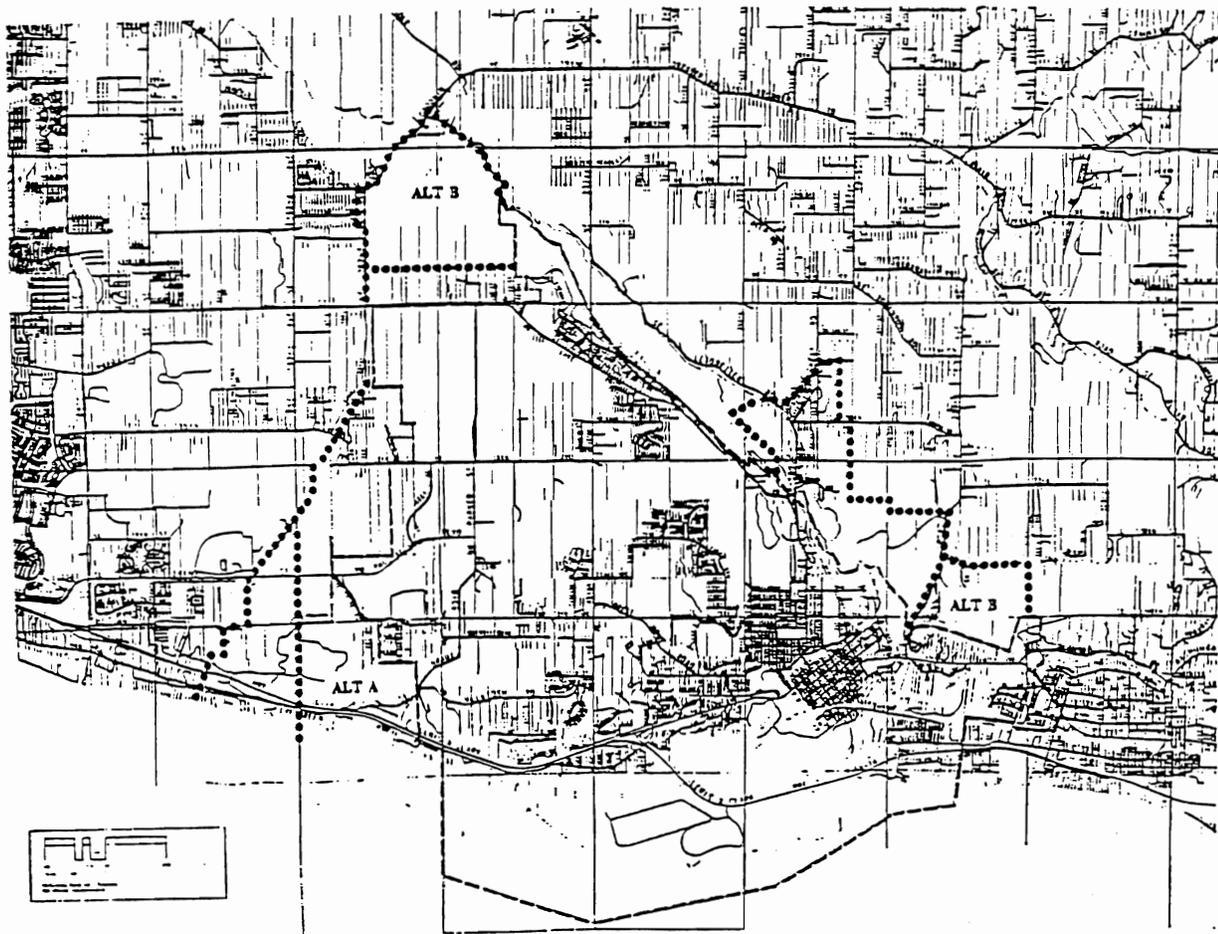
#### ALTERNATIVE URBAN GROWTH AREAS

As discussed previously, the interim growth boundary, approved by Clark County does not meet the identification

criteria. However, recognizing that there are conflicts with this proposed area with Vancouver on the west and Washougal on the east, the following alternatives are proposed:

A. If the greenway is not utilized as the western boundary in the vicinity of 34th and 192nd; then the area should be squared off by the quarry.

B. If the areas in conflict to the west and to the east are both excluded from the City of Camas Urban Growth Area, then the area North of First Street which contains Camas Meadows should be included in the City's Urban Growth Area.



**CONCLUSION**

Camas is limited in its expansion potential to the south by the Columbia River and to the east by the City of Washougal, thus the north and west areas function as the primary expansion zones. These areas are desirable due to the potential to facilitate large campus style industrial developments in proximity to major interstate highways and the Portland International Airport. The comprehensive plan goal is to maintain and encourage a strong and diversified economic base, while balancing this accommodation for growth with a preservation of Camas' natural beauty and historic value. Vacant land is available for development due to recent annexations and the location of the Urban Growth Area. Existing commercial uses are convenient to the downtown and east Camas areas, but new residential development on Prune Hill and the western portions of the Urban Growth Area would probably be better served by new commercial development to the west of Prune Hill.

**AMENDMENTS**

This Comprehensive Plan is based upon the best available information. As years go by, better information or changing circumstances may require the change or amendment of this plan. Such information could be a revised sewer or water plan for instance. In any event, it is likely that this plan, designed to guide the City of Camas to the year 2010, may need to be amended before that time. Therefore, the following procedure shall be used to amend this Comprehensive Plan.

The Comprehensive Plan shall be reviewed once a year, unless there is an emergency, with the following procedure:

In January of each year, the City of Camas shall announce that proposed amendments to the Comprehensive Plan will be received for 30 days. Applicants will be expected to

show cause as to why their proposed change should be made.

In February of each year, the City shall evaluate all proposed changes (including any changes which may be initiated by the City of Camas). If no amendments are received, the Chairman of the Planning Commission shall so report to the Mayor and City Council, and the Annual Review of the Comprehensive Plan shall be considered completed. The City may take as much as 60 days from the closing of the application period to complete the initial review of proposals. Environmental determination requirements may lengthen this period.

**PROCEDURE**

Amendments to the Comprehensive Plan shall be adopted in accordance with RCW 35A.63.070 to 35A.63.073 as outlined below:

After preparing any amendment, modification, or alteration to the Comprehensive Plan, the Planning Commission shall hold at least one public hearing on the proposed amendment. Notice of the time, place, and purpose of such public hearing shall be published in the official newspaper of the City at least ten days prior to the date of the hearing. The hearing may be continued from time to time at the discretion of the Planning Commission, but no additional notices need be published.

Upon completion of the hearing or hearings on the proposed amendments to the Comprehensive Plan, the Planning Commission shall transmit a copy of its recommendation for the amendments to the Comprehensive Plan to the City Council through the Mayor, who shall acknowledge receipt thereof and direct the Clerk of the City to certify the date of receipt.

Within sixty (60) days from its receipt of the recommendation of the Planning Commission for modification to the

Comprehensive Plan, the City Council at a public meeting shall consider the same. The City Council shall vote to approve or disapprove or to modify and approve as modified the proposed modifications to the Comprehensive Plan, or shall refer it back to the Planning Commission for further proceedings, in which case the Council shall specify the time within which the Planning Commission shall report back to the City Council its findings and recommendations on the matters referred to it.

The final form and content of the amendments to the Comprehensive Plan shall be determined by the City Council. An affirmative vote of not less than a majority of the total members of the City Council shall be required for adoption of an ordinance to approve the amendments to the Plan. The Comprehensive Plan as amended shall then be filed with the appropriate official and shall be available for public inspection.

#### REVIEW

In conjunction with the county review of the population and employment projections, and the Urban Growth Area, the City shall review its comprehensive plan at least every 10 years.

#### CRITERIA FOR ANNEXING TERRITORY

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The basic criteria for annexations will be established in an Intergovernmental Agreement between the City and County. It will establish the framework for ongoing and consistent responses to annexing future residential, commercial, and/or industrial properties within the Urban Growth Area. Criteria will be developed regarding applicable regulations and development standards; extension of streets and utilities; provision of services; public information; and administration.

## **II. PUBLIC INVOLVEMENT**

## II. PUBLIC INVOLVEMENT

The citizen participation process is an essential component in the development of a comprehensive plan, and the City of Camas values the participation of the citizens of the city and surrounding area in the formulation this Comprehensive Plan. Without the input and support of the community a plan will not be as effective. The requirements for public involvement in state law and the Growth Management Act (GMA) allow each community to determine the process that is most appropriate for them. However, the GMA does require that cities establish procedures for providing early and continuous public participation in the development and amendment of comprehensive land use plans and development regulations implementing such plans. The procedures shall provide for broad dissemination of proposals and alternatives, opportunity for written comments, public meetings after effective notice, provision for open discussion, communication programs, information services, and consideration of response to public comments.

The public participation process has included:

- Interviews with individuals (citizens and developers) and agency representatives (County, City, and School District)
- Steering Committee made up of representatives of City Council, Planning Commission, School District, City Staff and citizens.
- Community meetings before the Steering Committee to review plan recommendations and components
- Discussions at Ward Meetings
- Parks Board Review
- Official Public Hearing and adoption process before the Planning Commission and City Council

### STEERING COMMITTEE

The Steering Committee concept was first adopted during deliberations on the Prune Hill Annexation process. The concept functioned well and was carried over as GMA proceedings unfolded. The Steering Committee meetings are open to the public and are specifically structured to allow public participation at each meeting.

The Steering Committee consisted of three citizen representatives, a School District representative, a Planning Commission member, a City Council member, the Mayor, the City Administrator, the Public Works Director, the Planning Director, and a Member-at-Large. Representatives of the Clark County Planning Department also attended.

### PUBLIC MEETINGS AND HEARINGS

In addition to the Steering Committee, the City has scheduled various public community meetings to present the plan during its development. The City has also scheduled public hearings before the City Planning Commission and City Council to encourage public input.

The public involvement process for the Camas comprehensive plan actually began in 1990 with the Prune Hill Annexation (initially referred to as Vancouver View). Three public meetings were held from June to September of 1990 followed by three Steering Committee meetings and hearings before the City Planning Commission and City Council. With the adoption of the Growth Management Act the scope of this planning effort was expanded to also include the identification and protection of environmentally sensitive areas.

From November of 1990 through August of 1991 eight Steering Committee meetings were held; two Community meetings; workshops with the Parks Board and Planning Commission and City Council;

and public hearings before the Planning Commission and City Council. The results of this effort was the adoption of the Sub-Area Plan for the Prune Hill Annexed Area; adoption of the Sensitive Areas Ordinance; adoption of the Impact Fee Ordinance for Parks and Open Space; and an update of the Comprehensive Parks and Recreation Plan.

The update of the Comprehensive Plan to meet the requirements of the Growth Management Act since 1992 has included two phases:

- August 1992 to October 1993: In addition to updating background information, the effort focused on defining the Preliminary Urban Growth Boundary;
- October 1993 to April 1994: The effort has been to complete the draft Comprehensive Plan.

During these time periods, the following meetings were held:

- August 1992 to October 1993:
  - Steering Committee Meetings—Open public meetings at City Hall, eight
  - Community Meetings, one
  - Planning Commission Public Hearing, one
  - City Council Public Hearing, one
- October 1993 to June 1994:
  - Steering Committee Meetings, six
  - Parks Board Review, two
  - Joint Committee/City Council/Planning Commission, one
  - Community Meetings, one
  - Planning Commission Public Hearing, one
  - City Council Public Hearing, one

During this time there were also eight ward meetings where issues of growth management, planning, zoning, parks and impact fees were topics of the meeting. Meeting notices were sent to each registered voter household and were published in the local newspaper. Attendance ranged from 14–65 with a combined total of 322. City Council members and City staff attended these meetings which were informally

structured to provide “two way communication.” The information gained was brought back to the Steering Committee by representatives in attendance.

### NEWSPAPER AND OTHER RESOURCES

The City of Camas has also used the Perspectives Program created by the County to get information out on the GMA process. Information has been mailed out in utility bills to registered voters for ward meetings and published in the local newspapers regarding meeting time, hearing dates, progress updates, etc., not to mention the information spots on the local radio station. Overall, the City has made a special effort to get the public involved.

In conclusion, the City of Camas has satisfied the public participation requirements established by the Growth Management Act. The general public has been given the opportunity to participate in the GMA process and has played a large role in the City’s GMA process. The input received during the Steering Committee, Public Meetings, Planning Commission and City Council Hearing has been invaluable to the City.



### **III. BACKGROUND**

### III. BACKGROUND

#### HISTORICAL SETTING

The following history is provided as a foundation for the Comprehensive Plan. The history is intended to represent a context for future planning from familiarity with the past. It is a summary of some of the events of the city and area that formed its character and physical shape, but it is not the intent of this document to provide a complete history of the City.

#### EARLY CAMAS HISTORY

Clark County has, as the oldest county in Washington State, a long history. However, the history of the Camas area of course does not begin with its exploration by Europeans. Native Americans are thought to have occupied the Columbia River Valley for 10,000 years. For the tribes located along the Columbia River, Camas and Washougal were important gathering places and burial grounds. In the late 1800s Native Americans by the hundreds still camped along the Washougal and Columbia Rivers, though the tribes had been decimated by disease brought by white traders. The Parkersville Archeological site along the Columbia River is one of the last remaining areas that is relatively undisturbed. It is on both the State and national Register of Historic Places.

In fact, the name for the City of Camas comes from the lily-like *Camassia esculenta*, an important part of the Natives' diet in the Northwest. The botanical and town names were derived from the Nootka word *chamass*, meaning "fruit" or "sweet," which was adopted into the Chinook jargon as *camas* or *lacamass*.

White explorers first saw the Camas area in 1792, followed by the Lewis and Clark Expedition which camped here in 1806. The location in Vancouver of the Hudson's Bay Company fur-trading post and supply

depot in 1824 made the camp known throughout the 19th century international commercial world. Several decades later, in 1844, a party of prospective Oregon settlers spent the winter along the Columbia River, however they ultimately settled at Tumwater. The treaty recognizing the 49th parallel as the boundary between the United States and British territories in 1846 made the area more attractive and peaceful. By 1870 Vancouver's international fame had declined due to the U.S./British treaty and the rise of the American settlement in the Willamette Valley of Oregon, making Vancouver a satellite of Portland.

The first settler, David Parker, came to Camas in 1845, and the next year settlers built the first saw mill on the south end of Lacamas Lake; however, fire destroyed this mill and subsequent mills built in the early 1850s. Starting in the 1860s, American pioneers staked their claims in Fisher Basin and the area, including the founders of Washougal, at Parker's Landing, in 1849 and the first settlers in Fern Prairie in 1852. By 1880 Clark County had more farms than any other county in the state except Spokane County.

In many ways the history of Camas begins in 1883 when the La Camas Colony Company of Portland purchased 2600 acres encompassing Lacamas, Round, and Dead Lakes, the stream connecting them to the Columbia River, and Columbia River frontage, and constructed dams for water power for new flour and paper mills, and a sawmill and furniture factory in the area. The paper mill was the largest west of the Rocky Mountains. Formed by Henry Pittock, publisher of the *Oregonian*, the purpose was to produce newsprint for that paper and others in the region. In the same year, Camas was platted by the mill owners, Aeneas MacMaster opened the first store at Third and Division Streets which is now part of the paper mill, his daughter started the first school above the store, and telegraph service was provided.

In 1884 Chinese laborers cleared land and dug a tunnel for the paper mill's water system and the paper mill opened. When the articles of incorporation were filed in 1884 the paper mill was named the Columbia River Paper Company. Growth in the city by that same year required the first addition to the town site, Cowan's addition, and the establishment of a post office. Other improvements in the following years were the first school building (1886), church, and grange. This growth was in spite of a set back at the mill, when it burned in 1886; it was not reopened until 1888. In 1889 the Washington Territory became a state.

Residential development from present day Camas began to creep toward Prune Hill when Forest Home was platted for 5 and 10 acre lots in 1891. In 1894 the La Camas post office changed its name to "Camas" to eliminate confusion with other Washington towns.

#### A NEW CENTURY

As Camas entered the 20th century with a new name and heading towards incorporation, other changes were arriving. The first phone was installed at MacMaster's store in 1897 or 98, and a toll line to Vancouver was in place by 1902. In 1905 the Columbia River Paper Company merged with Crown Paper Company to become the Crown-Columbia Paper Company. (This was brought about by Fred Leadbetter, son-in-law of Henry Pittock.) On June 2, 1906 Camas was incorporated and residents also officially changed the name of the town by petition from La Camas to Camas. By 1907 the Spokane, Portland, and Seattle Railroad had been completed through Camas. In 1908 the Lacamas Post, the forerunner to the Post Record began operation. In 1911 the first Camas resident purchased an automobile; a Ford dealership opened the next year. Garfield Building (junior and senior high school), a creamery, and motion picture house were constructed, and an electric franchise was formed in 1913.

Another paper company merger in 1914 resulted in the formation of the Crown Willamette Paper Company. In 1915 the Columbia River Highway opened, and two years later the highway between Vancouver and Camas/Washougal was paved. In 1916 Oak Park Elementary School opened.

Two additional elementary schools were constructed in the 1920s, Central (1924) and Forest Home (1927). This was the extent of construction of school buildings until after the War, though consolidation of school districts continued during this period: Prune Hill and Camas, 1926; Camas and Fisher Basin, 1936; Woodburn and Camas, 1943; Fern Prairie and Camas, 1950; Ireland and Camas, 1953.

Technological and transportation achievements were not the only ties Camas had to the surrounding area and the world. By the early 1900s, Clark County was known as the "prune capital" of the world. Though many crops were raised, including apples, cherries, and pears along with dairy, livestock, and general farming, prunes brought international fame to the region. Beginning in the 1880's, farmers had planted prune trees throughout the county, including the west slopes and top of what would become known as Prune Hill. Prune Hill was one of the first areas to be planted with a significant orchard. Clark County's, and thus Prune Hill's, international status continued until the Great Depression when the prune market declined. Only a few trees on Prune Hill remain today.

As prune growing relocated to California, the prune orchards disappeared in Clark County. However in 1930 field and orchard crops and vegetables represented the greatest value for any particular group of agricultural products in the county, followed by livestock, dairy products, and poultry, though the increase in turkey production changed poultry's ranking by the late 1930s. As it had been in 1880, 47% of the county was being farmed in 1930, but the number of farms had increased from 589 farms in 1880 to 4591 in 1930 with the average size decreasing from 196 acres in 1880 to 49 in 1930.

The depression did not effect this area as substantially as many regions of the country were. Following the merger of Crown Willamette Paper Company and Zellerbach Corporation in 1928, the plant was expanded considerably in 1929-30. This increased the work force by one-third. Furthermore a reduced work week and work day led to employment of the maximum number of people possible. The plant ceased to manufacture newsprint in 1930, and with the expansion, swung into its new role as the "largest specialty mill in the world." The employment at the mill and the self-containment of the agricultural community cushioned the Camas-Washougal area economy from the most drastic effects of the Depression. Also in 1938 Crown Zellerbach presented the city with a park that was named Crown Park. Another park donated by Crown Zellerbach to the city was named after Louis Bloch who was vice-president of the Crown Willamette Paper Company, and became chairman of the board for the newly formed Crown Zellerbach Corporation.

World War II brought an influx of people to the Vancouver Shipyards, and the loss of many Mill employees as they left to serve their country. These people were replaced by recruits from southern states. The mill operated at top speed to meet the needs of a nation at war, and its machine shop was pressed into use to build giant 17-ton ship rudders. This effort continued in spite of the 1941 flood, the worst in 54 years.

#### POST-WAR CAMAS

The construction of the One-Stop Shopping Center and the Auto-Vue Drive-In around 1950 are characteristic of the changes that were coming to Camas. Both were constructed in outlying areas, though the Camas-Washougal boundary location of the One-Stop Shopping Center was already developed as a suburban residential area. The drive-in was one of the few developments on Prune Hill. The Helen Baller School constructed in 1948 is also indicative of the growth that was coming to the City.

1955 was the first year Camas and Washougal attempted to consolidate, followed by several attempts in the 1960s and early 70s. None were successful. In the late 1950s the paper mill employed 25 to 30% of the Camas population and about 10% of the Washougal populace. Half of the mill's employees lived in Camas, 40% in Camas and Washougal RFDs and other outlying areas, and the balance in Washougal.

The late 1950s and 1960s were a period in which public facilities were provided. A new city hall and downtown beautification project accommodated the changing needs of the citizens. Camas High School (1957), J.D. Zellerbach Middle School (1967 and named after the grandson of an owner of Crown Zellerbach Corporation) and Lacamas Heights (1963) Elementary School were built, indicating the growth that the community was experiencing. (The Lacamas Heights Elementary School and J.D. Zellerbach Middle School were built in a new cluster style and classroom dividers open so teachers could combine their classes.) The County also benefited when Crown Zellerbach presented them with 300 acres that became Lacamas Park. In 1964 began a series of strikes at the mill, the first in 45 years.

In 1972 the push to build Interstate 205 began; a decade later in 1982 it opened. In 1977 the Portland International Airport undertook a significant expansion. The airport had been located on the Columbia River in 1940, and had moved to its current location in 1957. The construction of I-205 and the expansion of the airport created an area with increased access and attractions on both sides of the River.

In 1971, two new reservoirs, water and sewer improvements were made on Prune Hill. These accommodated the new residential development being constructed on the east side of the hill, even though berry farms and other agricultural uses still operated on the west side and top. This year was also notable for the grand opening of View Ridge Estates, west of Camas.

With more residential development occurring near the top of the hill through this decade, the Camas School District opened the Dorothy Fox Elementary School in 1982.

On the other hand, strikes and other uncertainties in the ability of Crown Zellerbach to continue to be the primary economic foundation for the City caused Camas concern. That single industry, the paper mill, comprised over 78% of the total assessed valuation of the city. It is this dependency upon a single industry and the lack of control over developments which directly affected the existence of Camas, that prompted the City to undertake an annexation program in 1985. This annexation took in the lands north and west of Prune Hill — almost surrounding it on all sides. The annexed land was zoned for light industry and high technology uses. The areas that were annexed are desirable due to their appropriateness for large campus style industrial developments in proximity to major interstate highways and the Portland International Airport. Sharp Microelectronics purchased 120 acres in the newly annexed area, and opened a laboratory on the lower western slopes of Prune Hill in early 1990. Underwriter Laboratories also purchased approximately 75 acres along NW Lake Road for construction of a testing facility.

In 1987 James River Corporation bought Crown Zellerbach paper mill. James River is the most significant employer in Camas.

In 1990, approximately 1500 acres of Prune Hill was still part of unincorporated Clark County, although it was nearly surrounded by the City of Camas. The beautiful views, proximity to Vancouver and Portland, and availability of large parcels of land made Prune Hill attractive for development. The city recognized this and as part of the 1984 agreement with the Boundary Review Board permitting the Camas to annex the 1200 acres for high technology Camas agreed to annex Prune Hill. In 1990 the City of Camas annexed Prune Hill.

## PHYSICAL FORM

The Physical Form Section describes three aspects of the Camas area that form the basic underpinnings of the study area:

### Physical Constraints

- Topography
- Geology
- Soils
- Hydrology
- Climate

### Critical Areas

- Streams and Watercourses
- Wetlands
- Frequently Flooded Areas
- Aquifer Recharge Area
- Geologically Hazardous Areas
- Wildlife Habitat Conservation Areas

### Resource Lands

- Mining
- Agriculture

## PHYSICAL CHARACTERISTICS — CONSTRAINTS AND SETTING

The City of Camas is located in southeastern Clark County. It is bordered by the Columbia River to the south, the City of Washougal and Woodburn Hill to the east, Lacamas Lake and Lacamas Park to the north, and Grass Valley to the west.

### Topography

The topography of Camas and the study area is dominated by water. The Columbia River is a major influence directly and indirectly on Camas, its residents, and employers. The river has significantly shaped the land either by laying down sediments or by cutting through areas. To a lesser extent, the Washougal River also has shaped the topography.

The existing flat core of the City of Camas is surrounded by steep hills. The downtown and older parts of the City are nearly flat and are on almost the same level as the Columbia River. These areas are

surrounded by Prune Hill and other steep slopes on three sides. The river forms the other boundary. For the City of Camas to grow significantly, it must break out of this bowl and expand significant distances to reach fairly flat lands to the west and north.

Residential areas to the west and north of downtown are built on slopes ranging from 5 to 15%. Slopes increase to over 20% on Prune Hill to the west and Woodburn Hill to the northeast.

Topography is an important element in the character of the city, especially the older portions. The steep slopes provide a backdrop for the older sections of town, open up views, and define sections of the town.

*Implications:* Most types of industrial and commercial uses in typical American cities do not lend themselves to steep terrain. Steeply sloped areas are suitable only for residential uses. West of Prune Hill to the study boundary is a flat plain. Topography permits the many existing uses, such as aggregate extraction and farming, as well as the development of industrial, commercial, and residential uses. To the north of the existing city limits, topography again is limiting. Though some relatively flat areas do exist along S.E. Everett Road, particularly in the vicinity of the airfield.

### Geology

Generally, from the northern tip of Lacamas Lake westward, the geology is characterized by alluvial fan and associated deposits. This includes fine-grained sand and silt and some sand and gravel. (Generally, the significant sand and gravel deposits are north of S.E. 29th Street and west of 202nd Avenue, Sand and Gravel Resources, DNR, 1975). The only exception to the alluvial fan deposits is an outcropping of Boring Lava on the west side of Prune Hill. This strata is basalt rock and, in addition to being resistant to weathering, is extremely stable.

Prune Hill is underlain with the Troutdale Formation, a formation of seem-

consolidated clay, silt, sand and gravel that was deposited by glacial action. The area to the northeast of Lacamas Lake to Green Mountain and Brunner Hill is also underlain with the Troutdale Formation. However, Green Mountain and Brunner Hill themselves are outcroppings of the Boring Lava. The areas south and east of Prune Hill and Lacamas Lake are characterized by the oldest geologic elements in the county; a combination of andesite, basalt, pyroclastics, agglomerates, and sedimentary rocks.

Finally, the geology underlying the developed areas of downtown and Oak Park are Alluvial deposits (generally finer grain particles than the Alluvial fan deposits), and along the banks of the Washougal River an Alluvium which is a mix of gravel, sand, and silt which has been deposited in relatively recent times.

*Implications:* Excavations for sewer lines and other below-ground improvements will be difficult in volcanic deposits and areas of moderately cemented sands and gravels. Alluvial deposits are more easily excavated.

## Soils

Their characteristics, such as shrink-swell potential, corrosivity, and other factors can help or inhibit development. Soils in the Camas area occur in what has been identified as the Hillsboro-Dollar-Cove association, which is described in the Clark Co. Soil Survey as: deep, dominantly nearly level to sloping, well-drained to very poorly drained, medium textured soils of the terraces. This association occupies about 12% of the county. Hillsboro soils make up about 40% of the association; Dollar soils, 20%; and Cove soils, 10%. Small acreages of Hockinson soils and McBee, coarse variant, soils make up the rest.

Three soil classifications are most common: The Powell silt loam; the Hesson clay loam, and the Lauren gravelly loam series.

The Lauren series is primarily in the flat lands from 202nd Avenue westward. It

has a low shrink-swell factor and presents few problems for foundations. The Powell and Hesson series are east of the Lauren series. The Powell series has a low shrink-swell potential, while the Hesson series has a moderate shrink-swell potential.

*Implications:* Soil characteristics can prove to be limiting to certain uses, particularly industrial uses which may require good load bearing and little shrink-swell potential. In general, these types of soils are located in the western part of the study area, approximately 202nd Avenue and the drainage swale westward, scattered areas between 202nd Avenue and Prune Hill, and scattered areas north and east of Lacamas Lake.

Along with soils types, another important characteristic is soil drainage. This characteristic impacts sewage disposal, indicates potential wetlands, and generally informs possible uses of the land. This information is based on 1922 Soil Conservation Service data. The characteristics and their definitions area as follows:

### *Poorly and very poorly drained soils*

These soils are commonly wet at or near the surface for a duration ranging from most to all of the year. Soils are wet enough that artificial drainage may be required for most land uses. These areas typically support vegetation indicative of wetlands that may be regulated under federal, state and/or local regulations.

### *Somewhat excessively drained soils*

These soils have a low water holding capacity. It is highly unlikely that these soils could support vegetation indicative of saturated soil conditions. Excessively drained soils may pose some limitations on on-site wastewater disposal because of their rapidly draining character and the potential for contamination of groundwater supplies.

## Hydrology

Most of the Camas planning area is in the Washougal River drainage basin, which drains into the Columbia River between the Cities of Camas and Washougal. The

remainder of the city drains directly into the Columbia. The City's water supply originates primarily in Jones and Boulder Creeks; there are also seven wells to supplement this supply.

Water in the Lower Washougal sub-basin is unsuitable for most uses due to water quality problems arising from mill discharges, urban runoff, and septic drain field effluent. It is vital that the water quality be checked prior to the acquisition of park land and shorelines that will be used as public swimming areas.

### Climate

Camas' climate is influenced by the Coast and Cascade mountain ranges. Prevailing winds are from the northeast from April through September, and from the east-southeast for the rest of the year. Occasional high easterly winds occur year-around through the Columbia Gorge.

Annual average precipitation is 51 inches. The month of December receives the most, with an average of 6.5 inches, and July receives the least, with a half-inch. The average mid-winter temperature is 40°, the summer average is 65°, and the annual average temperature is 53°.

### CRITICAL AREAS

The Growth Management Act defines critical areas as wetlands, frequently flooded areas, aquifer recharge areas, geologically hazardous areas, and wildlife habitat conservation areas. In addition to the Critical Areas listed above the City of Camas also includes stream and watercourses in their Sensitive Areas Ordinance. Critical Areas are protected since they support unique, fragile, or valuable natural resources or are subject to natural hazards.

This background information is based on data obtained from Clark County and supplemented by field analysis. Where there are inconsistent definitions that may apply in the Urban Growth Area, they will be addressed in the Memo of Understanding between the City and County.

### Streams and Watercourses

The wet climate and steep topography of portions of the Study Area have resulted in many streams. These drain into the major water bodies that define the Camas area: Columbia and Washougal Rivers; Lacamas, Jones, and Boulder Creeks; Lacamas, Dead or Fallen Leaf, and Round Lakes. Streams are protected to preserve water quality and fish and wildlife habitat.

### Wetlands

The Growth Management Act defines wetlands as areas that have surface or ground water that supports vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, such as irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities.

The wetlands in the Study Area are located on Lady Island, along the Washougal River and Fallen Leaf, Round, and Lacamas Lakes, as well as Fisher Basin. This information was derived from the 1988 National Wetlands Inventory, information from Clark County, and the Fisher Basin Stormwater/ Wetlands Study. It is general and does not indicate the type or quality of the information.

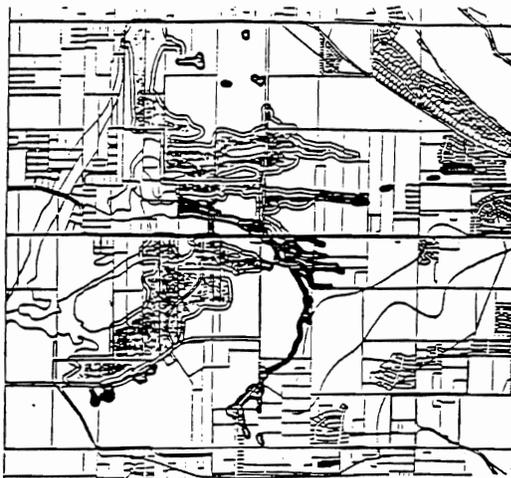
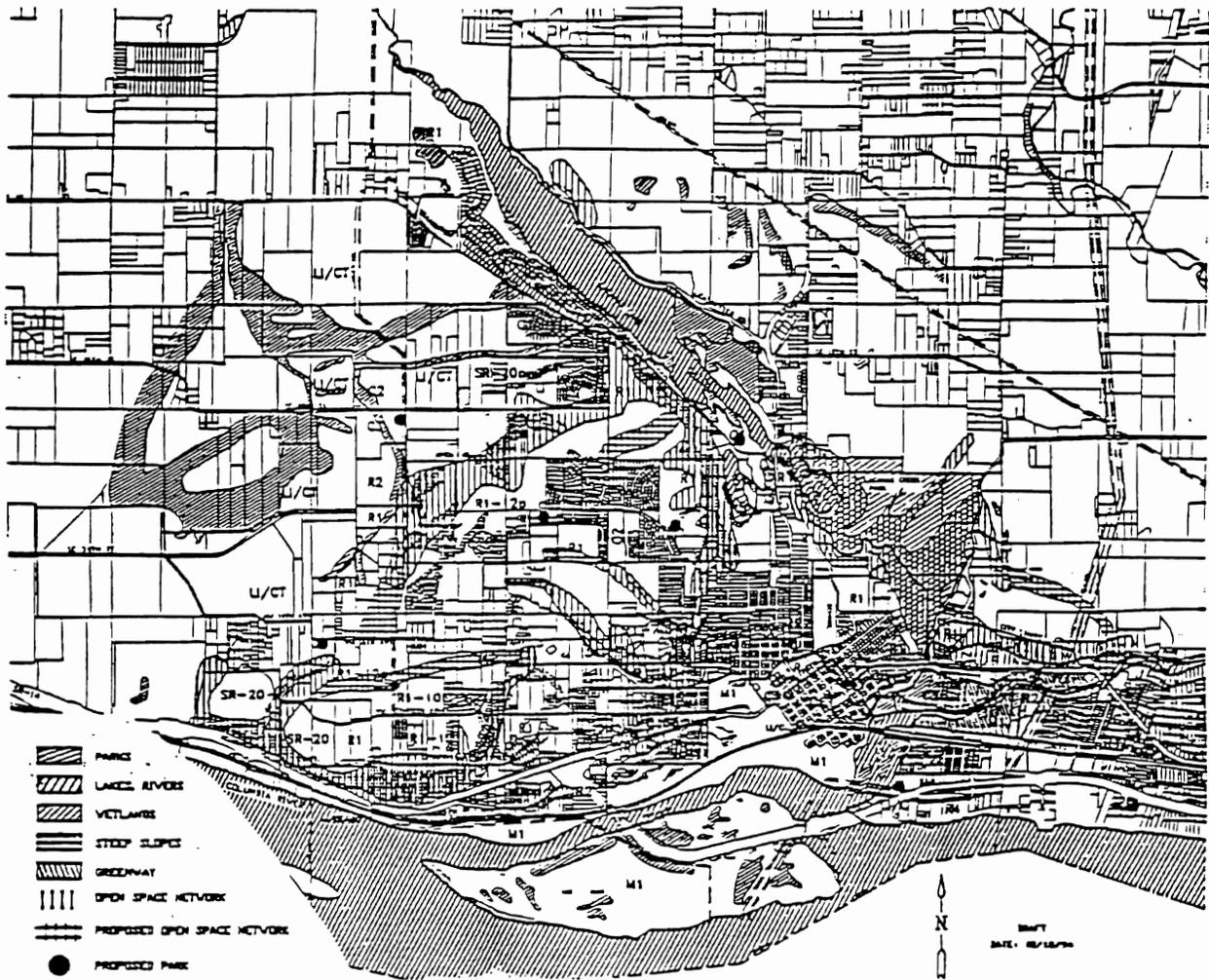


Figure 3  
Incorporated Wetlands



**Frequently Flooded Areas**

The Federal Emergency Management Agency (FEMA) has prepared maps showing the extent of the 100-year flood boundary. These areas have been calculated to flood with a frequency of once every 100 years, on the average, or representing a one percent chance of flooding in any one year.

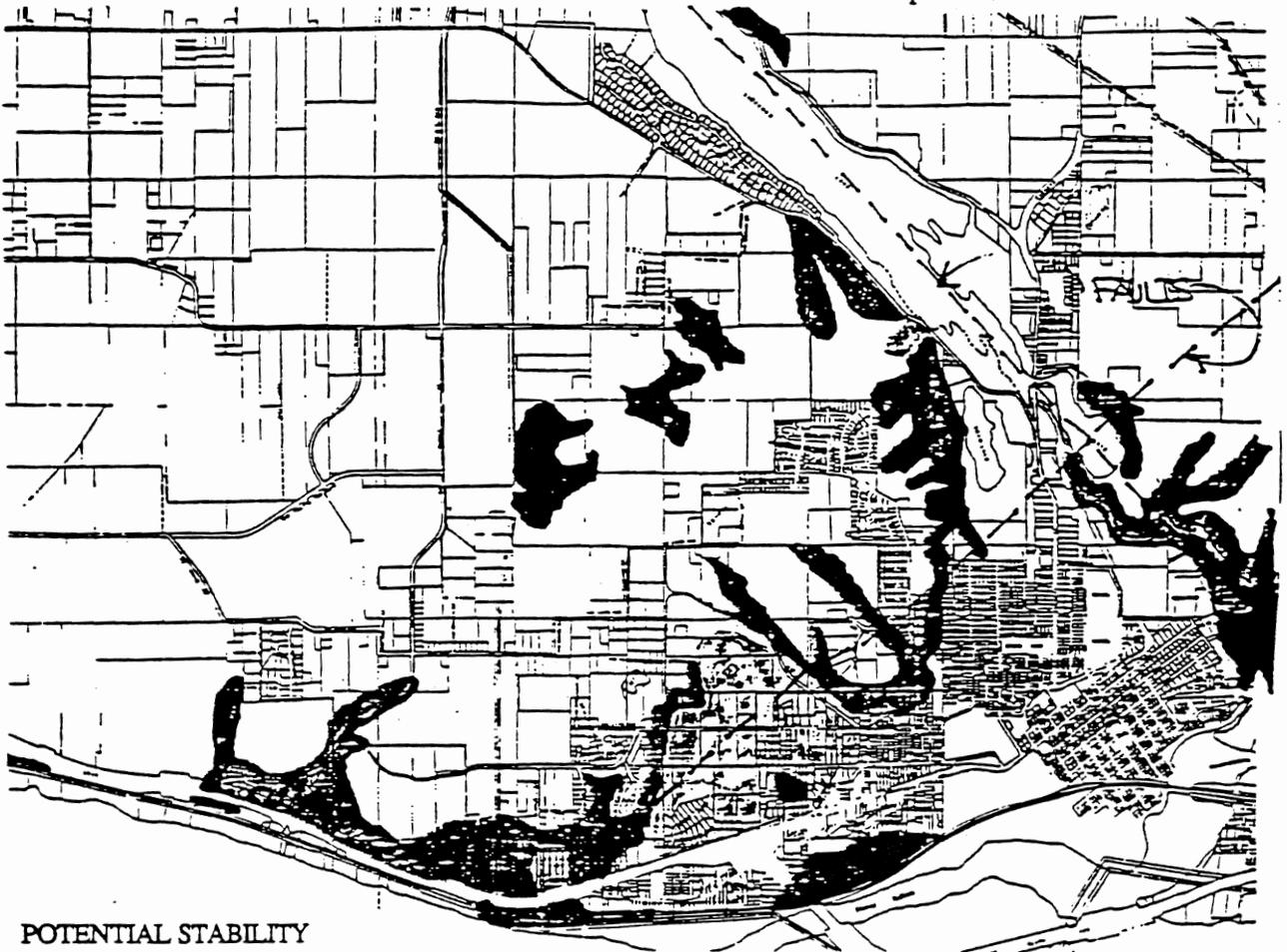
*Implications:* Emergency (hospitals, fire, police) and some public (schools) facilities should not be located within these areas. Instead these are areas that should have minimal development (such as agriculture, golf courses, very low density residential).

**Aquifer Recharge Area**

There are no known aquifers in the Study Area.

**Geologically Hazardous Areas**

The Sensitive Areas Ordinance required by Growth Management defines geologically hazardous areas as areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of development due to public health and safety concerns.



- POTENTIAL STABILITY
- HISTORIC OR ACTIVE LANDSLIDES
- OLDER LANDSLIDE DEBRIS
- FAULTS

## SLOPE STABILITY (GENERALIZED)

The report *Slope Stability of Clark County* (Washington State Department of Natural Resources, Division of Geology and Earth Resources [DNR]) investigates slope stability and landslide hazards in Clark County. Three types of concerns are indicated; geologic and engineering studies are recommended before development:

### *Areas of potential instability*

These areas are potentially unstable because of underlying geologic conditions and physical characteristics associated with steepness.

### *Historic or active landslide areas*

These areas are unstable at the present time. Development of these areas may cause additional movement.

### *Older landslide debris*

Areas of older landslide debris are believed to be stable, but may become unstable with development. Water from development (septic systems, watering of lawns, and redirection of surface water) could saturate otherwise stable materials, and cause a loss of internal strength. In addition, an earthquake of low or middle magnitude could cause problems within these areas also. Therefore, regardless of the type, the report recommends geologic and engineering studies be conducted before development.

Another consideration that must be made with regard to development is the potential for earthquake hazard. Again, the DNR has completed a report entitled: *Earthquake Hazards of Clark County*. Areas of potential hazard are designated on a map.

Investigation of the potential problem should be made by an engineering geologist prior to development within the designated areas according to the report.

It has also been inferred from geologic data in *Geology and Groundwater Conditions in Clark County* (Mundorff) that two faults in the shape of an "X" are centered on Round Lake. One fault runs northwest along the northern boundary of Lacamas Lake; the other northeast almost to the Columbia River. The existence of these faults has not been proven, and it is generally considered that even if they do exist, that no significant level of hazard exists (DNR).

A map has also been prepared which shows steep slopes. These include those which are between 15-40% slope; and those 40% slope and above. Over half of the areas with slope in excess of 40% are included in the Areas of Potential Instability shown on the Slope Stability map. As the slopes become increasingly steep, the more care which must be taken as development occurs upon them or adjacent to them.

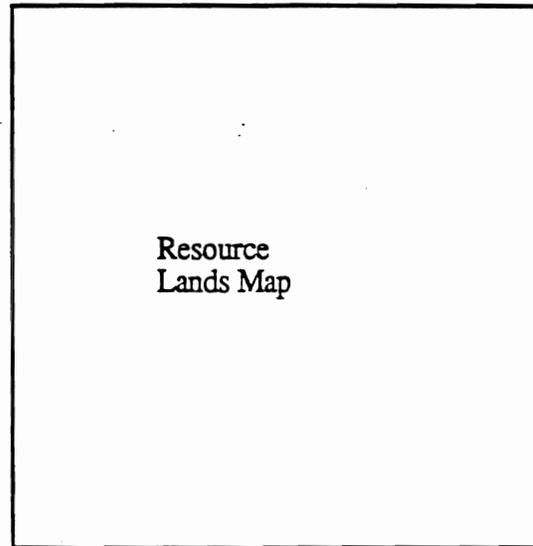
*Implications:* It is prudent to avoid locating emergency or other critical facilities in proximity to these faults, and restricting development.

#### Wildlife Habitat Conservation Areas

Wildlife Habitat is identified and protected in Camas by the protection of other critical areas such as wetlands, streams, watercourses, steep and unstable slopes, and their buffers. The location of these areas are shown in the appropriate sections. Also the Permanent Open Space Network ties the steep and unstable slopes together to provide a more continuous natural area. Continuity is important in maintaining the viability of the wildlife habitat and in some cases vegetation. Another objective is to preserve areas with which endangered, threatened, sensitive species, and species of local importance have a primary association. These forested areas provide a major visual impact and backdrop to the city, and also contribute significantly to wildlife habitat.

#### RESOURCE LANDS

The Growth Management Act (GMA) defines resource lands as those lands used for agricultural purposes, commercial forestry, or mining. The resource lands that are of particular concern with regards to the GMA are those that are designated as long-term commercially significant agriculture, forestry, and mining. Long-term commercially significant includes the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration of the land's proximity to population areas, and the possibility of more intense uses of the land. Generally these lands are not included within Urban Growth Areas.



Within the Study Area there are no commercial forests.

#### Mining

The only mining operation that is within the Study Area that is likely to receive the long-term, commercially significant designation is the Smith rock quarry located along the Columbia River at approximately SE 192nd Avenue. The other extraction areas that are significant in the area are: English Pit, the Musa-Kiewit (and others) sand and gravel south of N.E. 18th Street and north of S.E. 1st Street between 172nd and 192nd Avenues. In addition, there is an approved County zone for sand and gravel extraction south of S.E. 1st Street between 172nd and

192nd Avenues. Though it is not within the Study Area its location impacts the placement of the Urban Growth Boundary. Furthermore, these uses are expected to continue for many years, and some of the characteristics of the uses (heavy truck traffic and occasional blasting by the quarry) should be considered in the Plan.

The intention of the Resource Lands designation is to protect and separate Resource Lands from Urban Growth Areas. While this is appropriate for most Resource Lands the type of mining in the Camas area is for sand and gravel that are used for construction in urban areas. Thus the location is appropriate near urban areas.

### Agriculture

The agricultural lands of long-term commercial significance are generally not within even the Study Area. But as with the quarries, they impact the location of the Urban Growth Area. The one area of agricultural lands within the Study Area is located along the northeast shore of Lacamas Lake and is about 420 acres. The other two agricultural areas are more extensive. One is located east of SE Crown Road beginning slightly north of the Camas City Limits. It is 815 acres with more than half of it also coinciding with a potential mining overlay. The most significant agricultural area is the land surrounding Lacamas Creek, of 2235 acres.

This agricultural designation limits residential development, depending on the classification of the agricultural lands. The classification system is based on the size of the agricultural lands being designated. The proposed classification system is:

**PROPOSED AGRICULTURAL CLASSIFICATION<sup>1</sup>**

TIER	SIZE OF LANDS	RESIDENTIAL LOT SIZES
1	800+ acres	1 house per 20 acres
2	300 - 800 acres	1 house per 20 acres
3	0 - 300 acres	1 house per 10 acres

<sup>1</sup> Rural and Natural Resource Lands Advisory Committee: Farm Focus Group Final Report, Position Statement #2. Nov. 1993.

### VACANT BUILDABLE LAND

This analysis of vacant and buildable land was done for each Traffic Analysis Zone (TAZ) based on data provided by Clark County. It assumed the criteria and methodology utilized by the county as follows:

- For residential land, vacant parcels are defined as having a structural value of \$10,000 or less. Commercial and industrial are defined as parcels having a structural value of \$50,000 or less.
- Underutilized land is defined as parcels that are three times allowable lot size based on the existing zoning and greater than 2.5 acres. (Residential only.)
- Exclude all publicly owned land, parcels 5,000 square feet or less, parcels valued over \$750,000, and mobile homes.
- Exclude type 1 critical areas (floodways, high quality wetlands with 75 foot buffer, slopes over 40%).
- Include as vacant (however, calculate at a lower density) type 2 critical areas (flood fringe, hydric soils with a 75 foot buffer, uses stream coverage with 75 foot buffer, slopes over 40%).

The data from the county was compiled for each TAZ by the RTC and summarized on work sheets which included:

- Acres and parcels of buildable vacant land;
- Acres and parcels of built-up land;
- Rights-of-way and other public lands;
- Total acreage per TAZ;
- 1990 population, households, and person per household;
- Existing employment by retail, service, and other as well as total;
- Existing land use (based on zoning) noting critical area acreage.

These work sheets were then utilized to allocate future uses (public, residential, commercial, and industrial) and to allocate population (based on proposed residential densities) and employment.

AGRICULTURE

**EXISTING LAND USES**

In order to project proposed land uses, the need for different land uses should be considered. In addition, and sometimes more importantly, the development potential of the land must be evaluated. The following table shows the land zoned for generalized zones, based on Clark County Assessor's Information. This is not the same as the existing land use, but does provide information on the potential of the land under current zoning.

ZONE	CITY ACRES *	STUDY AREA W/O CITY ACRES*
<b>RESIDENTIAL:</b>		
Rural	155	1361
Single Family	1729	321
Duplex/Med. Den.	237	0
Multi-Family	102	0
Sum	2223	1682
<b>COMMERCIAL</b>		
Community	166	0
Other	63	2
Sum	229	2
<b>INDUSTRIAL</b>		
Light Industrial	685	3
Heavy Industrial	186	0
Sum	871	3
AGRICULTURE/WILDLIFE	0.5	1696
Sub-Total Non-Critical	3323.5	3383
Sub-Total Critical/Water†	4180	1759
<b>TOTAL</b>	<b>7503</b>	<b>5142</b>

\* Acres shown represent land without critical areas or open water.

† Critical is defined in this instance as Flood Way/Plane, Unstable Slopes, High Quality Wetlands, Hydric Soils, Slopes over 25%, and open water with buffers around Streams, Wetlands, and Hydric Soils.

The following discussion examines how land within the Study Area is currently being used, and in some cases where there is the possibility of different uses.

Existing lands associated with agricultural uses are primarily located on the outer edges of the Study Area: Prune Hill, north and west of Prune Hill in Fisher Basin, and north of Lacamas Lake and the Camas City Limits. These lands are not generally being used for agricultural purposes as much as remaining open and occasionally are used for hay and other grasses.

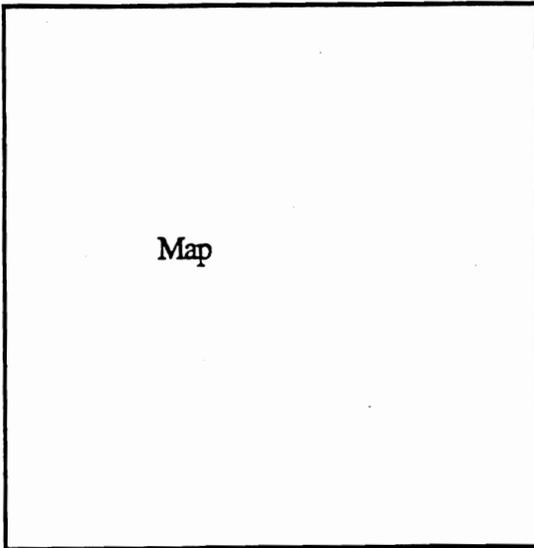
As the above chart shows, there are virtually no lands zoned for agricultural uses within the City limits, thus anticipating their redevelopment. Prune Hill and Fisher Basin have already been encroached on by both residential and high technology uses that they area zoned for. Though the chart shows that there is significant acreage of agriculture, none of this is likely to be designated long-term commercially significant agricultural lands, reinforcing the likelihood of conversion to other uses over time.

RESIDENTIAL

Camas has many well established residential neighborhoods, that have developed over many periods. The oldest neighborhoods are those in and adjacent to downtown. One direction that residential developed from downtown was toward Washougal, with Oak Park being constructed early this century, and the neighborhood between One Stop and Goot Park being built after World War II. From the neighborhood surrounding downtown, the residential areas go up the benches of land towards Prune Hill. The oldest areas are closest to downtown, with the top bench before Prune Hill built after World War II, and the construction on Prune Hill built mostly in the last 20 years. The third residential area is along SR 14. Some of this is older such as the pocket near the intersection with Lewis and Clark Highway, others such as those built on the slopes above the highway are more recent. The other recent area of construction is along Lacamas Lake.

All of Camas' residential neighborhoods are predominately single family. Multi-family construction has taken place in the downtown area and some of the areas north of it, Oak Park, the area south of SR 14, and in occasional pockets on Prune Hill.

The period in which the residential areas were constructed generally coincides with the economic class to whom the homes were targeted. The oldest areas near downtown are small homes built for mill workers. The construction of I-205 and the airport expansion in the 1970s attracted many people to Camas who did not necessarily work there. Thus the newest homes on Prune Hill, above SR 14, and along Lacamas Lake take advantage of the views and cater to managers and professionals who may commute to Vancouver, Portland, or even further away via the Portland International Airport.



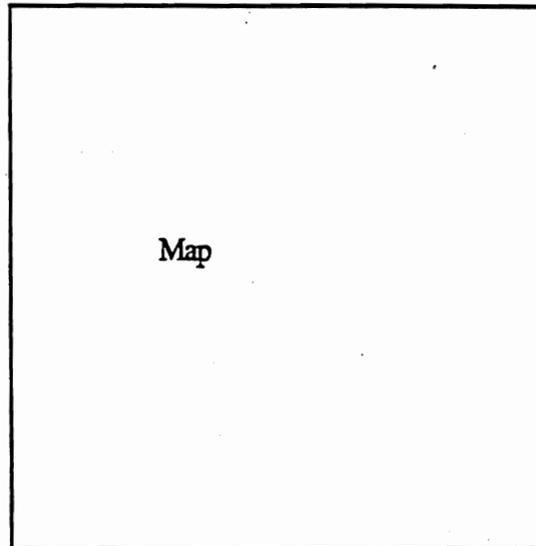
Outside the City limits, but within the Study Area the only significant area of residential is along Everett Road just north of Round Lake. There is a wide variety of types and periods of construction in this area. This use is consistent with the zoning.

*Implications:* Most of these neighborhoods are quite stable and are consistent with their residential zoning. There are few vacant lots within these areas. However, there are

residential areas surrounding downtown that are zoned for commercial uses; these have begun to convert to non-residential uses through use changes as opposed to reconstruction. As the demand for space downtown increases these areas will look less and less residential over time. Also the areas mentioned above that already have some multi-family construction will continue to convert over time due to the pressure for different configurations and price ranges. Though if new undeveloped areas are identified these will most likely provide multi-family housing, before these areas are redeveloped.

#### COMMERCIAL

Commercial uses include retail, office, and other service-providing businesses.



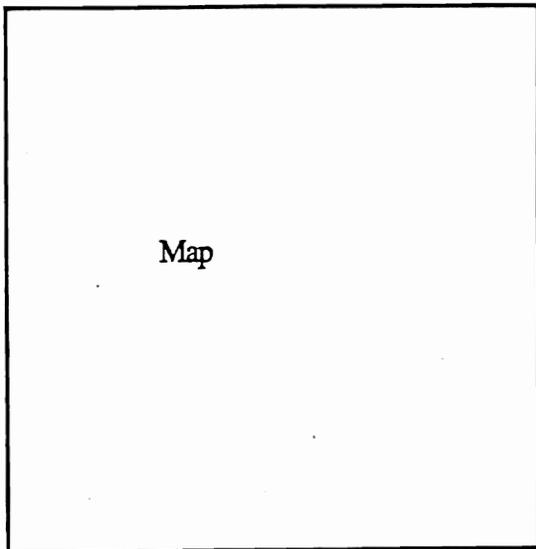
The primary area of commercial in the City of Camas is downtown. This includes traditional commercial uses as well as governmental functions. The second most significant area of commercial extends along Third Ave east of downtown to the boundary with Washougal. There are additional retail uses in the shopping centers adjacent to Washougal. Finally there are several small commercial area scattered around the city and Study Area: west of the mill, near Crown park, and along Everett Road near Round Lake. Present zoning supports these uses continuing.

There are several areas zoned for commercial that have yet to develop, or are not fully developed. Two fairly large areas are in Fisher Basin. One is north of Prune Hill along Lake Road, and the other is northwest of Prune Hill on NE 38th St. The site north of Prune Hill however has been used totally for residential development. This is a problem since it limits the ability of the city, in its current form, to provide commercial in locations where it is needed in the future.

Other sites zoned for commercial are: top of Prune Hill discussed above, additional lands near Dead or Fallen Leaf Lake, and a site south of SR 14. While these offer substantial potential commercial development, it must be examined in light of the potential population and distribution of land uses anticipated in the next 20 years.

**INDUSTRIAL**

Camas has sizable acreages of industrial land. Heavy industrial uses are located along the Columbia and Washougal Rivers, and the railroad tracks. James River Paper Mill has the lands west of downtown as well as Lady Island. Additional industrial uses are south of downtown and east of Oak Park. Currently high technology uses are primarily located west of Prune Hill.



There are significant lands zoned for industrial uses that are not totally occupied. The areas south of downtown and north and east of Oak Park have the capability of accommodating additional industrial uses.

High technology lands surround Prune Hill to the west and north, and have just begun to be developed for that use. One light industrial parcel near Dead or Fallen Leaf Lake is not being used for that purpose and is somewhat inconsistent with surrounding uses.

**TRANSPORTATION & CIRCULATION**

The basic system providing circulation to Camas and the study area is the Federal Highway system — Interstate 5 and Interstate 205. These highways link the area to Portland to the south and with Olympia and Seattle to the north. I-205 has made Camas and the study area much more convenient to Portland and the Portland International Airport. Because it better connects Camas and Portland, Camas will find that growth will occur at a faster pace than in the past.

The State Highway system is also very important to Camas and the study area. State Route 14 along the Columbia River provides a large capacity east-west route linking Camas with Vancouver and points to the east of Camas. The access points of this east-west highway are, therefore, major factors for Camas and the study area. The 164th Avenue, S.E. Brady Road, and N.W. 6th Avenue, Union, and 2nd Street intersections provide the main access points to Camas and the study area. However, topography presents great challenges.

First, and minor in comparison, the 164th Avenue interchange will be insufficient to meet the demands to be made of it. The topography to the south of the present interchange slopes off and some amount of fill or bridging will be needed in order to fully improve the interchange.

At the S.E. Brady Road access point, a much more difficult problem exists. There is no interchange, only a left turn refuge and cross-traffic turns are allowed as safety permits. As traffic flows increase, the turns will become more difficult and less safe. The Washington Department of Transportation has said in informal conversations that they would like to eliminate this access point altogether. This would greatly hamper circulation to the central portion of the study area. The reason that this closing is suggested, beyond the safety reason, is that the topography is extremely limiting. To the north the land rises over 300 feet within a distance of 1,000 feet or less. Rebuilding the intersection into an interchange, given the small amount of flat land, will be difficult and probably quite expensive. However, it is the only point available between 164th Avenue and the N.W. 6th Avenue interchange.

Finally, the N.W. 6th Avenue interchange, although now adequate in terms of capacity and safety, does not easily allow access to the north. For many years improvement of the connection between N.W. 6th Avenue and N.E. Everett Street has been proposed. However, because of the cost, nothing has been constructed. N.W. 6th Avenue also is severely restricted in capacity as it forces through-traffic to make as many as three stops while going through the downtown area and continuing eastward on N.E. 3rd Avenue.

The third level of circulation is those provided by local governments — Camas and the County. These roads — primary and secondary arterials, collector streets and residential streets, form the network of streets and provide access for the various land uses: residential, commercial, industrial and other.

The arterials provide the circulation and access as well as link with the State and Federal systems. The collectors do just as their name implies, they collect traffic from the residential areas and bring it to the arterials. The residential streets are also

aply named. They provide access to residential areas.

The local street system is built in ways that help insure that the street does what is intended. First, residential streets are relatively narrow and do not require a thick base because they do not need to carry heavy volumes and heavy truck traffic. The collectors are wider and somewhat more heavily constructed. The arterials are the widest streets, have the strongest bases to carry heavy loads and are as straight and level as possible to insure high traffic capacities. Arterials also should have limitations placed upon access so that the expensive investment in capacity is not greatly diminished by too frequent, and sometimes dangerous, access.

The local system can also be described in terms of the traffic generators or major destinations that need to be served. Obvious large attractors are the James River plant, the downtown, Prune Hill, Sharp, and Hewlett-Packard. However, the connections to these destinations is frustrated by topography.

The downtown is at one level or elevation, there are then two levels to the west: one plateau midway up Prune Hill, and the other at the top of Prune Hill. Circulation on these levels or plateaus is satisfactory, but when going from one level to another, steep grades are encountered.

Prune Hill has four access points (Forest Home Road, Fargo Street, N.W. 16th Ave., and N.W. McIntosh Road), but they are all from the south. If one wants to go to Prune Hill from the north or vice versa, a great deal of backtracking must be done. Then, too, many of the streets and roads have sharp turns and bends in them which reduce speed and capacity. Some of these are due to topography, but a great many are not. The links with Prune Hill from the existing city limits, N.W. Fargo Road and Forest Home Road, have many sharp bends which should be realigned to the extent possible. This would help tie Prune Hill more closely with the existing City, as well as improve access.

**EMPLOYMENT AND THE ECONOMY**

In describing the economics of the City, several important factors should be considered: the basic job providers, population growth, and commercial development. The first of these is, in many ways, the most important. The job base provides for the growth of the community. It can also provide much of the tax base for needed public services (such as, streets, sewer, water, police, and fire).

As an example, the James River Corporation has between 64 and 67% of the total assessed valuation of the City (1992).<sup>2</sup> James River

Corporation also provides approximately 1650 jobs, ranking as the largest single employer in Camas and second largest in Clark County. (It was the first in the County, but was surpassed by Hewlett Packard in 1993.) Therefore, James River Corporation provides the majority of the jobs in the community (directly or indirectly). For comparison, Sharp, the only high technology company in operation in Camas during 1992, has 3% of the total assessed valuation of the City.<sup>3</sup> The impact of high technology on taxes and total jobs within Camas has yet to be felt, but could become a major force during this 20 year planning period. An indication of this is that in 1993 Sharp had building permits for \$2 million for their expansion, and Underwriter Laboratories had permits for \$12 million for their initial construction.

**HISTORICAL AND EXISTING EMPLOYMENT**

The following is the pattern of employment:

**CAMAS EMPLOYMENT<sup>4</sup>**

TYPE OF EMPLOYMENT *	1960	% of Total	1970	% of Total	1980	% of Total	1990	% of Total
Professional/Technical/Allied Jobs	289	13.4	264	12.5	244**	11.1	430**	15.8
Managers/Officials/Proprietors	189	8.8	111	5.3	217	9.9	251	9.2
Clerical/Kindred Workers	202	9.4	250	11.9	290	13.2	375	13.8
Sales Workers	99	4.6	135	6.4	130	5.9	292	10.8
Craftspeople/Supervisors/Allied Jobs	298	13.9	316	15.0	352	16.0	470	17.3
Operatives/Allied Jobs	707	32.9	688**	32.7	514**	23.4	408**	15.0
Private Household	58	2.7	32	1.5	0	0	6	.2
Service Workers	122	5.7	216	10.3	304**	13.9	366**	13.5
Farmers, Farm Laborers, Managers, & Foremen	15**	.7	8**	.4	—	—	—	—
Farming, Forestry, and Fishing	—	—	—	—	13	.6	45	1.7
Laborers, Handlers/Allied Jobs	108	5.0	84	4.0	132	6.0	74	2.7
Occupation Not Reported	64	2.9	—	—	—	—	—	—
<b>TOTALS</b>	<b>2,151</b>	<b>100%</b>	<b>2,104</b>	<b>100%</b>	<b>2,196</b>	<b>100%</b>	<b>2,717</b>	<b>100%</b>
Percentage Change			-2%		+4%		+24%	

\* Significant changes were made in categories from 1970 to 1980. The descriptions have been synthesized.

\*\* Two categories have been combined for consistency between Census years.

2

<sup>2</sup> Clark County Assessor. Includes Camas Power and Boiler since it is located on and leased to James River. James River alone is 64%.

<sup>3</sup> Clark County Assessor.

<sup>4</sup> U.S. Census.

The table illustrates that total employment sagged during the mid-1960s to mid 1970s. Employment shifted away from labor-intensive employment to service occupations. Except for professional and technical employees (primarily due to the Central Research facility of James River), most employment is service or blue-collar work.

**Industrial Land**

In 1981, the total industrial land within the existing limits of the City of Camas was 178 acres,<sup>5</sup> with approximately 92% (163 acres) used by the James River Corporation (exclusive of Lady Island holdings). This compares with 266 acres of land in 1961. (In the 1961 study, railroad rights-of-way were counted as industrial. In addition, a rock quarry no longer in operation was counted.) A total of 38.5 acres of new industrial acres were added between 1961 and 1981 with 30.5 acres added to James River. In 1992 industrial acreage within the city limits is estimated to be:

TYPE OF LAND	INDUSTRIAL LAND (Critical will have Col. Riv. cut)	
	LIGHT IND'L ACRES*	HEAVY IND'L ACRES*
Non-Critical	685	186
Critical/Water†	527	700
<b>Sum</b>	<b>1211</b>	<b>886</b>
<b>Total Industrial</b>	<b>2097</b>	

\* Information provided by Clark County Assessor. Acres are estimated because a Transportation Analysis Zone is located partially in Camas.  
 † Critical is defined as Flood Way/ Plane, Unstable Slopes, High Quality Wetlands, Hydric Soils, Slopes over 25%, and open water with buffers around Streams, Wetlands, and Hydric Soils.

The above chart indicates the impact of heavy industrial lands being located along major waterways with sensitive areas. It also shows the significant increase in high technology lands due to the annexation of Fisher Basin. These lands also have significant sensitive areas, since a wetland system runs through a portion of them.

<sup>5</sup> Commercial/Industrial Economic Analysis, Bill Mundy, 1982.

Camas' major employers in 1993 are:<sup>6</sup>

EMPLOYER	EMPLOYEES
James River Corporation	1650*
Sharp Microelectronics	340
Camas School District	285
Tidland Corporation	160
Highland Terrace Nursing Center	150
City of Camas	103
Heraus Shin-Etsu	37

\* Down from 2,500 in 1981; 2,000 in 1991.

This illustrates the central role that industry plays in Camas. James River is clearly still the major employer within the City. Tidland is another industrial employer that has a long history in Camas. Sharp and Heraeus are indicative of the new generation of industry in Camas. These are typical of businesses Camas is trying to attract with the sizable annexation of Fisher Basin.

Though there are only 3.5 acres of industrial land within the Study Area (outside the city), there are several other industrial uses currently operating near the Study Area boundaries: Hewlett-Packard Company (2,400 employees<sup>7</sup> on two sites: 190 acres and the old Tektronix site of 270 acres), the Fisher Quarry (formerly Smith Rock Quarry), and several gravel extraction operations: Aphis Ready mix and Pacific Rock Products (50 and 39 employees<sup>8</sup>). Columbia Vista Corporation, producing lumber, has 75 employees.<sup>9</sup>

<sup>6</sup> Camas-Washougal Chamber of Commerce, 1993; 1993 Clark Co. Data Book, March 1994..

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

**Commercial Land**

Commercial have never been a significant portion of the economy of Camas. The City had 18.2 acres of commercial uses within its boundaries in 1981. This compares with 8.4 acres of commercial development in 1961, or an increase of 9.8 acres of commercial uses from 1961-81.<sup>10</sup>

In 1993, Clark County had 5,594,285 square feet of retail space.<sup>11</sup> In the early 1980s total retail square footage per person was approximately 20 sq. ft/person. Based on the 1993 county population, the square footage per person was up to almost 21 sq. ft/person. The following shows the land within the City:

COMMERCIAL LAND TYPE OF LAND	COMMUNITY COMM'L ACRES*	OTHER COMM'L ACRES*
Non-Critical	166	63
Critical/Water†	130	37
Sum	296	100
Total Commercial	396	

- \* Information provided by Clark County Assessor. Acres are estimated because a Transportation Analysis Zone is located partially in Camas.
- † Critical is defined as Flood Way/Plane, Unstable Slopes, High Quality Wetlands, Hydric Soils, Slopes over 25%, and open water with buffers around Streams, Wetlands, and Hydric Soils.

**WORK LOCATIONS FOR CLARK COUNTY RESIDENTS**

CENSUS TRACT	IN PORTLAND METRO AREA (INCL., PART OF CLARK CO)	PORTLAND	REMAINDER OF PORTLAND METRO AREA	OUTSIDE CLARK CO. IN WASHINGTON	OUTSIDE STATE & PORTLAND METRO AREA
415	656 68.8%	142 14.9%	514 53.9%	7 0.7%	291 30.5%
414	1029 70.5%	199 13.6%	830 56.9%	0 0.0%	430 29.5%
406.02	1196 69.9%	334 19.5%	862 50.4%	6 0.4%	509 29.7%
413.11	310 61.6%	139 27.6%	171 34.0%	19 3.8%	174 34.6%

As with industrial land there currently is virtually no commercial land within the Study Area (6 acres) but outside the city limits.

**LOCATION OF EMPLOYMENT**

The following chart examines the locations of employment of Clark County residents. The majority work in the Portland Metropolitan Area including urban portions of Clark County. Within the Portland Metropolitan Area the majority of Camas residents work outside of Portland, probably in Clark County. An insignificant portion of residents work elsewhere in Clark County. However a surprising number of persons work outside the Portland Metropolitan Area and outside Washington State. The 1990 U.S. Census shows that 2,717 people work in Camas.

<sup>10</sup> A Comprehensive Plan for the Development of Camas, WA, Fritsch and Kozlovski, 1962.

<sup>11</sup> Grubb and Ellis, 3rd quarter of 1993.

PROJECTED EMPLOYMENT

A local economy can grow in a number of ways. It can bring outside dollars into the community (primarily through tourism); it can increase its industrial base; and it can better provide for its own needs (local service or commercial activities).

Tourism currently has a minimal base in Camas. Although the Columbia River, the scenic forested hills, and lakes and streams attract some tourism, no attempts have successfully been made to make tourism a part of the community. Any efforts to do this would probably have to effect mill operations, since odors from the mill are a deterrent. The significance of the mill to the economy of Camas makes this alternative unlikely.

Potential job growth can be expected primarily in industrial jobs. And this industrial expansion is expected to occur as a result of high technology growth. While many of the anticipated jobs will come from companies that have not yet located in Camas, in 1994 looking at the companies that are already here or are in the process of opening is also informative.<sup>12</sup>

*James River Corp.* will probably not experience a significant change from 1650, the employment reduction they have reached.

*Tidland Corporation* employment will remain stable at about 160.

*Sharp Microelectronics* is in the process of expanding their building, and an increase in employees will be concomitant with the construction. This increase is expected to bring employment to over 500.

*Heraeus Shin-Etsu* currently has 37 employees which is an optimum level for their production in Camas.

*Hewlett Packard* has experienced significant growth in 1993 (60%), and though they will continue to grow, it will likely not be at this significant rate.

*Underwriters Laboratories* is planning to open their operation in 1994 with 220

<sup>12</sup> Camas-Washougal Chamber of Commerce, '93.

employees. If future plans to locate their Pacific Rim testing facility in Camas materialize, employment could increase to 1200.

*Furuno, USA*, distributing radar and sonar, will begin construction in 1994, and is anticipated to have 75 employees.

*Linear Technology*, a computer manufacturer, is currently purchasing a site that would employ approximately 300 people.

Quarries and extraction companies will probably remain stable.

Just as the employment growth provides a base for population growth, population growth provides a base for commercial growth. And conversely, as the population grows commercial and retail services are essential to attract residents and maintain a appealing community.

Based on the current ratio of 20.75 square feet of commercial space per person, and the projected population within the Urban Growth Area, 511,500 square feet<sup>13</sup> of leasable space would be needed, or as much as 35 acres of commercial land.<sup>14</sup> The total will depend, among other factors, upon the actual population served, family income levels, and the attractiveness (convenience, physical appearance, parking, etc...) of other commercial areas in the County and in Oregon, as well as the level of use by surrounding non-urban areas such as Fern Prairie.

As part of Growth Management, employment projections have been made by the State for each county. Clark County then assigned a portion of the county total to each city based on its population. Based on the State and County numbers, Camas is allotted 6,424 jobs in the next 20 years. To accommodate the market factor, the City is planning for 11,900 jobs within the Urban Growth Area, though the Urban Growth Area may hold at Buildout up to 17,500 jobs based on current zoning.

<sup>13</sup>  $(511,500 + 43,560) \times 3$  where 3 equals the ratio of total land area to leasable area

<sup>14</sup>  $24,650 \times 20.75$  where 24,650 is the assigned Urban Growth Area population with Market Factor

**FORECAST GROWTH CAMAS' URBAN GROWTH AREA: EMPLOYMENT**

	1992	20 year Growth		Buildout
	Estimated Existing Employment	Forecasted Employment Growth	2012 Total Forecast Employment	Employment
Urban Growth Area	5,365	6,424*	11,789	17,489
City of Camas	5,126	5,018	10,144	14,394
West of City	159	1,366	1,525	2,895
North/East of City	80	40	120	200

\* Allotment from Clark County.

**COMMERCIAL BUILDING PERMIT ACTIVITY**

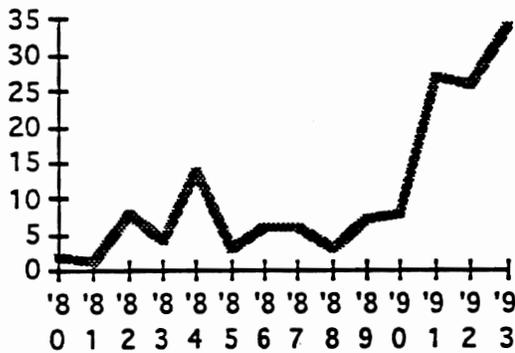
Camas may in actuality experience a higher proportion of employment growth than the County's process would anticipate, since it

has the single largest area zoned and serviced for high technology in Clark County. Also historically the trends indicate a continued significant upswing, as the following charts illustrate.

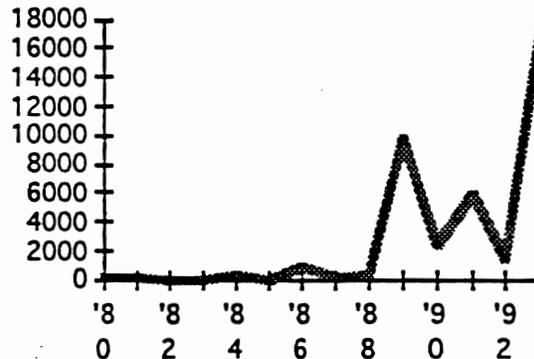
**COMMERCIAL PERMITS:**

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
# of Projects	2	1	8	4	14	3	6	6	3	7	8	27	26	34
Value of Projects in \$1000s	189.9	236.0	45.3	35.4	318.7	70.7	838.5	232.2	260.0	9752.9	2364.0	5876.7	1478.3	17492.1

**NUMBER OF PROJECTS**



**VALUE IN \$1,000S**



**DOWNTOWN**

Downtown Camas grew with the Crown Zellerbach mill (now James River) and the growth of the City from the City's inception in 1883 to about 1960. Then, as shopping opportunities and patterns changed, the City and its business community were faced with the need to make the downtown more competitive,

convenient, and attractive. In 1962, community leaders from the Camas-Washougal Chamber of Commerce began "Operation-4 Sight", which included promoting the modernization of the downtown with literature and a slide show, and actually building a temporary, full-scale mock-up of the improvements to be made. This effort resulted in the downtown Camas Shopping Park.

The Camas Shopping Park has not grown very much since its completion in 1966, but it has maintained a good level of business activity. In looking at the future of the Shopping Park and the downtown, a number of factors emerge:

- The downtown will always have a certain level of business activity because of its convenience to the James River mill;
- For the downtown to grow, additional parking may need to be provided;
- To attract office and other growth to the downtown, the smell from industrial processes would need to be further reduced; and
- If access to the downtown is improved, new commercial developments to the west of the existing city limits, will intercept shoppers, reducing the potential for major downtown commercial growth.

Therefore, the alternatives for the downtown are either to pursue growth which would include extensive cooperation between the City and adjacent industrial uses, and the commitment of public and private funds to provide additional parking, or to let the downtown continue in its present form with changes such as the intensification of housing and additional office and possibly retail space.

## POPULATION

### HISTORICAL AND EXISTING POPULATION

Population growth is another important consideration to the economic analysis of

### HISTORICAL POPULATION GROWTH

	1910	1920	1930	1940	1950	1960	1970	1980	1990	1992
Camas Pop.	1,125	1,843	4,239	4,433	4,725	5,666	5,790	5,681	6,442	7,054†
% Increase		+64%	+230%	+5%	+7%	+20%*	+2%	-2%	+13.4%	+9.5
Clark County Population	26,115	32,805	40,316	49,852	85,307	93,809	128,454	192,227	238,053	
Camas as a % of Clark Co.	4.3%	5.6%	10.5%	8.9%	5.5%	6.0%	4.5%	2.9%	2.7%	

\* This growth is a result of substantial annexation on the part of the City of Camas.

† This City estimate reflects the annexation of Prune Hill following the 1990 Census.

the community. Below is a table showing Camas' historical growth.

As it can be seen, population growth has been erratic — growing by leaps and bounds during some periods and very slowly during other periods. Many increases have been due to national economic policies causing a large amount of in-migration. The decline in the period between 1970 and 1980 is most likely attributed to the general aging of the population and, perhaps, some out-migration of younger people.

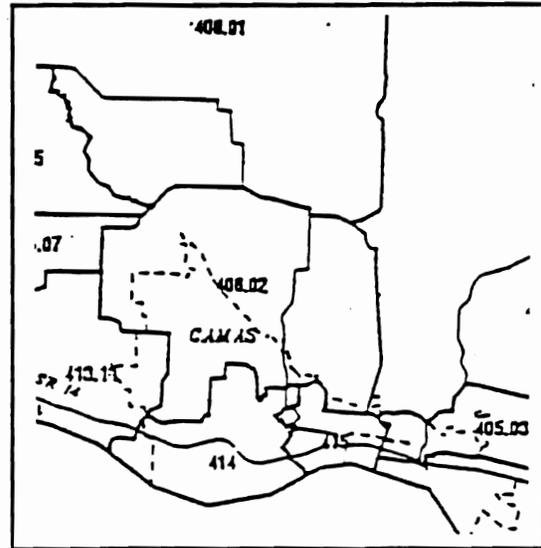
Population growth in the City of Camas has not been occurring at the same rate as that in the remainder of Clark County. Between 1960 and 1975, the portion of the county's population residing in Camas had dropped from 6% to only 4.4%. The 1980 Census showed that this figure dropped further to 2.9%, and the 1990 Census showed it at 2.7%.

Though the population froze in the 1960s at a level of about 5700 people, the subsequent growth by and in the 1990s has not kept pace with the growth in the County. Until the I-205 bridge was opened across the Columbia River, most of the county's growth could have been expected to occur on the outskirts of Vancouver. Upon the completion of the bridge in 1983, however, access from Camas to Portland improved dramatically. Though this has substantially impacted growth in Camas, it has also impacted growth in the County between Vancouver and Camas.

POPULATION AGE DISTRIBUTION

Another reflection of the population and their needs is indicted by the following chart showing the age distribution of the Camas population.

The most basic distinction between the areas is that the downtown (415) and area west of Camas (413.11) are older persons without young children, especially 413.11. Whereas the other two areas are more family oriented. This area, Prune Hill/Lacamas Lake area, has between 30-31% of the population between 0 and 20 years of age.



AGE OF CAMAS POPULATION: CITY AND SURROUNDING AREA<sup>15</sup>

	City of Camas		Census Tr. 415		Census Tr. 414		Census Tr. 406.02		Census Tr. 413.11	
	Persons	%	Persons	%	Persons	%	Persons	%	Persons	%
0-4 years	430	6.7%		6.5%	240	7.1%	248	6.4%	55	4.8%
5-17 years	1307	20.3%	463	19.0%	745	22.2%	809	21.0%	188	16.3%
18-20 years	313	4.8%	110	4.5%	134	4.0%	157	4.1%	28	2.4%
21-24 years	283	4.4%	133	5.4%	140	4.2%	133	3.4%	22	1.9%
25-44 years	2025	31.4%	716	29.3%	1061	31.6%	1202	31.2%	302	26.2%
45-54 years	598	9.3%	236	9.7%	359	10.7%	503	13.1%	126	10.9%
55-59 years	268	4.2%	76	3.1%	133	4.0%	204	5.3%	73	6.3%
60-64 years	242	3.8%	89	3.6%	145	4.3%	163	4.2%	71	6.2%
65-74 years	515	8.0%	195	8.0%	236	7.0%	285	7.4%	185	16.1%
75-84 years	352	5.4%	178	7.3%	131	3.9%	122	3.2%	95	8.2%
85+ years	109	1.7%	89	3.6%	33	1.0%	25	.7%	8	.7%
Median Age			34.6		33.5		35.8		44.1	

<sup>15</sup> 1990 U.S. Census

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

PROJECTED POPULATION

One of the major objectives of the Growth Management Act and the County Community Framework Plan is to concentrate growth in urban areas. Population projections have been made by the State for each county. In Clark County it is proposed that 80% of the forecast 20 year growth will occur in urban areas. It is assumed that the majority of this urban growth will occur in Vancouver, Camas, and Washougal due to the proximity of Portland, jobs, and the road system.

Based on the County plan, Camas' share of the forecast population increase is 13,600. The area may be increased by a Market Factor to ensure there is a surplus of land available for housing and employment needs. The Community Framework Plan suggests that a 25% Market Factor be used. Combining the existing population located in the City, the allotment from the County, and 25% market factor, the City's Urban Growth Area could accommodate at least 24,500 people. The following chart shows where that growth would take place.

FORECAST GROWTH CAMAS' URBAN GROWTH AREA: POPULATION

	1992	20 year Growth			With Market Factor
	Estimated Existing Population	Dwelling Units	Forecasted Population Growth	2012 Forecast Population	Population
Urban Growth Area	7,656	9,317	13,600*	21,227	24,650*
City of Camas	7,054	7,565	9,968	17,022	18,939
West of City	255	1,158	2,524	2,779	3,082
North/East of City	347	594	1,079	1,426	2,395

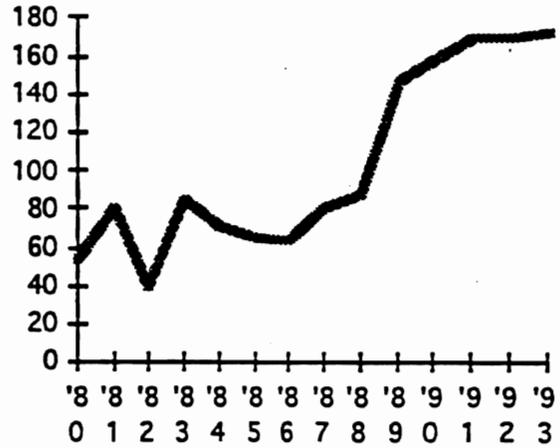
\* Allotment from Clark County.

The actual population growth of the Camas area will depend upon the number of jobs provided to support the population, and upon the policies the City pursues. If the City continues to adopt policies that promote residential growth, services can be made available, and additional annexation of land within the study area of the plan for Camas are approved, the population of Camas could increase significantly. This potential for a significant increase is totally outside the past experience of the City's growth and would be a major impact. The following section on residential building activity gives some indication of that possibility.

**RESIDENTIAL BUILDING PERMIT ACTIVITY**

There has been a significant increase in building permits in the past 5 or so years, and this could easily become much greater in the next 20 years. The following information illustrates the increase in residential building activity and the average price of housing in the city of Camas.

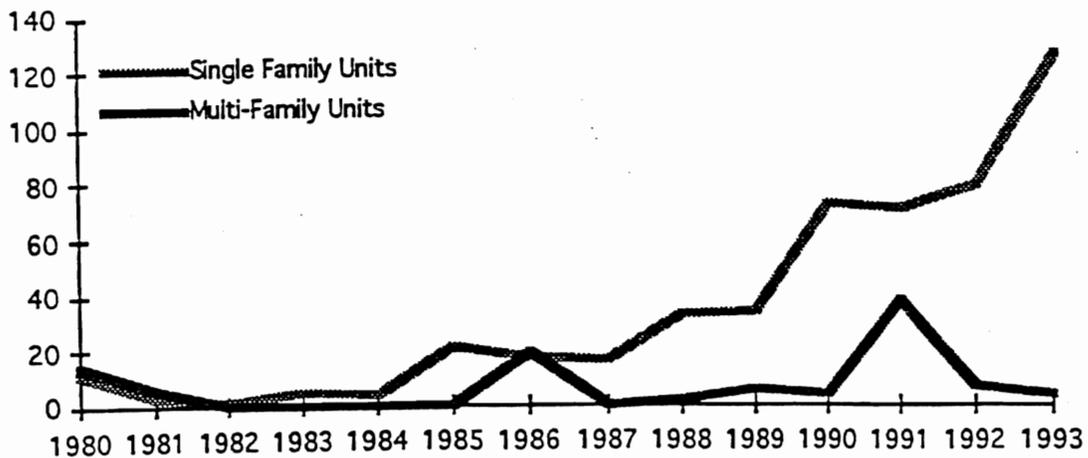
**SINGLE FAMILY AVERAGE VALUE**



**RESIDENTIAL PERMIT ACTIVITY**

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994*
Net DU Added	23	5	-7	-2	-11	12	35	9	34	34	58	105	80	127	
Single Family Dwelling Units	12	3	1	5	4	21	17	16	33	34	73	71	79	127	
Multi Family Dwelling Units	14	6	0	0	0	0	19	0	2	6	4	38	7	4	
Demolition	3	4	8	7	15	9	1	7	7	6	19	4	6	4	
Average Value Single Family in \$1000	53.6	80.0	39.0	85.3	70.8	64.5	64.2	80.0	87.8	146.8	157.6	170.0	170.0	172.0	
Average Value Multi Family in \$1000	26.8	26.0					25.9		38.5	24.6	29.0	69.8	44.3		

\* 1994 from January through



## GOVERNMENTAL JURISDICTIONS

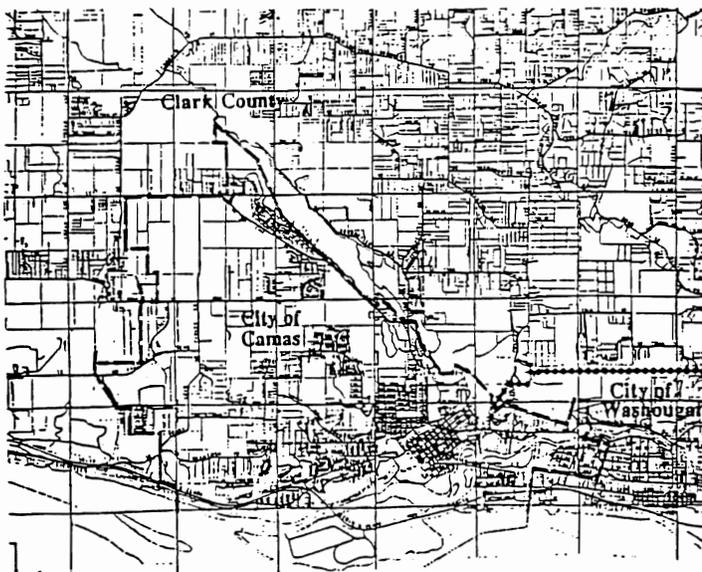
Washington State has many levels of governmental jurisdictions. The City is impacted not just by its own decisions, but by the decisions of these many other governmental jurisdictions, that Growth Management requires the City coordinate with:

- County and nearby cities
- Special Purpose Districts, e.g. Schools

The following outlines the jurisdictions that are significant to Camas.

### CLARK COUNTY

The City of Camas is located within Clark County. In terms of Growth Management, many decisions must be coordinated with the county or are affirmed at the county level. The Urban Growth Area encompasses an area larger than the City. Therefore, the Comprehensive Plan will serve as the basis for negotiations with the County on land uses within the Urban Growth Area, but outside the city limits.



### CITY OF VANCOUVER

The City of Vancouver is located approximately 12 miles west of Camas; their city limits is only 5 miles west. However, the

direction of urbanization of Vancouver brings Vancouver's unincorporated suburbs to within a mile or so of Camas. Thus Vancouver and Camas have adjacent spheres of influence within the Urban Growth Area, and will need to be consistent and coordinated in their plans and decisions.

### CITY OF WASHOUGAL

The City of Washougal and Camas share a common border on Camas' east edge along the Columbia River. As each city grows, issues of who will provide services and what areas will be annexed into which city will have to be resolved. And as with Vancouver plans and decisions will have to be consistent and coordinated.

### CLARK COUNTY PUD

Clark Public Utilities is a customer-owned utility providing electric, water, and wastewater service in Clark County. It was formed by a vote of the people in 1938. Clark Public Utilities provides electric service to more than 112,000 customers. Its Water Utility services more than 16,000 customers. The Wastewater Utility serves about 200 customers. Operations of the three utilities are financially independent.

### PORT OF CAMAS/WASHOUGAL

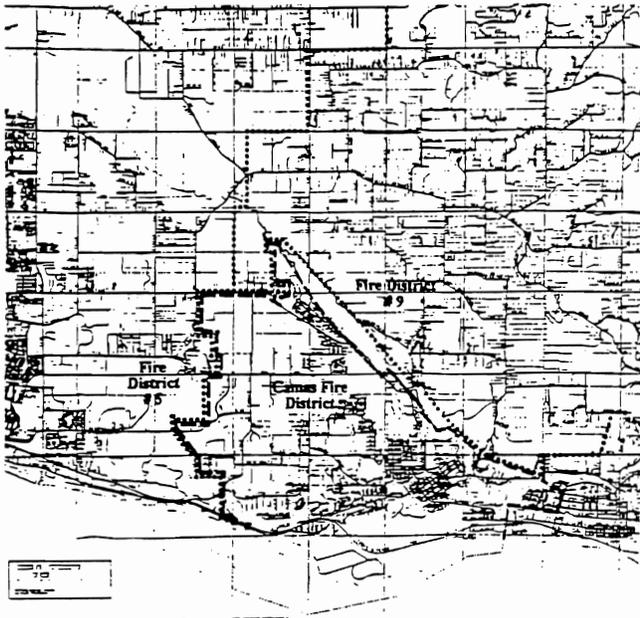
The Port of Camas/Washougal was established by a vote of the people in 1935. The Port's activities have resulted in the creation of more than 600 jobs and \$10 million in local annual payroll.

The Port operates three facilities in the Camas-Washougal area: the Industrial Park, marina, and Grove Field airport. The industrial park includes over 400 acres of industrial property, south east of the City of Washougal. The marina is located at historic Parker's Landing and includes 320 slips for recreational boats. In addition to moorage, several floating structures and shore side facilities. Grove Field is a general aviation airport located three miles north of Camas in the Fern Prairie area.

**FIRE DISTRICTS**

The City of Camas provides its own fire protection. It operates a full-service fire department from one location in downtown Camas.

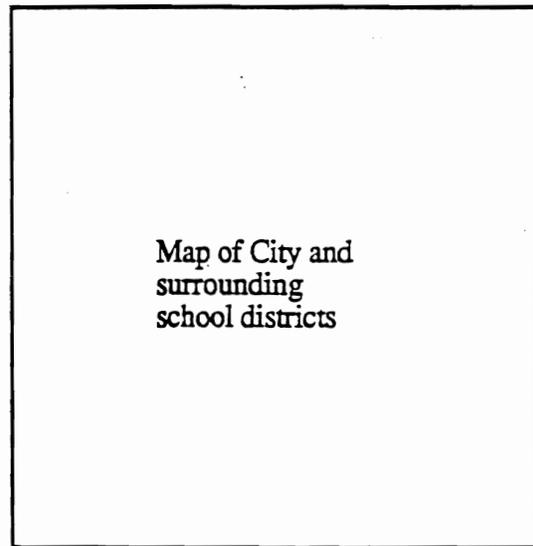
The Study Area is protected by two fire districts: District 9 northeast of Lacamas Lake, extending to Skamania County, and Fire District 5 that is west of Camas.



**CAMAS SCHOOL DISTRICT**

The Camas School District serves the City of Camas, the area east of Lacamas Lake continuing up to Livingston Mountain and on to Skamania County. There is a small portion of the district that extends past the western limits of the City. Therefore, the eastern portions of the Study Area are served by the district, but some of the western portions are within the Evergreen School District, and a tiny portion of the eastern Study Area, Woodburn Hill, is within the Washougal School District.

The Camas School District has the following facilities:



**CAMAS SCHOOL DISTRICT FACILITIES**

FACILITY	YEAR CONSTRUCTED AND REMODEL/ADDITIONS	SQUARE FEET	STUDENT CAPACITY	1993-94 ENROLLMENT
Camas High School	1937/1970	114,102	950	757
JD Zellerbach Middle School	1966/1973	62,757	570	655
Elementary Schools:				
Helen Baller	1948/1951/1954/1986	40,728	509	368
Dorothy Fox	1982	39,436	493	375
Lacamas	1962	41,685	521	442

**IV. LAND USE ELEMENT**

## IV. LAND USE ELEMENT

### THE GOALS OF THIS PLAN

The City of Camas enjoys a number of advantages:

- Quality of Life
- Location
- Natural Beauty
- Variety of Housing
- Defined Neighborhoods
- Quality schools
- Easy access to Vancouver and Portland
- Proximity to Air, Water, Rail and Highway Routes
- Strong Employment Base
- Proximity to similar industries
- Availability of water, sewer and power
- Responsive review times

### COMMUNITY VISION

The vision for Camas' future, although it will accept a significant amount of growth in both population and jobs, is to retain the small town character by preserving the natural amenities, such as the steep wooded slopes and Lacamas Lake, and to use them to define existing and future development and neighborhoods. Each neighborhood will have parks and natural open spaces, a range of housing types and densities, convenient schools and shopping. They will be connected by primarily two lane streets, a pedestrian/bike path system, and convenient transit.

Mixed-use commercial centers and the downtown will provide locations for quality, identifiable shopping, offices, higher density housing, City services, and schools. These centers will be linked to the neighborhoods by local streets, as well as the arterials serving industrial areas and areas outside of the City.

There will be change, but it will be controlled to preserve as much of the physical amenity and small town feeling of the City as possible. A key element of

maintaining this feeling will be the protection of cultural resources by preservation and enhancement of properties of historical significance to the community.

### URBAN GROWTH AREA

The City of Camas' Urban Growth Area has been sized to the population and employment growth projected to occur over the next twenty years. It is planned to meet the goals of the Growth Management Act and the Clark County Framework Plan. The Camas Urban Growth Area accomplishes the following:

- Accommodates population of 21,250 with additional land planned to accommodate approximately 25,300 people.
- Allows projected total jobs to between 14,000 to 16,500.
- Utilizes natural features such as the Columbia River to the south, the Greenway to the west, Lacamas Creek Valley, Lacamas Lake, and Lacamas Park to the north to define its area.
- Concentrates urban development with associated facilities, utilities, and transportation.
- Incorporates existing urban areas and proposed developments requiring urban services.
- Reflects historic water and sewer service areas and special purpose districts such as school and fire.

The Interim Urban Growth Area approved by Clark County reduced the City of Camas' proposed Urban Growth boundary by:

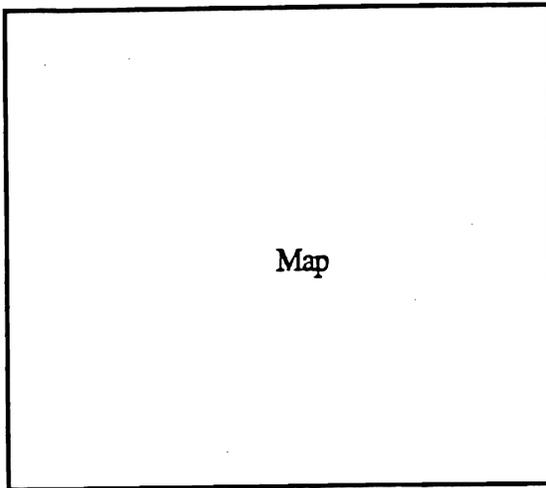
- Allowing no growth beyond the existing western City limits; and
- Limited the area north of Lacamas Lake to that adjacent to N.W. Everett Road.

The Urban Growth Area was re-analyzed to determine:

- Potential population within the Final Urban Growth Boundary.
- How much area is required to accommodate the assigned population plus the 25% Market Factor?
- What would the residential net densities be of the City and its Urban Growth Area?
- Was the boundary logical in terms of services, topography, adjacent jurisdictions, and land uses?

**SUB-AREA ANALYSIS**

Five general areas were further examined as part of the City's planning process: (A) the area west of the City, (B) the area east of Lacamas Park, (C) the area north of Lacamas Park, (D) the area north of Lacamas Lake, and (E) an area north of the City along First.



Map

After discussion, the Steering Committee recommended that the areas (C) north of Lacamas Park and (D) Lacamas Lake be excluded from the recommended Urban Growth Area. It was recommended that all or portions of the other three areas be included.

*Area A: West of the City* This area is between the existing City limit and Water Service Area and the Greenway and is also partially included in Vancouver's proposed Urban Growth Boundary. Recent discussions between the Cities of Camas and Vancouver, Clark County and property

owners have resulted in preliminary decisions on land use—mixed use center, and the general alignment for 192nd extending to SR-14. This area is most logically within the Camas Urban Growth Area for the following reasons:

- **Greenway:** The Greenway has been a historical objective of the City's planning, it provides an identifiable natural drainage area between jurisdictions and is consistent with GMA and County objectives.
- **Land Use:** The mixed use center is consistent with the City's planning concept and reinforces the light industrial/high technology uses.
- **Utilities:** The topography with natural drainage to the greenway reinforces both sewer and drainage plans of the City.
- **Community Identity:** The combination of the Greenway, 192nd intersection and land uses reinforces this as an entry to the City of Camas.

*Area B: East of Lacamas Park* This area borders the City of Camas along its south boundary and is located between Lacamas Park on the west and the BPA right-of-way on the east. It is also proposed to be in Washougal's Urban Growth Area except for a small area between Crown Road and Lacamas Park. This area is recommended to be in Camas' Urban Growth Area because of the following factors:

- It is within the Camas Water Service area and improvements have been built anticipating providing service;
- Camas School District with a future school site shown in their Capital Facilities Plan;
- Sewer service to lines in Third Street are most logical;
- Road connections from Crown Road to Third Street within the City of Camas are most likely used by future residents.

*Area E: North of First Street* This area was initially proposed to extend to 202nd and Goodwin Road; however, the Steering Committee recommended only including those properties (one-quarter mile deep) north of First Street from 202nd to the

existing City limits. Their rationale was that this area:

- Provided land in the City on both sides of First Street to take advantage of street, water and sewer improvements;
- Allowed a logical extension of residential uses west of the Greenway and light industrial/high technology north across from similar uses to the south; and
- Made a logical connection to the City limit on the east.

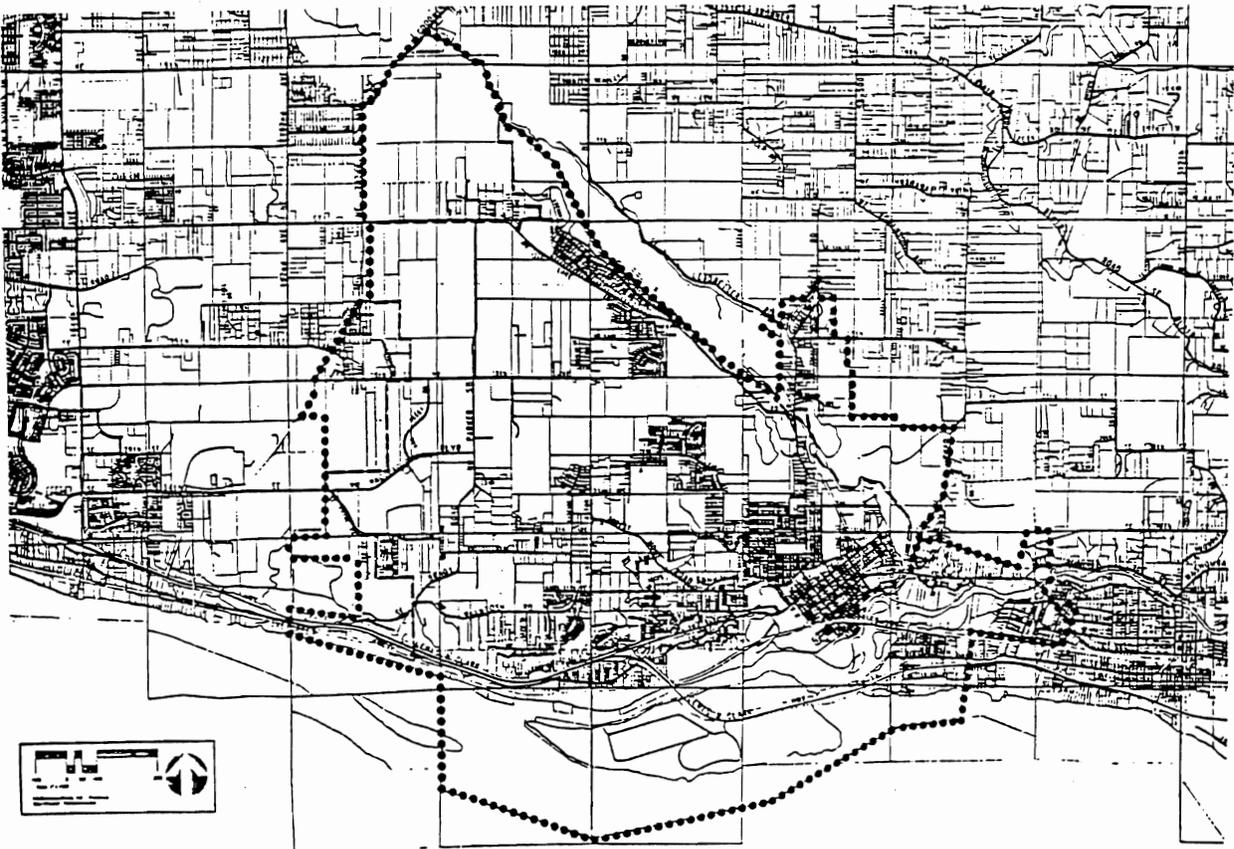
#### Potential-Interim UGA

Our analysis shows the existing City limits can accommodate a population at build-out of 21,165 people at a residential density of over 6.0 dwelling units per net acre. The areas in the Interim UGA along Everett Road and east of Lacamas Park will accommodate a population of 2,685 at a residential density slightly over 5 dwelling units/acre. If the area to the east of Lacamas Park is eliminated it will reduce this amount by approximately 1,145 people.

Including the areas around Lacamas Park with the City will provide a population range of 22,700 to 23,850 which will not meet the allocated growth including a 25% Market Factor of 24,650. Thus the Interim Urban Growth Area cannot hold the population that Camas' is expected to receive.

#### PROPOSED URBAN GROWTH AREA

The following map identifies the final Camas Urban Growth Area. The growth boundary starts at the Columbia River at the southwest, extends generally northerly around the quarry to the major drainage/wetland area commonly referred to as the Greenway between Vancouver and Camas, the existing city limit, 202nd Street north of First Avenue and along Goodwill Road to Lacamas Creek. At Lacamas Creek the boundary goes to the southeast diagonally along the creek to the south shore of Lacamas Lake, it extends north around development on each side of Everett (SR 500) Street, then along the north boundary of Lacamas Park, south along Crown Road to the current city limit between Camas and Washougal.



**PLAN CONCEPT**

The physical setting and natural features of the City of Camas are the major organizing elements of the plan. Land use, transportation, and the provision of public facilities, utilities, and services are all constrained and shaped by these major features:

- Columbia and Washougal Rivers with related flood planes;
- Lacamas, Round and Fallen Leaf Lakes, and Lacamas Creek;
- Wetlands and drainage courses;
- Unstable and steep slopes; and
- Wooded and habitat areas

A second series of natural features north of the Camas Urban Growth Area also define logical Rural and Urban Reserve areas. These include the valley extending to the northwest along Lacamas Creek, Green Mountain, Brunner Hill, Fern Prairie, and the Little Washougal River. The Fisher and the English Pit Quarries to the west provide constraints on urban development and provide direction for defining the urban reserve between Camas and Vancouver.

By utilizing and identifying these natural features and critical areas as key elements of the plan, it is the City's goal to protect them from incompatible land uses. Through the permanent open space network it is the City's goal to protect related fish and wildlife habitat.

**URBAN RESERVE: CRITERIA<sup>1</sup>**

If densities in between urban and rural densities are permitted, sprawl development can occur that will preclude future development at more efficient urban densities. The recent *Urban Growth Management Study: Case Studies Report*, prepared for Oregon's Department of Land Conservation and Development, concluded

that low densities in the one to five-acre range presented major problems for future annexation, extension of urban services, and conversion to urban patterns. The report notes that the less development allowed in future urban areas where urban services are absent, the better. It further notes that "interim land divisions mean the land must be consolidated in the future for larger scale, more efficient development. Homes that are sited on five acre lots exacerbate future subdivision design problems." The report recommends that Oregon communities establish a large minimum lot size of at least 10 to 20 acres for areas without urban services. Florida communities have experienced similar problems where sprawl patterns (defined as two units per acre to one unit per ten acres) are established. Thus a minimum acreage of at least 10 acres would be appropriate.

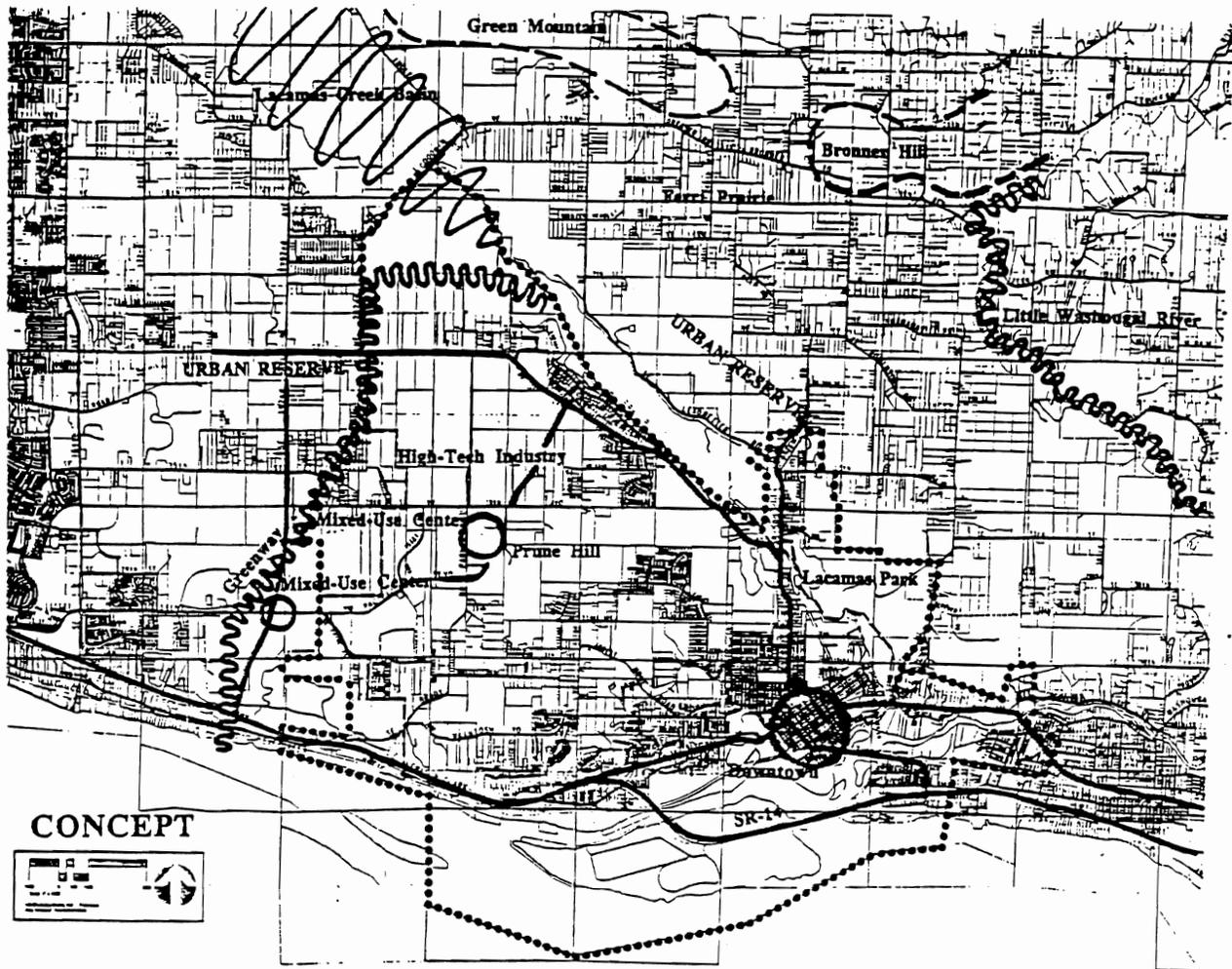
Within the Camas Urban Growth Area the highest intensity of development is concentrated around existing and proposed mixed use centers. Existing centers include downtown and One-Stop area on Third Ave. New, larger centers are proposed on Pacific Rim Blvd. in the vicinity of 192nd and adjacent high technology uses in Grass Valley, and residential neighborhoods on Prune Hill. Smaller neighborhood centers may occur on Prune Hill, Everett St. north of Lacamas Lake, Evergreen Hwy. west of SR 14 and Third Avenue near Crown Rd.

Higher density housing would also be encouraged along the Sixth/Third Avenue transit corridor and downtown Camas; particularly where they are in proximity to the open space network or greenway.

Older, higher density (8 du/ac) primarily single family neighborhoods which contain affordable housing such as Oak Park and around Crown Park would be enhanced.

<sup>1</sup> Washington State, Department of Community Development, Growth Management Program, *The Art and Science of Designating Urban Growth Areas II: Some Suggestions for Criteria and Densities*.

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN



PERMITTED BUILDING INTENSITIES IN THE LAND USE ELEMENT

It is anticipated that the current range of building intensity would also be allowed in the future:

Category	Lot Coverage
Single Family/Duplex	30 - 40%
Multiple Family	50 - 60%
Commercial	85%
Light Industrial	70%
Light Industrial Country Tech	30 - 45%

**RESIDENTIAL**

Residential development is an important part of the community. People spend a great deal of their time there, as well as in most cases making their largest financial commitment. The City of Camas strives to help provide the highest quality residential living within the consideration of providing the widest choice of type, location, and price.

Residential lands are categorized into two main types: Single and Multiple Family. Within each of these types there is a range of densities with opportunities for increasing densities in special situations or review procedures. The effective lot size is reduced by open space requirements. The densities by type of residential classification are:

**SINGLE FAMILY RESIDENTIAL**

Density	Lot Size Ranges Per Dwelling Unit*	Maximum Number of Units Per Net $\diamond$ Acre
Low	15,000 - 20,000 sq. ft	2.2 - 2.9
Medium	10,000 - 12,000	3.6 - 4.4
High†	5,000 - 7,500	5.8 - 8.7

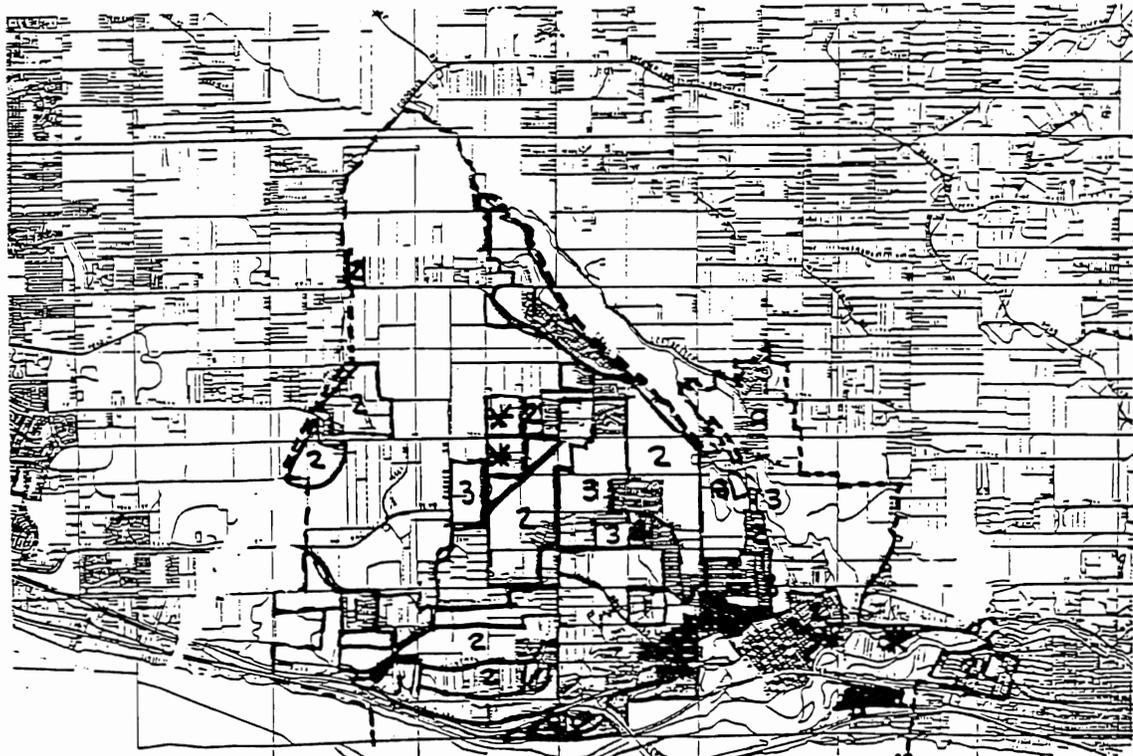
**MULTIPLE FAMILY RESIDENTIAL**

Density	Lot Areas Per Dwelling Unit*	Maximum Number of Units Per Net $\diamond$ Acre
Low	3600 sq. ft.	12
Medium	1,800 - 2,400	20 - 24
High†	1200	36

- $\diamond$  Net Acres have acreage for streets removed.
- \* Planned Unit Developments may be approved allowing up to a 20% increase in density, except not less than 6,000 square feet in lot size.
- † Some mixture with duplex and small multiple family developments may occur in these zones.
- ‡ Multiple Family residential high density land use may be increased from a density of 20-24 units per net acre to as high as 36 units per acre if a need can be shown for the additional density and that it would not adversely impact the surrounding areas.

The map below shows residential densities:

AREA	DENSITY
City	6.27 units/net acre
West of City	6.78 units/net acre
North of City	5.07 units/net acre
Overall Urban Growth Area	6.21 units/net acre



**RESIDENTIAL DENSITY**

Single Family		Multiple Family	
1	Low 1-3	A	Low <12
2	Med 3-5	B	Med 12-20
3	High 5-7	*	24-36
4	Mix 7-10		



# CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

## Assumed Density Model

Plan	Related Zoning 1 (lot size)	Plan Density (du/acre)	Assumed Actual Average 2	Typical 100 Acres			
				Acres	Dwelling Units	Persons/ Household	Population
SFR-Low Density	SR(15-20)	1-3 du	2.25 du/ac	15	34	2.4	82
SFR-Medium Density	R-1(10-12)	3-5 du	3.5 du/ac	25	88	2.4	211
SFR-High Density	R-1(6-7.5)	5-7 du	5.5 du/ac	35	193	2.4	463
Small Lot	R-2	7-10 du	9 du/ac	15	135	2.4	324
Duplex, Townhouse 3	R-3	12 du	10.2 du/ac	3.4	35	1.8	63
Apartments/ Condominiums	R-4	18 du	15.3 du/ac	3.3	50	1.8	90
	with CU	24 du	20.4 du/ac	3.3	65	1.8	117
7.13± du/ac			6.00 du/ac	100	600	2.25	1,350

- 1 Multiple Family Zones to be revised
- 2 85% of allowed density
- 3 Assume 2/3 duplex and town houses

Within these designations a mix of unit types as well as the exact zoning district that is applied may allow density up to the minimums stated above. The precise zoning category will depend upon previous zoning, topography, surrounding land uses, and other relevant factors. The maximum density will not necessarily be applied and is not granted by right by the Comprehensive Plan. The minimum lot size for High Density Single Family Residential shall be a minimum of 6,000 square feet. Where previous zoning commitments or within undeveloped areas where topography, surrounding land uses, public services, and other relevant factors are favorable, the City Council may consider the smallest lot size of 5,000 square feet.

The various residential types are designated on the land use plan map according to the following policies:

- Residential uses are more flexible in terms of location than industrial and commercial uses. Therefore, residential uses are designated where the topography is uneven and grades generally are steeper. This often provides views and direct access to the open space network which enhance the development. Flatter lands are generally reserved for industrial

and other similar permanent employment uses.

- Established residential neighborhoods should be conserved. This is achieved by maintaining similar densities to existing densities, and except where necessary, avoiding traffic circulation patterns which encourage through-traffic. The City will also encourage campaigns to repair structures, and improve streets, sidewalks, and street lighting.
- New residential development should not be developed with a lot size or density that is less than the next lower zoning classification (i.e., R-1-10 to R-1-12).
- Low Density Single Family Residential has been designated adjacent to existing low density developments, where steep topography requires greater flexibility in layout, and where potential natural hazards do not exist.
- Medium Density Single Family Residential has been designated where it is in proximity to Low Density Residential, where good access is available and when potential natural hazards do not exist.
- High Density Single Family Residential is generally on property with less slope and

is adjacent to existing high density neighborhoods.

New areas of Multiple Family Residential have been indicated as nodes, with the total number of dwelling units and net acres indicated.

In addition, the following policies apply to residential development:

- All development should occur in a logical and phased manner. Sprawl or leap-frog development should be discouraged so that roads, water, sewer, and other City services can be provided in an efficient and orderly manner.
  - Moderate increases in the density of the Low Density Single Family Residential development category should be encouraged to preserve open space and to help make it more cost-effective.
  - Densities of the various residential designations shall be as stated above. However, Planned Unit Developments may be allowed to increase density by up to 20% and provide a variety of unit types.
  - New residential development or redevelopment should provide adequate right-of-way, street improvements, water and sewer improvements, park, and other capital improvements which directly serve the new development.
  - Medium and High Density Multiple Family Residential should be located near or adjacent to existing or proposed parks, and commercial centers with direct access to major or secondary arterials.
  - New Medium and High Density Residential should be developed in planned mixed use centers or in smaller developments distributed throughout the area, rather than in fewer, larger concentrations.
  - Professional offices may be allowed in the Medium and High Density Multiple
- Family designations up to 50 percent of the total acres allocated.
  - Modular and manufactured homes meeting UBC or HUD Gold Label standards should be allowed within any of the single family residential designations so long as they meet the basic zoning requirements for setbacks, lot size, and other requirements that traditionally-built structures must also meet.
  - Mobile homes should be allowed within any of the residential designations as long as they are part of an approved mobile home park (including mobile home subdivisions).
  - New residential properties proposed for development adjacent to existing sand and gravel operations, or adjacent to areas so designated, should be situated so that lots do not face the major street serving the sand and gravel operations. The development should provide extra-deep lots to buffer the residential uses from truck traffic and associated impacts generated, or to be generated, by the sand and gravel operations.

**COMMERCIAL**

Commercial lands provide services primarily to residential uses, although they can also serve each other's needs as well as industrial needs. Given the nature of the Camas downtown and the residential growth that will occur, new commercial uses will be needed to serve the Prune Hill and Grass Valley areas, the area northeast of Lacamas Lake, and the more limited needs of the industrial and residential areas to the west.

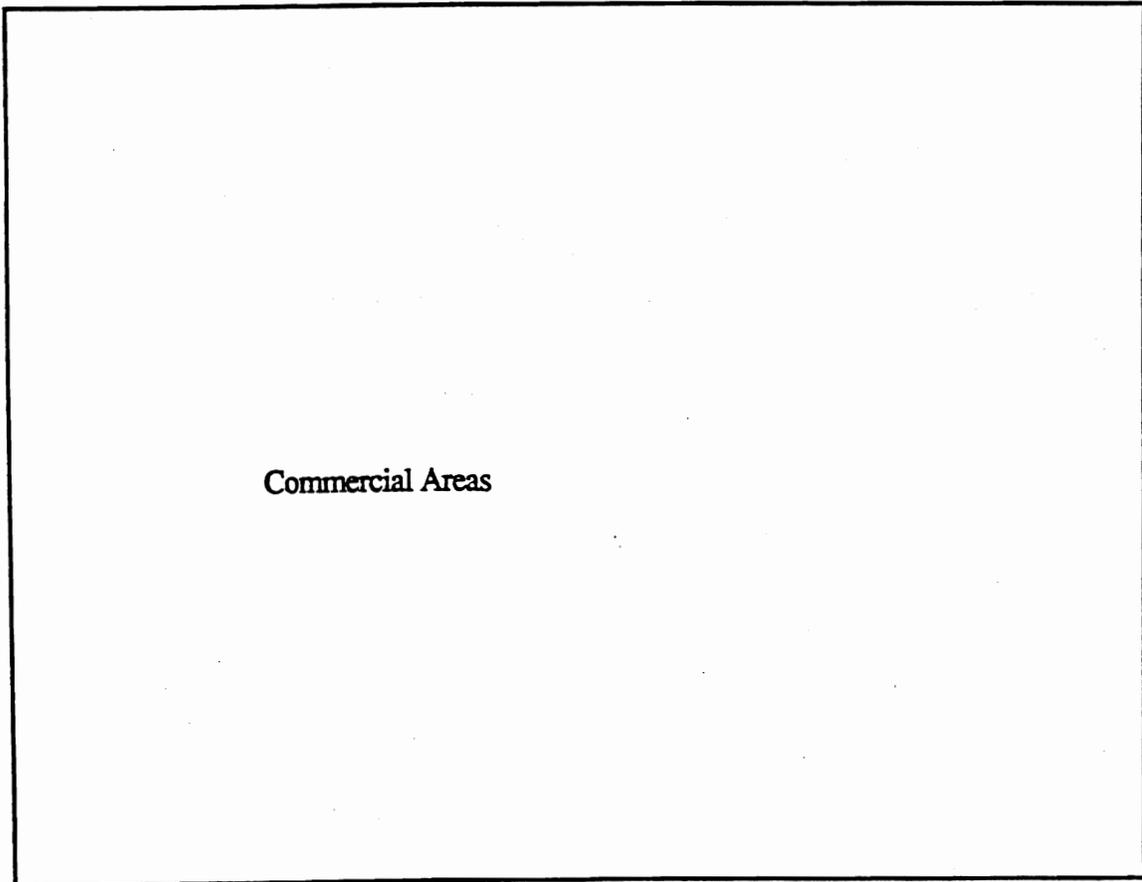
Commercial lands may be categorized into several different categories:

- Neighborhood Convenience
- Community Commercial
- Downtown
- Highway Commercial
- Special
- Regional Commercial

Each provides a different type of service and, as a result, has different characteristics. The following discusses each of these.

*Neighborhood Convenience Commercial* is intended to provide for the day-to-day needs of the immediate area. They tend to be relatively small and fairly numerous. Convenience goods (food, drugs, sundries) and personal services (laundry, dry cleaning, hair care, etc.) are the common goods and services offered.

*Community Commercial* typically provides goods and services for which comparison shopping is done. These goods and services are subject to longer-term consumption, and tend to be larger-priced items than the Neighborhood Convenience Commercial items. Typical goods include wearing apparel and soft lines, as well as hardware and appliances. In addition,



some professional services such as real estate and financial services may be provided, as well as limited eating and drinking establishments. Community Commercial tends to vary in size, but it is larger than Neighborhood Convenience Commercial, although less frequent.

*Downtown* is designated as a large Community Commercial area, as it provides a range of goods and services. The plan does not propose major expansion of the downtown because of the expected commercial diversification in the area. Rather, the plan proposes the conservation of the downtown, intensifying the existing uses as higher density residential and office uses occur in the immediately adjacent areas.

*Highway Commercial* is designed to provide goods and services for the motoring public, as well as to provide a place for land intensive commercial uses (car sale, equipment rental, etc.).

*Regional Commercial* provides apparel, home furnishings, and general merchandise in depth and variety, as well as providing services for food clusters and some recreational activities. Regional Commercial is the largest of the commercial categories, and is designed to serve the region or a significant portion of the region's population. None of this type of center is expected in Camas and will likely be accommodated by facilities in Vancouver.

All the commercial categories, with the exception of Highway Commercial, should be developed in centers instead of strips along arterials. This helps protect the traffic-handling capacity of the arterial, increases access to transit, as well as promoting one-stop shopping, which can reduce the number of parking places to be provided. The centers (Neighborhood, Convenience, and Community) should be developed according to the following policies:

- New commercial development should have direct access to arterial streets. As access to arterials is limited to a few driveways, it will require access an internal circulation system coordinated with other uses in the center.
- New commercial should be located at the intersection of arterials which affords maximum accessibility north, south, east, and west, and minimizes traffic turning movements and improves pedestrian safety.
- Land designated for commercial development should not be used for less intense development (Residential) unless alternative sites are available.
- Commercial centers should be a minimum size as follows:
 

Mini/Infill Centers	.5-5 acres
Neighborhood Centers	5-10 acres
Community Commercial	10-25 acres
- Commercial centers should follow a similar design and landscaping theme to enhance the center image and should be coordinated with surrounding uses.
- Drive-up or drive-in facilities should be encouraged only as an integral part of the center.

Commercial designations in the plan were made as follows:

- Existing viable commercial uses and zoning were recognized and designated. In some cases undeveloped areas were modified because of changes in the arterial system.
- New Neighborhood Convenience and Community Commercial centers were not specifically designated, but rather combined into multiple use nodes on the map. Specific proposals for these may be made and evaluated according to the commercial policies. Proposals of new centers should include adequate economic

analysis to assure that the size and type of center are justified.

**Mixed Use Center:** The plan makes provision for a major, planned, mixed use center located in Grass Valley adjacent to the large Light Industrial High Technology area around the intersection of NW Parker Road and NW 38th Ave as well as another at NW 34th Ave. and 192nd Street, at the entrance to the City. It is suggested that overall master plans be prepared for these areas in cooperation with the present land owners.

The range of potential uses which could be integrated at these locations are:

- Community Commercial
- Office Uses
- Educational/Research Center
- Motel and Restaurant Facilities
- Multiple-Family Residential
- City facilities such as fire station and possibly a branch library
- Parks, Open Space, and Trails
- Middle School

## INDUSTRIAL

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Industrial development, as a provider of jobs, tax base, and goods, is the basic component of most communities. As stated earlier, tourism, as an economic activity, is limited. Military and governmental activities are also not realistic bases for economic activity for Camas. Camas now has substantial vacant land within its boundaries due to annexations to the west and north. Three types of industrial are designated in the plan: Heavy Industrial, Light Industrial, and High Technology.

**Heavy Industrial** is characterized by a full range of industrial and manufacturing uses and processes, such as James River Mill, and usually is separated from other uses because of the impacts of noise, light, transportation, etc.

**Light Industrial**, by contrast, has less intensive uses allowed and is more compatible with other uses such as commercial or residential.

The **High Technology Park** designation is characterized by strict development standards including generous landscaping, well- designed buildings, and limited outdoor operations. With these standards, the type of development can be compatible with most other uses, as long as transportation corridor is separated or otherwise mitigated.

Within the older, developed areas of the city the potential for industrial development is limited. Industrial development needs good access, flat or nearly flat grade, and vacant land. Nowhere in the developed part of the City does more than an acre or two of such land exist.

The primary industrial location for high technology uses in Camas is the Fisher Basin High Technology (LICT) area, which is generally bounded by Pacific Rim Boulevard on the south, S.E. 1st Street on the north, 192nd Avenue/Greenway on the west, and N.W. Parker Street on the east. It is a unique area which calls for carefully considered development because of the extensive network of wetlands. It is set aside as the most desirable and suitable land for the siting of high technology, or other similar industrial uses that should be developed in campus- like setting. Specifically, lot layout and site plans should reflect the wetlands, the grounds should be well landscaped, providing a buffer from adjacent land uses and a pleasing visual experience as seen from public roads. Buildings should have generous setbacks and be designed to house all activities including production, storage, etc., so that no adverse impacts such as noise, glare, odor, vibration, are detectable from the outside. Walking and bike paths should be accommodated when possible.

**Industrial Areas**

In order to facilitate high quality industrial development, the possibility of an educational/research center should be encouraged. Such a facility would enhance the desirability of the area for existing and new industrial development and add to the campus atmosphere. Such a center might include residential/motel type facilities, restaurants and limited retail shopping.

Heavy Industrial uses are designated where existing uses or appropriate zoning occurs.

**URBAN RESOURCE EXTRACTION**

There are two areas identified "Natural Resource Extraction" which effect the city's Urban Growth Area or the Urban Reserve Area. The first is English Pit located west of 192nd Avenue, north of S.E. 15th

Street. The second is the Fisher Quarry just north of SR 14.

These are areas of sand and gravel resources, a diminishing resource in the County and the metropolitan area. It is highly desirable to conserve the areas for the extraction of sand and gravel to assist in the economical growth and development of the area. Any other use should be carefully considered for its impact upon the ability to provide adequate sand and gravel at an economically feasible price. Adjacent uses should be adequately buffered from these areas.

Potential future uses compatible with surrounding development patterns have been proposed for the Fisher Quarry site. The English Pit is in the proposed Urban Reserve Area between Camas and Vancouver.

### **SITING ESSENTIAL PUBLIC FACILITIES**

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Under the provisions of the Growth Management Act a process or criteria for siting essential public facilities that are typically difficult to site such as state education facilities, regional transportation facilities, state or local correctional facilities and in-patient facilities including substance abuse, mental health and group homes must be included in the comprehensive plan.

The City of Camas uses a special review procedure. For larger facilities it includes the preparation of an overall Master Plan. Small facilities may be allowed within some existing districts through a conditional use process. In both cases the consistency of the use with the intent of the comprehensive plan, affect on adjacent uses or neighborhood, and methods to mitigate that impact would be considered in the approval process. Essential County and State public facilities (e.g., solid waste and/or hazardous waste facilities), must meet existing state laws and regulations requiring specific siting and permitting requirements.

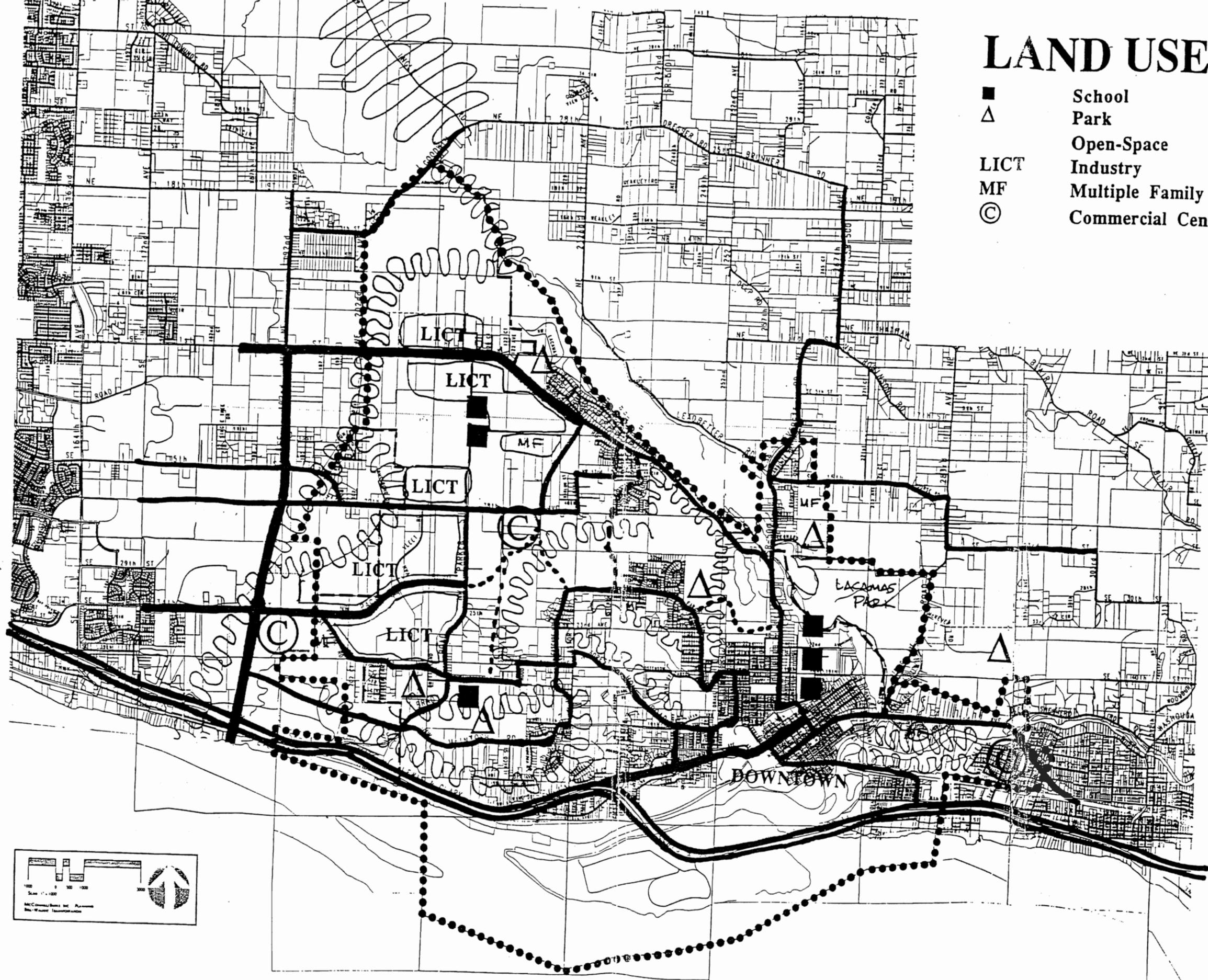
### **LAND USE**

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The fold-out map on the next page shows the proposed land uses within the Camas Urban Growth. It also includes the open space network and the transportation system and shows symbols for existing and future parks and schools.

# LAND USE

- School
- △ Park
- Open-Space
- LICT Industry
- MF Multiple Family
- © Commercial Centers



COMPREHENSIVE PLAN: CAMAS URBAN GROWTH AREA

**V. HOUSING ELEMENT**

## V. HOUSING ELEMENT

### INTRODUCTION

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The Housing Element recognizes the vitality and character of established residential neighborhoods and identifies sufficient land for housing to accommodate a range of housing types and prices. The goal is that Camas contain a diversity of housing types to enable citizens from a wide range of economic levels and age groups, and to ensure an adequate supply of affordable and attainable housing.

The Growth Management Act's Housing goal is to:

*Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.*

Specifically the Act requires that each city prepare an inventory and analysis of existing and projected housing, and that all economic segments of the community are provided for. The Plan must identify sufficient land for housing, including, but not limited to, government-assisted housing, housing for low-income families, manufactured housing, multifamily housing, and group homes and foster care facilities. The cities and County are cooperating to plan for the region's affordable housing needs and housing for special needs population.

The Housing Element and its strategies are also linked to:

- Economic development element to achieve parity between job development and housing affordability
- Transportation to assure reasonable access to multi-modal transportation systems and to encourage housing opportunities in locations that will

support the development of public transportation

- Locations of work sites and jobs
- Availability of public facilities and public services

The Housing Element addresses four areas of concern: Neighborhood Quality, Housing Supply, Affordable Housing, and Special Housing Needs.

This element is structured to examine the historical and existing situation and then present Needs and Policies addressing the areas of concern.

This document has employed statistics, information, and ideas from the Joint comprehensive Housing Affordability Strategy [CHAS] 1992-1998 (Draft) produced by Clark County and the City of Vancouver.

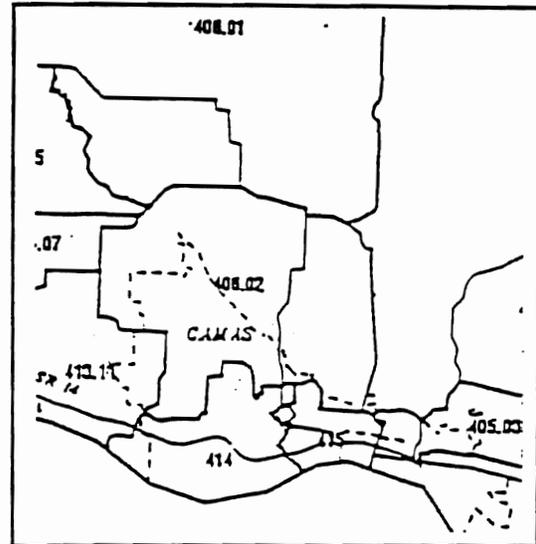
**BACKGROUND**

The City of Camas as well as Clark County have experienced significant growth since the late 1980s. These trends are expected to continue. Clark County is greatly influenced by its location in the greater Portland metropolitan area. The tax structure of the States of Washington and Oregon have encouraged people to locate in Washington and work in Oregon. The construction of I-205 has supported Washington's attractiveness, and made Camas a desirable location. Clark County, traditionally a rural, blue collar, affordable community, stands a chance of becoming a victim of its own success.

**WAGES AND INCOME**

Between 1980 and 1990 there was a 24% increase in jobs. About 1/3 of that increase was in professional, technical, and allied jobs; another third was in sales.<sup>1</sup> While the

professional jobs were probably related to the high technology companies locating in Camas which pay well, the sales jobs are generally lower paying than for other sectors. The average pay in 1992 in the retail sector was \$12,595 and in the service sector was \$17,516.<sup>2</sup> The following chart shows wages by income classification by Census Tract for the Camas area:



**NUMBER OF HOUSEHOLDS WITH MEDIAN INCOME BY INCOME CLASSIFICATION<sup>3</sup>**

CENSUS TRACT	VERY LOW INCOME * \$0-\$17,999	LOW INCOME † \$18,000-\$29,999	MODERATE INCOME ‡ \$30-34,999	§ \$35,000 and up	MEDIAN INCOME	% OF HOUSEHOLDS LESS THAN COUNTY MEDIAN \$
415	362	167	78	336	\$25,742	61.7%
414	362	307	68	544	\$28,546	54.6%
406.02	254	234	125	734	\$37,660	42.1%
413.11	52	64	33	309	\$45,486	31.0%

\* Very Low Income Households: 50% of County Median Income, or less than \$18,104

† Low Income Households: 51-80% of County Median Income, or between \$18,104 and \$28,966.

‡ Moderate Income Households: 80-95% of County Median Income, or between \$28,966 and \$34,298.

§ All Households under \$29,999 plus 90% of households in the \$30,000 to \$32,499 increment.

The above chart shows that by income classification, households in the greater Camas area are 25% Very Low Income,

27% Low and Moderate, and 48% above the median. In Clark County, 46% of the households have low or moderate incomes.<sup>4</sup>

<sup>1</sup> U.S. Census

<sup>2</sup> Draft Joint Comprehensive Housing Affordability Strategy, 1992-8 for Clark County and the City of Vancouver.

<sup>3</sup> US Census, 1989

<sup>4</sup> Draft Joint Comp. Hsing Affordability Strategy, 1992-8 for Clark Co. & the City of Vancouver.

HOUSING COSTS AND TYPES

The county's median income is \$31,800. The standard is that households should pay no more than 30% of their monthly income for rental housing. The chart to the right shows for the income groups shown on the previous page what rent or home costs can be afforded based on the 30% target. The charts below show the percentages of home values or rents in the Camas area.

INCOME CLASSIFICATION	RENT	HOME COST
Very Low Income	up to \$453	up to \$50,000
Low Income	\$453-\$724	\$50 - \$80,000
Moderate Income	\$724-\$860	\$80 - \$95,000

The 1990 Census shows that for Camas the Median Owner Occupied Housing Value was \$67,100 and the Median Contract Rent was \$303.

RESIDENTIAL VALUE BY OWNERS <sup>5</sup>

CENSUS TRACTS	\$0-\$50,000	\$50,000 - \$99,000	\$100,000 - \$149,000	\$150,000 - \$199,999	\$200,000 - \$299,999	\$300,000 and up	MEDIAN
City							\$67,100
415	35%	53%	8.5%	2%	1%	.5%	\$60,400
414	26%	59%	8%	3%	3%	1%	\$65,300
406.02	10%	63%	18%	5.5%	2.5%	1%	\$84,100
413.11	4%	27.5%	19%	27.5%	19%	3%	\$150,000

CONTRACT RENT<sup>6</sup>

CENSUS TRACTS	\$0-\$250	\$250-\$499	\$500-\$749	\$750-\$999	\$1,000 & up	MEDIAN
City						\$303
415	29%	69%	2%	0.2%	0%	\$287
414	24%	65%	10%	0.5%	0.5%	\$328
406.02	22%	61%	13%	4%	0%	\$361
413.11	17.5%	47%	25.5%	2%	8%	\$418

in these price ranges there are not nearly enough to meet the demand. Often homes for sale which cost less than \$50,000 are not in a physical condition that is acceptable to a lending institution. While homes are available for low and moderate incomes, the issue of down payments and closing costs can prohibit their purchase. Thus new and existing home ownership often is unaffordable to very low, low, and moderate income families.

In Clark County, over 1/3 of the projected demand for rental housing is in the lowest price range, or under \$310 per month. Current new construction does not meet this price constraint, so these households will be looking for older existing units or require subsidies for new units to be affordable. In addition almost 16% of new households are expected to be looking for houses that sell for less than \$38,000.<sup>7</sup> While homes and rental units are available

The trends in new construction are making new housing more expensive. Between 1989 and 1993 Clark County median house prices of existing homes increased each year, with an overall increase of 53%. This increase was 23% greater than the overall increase in the sale price of newly-constructed homes between 1989 and 1993. Also from the perspective of private sector lenders and developers, given the strong demand for housing in Clark County, it is more profitable to develop "upscale," more expensive housing.<sup>8</sup>

<sup>5</sup> U.S. Census, 1990. Specified owner-occupied units. Represents the following % of owners in Census Tracts listed above: 94%, 93%, 72%, 53%.

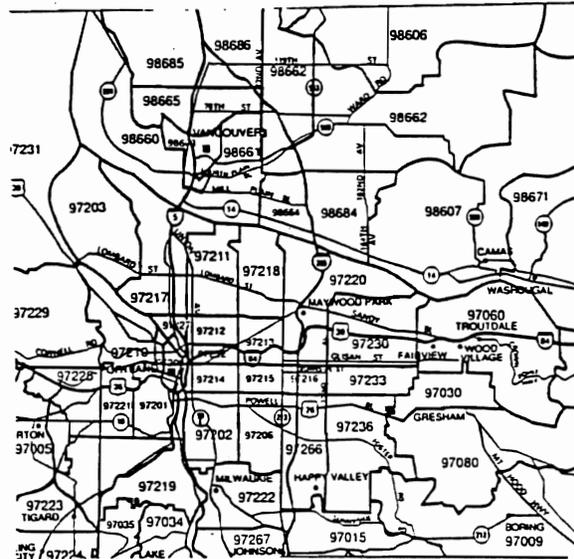
<sup>6</sup> U.S. Census, 1990. Specified renter-occupied units. Represents the following % of renters in Census Tracts listed above: 97%, 96%, 77%, 81%.

<sup>7</sup> Draft Joint Comprehensive Housing Affordability Strategy 1992-8 for Clark Co. and Vancouver.

<sup>8</sup> Clark County Housing Study, June 1990.

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In contrast to the growth of jobs in low paying segments such as retail, the cost of housing in Camas has been significantly increasing. From 1983 to 1988 the average price of new housing in Camas ranged from \$64,000 to \$87,000. Beginning in 1989 the cost has steadily and substantially increased. In 1993 the average cost of a new single family home in Camas was \$172,000, almost double the highest average in the previous period. The following chart shows that the bulk of existing home sales, especially in the Camas area and city, are under \$120,000 (61% and 64% respectively), new homes are predominately high priced.



RECORDED HOME SALES<sup>9</sup>

PRICE RANGE	CLARK CO. HOME SALES		CAMAS AREA HOME SALES†		CITY OF CAMAS HOME SALES	
	Existing	New	Existing	New	Existing	New
\$10,000 - \$60,000	285 7%	1 0%	31 16%	0 0%	28 20%	0 0%
\$60,001 - \$80,000	675 16%	103 5%	30 16%	1 3%	25 18%	0 0%
\$80,001 - \$100,000	1127 26%	490 24%	24 16%	4 11%	24 17%	1 4%
\$100,001 - \$120,000	714 17%	415 20%	24 13%	1 3%	13 9%	1 4%
\$120,001 - \$140,000	494 11%	332 16%	20 11%	2 6%	17 12%	0 0%
\$140,001 - \$160,000	319 7%	250 12%	12 6%	3 8%	7 5%	2 8%
\$160,001 and up	705 16%	436 22%	48 25%	25 69%	28 20%	21 84%
Total	4319	2027	189	36	142	25

\* Custom Built Homes are not included, unless excise tax is paid.

† Camas Area is the 98607 zip code area without the corridor between 164th and 192nd (See above map)

Also the majority of units constructed between 1988 and 1993 have been single family, with only a handful, 13%, multi-family units.<sup>10</sup> (See the Background section for more information.) Multi-family includes condominiums which

means that not all of these units would be considered affordable.

<sup>9</sup> Real Estats, 1994.

<sup>10</sup> City of Camas Building Dept.

**FACTORS AFFECTING HOUSING QUALITY**

Ownership rates have also been declining. The decline in home ownership was greater in the County than in Camas. However the City has historically had less ownership than the County. So the trends have equalized ownership rates between them.

**RATES OF OWNERSHIP<sup>11</sup>**

	1990	1980
Clark County		
% Owner Households	64.3	67.4
% Rental Households	35.7	32.6
City of Camas		
% Owners Households	63.9	64.8
% Rental Households	36.1	35.2

Furthermore, in studying ownership patterns within the City, Census Tracts 414 and 415 have substantially more rental units than other parts of the city. This is particularly remarkable since in general Camas has much higher ratio of single family units (usually perceived to be owned) versus multi-family units than the County. For example in 1990 the City had 81% single family versus 69% in the County. In 1990 Camas had a vacancy rate of 5.3%; 5% is considered healthy or "normal."<sup>12</sup>

The following breakdown shows where rental housing is concentrated in the City.

**COMPARISONS OF OWNERSHIP IN CITY<sup>13</sup>**

CENSUS TRACT	% OWNED	% RENTED
415	53.1	46.9
414	63.3	36.7
406.02	88.2	11.8
413.11	86.5	13.5

Of the non-single family housing in the City in 1990, 51% of it was in structures with 2-4 units, 34% in structures with 5 or more units, and 15% was categorized as

Other (mobile homes). Two to four unit structures are in general more compatible with single family areas, offer more opportunities for direct association with outdoor space, and can be easier to finance.

Configuration and ownership are basic way to examine housing, but the quality of the structure is at least as important in evaluating the housing stock. One aspect is the age of the structures. The age of housing also illustrates how the city grew from a company town near the mill toward Vancouver and up Prune Hill.

**AGE OF HOUSING**

CENSUS TRACK	PERCENT OF STRUCTURES BUILT		
	1980-1990	1960-1979	pre-1960
415	8%	19%	72%
414	12%	31%	57%
406.02	21%	46%	34%
413.11	45%	25%	29%

Older homes are not inherently bad, nor new homes always preferable. Older homes offer details and construction techniques that are no longer affordable. Poor maintenance and the impact of daily wear and tear are more often found in older homes. New homes do provide new electrical and plumbing systems, and meet today's energy standards, as well as being typically larger structures.

Another means of evaluating the quality of a home is complete plumbing facilities. the following chart summarizes the availability of plumbing in the Camas area:

<sup>11</sup> U.S. Census, 1990 and 1980

<sup>12</sup> Draft Joint Comp. Housing Affordability Strategy 1992-8 for Clark Co. and Vancouver.

<sup>13</sup> U.S. Census, 1990

**DWELLING UNITS WITHOUT PLUMBING**

CENSUS TRACT	% OF HOMES WITHOUT COMPLETE PLUMBING <sup>14</sup>
415	1.0%
414	1.4%
406.02	0.7%
413.11	0.0%

Except in Census Tract (CT) 414 where 8.3% or 5 vacant homes have incomplete plumbing, the other CTs have no vacant homes without complete plumbing. While the above percentages and numbers (37 homes in the four CTs) are small, the percentage for the four CTs, 0.9% is higher than the County's 0.5%.

Related to plumbing is the provision of water and the method of sewage disposal.

**WATER SYSTEM**

CENSUS TRACT	ON A SYSTEM	INDIVIDUAL	OTHER
415	100%	0%	0%
414	97%	2%	1%
406.02	38%	60%	2%
413.11	46%	50%	4%

Clearly the location of the home within the City limits is a significant factor in how a home receives its water. This explains the 100% rate for Census Tract 415, the only Census Tract completely within a municipality. While not quite as closely correlated, the location of the home within the City limits is also a significant factor in how a home disposes of sewage. Lack of sewers, lot size, and soil quality are also factors, and explain why Census Tract 406.02 has such a high reliance on septic tanks.

<sup>14</sup> For a dwelling unit to be considered as having "complete plumbing" a flush toilet, bath tub or shower, and hot and cold water must be available inside the unit.

**SEWAGE DISPOSAL**

CENSUS TRACT	SEWER	SEPTIC
415	99%	1%
414	90%	10%
406.02	19%	80%
413.11	52%	48%

Another issue in the quality of housing is lead, especially for children under six and fetuses. Sources include air, food, drinking water, soil, dust, and house paint. Clark County looked at the following factors in identifying areas with high risk for housing units with lead hazards: housing units built before 1949, incomes equal to or below the county family median income, units with more than 1.01 persons per room, and children between the ages of zero and eleven years of age. Eight census tracts were identified as meeting these criteria; CT 415, central Camas, was one.

Market trends have not been supportive of affordable housing. The pressure to provide housing for the professionals and managers locating to the area has supported more expensive new home construction. In addition, many existing homes that are considered affordable are often either zoned for non-residential uses, higher density, or are poorly maintained. Census Tract 415, comprising Camas' downtown, is typical of this. It is the only area outside of Vancouver with a concentration of low-income households; many of those are near downtown and are thus zoned for other uses. In some cases the mismatch of current land use and zoning is what has made the housing affordable, but simultaneously threatens it.

**SOCIAL FACTORS**

Some components of the population deserve special attention within the Housing Element, since the type and availability of housing has a greater impact on that component.

affordable housing should be designed and distributed becomes clearer.

In examining the ages of persons living in poverty a picture of how low income and

**COMPARISON OF AGE GROUPS ABOVE AND BELOW POVERTY LEVELS <sup>15</sup>**

Age	CENSUS TRACT 415 Poverty Line		CENSUS TRACT 414 Poverty Line		CENSUS TRACT 406.02 Poverty Line		CENSUS TRACT 413.11 Poverty Line	
	% Below	% Above	% Below	% Above	% Below	% Above	% Below	% Above
0-4	4%	7%	18%	6%	14%	6%	0%	5%
5-17	21%	18%	22%	20%	30%	21%	49%	18%
18-44	51%	43%	43%	39%	39%	40%	51%	34%
45-64	4%	16%	6%	20%	7%	23%	0%	19%
65+	20%	16%	11%	15%	10%	10%	0%	24%
Total Persons	286	2013	355	2995	186	3635	61	1181
%	12%	88%	11%	89%	5%	95%	5%	95%

Census Tracts (CT) 415 and 414, comprising the center of Camas and the area along SR 14, have the largest groups living below the poverty level. The age groups hit are predominately families, as illustrated by the larger percentages of persons below poverty in the age groups 0-4, 5-17, and 18-44. Downtown Camas, CT 415, has more persons without children who are in poverty while CT 414 has more children, especially the 0-4 age group. Furthermore, CT 415 is the only Tract with an elderly population that has more people living in poverty than not. Since CT 415 is more "urban" and also has a concentration of low-income housing, adults who desire inexpensive housing have obviously tended to locate there.

In examining age, it is important to look at the overall aging of the population which is a national trend. The population of Camas is also aging, necessitating new types and configurations of housing, and related services.

**PERCENTAGE OF THE POPULATION OVER 65<sup>16</sup>**

	1990	1980
City	15.1%	14.1%
Census Tracts:		
415	18.9%	20.1%
414	11.9%	10.8%
406.02	11.3%	6.9%
413.11	25.0%	

As the table shows, the elderly are more concentrated in downtown and west of the City, though the aging of the population is evident throughout the area.

The kinds of housing targeted to these populations needs to be amenable to families and senior citizens. Since low income housing is often multi-family, and since families are presumed to live in houses, the fit of families in low-income housing is often not good.

The suitability of housing stock for groups with special housing needs, especially the elderly has not kept pace with the increase in their populations. Currently, 80% of long-term care for the elderly is estimated to be provided by family or friends, without any public or professional support. However, as medical advances and lifestyle changes increase the average life span of

<sup>15</sup> U.S. Census, 1990

<sup>16</sup> U.S. Census, 1990 and 1980

the elderly, many will outlive spouse or friends who are able to care for them.

Another way of examining the design of housing to serve specific populations, is to compare the number of persons per unit in owner and renter occupied housing.

**PERSONS PER UNIT: OWNED VS. RENTED<sup>17</sup>**

CENSUS TRACT	OWNER OCCUPIED	RENTER OCCUPIED
City	2.5	2.6
Census Tracts		
415	2.6	2.3
414	2.7	2.8
406.02	2.8	3.0
413.11	2.5	2.6

The misconception is that single persons or persons without children rent apartments. However the above chart illustrates that in actuality often more persons are living per rental unit than owned unit, indicating that more families are living in rental units.

Furthermore, the areas with the highest concentrations of rental units, Tracts 414 and 415 appear to have the highest percentages of single parent families.<sup>18</sup> Tracts 414 and 415 have 19.7% and 22.6% of households with only one parent as compared to Census Tracts 406.02 and 413.11 with 12.3% and 7.8% respectively.

However, renters occupy nearly 3/4 of zero- and one-bedroom units in Clark County and 56% of two-bedroom units. For those units with three bedrooms or more, only 16% are occupied by renters, as compared to 81% by owners.<sup>19</sup> For families who rent housing, these are not adequately sized housing units. Furthermore, the cost of units, based on the 30% of household income standard makes the multi-bedroom units less and less affordable as the number of rooms increases.

<sup>17</sup> U.S. Census, 1990

<sup>18</sup> This is calculated from 1990 Census data, by comparing the number of householders and spouses.

<sup>19</sup> Draft Joint Comprehensive Housing Affordability Strategy 1992-8 for Clark County and City of Vancouver.

In addition, the data shows there is an increase in families living with relatives or non-relatives in the Census Tracts with the higher rates of single parenthood.

**FAMILY HOUSEHOLDS: OTHER PERSONS<sup>20</sup>**

CENSUS TRACTS	FAMILY HOUSEHOLDS WITH OTHER RELATIVES*	NON-RELATIVES
415	7.8%	10.8%
414	6.8%	7.1%
406.02	7.1%	6.0%
413.11	5.3%	5.3%

\* Family is Householder, Spouse, Natural, Adopted, Step, and/or Grandchildren.

Another trend is non related persons living together. This category represents people living alone or with other non-related persons.

**NON-FAMILY HOUSEHOLDS**

CENSUS TRACT	% OF TOTAL CENSUS TRACT	LIVING ALONE	LIVING NOT ALONE	NON-RELATIVES
415	17%	12%	2%	3%
414	12%	8%	2%	2%
406.02	8%	5%	1%	2%
413.11	11%	7%	2%	2%

Non-family households are mostly people living alone. And as it has appeared throughout this discussion Census Tract 415 is the area where this is most common.

Group homes are virtually non-existent in the Camas area. There is one nursing home in downtown Camas housing 124 persons. While that is an important facility, there are other needs that group homes could also meet that are not provided.

The above analysis indicates the need for new thinking on the configuration and market for housing in the area, since new mixes of people are living together, and the population has different characteristics than the single family home was originally designed for.

<sup>20</sup> U.S. Census. Dividing Other Relatives or Non-Relatives by Family Householders.

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Camas does not have a sizable minority population. The following table shows that the vast majority of the population is white.

CITY OF CAMAS : RACE OF HOUSEHOLDER <sup>21</sup>

	WHITE	AFRICAN AMERICAN	ASIAN/ PACIFIC ISLANDER	NATIVE AMERICAN	OTHER
Number	2,380	4	15	11	5
%	98.6	.2	.6	.4	.2

Countywide, 66% of the minority householders are in unincorporated areas, 31% are in Vancouver with the remaining 3% in other incorporated areas. 1% of the county minority householders are in Camas.

COUNTY AND CAMAS AREA: RACE <sup>22</sup>

	WHITE	AFRICAN AMERICAN	ASIAN/ PACIFIC ISLANDER	NATIVE AMERICAN	OTHER
County	221552 93.1%	2873 1.2%	2129 0.9%	5478 2.3%	149 0.1%
415	2329 95.3%	8 0.3%	35 1.4%	29 1.2%	1 0%
414	3234 96.3%	8 0.2%	23 0.7%	38 1.1%	3 0.1%
406.02	3763 97.7%	8 0.2%	12 0.3%	40 1.0%	0 0%
413.11	1109 96.2%	8 0.7%	3 0.3%	23 2.0%	3 0.3%

In looking at the overall population rather than just at householders, more of the population in Camas is minority. In general, the county has more minority population than Camas; although as a percentage of the population CT 415 has a higher percentage of Asian/Pacific Islanders than the County.

<sup>21</sup> U.S. Census, 1990

<sup>22</sup> U.S. Census, 1990

**NEEDS**

**INTRODUCTION**

Affordability is the primary concern regarding rental housing in Clark County. New construction as now being developed cannot meet the price constraint for very low, low, and moderate incomes, so these households will be looking for older existing units or require subsidies for new units to be affordable. Lenders and developers have concentrated on constructing upscale, expensive housing since it is more profitable. Furthermore, public programs are insufficient to induce private sector participation in the affordable housing market. In addition to finding affordable housing, significant problems for low-income renters are high up-front costs and the potential for rent increases.

From a market perspective, there has been no incentive to build housing for other underserved populations. Congregate housing is sometimes unnecessary; adjustments to units within subdivisions

and multi-family housing would permit some people to live independently. Many persons with developmental or physical disabilities are able to live with little or no assistance if their housing unit is designed to allow independent movement and the ability to perform daily tasks. For many elderly in-home care is more appropriate than a nursing home. In-home care allows for greater independence, privacy, and dignity; it offers greater flexibility and fit of the services for each person; and it is less expensive than subsidized care.

Yet these considerations are more appropriate for new housing rather than existing homes since the requirements of the Americans with Disabilities Act and the needs of elderly populations make it more economical to build new units with adaptation for accessibility than it is to retrofit existing units.

**VERY LOW, LOW, AND MODERATE INCOME**

The following chart shows the housing situation for income levels in Camas.

**MEDIAN HOUSEHOLDS INCOME BY INCOME CLASSIFICATION COMPARED TO HOUSING AVAILABILITY**

CENSUS TRACT	VERY LOW INCOME *			LOW INCOME †		MODERATE INCOME ‡		LOW/MOD §
	INCOME \$0-\$17,999	RENT ◊ \$0-\$499	HOME § \$0-\$50,000	INCOME \$18,000-\$29,999	RENT ◊ \$500-\$749	INCOME \$30-\$34,999	RENT ◊ \$750-\$999	HOME § \$50-\$99,000
415	362	421	165	167	7	78	1	250
	38%	98%	35%	18%	2%	8%	0.2%	53%
414	362	392	193	307	43	68	2	429
	28%	89%	26%	24%	10%	5%	0.5%	59%
406.02	254	102	82	234	16	125	5	540
	19%	83%	10%	17%	13%	9%	4%	63%
413.11	52	33	8	64	13	33	1	59
	11%	64.5%	4%	14%	25.5%	7%	2%	27.5%

- \* Very Low Income Households: 50% of County Median Income, or less than \$18,104; Actual Rent for this Income group is \$0-\$453.
- † Low Income Households: 51-80% of County Median Income, or between \$18,104 and \$28,966; Actual rent for this income group is \$453-\$724; Home value is \$50-80,000.
- ‡ Moderate Income Households: 80-95% of County Median Income, or between \$28,966 and \$34,298; Actual rent for this income group is \$724-\$860; Home value is \$80-95,000.
- § U.S. Census, 1990. Specified owner-occupied units. Represents the following % of owners in Census Tracts listed above: 94%, 93%, 72%, 53%.
- ◊ U.S. Census, 1990. Specified renter-occupied units. Represents the following % of renters in Census Tracts listed above: 97%, 96%, 77%, 81%.

Certain conclusions can be drawn regarding the provision of housing for very low, low, and moderate income families. With 84% of the new homes sold in Camas in 1993 over \$160,000 few persons in the general population can afford them. While the ratio of single to multi-family dwelling units decreased between 1980 and 1990, the examination of building permits presented in the Background section shows that multi-family units are a small percentage of the units constructed in the last few years, and some of these are condominiums. Thus current new construction trends in Camas are not providing for these income groups.

*Very Low Income*

While this group appears to be best provided for, the picture is somewhat misleading. Census Tracts (CT) 415 and 414 seem to have a surplus of units, both rental and owned. While the census information does not indicate where within the CT the homes in each group are located, a windshield survey conducted in 1992 gives a sufficient indication.

In CT 415 the lower priced homes would probably be in Oak Park, south of One Stop Shopping Center, and south of downtown near the river and James River. In CT 414 the homes "available" for very low income would probably be south of Lewis and Clark Highway and east of Forest Home Park. Possibly 50% of these areas are threatened with either redevelopment or replacement based on current zoning. This Comprehensive Plan anticipates some of these areas being redeveloped; portions for high density residential others for different uses. While high density residential will maintain the use, as has been discussed it is unlikely that without some intervention that dwelling units will be available in these price ranges.

*Low and Moderate Income*

Sufficient numbers of rental units are not available for persons in these income levels, and new construction is not ameliorating the situation. Furthermore, though there are apparently significant numbers of homes that are "available" in

the price range appropriate to these income levels, in actuality most of the homes are probably at the higher end of the range, meaning the homes are beyond the means of low income persons, the largest portion of the low and moderate income groups. Even homes that are available in the price range of moderate income level groups, the down payment and closing costs often prevent them from purchasing homes.

**SPECIAL NEEDS**

The following outlines the requirements of special needs groups in having an adequate, affordable, and appropriate housing supply:

*Elderly*

- Affordable housing, especially rentals
- Services to permit them to receive in-home care
- More congregate space for frail elderly not able to have in-home services
- More physically accessible units

*Homeless: Individuals*

- Day shelter
- Additional night shelters
- Transitional housing (from shelter to market rate)

*Homeless: Families with Children*

- Additional night shelters and longer stays at shelters
- Linkage to services for children
- Day care for pre-school and school-aged children
- Transitional housing (from shelter to market rate)

*Severe Mental Illness*

- More community-based housing
- Residential treatment for children
- Ability to keep housing units as mentally ill move in and out of hospitals or other institutions

*Developmental Disabilities*

- More accessible units
- Additional services

*Physical Disabilities*

- More accessible units
- Additional in-home services

*Alcohol and Other Drug Addictions*

- Case management
- Youth detoxification services
- Services for pregnant and postpartum women

*AIDS and Related Diseases*

- Terminal care beds
- Support for in-home care services

Camas can not meet all these needs and requirements alone. Vancouver will continue to be the point of convergence for most services in the County, such as hospitals and social security. However, Vancouver can not and has indicated in their policies that they will not continue to be the sole provider for other services such as mental health, alcohol and drug rehabilitation, and homeless shelters. By recognizing the above needs, the City and its citizens are able to begin to address them within their community and to work with other communities to provide them as appropriate.

**POLICIES**

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The following policies are intended to ensure that all existing and future residents are housed in safe and sanitary housing appropriate to their needs and within their means.<sup>23</sup> For purposes of these policies it is assumed that this type of housing can occur anywhere within the Urban Growth Area.

- Provide for a variety of housing types and designs to meet the needs of people with special needs. However, every dwelling unit does not have to be accessible to special needs populations.
- Create incentives for developers to design housing suitable for families with children throughout the City.
- Encourage preservation, maintenance, and improvements to existing affordable housing.
- Ensure that affordable and special needs housing opportunities are dispersed throughout the City, not concentrated.
- Provide housing opportunities close to places of employment.
- Work with C-TRAN to develop transit connecting dispersed affordable housing and employment centers.
- Encourage infill development that enhances the existing community character.
- Provide a mix of uses, with higher residential densities, in mixed use centers.
- Through the Planned Unit Development process, provide opportunities and incentives for a variety of housing types and site planning techniques.

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<sup>23</sup> Sources: Community Framework Plan, Clark County, March 5, 1993; Draft Joint Comprehensive Housing Affordability Strategy, 1992-8 for Clark County and the City of Vancouver.

- Review existing and proposed land use regulations to assure that regulations and permit processing requirements are reasonable, and do not adversely impact housing production and cost.
- Coordinate with C-TRAN to identify and adopt appropriate densities for priority transit corridors. Ensure that the development standards for these areas are transit and pedestrian friendly.
- Explore available federal, state, and local programs and private options for financing affordable housing.
- Coordinate housing strategies with the financial community as well as public and private financing mechanisms.

## ACTIONS

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The requirements for creating an environment that fosters affordable housing for very low, low, and moderate income households are:<sup>24</sup>

- Increase the supply of housing affordable to renter households earning up to 50% of median income.
- Promote home ownership for low-income households earning between 51% and 80% of the median income through an integrated approach that involves increasing housing supply, increasing financial options for both housing providers and purchasers, and increasing individual capacity to purchase.
- Preserve, whenever cost effective, existing affordable housing units threatened with loss due to condition, location, land use regulations, expiring federal contracts, or other situations.
- Secure a stable source of housing development funds at the state and local level.
- Improve coordination and responsiveness between providers of housing and other sectors of the community to improve the quality and quantity of housing.

To accomplish these strategies the following actions are necessary:<sup>25</sup>

Require that 10% of new dwelling units be affordable to very low income groups to account for those lost to redevelopment.

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<sup>24</sup> Source: Draft Joint Comprehensive Housing Affordability Strategy, 1992-8 for Clark County and the City of Vancouver.

<sup>25</sup> Sources: primarily Draft Joint Comprehensive Housing Affordability Strategy, 1992-8 for Clark County and the City of Vancouver; Housing and Building Accessibility: The Law in Washington - 1992.

Require that 10% of new dwelling units be affordable to low and moderate income groups to meet additional current need.

Require 5% of new dwelling units be accessible to the disabled on sites with 11 or more units. (WAC 51-20) On sites with 4 or more units some must be designed to a higher standard. (WAC 51-20) On sites with 2 to 4 units encourage one ground floor unit to be accessible.

Encourage subdivisions to design 5% of the homes to be accessible.

Provide increased flexibility and encourage creative approaches in the use of new and existing housing development and design to increase the potential for (subject to specific development, design, and possibly owner occupancy standards):

- preserving and increasing housing affordability
- accommodating higher densities attractively
- ensuring that infill development fits with the character of the existing neighborhood
- re-using existing housing
- sharing living quarters
- using accessory structures as housing
- inter-generational housing
- assisted living options
- accessory units
- housing above commercial storefronts
- townhouses
- boarding homes
- cooperative housing
- congregate housing

This can provide for more affordable housing, housing for special need and elderly persons, and reduce the costs of and need for social services.

Establish maximum as well as minimum lot sizes and densities in urban areas.

Streamline building permit review and approval processes for affordable housing.

Create fee and development incentives for developers to build more affordable housing.

Work with the County and other jurisdictions to create a first time home buyer assistance program.

Work with local lending institutions, non-profit organizations, and housing providers to create education programs for financial counseling and assistance in buying a home.

Encourage the creation of financing mechanisms such as reverse mortgage programs, housing trust funds, and loan pools for local financing of affordable housing.

Redefine "family" in zoning codes to recognize the changing nature of life styles.

Allow flexibility to provide accessory units to accommodate elderly and other special needs persons.

Prioritize utility subsidies for energy conservation toward lower priced housing.

Encourage the preservation and rehabilitation of historic residential structures as a means of providing affordable housing.

Encourage the use of historic preservation incentives for rehabilitating historic properties and adopt the State Historic Building Code.

**VI. TRANSPORTATION ELEMENT**

## VI. TRANSPORTATION ELEMENT

The basic roadway system providing circulation to Camas and the Urban Growth Area is the federal highway system — Interstate 5 and Interstate 205. These freeways link the area to Portland to the south and with Olympia and Seattle to the north. I-205 has made Camas and the Urban Growth Area much more convenient to Portland and some of the regional or metropolitan features it has, such as the Portland International Airport. Because it better connects Camas and Portland, Camas will likely find that growth will occur at a faster pace than in the past.

### STATE HIGHWAY SYSTEM

The state highway system is also very important to Camas and the Urban Growth Area. State Route 14 along the Columbia River provides a large capacity east-west route which links Camas with Vancouver to the west and Washougal and points to the east of Camas. The access points of this east-west highway are, therefore, major factors for Camas. The 164th Avenue, S.W. Brady Road, and N.W. 6th Avenue intersections provide the main access points to Camas and suggest the major north-south arterial alignments.

However, it is here where topography presents some challenges. First, the 164th Avenue interchange will be insufficient to meet the demands placed on it. The topography to the south of the existing interchange slopes off and some fill or bridging will be needed in order to fully improve the interchange. At the S.E. Brady Road access point, a much more difficult problem exists. There is no interchange — only a left-turn refuge and cross-traffic turns are allowed. As traffic flow increase, the turns become more difficult and less safe. SR 500 provides access to the north and west from Camas. The current route travels

Everett Street through Camas to SR 14. Indirect routing on city streets does not provide efficient travel patterns.

### LOCAL ROADWAYS

The third level of circulation is provided by local governments— the city of Camas and Clark County. These roads (primary and secondary arterials, collector streets, and residential streets) form the network of streets which provide access for various land uses: residential, commercial, industrial, and others. The arterials are intended to provide circulation and access, as well as a link with state and federal systems. The collectors do just as their name implies— collect traffic from residential areas and channel traffic onto the arterial street system. The residential streets are aptly named for being the primary means for access to major residential areas. Residential streets are relatively narrow and do not carry heavy volumes and truck traffic. The collectors are wider and somewhat more heavily constructed. The arterials are the widest streets and are designed to carry heavy loads and high traffic volumes. Arterials should also have limitations placed upon access so that the expensive investment in capacity is not greatly diminished by too frequent and sometimes dangerous access.

## EXISTING PLANS

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Copies of reports, plans, and records relevant to the City of Camas Transportation Study were obtained from the City. The following is a summary of major elements of selected reports:

### SR 500/S.E. CLARK COUNTY TRAFFIC ANALYSIS

This study for Clark County investigated three tasks:

- Traffic analysis of the proposed interchanges on I-205 and SR 14
- Analysis of future travel demand on the intersections of SR 500 at Andersen Road, Thurston Way, Gher Road, and SR 503
- A comprehensive transportation study that would examine land use, accessibility impacts, and the issues of alternative alignments of SR 500 between Ward Road and SR 14.

The study states that traffic demand in the year 2010 through some of the existing and proposed interchanges is expected to approach or exceed practical capacity. In addition, key intersections will likely undergo capacity problems in the 2010 pm peak hour. The results state that much of the 2010 travel on the SR 500 intersections are regional trips into and out of the growing Vancouver Mall and Orchards area.

The analysis consisted of six SR 500 alternatives. Alternatives were described and analyzed for future traffic conditions and cost estimates were prepared. The following are the six alternatives:

- Existing alignment with downtown Camas terminus
- Existing alignment with new southern terminus
- Modified existing alignment with new southern terminus

- BPA power line alignment
- Lake Road alignment
- 192nd Avenue alignment

### WSDOT SR 14 STUDY

The Washington State Department of Transportation SR 14 study had two goals:

- Explain current traffic patterns on SR 14 and identify problem locations
- Estimate 2010 traffic volumes on SR 14 and recommend improvements for both current and future problem locations

The study found increasing traffic flows on SR 14 resulting from anticipated population and employment growth will, in many cases, cause travel demand to exceed current roadway capabilities. Recommendations to meet the travel demand forecast for SR 14 through the year 2010 were formulated.

### SOUTH COUNTY PLANNING AREA

This study, completed by a committee comprised of representatives from neighborhoods, industry and business, reviewed the existing comprehensive plan for the south county area. The review looked at elements of land use, transportation, utilities, parks, and recreation. The committee then made recommendations which would be considered by the Clark County Planning Commission and the Clark County Board of County Commissioners.

### CLARK COUNTY ROAD STANDARDS

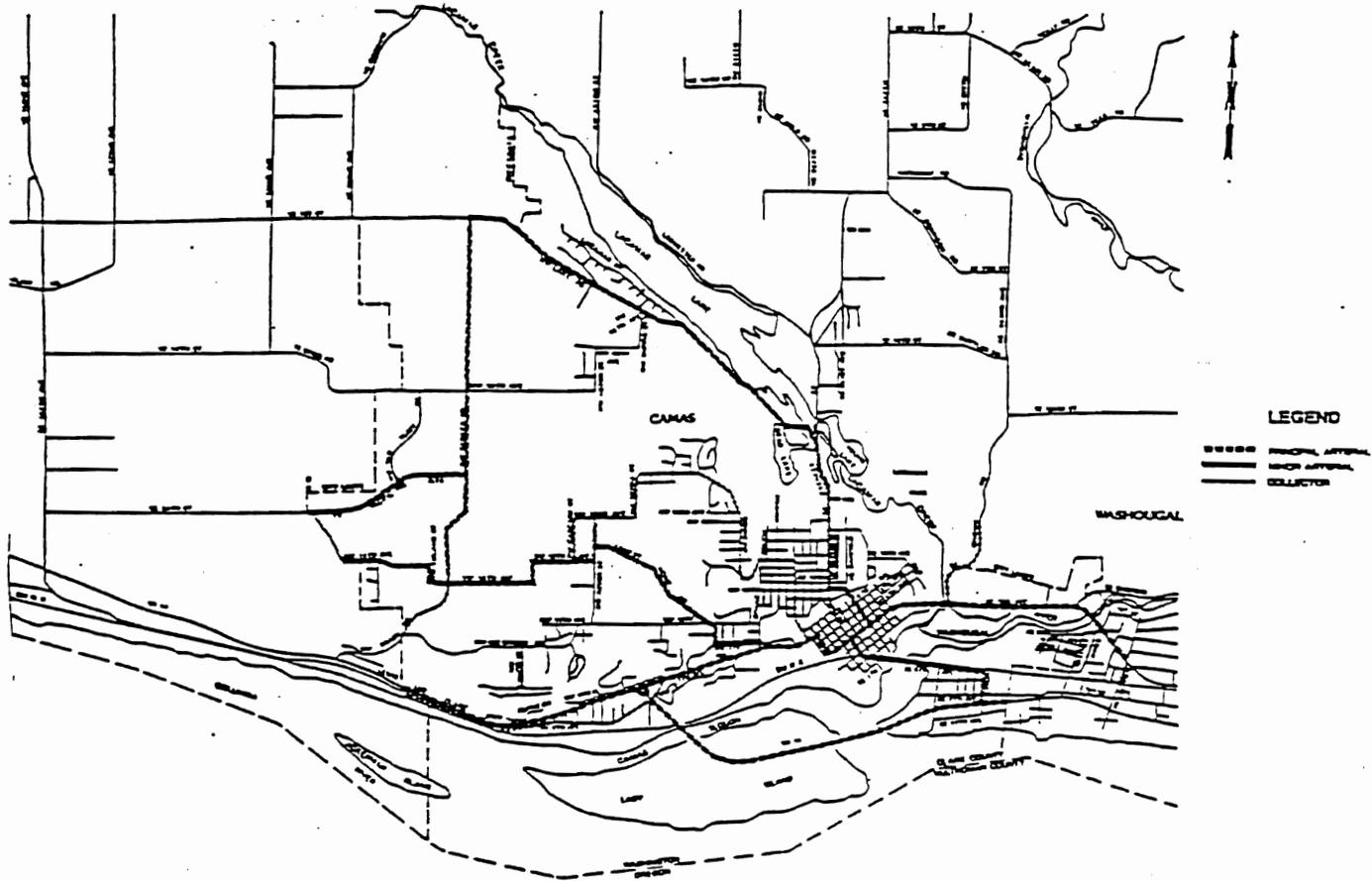
This report is the public and private road standards for Clark County. The report contained information concerning arterial road classification, surfacing, paving, grading, and other general specifications. The City is reviewing its standards to be consistent.

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information obtained from the City of Camas and field investigation. Arterials and collectors are on the following map and the two tables. They show the primary physical features of the collector system and the physical features of the arterial system.

## ARTERIAL STREET SYSTEM

An inventory of the existing arterial and collector street system was prepared using



## PHYSICAL FEATURES COLLECTOR SYSTEM

STREET NAME	FROM	TO	LENGTH MILES	WIDTH FEET	SURFACE TYPE	SHOULDER		DRAINAGE ADEQUATE	CURB/ GUTTERS		PARK LANE	
						LEFT	RIGHT		LEFT	RIGHT	LEFT	RIGHT
NW Sierra St	NW 18th Ave	N Camas C/L	0.84	18	ACP	3	3	2	No	No	No	No
Crown Rd	NE 3rd Ave	North C/L	0.17	24	ACP	8	8	1	No	No	No	No
Division St	NW 11th Ave	NW 6th Ave	0.48	20	ACP	10	10	1	Yes	Yes	No	No
NW 18th Ave	Osterson Rd	Division St	0.36	30	ACP	0	0	1	Yes	Yes	No	No
NW Brady	NW McIntosh Rd	NW 16th Ave	0.4	30	ACP	0	0	1	Yes	Yes	No	No
NW Fargo St	NW 28th Ave	NW 18th Ave	0.54	24	ACP	8	8	1	Yes	Yes	No	No
SE Whitney St	NE 2nd Ave	S Camas C/L	0.26	24	ACP	10	5	2	No	No	No	No
SE Lechner St	NE 3rd Ave	S Camas C/L	0.12	44	ACP	0	0	1	Yes	Yes	No	No
SE 8th Ave	SE Union St	E Camas C/L	0.17	24	ACP	8	8	1	Yes	Yes	No	No
NW 6th Ave	W Camas C/L	NW Norwood	2.6	20	ACP	4	4	1	No	No	No	No
NW 28th Ave	NW Sierra St	NW Fargo St	0.38	24	ACP	10	10	1	Yes	Yes	No	No
NW 23rd Ave	NW Sierra St	NW Cascade St	0.35	18	ACP	3	3	2	No	No	No	No
NW Cascade St	NW 18th Ave	NW 23rd Ave	0.3	18	ACP	3	3	2	No	No	No	No

# CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

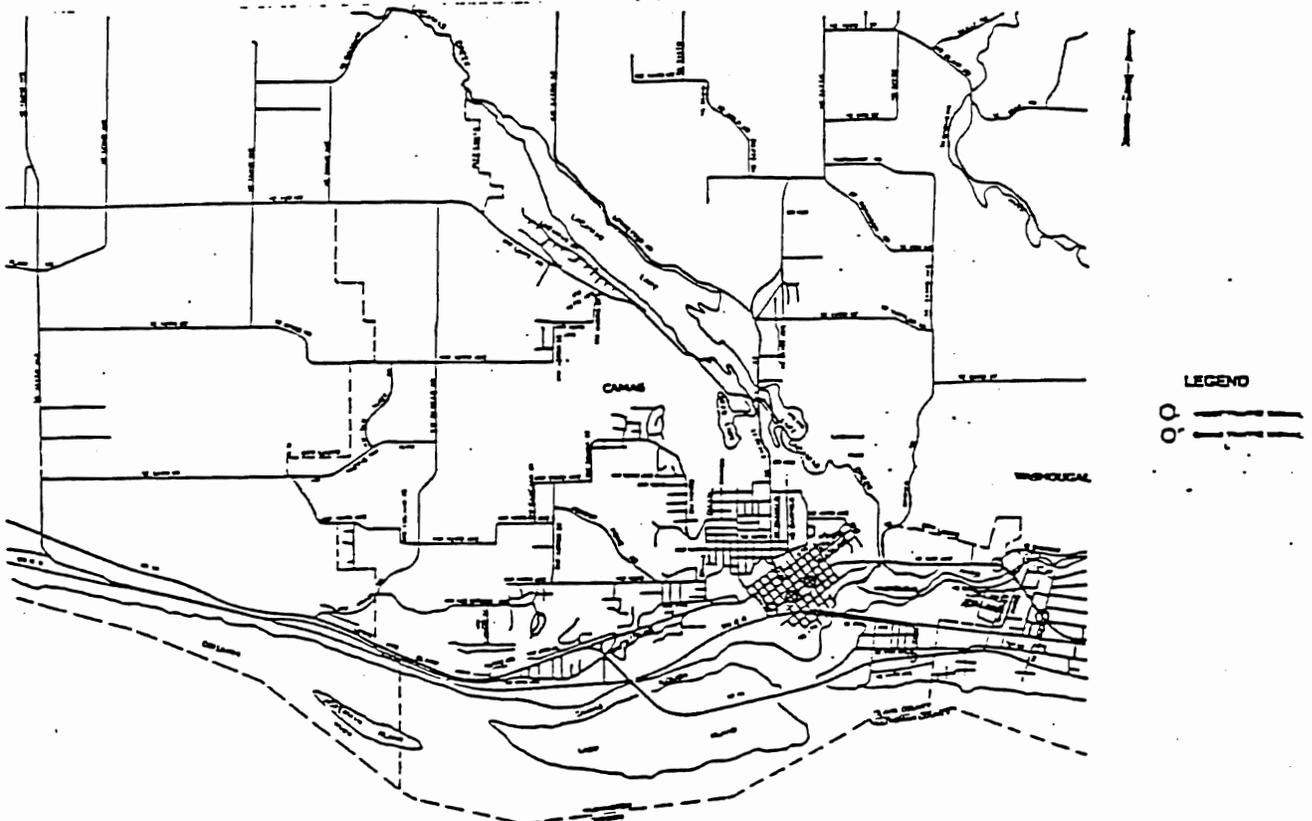
## PHYSICAL FEATURE ARTERIAL SYSTEM

STREET NAME	FROM	TO	LENGTH (MILES)	WIDTH (FEET)	SURFACE TYPE	SHOULDER		DRAINAGE ADEQUATE	CURB/GUTTERS		PARK LANE	
						LEFT	RIGHT		LEFT	RIGHT	LEFT	RIGHT
SR 14	W Camas C/L	E Camas C/L	3.07	20	ACP	4	4	1	No	No	No	No
Forest Ho	NW Astor St	NW 10th St	0.28	18	ACP	3	3	2	No	No	No	No
NW Lake Rd	W Camas C/L	NE Everett	2.33	19	ACP	3	3	2	No	No	No	No
NE 3rd Ave	NE Adams St	NE Lechner	1.87	28	ACP	11	11	1	Yes	Yes	No	No
NE Adams St	NE 6th Ave	NE 3rd Ave	0.15	28	ACP	11	11	1	Yes	Yes	No	No
NE Garfield St	NE 14th Ave	NE 3rd Ave	0.27	38	ACP	0	0	1	Yes	Yes	No	No
NW 16th Ave	NW Tidland St	W Camas C/L	0.28	30	ACP	0	0	1	Yes	Yes	No	N
NW 18th Ave	NW Astor St	NW Hood St	0.36	30	ACP	0	0	1	Yes	Yes	No	No
NW 6th Ave	NW Norwood	NE Adams St	0.94	44	ACP	0	4	1	Yes	Yes	No	No
NW Brady Rd	NW 6th St	N Camas C/L	0.93	20	ACP	4	4	1	No	No	No	No
NW Ivy St	NW 10th Ave	NW 7th Ave	0.13	18	ACP	7	8	1	Yes	Yes	No	No
NW Pacific Blvd	SE 34th St	NW Parker St	1.05	20	ACP	4	4	1	No	No	No	No
NE Everett St	N City Limits	NE 14th Ave	0.45	24	ACP	10	10	1	Yes	Yes	No	No
NE 14th Ave	NE Everett	NE Garfield	0.12	28	ACP	0	9	1	Yes	Yes	No	No
NW 7th Ave	NE Ivy St	NW 6th Ave	0.36	18	ACP	8	8	1	Yes	Yes	No	No
SE 6th Ave	NE Datas St	SE Union St	0.72	24	ACP	8	8	1	Yes	Yes	No	No
NW 16th Ave	NW Tidland Rd	NW Hood St	0.27	30	ACP	0	0	1	Yes	Yes	No	No
NW Tidland St	NW 16th Ave	NW 18th Ave	0.09	30	ACP	0	0	1	Yes	Yes	No	No
NW Hood St	NW 16th Ave	NW 18th Ave	0.09	30	ACP	0	0	1	Yes	Yes	No	No
NW Astor St	NW 18th Ave	NW 23rd Ave	0.3	30	ACP	0	0	1	Yes	Yes	No	No
NE Datas St	NE 3rd Ave	SE 6th Ave	0.15	30	ACP	0	0	1	Yes	Yes	No	No
SE Union St	SE 6th Ave	SR 14	0.16	24	ACP	8	8	1	Yes	Yes	No	No

### TRAFFIC CONTROL DEVICES

The City of Camas currently has six signalized intersections within the city limits. Three are owned by the City and three are owned by WSDOT District 4 in

Olympia, Washington. All traffic signals are maintained by WSDOT through an agreement with Camas. Table 3 summarizes the characteristics of these traffic signals. Figure 2 shows the location of each traffic signal.



CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

**SIGNALIZED INTERSECTIONS**

INTERSECTION	TYPE	NUMBER OF PHASES	CYCLE LENGTH
SR 500/3rd & Dallas			Crouse Hinds DM 400
		2	64 seconds
SR 500/3rd & Garfield	Econolite EML 4000	2	36 seconds
3rd & Shepherd Rd		4	76 seconds
3rd & Lechner		2	124 seconds
Union Street / SR 14			
Adams St & NE 4th Ave		2	50 seconds

**ACCIDENT SUMMARY**

Accident information for the years 1989-1991 was obtained from the City of Camas. These reports of "Motor Vehicle Traffic Accidents by Location" used for the accident summary contained information on location, type date, road, and light conditions of accidents.

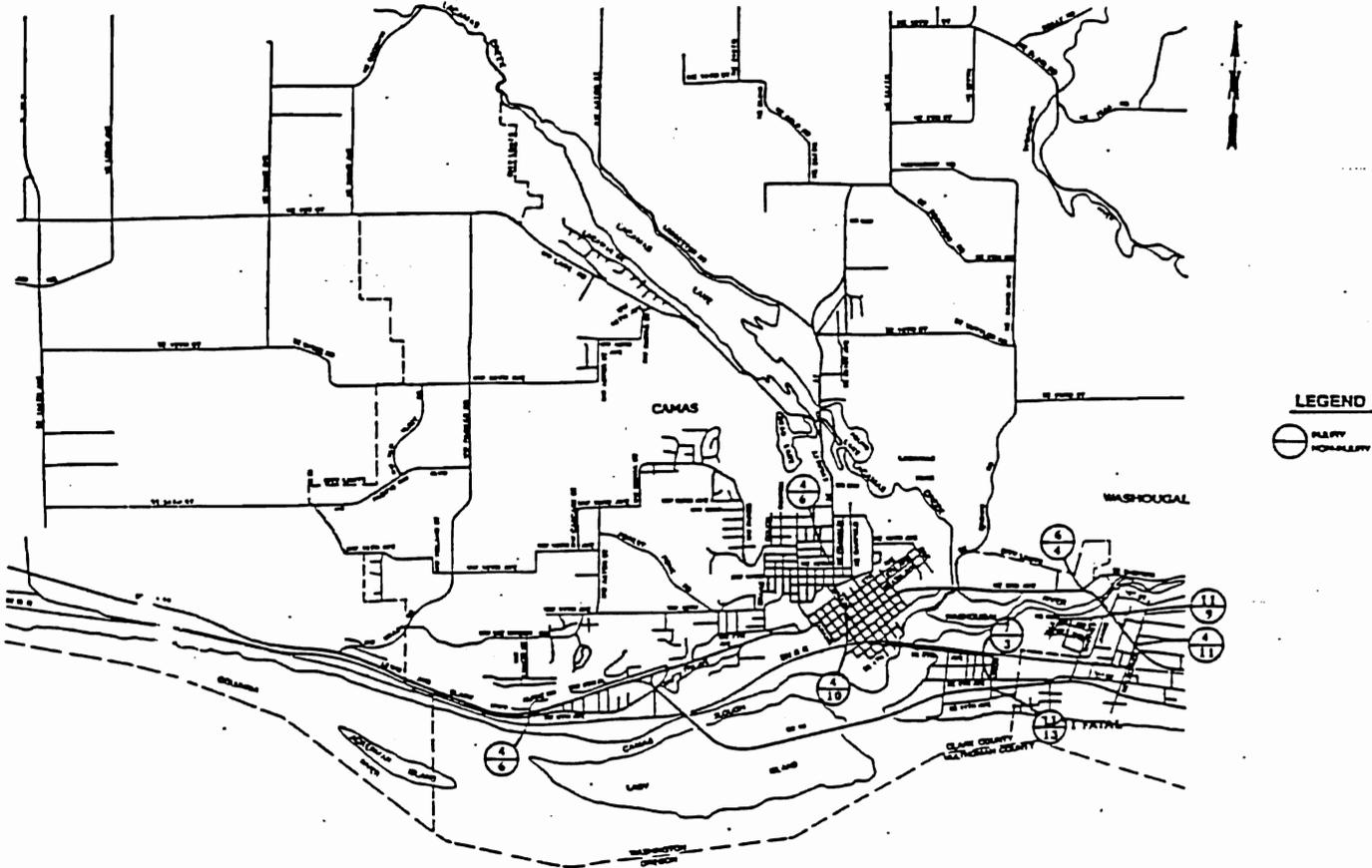
High-accident locations are listed on the following table and the locations shown on the map on the next page. SR 500 and SR 14 intersection has the highest number of accidents due to the high ADT

on both arterials. N.E. 3rd Avenue is in three of the eight highest accident locations, also because of high ADT. Locating high accident intersections serves several purposes. First the location of the concentrated accidents may indicate problems with traffic control devices. These may provide a basis or warrant for traffic signal installation or reconfiguration of the traffic signal if one already exists. A high accident location may also indicate a problem with lane configuration, sight distances, geometric problems or a lack of proper signing.

**HIGH ACCIDENT LOCATIONS (1989 - 1991)**

INTERSECTION	NUMBER OF ACCIDENTS	ACCIDENT RATE (PER 1 MILLION ENTERING VEHICLES)
SR 14 and Alpine Drive	10	.30
SR 500 and NE 15th Avenue	10	.26
SR 500 and SE 8th Avenue	10	1.10
NE 3rd Avenue and NE 2nd Avenue	20	1.23
NE 3rd Avenue and NE Lechner	15	.78
NE 3rd Avenue and NE Shepard	10	1.08
NE 5th Avenue and NE Dallas	14	1.17

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN



**TRANSIT**

Transit services for Camas are provided by C-TRAN. Service within Camas is provided through Route 33. Route 33 circulates between Camas and Washougal and provides a timed transfer point at 3rd and Cedar. Transfers can be accomplished at 3rd and Cedar to Route 41 which provides service to connecting routes in Vancouver. The Camas-Washougal Express to Tri-Met's Transit Mall in downtown Portland with connections to Vancouver's Transit Center stops at 3rd and Cedar.

Transit services available to Camas also include wheelchair accessible curb to curb service for elderly and physically challenged people who are unable to use the fixed route system. This service operates during the same hours as fixed route service and is operated by DAVE Transportation Services. C-TRAN also provides ride-matching services in cooperation with Tri-Met for people who either live or work in Camas.

The existing street pattern and condition in Camas is partially hindering expansion of transit service. Additional transit service to employment centers is anticipated as the roadway system is developed.

**.C2. PEDESTRIAN AND BICYCLE FACILITIES**

Pedestrian and bicycle facilities are primarily adjacent to the existing street system. Sidewalks are provided on selected arterial streets. Designated bicycle lanes are provided on S.W. 6th from SR 14 through Camas, Everett Street from 22nd Avenue to La Camas, and Lake Road from Everett Street to LaCamas Shore Trailhead. See Chapter VII for a detailed discussion on Trails and Bikeways.

**TRAFFIC CAPACITY**

Using traffic counts obtained from the City of Camas, the capacity of key intersections within Camas were analyzed. The intersections analyzed were chosen because of either accident rate, high volume, or geometric characteristics. Criteria used to determine capacity of those intersections is the planning method of the Highway Capacity Manual. The criteria is based on critical volume for the intersection. Critical volumes for the north-south street is the sum of either northbound left-turn volume plus the maximum single-lane volume for the southbound through plus right-turn movement, or southbound left-turn volume plus the maximum single-lane volume for the northbound through plus right-turn movement.

Similarly, the critical volume for the east-west street is the sum of either eastbound left-turn volume plus the maximum single-lane volume for the westbound through plus right-turn movement, or westbound left-turn volume plus the maximum single-lane volume for the eastbound through plus right-turn movement.

The total critical volume for the intersection is the sum of the critical volumes for the north-south and east-west streets. The following tables summarize the comparison of critical volumes and probable capacity and the capacity of key intersections.

**CAPACITY CRITERIA (pm peak hour)**

CRITICAL VOLUME FOR INTERSECTION (VPH)	RELATIONSHIP TO PROBABLY CAPACITY
0 to 1,200	Under capacity
1,201 to 1,400	Near capacity
Over 1,400	Over capacity

# CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

## CAPACITY OF KEY INTERSECTIONS (pm peak hour)

INTERSECTION	CAPACITY
SR 500/Everett and 15th Avenue	Under
3rd Avenue and Adams Street	Under
3rd Avenue and E 1st Avenue	Under
3rd Avenue and SE Crown	Near
3rd Avenue and Lechner	Under
3rd Avenue and Garfield	Under
3rd Avenue and Dallas	Under
Third Avenue and Shepard	Under

## TRANSPORTATION PROGRAM REVIEW

The City of Camas six-year transportation plan details a large number of streets to have an asphalt concrete overlay. The following table summarizes the major projects to be constructed in the next six years.

## MAJOR PROJECTS IN THE SIX-YEAR TRANSPORTATION IMPROVEMENT PROGRAM

LOCATION	BEGINNING AND ENDING TERMINI	WORK TO BE COMPLETED
1 SE Polk St & SE 8th Ave	SE Polk St to S terminus & SE 8th Ave to W terminus	Reconstruction completed
2 NE 3rd loop	NE 3rd Ave to NE 3rd Ave	Construct curb, gutter & paving (completed)
3 Forest Home neighborhood improvements	NW 10th Ave (NW Ivy St to Drake St)	AC overlay reconstruction
4 NE Dallas St	NE 6th Ave to NE 14th Ave	Reconstruction
5 NE Lechner St	NE 3rd Ave to NE 4th Ave	Reconstruction
6 Division Street	NE 4th Ave to NE 18th Ave	Reconstruction
7 NW Parker Street	NW 16th Ave to NW 38th Ave	Reconstruction
8 NW Cascade Street	NW McIntosh Rd to NW 18th Ave	Reconstruction
9 NW 28th Avenue	Remainder to complete	New construction
10 NW Pacific Rim Boulevard	NW Parker St to NW 38th Ave	New construction
11 NW Leadbetter Boulevard	NW Lake Rd to NW 38th Ave	New construction
12 NE Adams Street	Intersection of NE Adams St and NE 4th Ave	Upgrade signal system

diverse interests in Camas and result in a workable plan.

## EVALUATION CRITERIA AND STANDARDS

Development of evaluation criteria is a crucial element in the process of determining the effectiveness and efficiency of a transportation plan. They are the method by which alternatives are compared and a recommendation is made. A set of evaluation criteria, as established in the following paragraphs, will allow the recommended plan to be evaluated by the

Evaluation criteria and level of service (LOS) standards measure, quantitatively, the performance of the existing transportation system and the adequacy of alternatives proposed for the future. For this plan, the evaluation criteria are subdivided into three parts. First is the traffic service which measures the ability of any alternative to provide an efficient and safe street system for the citizenry of Camas. Second is compatibility which measures the ability of any alternative to satisfy the desires of citizens of Camas and the criteria in the

adopted comprehensive plan. Third is the benefit-cost ratio which measures the ability of each alternative to provide a positive benefit to citizens of Camas.

#### TRAFFIC SERVICE

Traffic service measures the efficiency and effectiveness of each alternative as compared to the no-build or do-nothing alternative. The following items will complete this evaluation:

- Area-wide volume/capacity ratio
- Average speed of traffic
- Potential for accidents due to high speed and congestion
- Cost of each alternative
- Vehicle-miles of travel
- Vehicle-hours of travel

#### COMPATIBILITY

Compatibility measures the ability of each alternative to satisfy the desires of citizens of Camas. These desires are expressed at public meetings and through adopted comprehensive plans and policies. The following items will define this criteria:

- Community impacts
- Conformance with City of Camas plans
- Visual impacts
- Aesthetic impacts

#### BENEFIT-COST

Benefit-cost analysis measures the economic feasibility of each alternative. Cost is calculated based upon unit cost to build or reconstruct any roadway to meet standards identified in the plan. These construction costs are converted to annual cost by utilizing a discount rate of 10 percent. Benefit is calculated from a change in vehicle miles of travel and vehicle hours of travel with respect to the do-nothing alternative. A reduction in vehicle miles of travel is quantified at a rate of 25 cents per mile. A reduction in vehicle hours of travel is quantified at a rate of \$4.00 per hour which is considered to be conservative. A

comparison of cost to benefit will determine the feasibility of each alternative.

#### EVALUATION MATRIX

An evaluation matrix is used to display the results of each criteria. This matrix will prioritize the alternatives by applying the following weight to each factor.

- Area-wide volume/capacity ratio (1)
- Average speed of traffic (1)
- Safety (3)
- Operations (3)
- Visual and aesthetic impact (2)
- Benefit-cost ratio (4)

#### FUTURE ROADWAY NETWORK

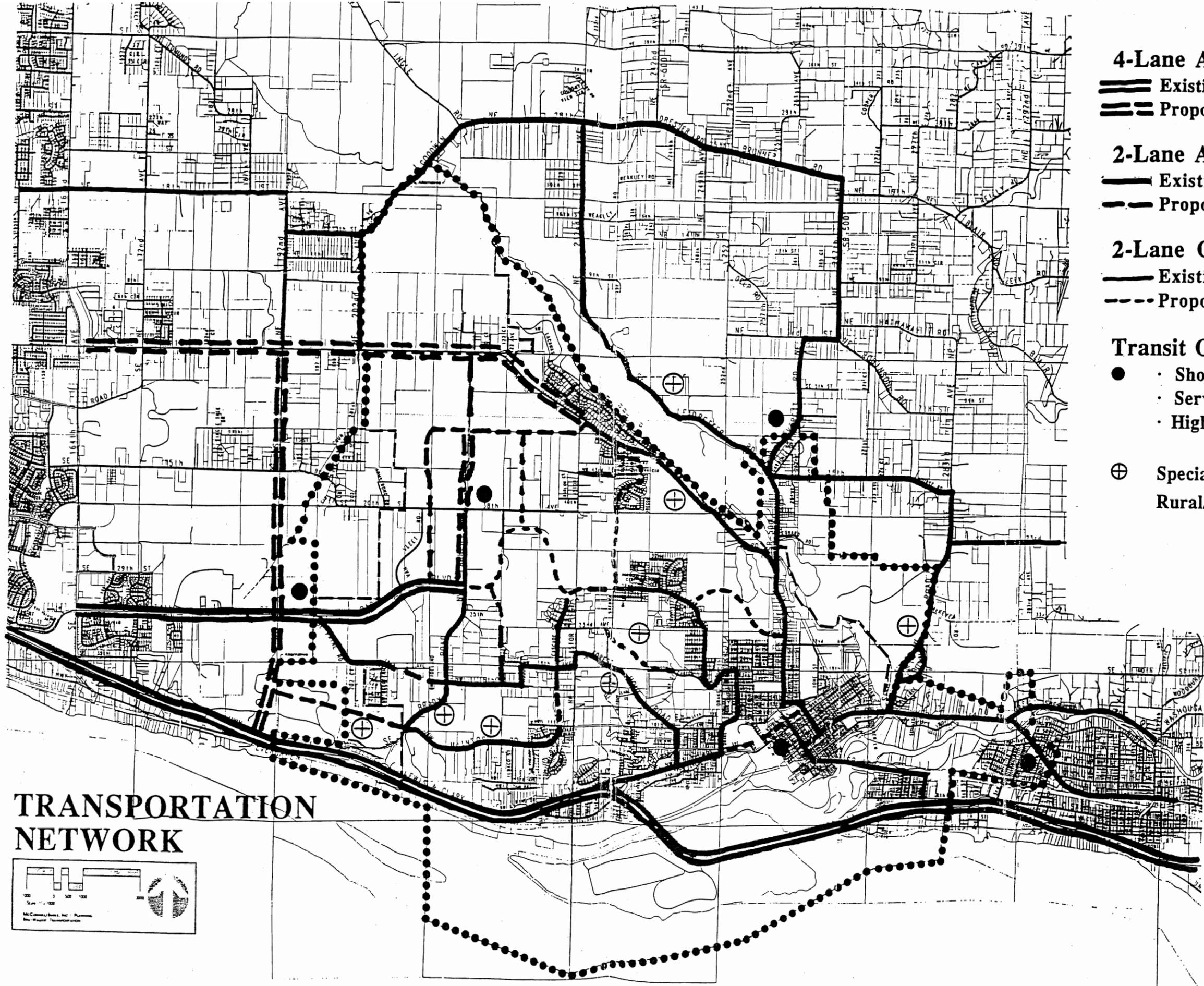
The local system can also be described in terms of the traffic generators or major destinations that need to be served. Obvious large attractors are the James River plant, downtown, Sharp Prune Hill, Tektronix, and Hewlett-Packard. However, connecting these destinations is frustrated by topography. The downtown is at one level or elevation. There are then two levels to the west: one plateau midway up Prune Hill, and the other at the top of Prune Hill. Circulation on these levels or plateaus is satisfactory, but when going from one level to another, steep grades are encountered. Prune Hill has four access points (Forest Home Road, Fargo Street, N.W. 16th Street, and N.W. McIntosh Road), all from the south. Access to Prune Hill from the north requires a great deal of out-of-direction travel. In addition, many of the streets and roads have sharp turns in them which reduce speed and capacity. Some of these are due to topography, but a great many are not. The links with Prune Hill from N.W. Fargo Road and Forest Home Road, have many bends which should be realigned.

The land use projections (population and employment) for the City of Camas were made for the year 2013 and trip generation

was calculated based on this projected land use. Due to the nature of the concentrations of future population and employment in certain areas and the fact that transportation is closely connected with land use, some basic improvements are needed to circulate the future anticipated traffic growth. These improvements that are necessary from an access and topographical points of view are on the following map.

Some major arterial extensions (additions) are explained below.

- The 192nd Avenue is extended south to an interchange with SR 14 because of insufficient access points to Camas.
- The industrial service road is necessary to serve the future industrial growth and north and south of N.W. 38th Avenue. The improvements to Pacific Rim Boulevard and Parker Street achieves the same purpose for east-west access.
- All east-west traffic entering or leaving Camas (through 1st Street, SR 14, Pacific Rim) cannot be accommodated in two lanes. A minimum of four lanes is required to accommodate future traffic growth.
- Residential streets are necessary to access these new arterials.



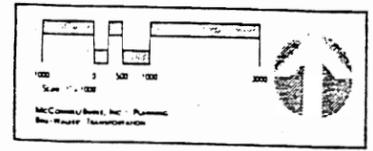
**4-Lane Arterial**  
 Existing Corridor  
 Proposed Corridor

**2-Lane Arterial**  
 Existing  
 Proposed

**2-Lane Collectors**  
 Existing  
 Proposed

**Transit Centers**  
 ● Shopping/Offices  
 ● Services  
 ● High Density Housing  
 ⊕ Special Design Street  
 Rural/Wooded Character

# TRANSPORTATION NETWORK



**BENEFIT-COST RATIOS**

A benefit-cost ratio was determined for the 2013 proposed network compared to the 2013 base network. Benefits were calculated using a rate of \$ .25 for each vehicle-mile of travel saved and \$4.00 for each vehicle-hour of travel saved. Annual costs and benefits were all discounted to the base year 1993. Further, since actual construction would take place through the six-year Transportation Improvement Program (TIP), annual costs and benefits for each of the six-year TIPs were calculated. Total project costs for each six-year TIP were calculated.

The resulting total annual cost was determined as \$737,600 and total annual benefit as \$1,307,000. These values represent a benefit-cost ratio of 1.77.

**EVALUATION MATRIX**

The evaluation matrix below is for 2013 base network and 2013 proposed network. As mentioned earlier in this report, different weights were applied to each factor. The lower the total, the better the rank for the alternative.

**EVALUATION MATRIX**

	V/C RATIO	SPEED	SAFETY	OPERATIONS	COST-BENEFIT	TOTAL
2013 Base Network	1	2	6	6	8	23
2013 Proposed Network	1	1	3	3	4	12
Weight Factor	(1)	(1)	(3)	(3)	(4)	

(population and employment) projected in this comprehensive plan.

**PROJECTED TRAFFIC VOLUME**

The following table shows the 1990 existing and 2013 projected average weekday (AWD) productions and attractions for the City of Camas. These productions and attractions were estimated by the Southwest Regional Transportation Council (RTC) using the land use

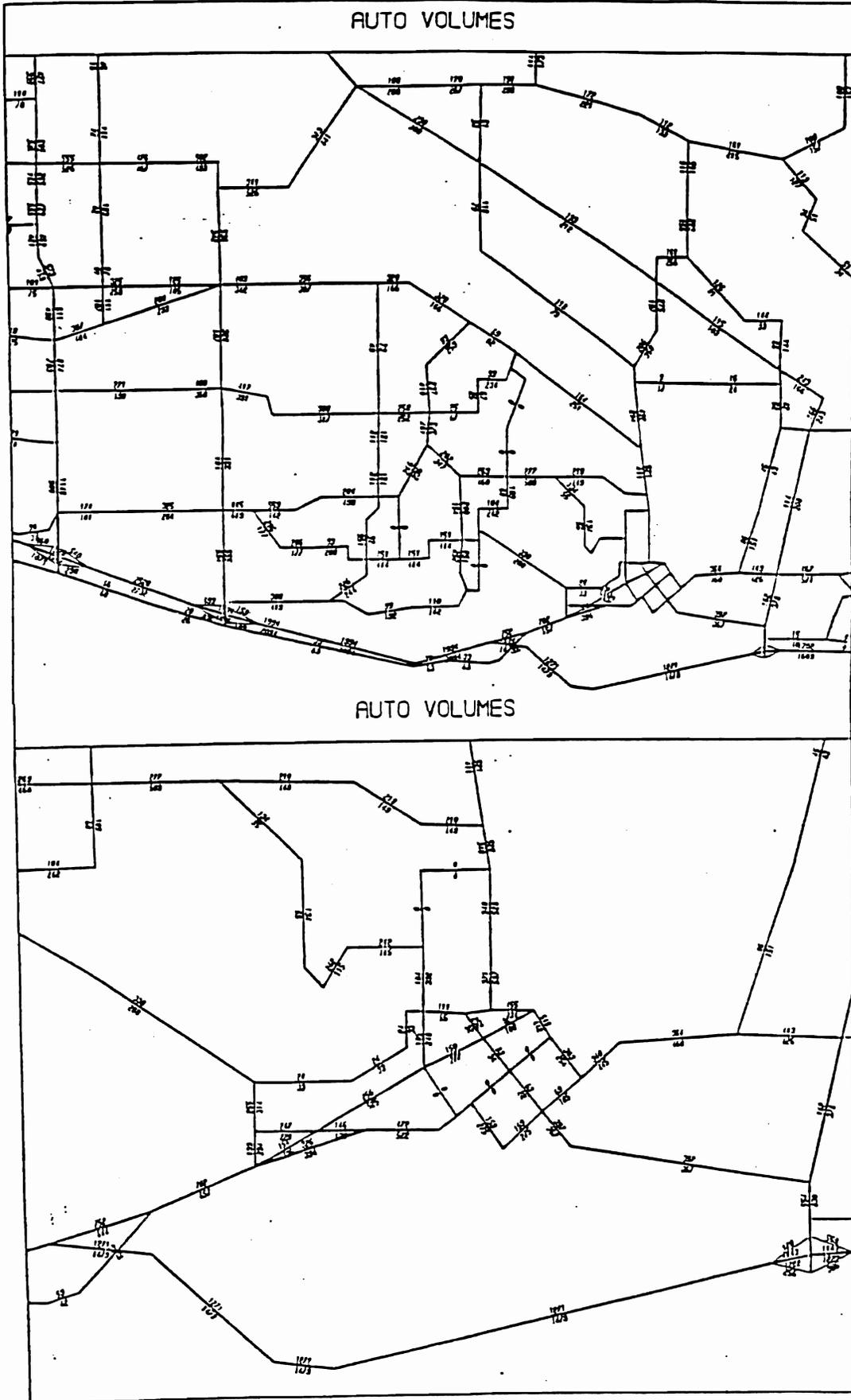
Traffic assignments were made by the Southwest Regional Transportation Council using a traffic model EMME/2-. The future 2013 productions and attractions were distributed and assigned to the planned transportation network shown previously. The resulting traffic assignments for the proposed road improvements are shown on the following map.

**AVERAGE WEEKDAY PRODUCTIONS AND ATTRactions FROM AND TO CAMAS**

PRODUCTION DISTRICT	CAMAS		OTHER CLARK		PORTLAND & OREGON		TOTAL PRODUCTIONS	
	1990	2013	1990	2013	1990	2013	1990	2013
Camas	11,607	29,380	11,685	34,661	4,571	10,154	27,863	74,195
Other Clark	14,779	27,521	NA	NA	NA	NA	NA	NA
Portland/Oregon	1,866	3,299	NA	NA	NA	NA	NA	NA
Total Attractions	28,252	60,200	NA	NA	NA	NA	NA	NA

NA = Indicates not applicable for Camas

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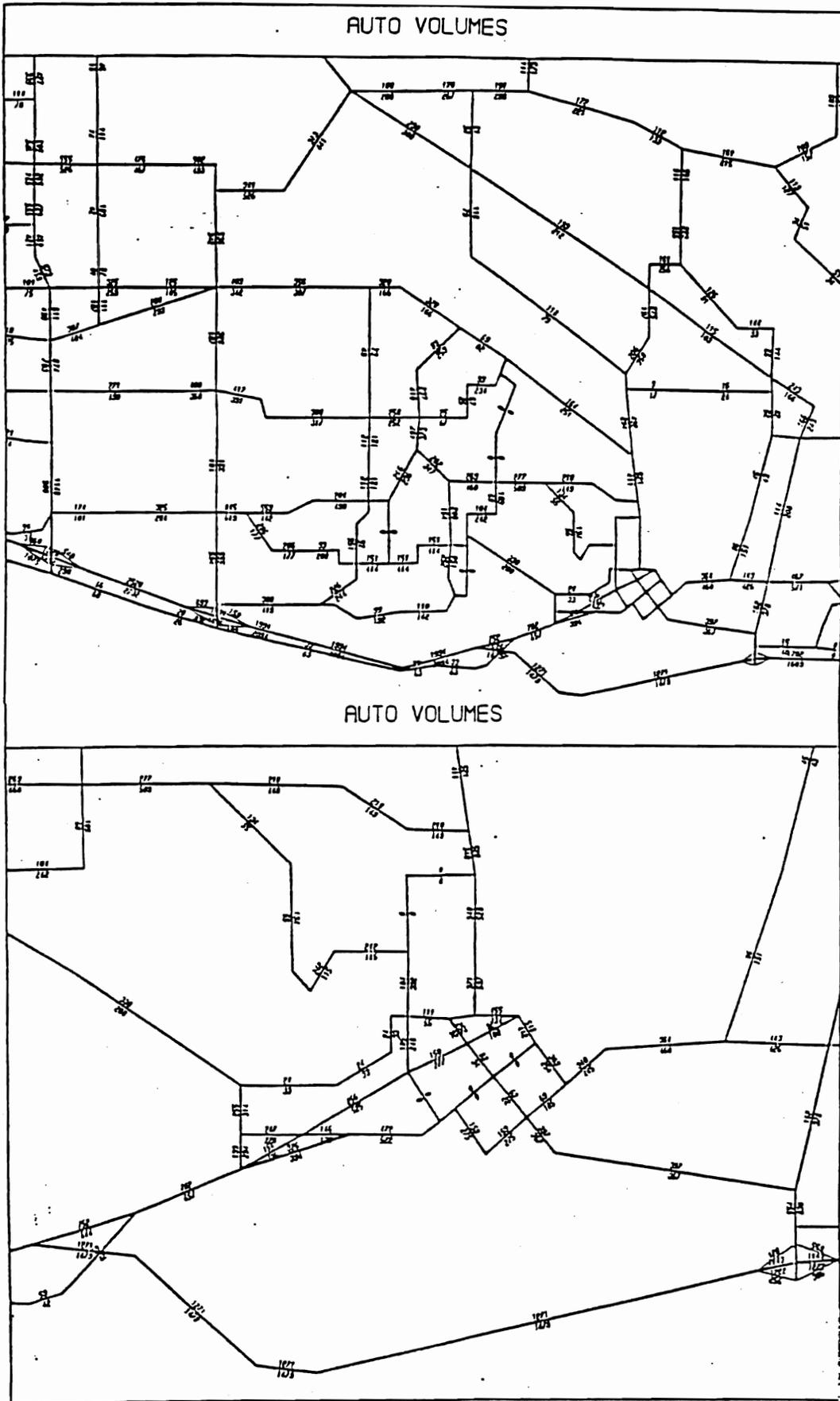
The previous table shows that there are 27,863 productions and 28,252 attractions per day from and to the City of Camas for the base year 1990. Projected AWD trips for the year 2013 are 74,195 productions and 60,200 attractions. These trips represent an increase of 46,332 productions (166 percent) and an increase of 31,948 attractions (113 percent) per day. The total increase in AWD trips is 78,280, which translates into a 139 percent increase from 1990 to 2013.

Highway system performance within the Camas urban growth boundary for 1990 existing trips and 2013 future trips was determined under the 1990 base network conditions without any improvements. The system performance measures included total vehicle-miles of travel, vehicle-hours of travel, and average speed. System performance for the proposed improvements was determined for the projected 2013 trips. The following table shows the VMT, VHT, and average speed under the above-mentioned three conditions by facility type. Note that all the measures are with respect to the PM peak hour.

HIGHWAY SYSTEM PERFORMANCE WITHIN CAMAS URBAN GROWTH BOUNDARY

FACILITY TYPE	VMT			VHT			AVERAGE SPEED		
	1990	2013 DEMAND ON 1990 NETWORK	2013 PROPOSED NETWORK	1990	2013 DEMAND ON 1990 NETWORK	2013 PROPOSED NETWORK	1990	2013 DEMAND ON 1990 NETWORK	2013 PROPOSED NETWORK
Principal Arterials	14,646	24,978	25,671	325	589	589	45.0	42.4	43.6
Minor Arterials	2,318	10,578	9,906	69	341	312	33.4	31.0	31.7
Collectors	2,343	6,605	5,787	60	202	159	39.2	32.7	36.5
Minor Collectors	47	302	262	1	8	6	39.1	39.2	39.7
Local	264	464	363	11	19	15	25.1	23.7	24.5
Total	19,618	42,927	41,989	466	1,159	1,081	42.1	37.0	38.8

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN



SR-14 and serve adjacent industrial and mixed use commercial development.

## TRANSIT PLAN

C-TRAN is anticipating the high growth rate of population and employment which will occur in Camas and its planned business and technology area. This high growth rate will affect the demand for transit services. C-TRAN service expansion is anticipated to follow this land use pattern which emphasizes higher density mixed use centers linked by arterial streets. C-TRAN will meet the increased demand for services through the following system-wide expansion:

- Expansion of the inter-County commuter service to set the stage for possible HCT development on I-5 and I-205.
- Expansion of the ride-sharing program by increasing the vanpool fleet and increasing administrative resources.
- Increase C-VAN service hours by 10 percent annually from 1994 to 1999.

The C-TRAN transit development plan for Camas should be expanded as higher density areas are developed, additional roadways are constructed and current barriers to efficient operation, such as lack of pedestrian crossings, bike facilities, are eliminated. Specific proposals for improved C-TRAN service are as follows:

- Increased service on SR-14 to downtown Camas with service on Sixth Avenue through Camas to Union Street and SR-14 to serve the higher density residential areas, the mill and downtown businesses
- A route which serves the area north of downtown Camas on Everett Street to Lake Road and N.E. 1st Street because of the schools and residential neighborhoods
- A route which service Pacific Rim Boulevard and connects to Parker and 38th and to Lake Road to connect industrial and mixed use commercial developments
- North-south service on 192nd Avenue would connect Lake Road/N.E. 1st to

These new and expanded routes should be implemented when the roadways and related facilities are constructed and the population/employment density is sufficient to warrant the service. As level of service criteria are developed by C-TRAN, the implementation schedule can be determined.

## CONCURRENCY MANAGEMENT

*The Washington Growth Management Act (GMA)* requires each city and county planning under the GMA to incorporate a concurrency management system (CMS) into the transportation element of their comprehensive plan. This element of the GMA states:

Local jurisdictions must adopt and enforce ordinances which prohibit development approval if the development causes the level of service on a transportation facility to decline below the standards adopted in the transportation element of their comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development.

The principal components of the CMS adopted by the City of Camas include the following:

- Identification and definition of the facilities and services to be monitored
- Establishment of LOS standards
- Identification of the point in the development approval process where the concurrency test is applied
- Establishment of the capacity accounting procedure
- Responsibilities of the applicant and City of Camas in determining capacity
- Provision for reservation of capacity

**IMPLEMENTATION OF THE CONCURRENCY MANAGEMENT SYSTEM**

Implementation involves monitoring the LOS on the affected transportation system to see if it meets the adopted standards. This process can be summarized as follows:

- Setting LOS standards and providing adequate funding
- Rationing and monitoring available transportation capacity
- Analyzing external influences on CMS
- Making periodic adjustments to LOS standards

**LOS SERVICE PRINCIPLES**

LOS standards adopted by the City of Camas consider the following principles consistent with the GMA:

- Ensure adequate facilities to support growth
- Reinforce development policies
- Design process for ease of understanding, administration, and flexibility
- Strive for maximum uniformity and consistency
- Enhance transit and non-motorized transportation modes
- Ensure financial feasibility

**LOS SERVICE STANDARD**

Methods of determining roadway LOS can range from simple to complex, depending on the type of application. The method adopted by the City of Camas for long-term planning will be the generalized maximum volume tables. For short-term applications such as designing roadways, other methods are preferable.

Generalized maximum volume tables compare traffic volumes on roadway segments to the maximum volumes at different LOS thresholds for roads of a

given type and number of lanes. LOS standard adopted for Camas is: minor or local streets - LOS C and primary streets and intersections - LOS D. Clark County has adopted a tiered level of service in their transportation element. Their plan states that small urban areas such as Camas will have a medium level of service. This will promote a balance of economic development and neighborhood concerns and encourage development of a multi-modal transportation system. A medium level of service corresponds to the LOS D specified for Camas.

**LOS SERVICE APPROACH**

Application of LOS service standards can involve a variety of approaches. Usually, an area-wide LOS will establish an acceptable LOS for an entire transportation network. The network will not be allowed to violate LOS standards on an aggregate basis, but will allow specific intersections or roadways to violate the adopted standards. This approach shall be adopted by the City of Camas because the transportation plan element addresses roadway "system performance," rather than "facility performance."

**CAPACITY ALLOCATING STRATEGY**

Growth phasing strategy is a direct means of growth control, since it pre-approves development capacity in an area. Under the growth phasing strategy, the city conducts an aggregate analysis of a variable capacity on a zone-by-zone or area-wide basis. Each zone or area is then allocated a certain amount of allowable new transportation capacity over a specific time period. This allowable capacity can then be translated into allowable numbers of trip generation and development units, such as housing units or square footage. New development applications are reviewed with respect to trip allowable capacity in the particular area.

**DEVELOPMENT REVIEW STRATEGIES**

A development could be approved only under two situations:

- The land use has been exempted from the concurrency provisions
- Adequate roadway and transit LOS is maintained

approved, capacity reservation can be made for a specified time frame, possibly requiring continued progress by the developer to retain capacity reservation rights or can be reserved forever.

Typical exemptions include governmental buildings, daycare facilities, and developments that generate less than 10 trips during the PM peak hour in an average weekday.

LEVEL OF SERVICE (LOS)

An area-wide LOS was determined for the 1990 base network, 2013 future demand on the base network without any improvements, and 2013 future demand on the proposed network. The LOS is based on the 1985 *Institute of Transportation Engineers Highway Capacity Manual's* procedures for urban and suburban arterials. LOS is given in the following table by facility type, along with corresponding volume/capacity ratios that would apply.

After concurrency evaluation and determination is made and the project is approved, capacity reservation can be made for a specified time frame, possibly requiring continued progress by the developer to retain capacity reservation rights or can be reserved forever.

Note that the area-wide roadway system is under capacity irrespective of improvements made. However, as explained earlier, improvements are needed for access and mobility functions.

Typical exemptions include governmental buildings, daycare facilities, and developments that generate less than 10 trips during the PM peak hour in an average weekday.

After concurrency evaluation and determination is made and the project is

LEVEL OF SERVICE

FACILITY TYPE	AVERAGE SPEED (MPH)			LEVEL OF SERVICE			VOLUME/ CAPACITY RATIO
	1990	2013 ON BASE NETWORK	2013 ON PROPOSED NETWORK	1990	2013 ON BASE NETWORK	2013 ON PROPOSED NETWORK	
Principal Arterials	45	42.4	43.6	under	under	under	0.0 - 0.6
Minor Arterials	33.4	31.0	31.7	under	under	under	0.61 - 0.70
Collectors	39.2	32.7	36.5	under	under	under	0.0 - 0.6
Minor Collectors	39.1	39.2	39.7	under	under	under	0.0 - 0.6
Local	25.1	23.7	24.5	under	under	under	0.61 - 0.70
Total	42.1	37.0	38.8	under	under	under	0.0 - 0.6

DEMAND MANAGEMENT STRATEGIES

The transportation element of the *City of Camas Comprehensive Plan* has established a LOS C for minor or local streets and LOS D for primary streets and

intersections. This LOS standard is to be applied on an area-wide basis for the entire transportation network. After adoption of the City's comprehensive plan, strategies must be established to mitigate the impact of a development if this LOS standard cannot be met. These

strategies will allow development to proceed if the roadway, transit, or bicycle/pedestrian facilities are not funded or in place within six years of development.

Transportation demand strategies identified as feasible for Camas are: increased transit, ridesharing, telecommuting, work schedule changes, high-occupancy vehicle facilities, and employer-based transportation management programs. Place policies identify and support expansion of C-TRAN service and ridesharing programs. Implementation of these service expansions can be subsidized by the development to reduce the number of vehicles added to the transportation network. As major facilities (such as SR 14, I-5, and I-205) are expanded, provisions for high-occupancy vehicles should be supported. This support should consist of subsidies and preferential parking for HOV users in order to reduce the impact of vehicles traveling during the PM peak hour. Individual employers should promote altered work schedules and telecommuting. Telecommuting facilities can also be built into the individual residences as they are constructed. A significant strategy which will reduce transportation demand is implementation of the land use element which will provide for a cohesive arrangement of land uses to make alternative modes of travel – such as bicycle or walking – more attractive. The land use element of this plan provides a clear pattern of development which will reduce trips. The trails and bikeway element provides a comprehensive network convenient to employment, residential, recreational, and commercial areas.

**PROJECT PRIORITIZATION**

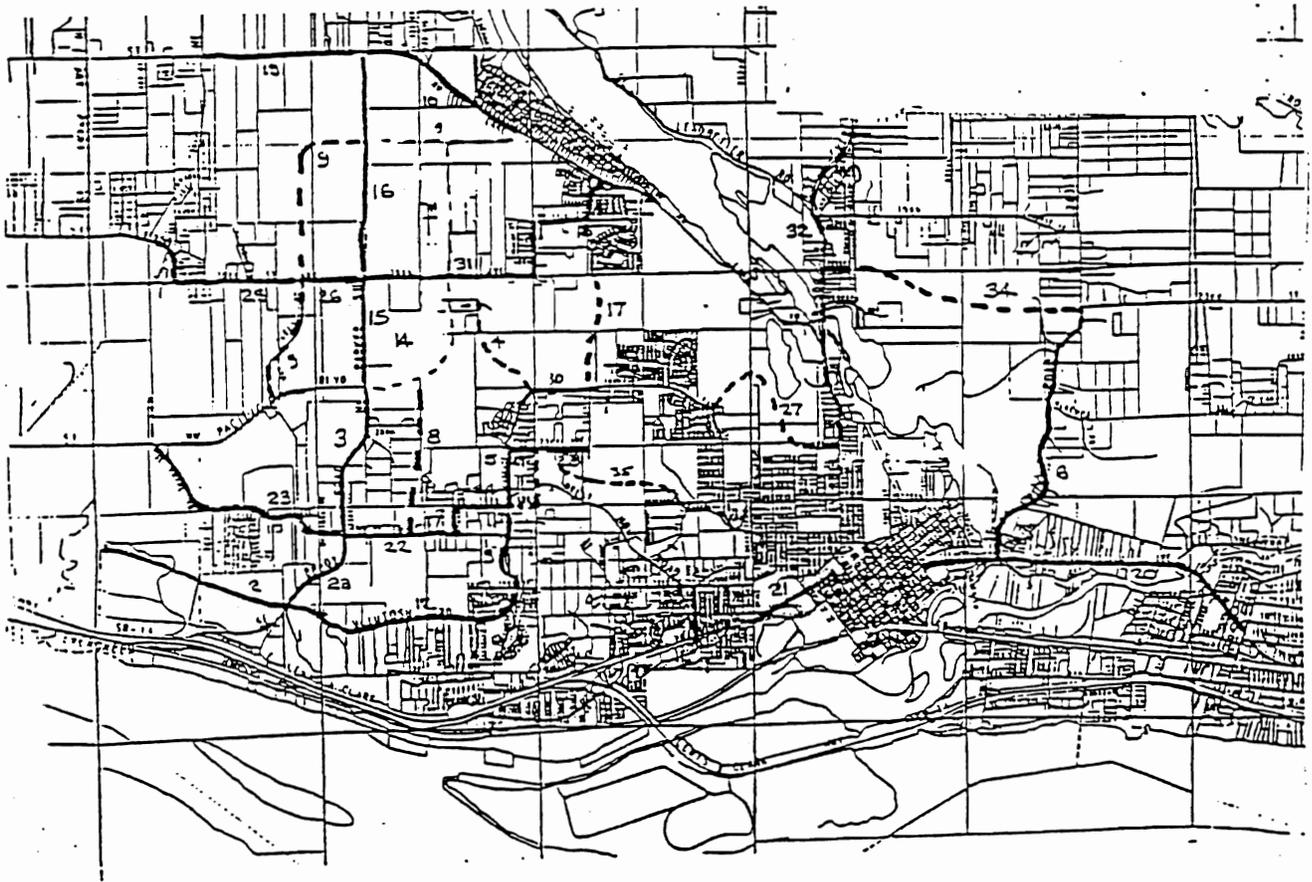
Roadways included in the comprehensive plan concept for improvement are shown on the following table, along with a brief description and priority rating. The map shows the location of these projects.

Projects that would be part of the street network but not included in the impact fee calculation are also shown and noted in the table.

**ROADWAY IMPROVEMENTS**

- Improvements included in Impact Fee Calculation
- - - - Improvements Not Included in Impact Fee Calculation

12      Number Corresponds to Table #1



CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

CAPITAL FACILITIES PLAN  
CITY OF CAMAS

PROJECT NAME	PROJ NO.	SEGMENT	PRIORITY	PROJECT COST (\$)	NOTE	PROJECT DESCRIPTION * (MAJOR IMPROV.)
Astor Street Improvements	1	NW 38th to NW 43rd St.	Medium	299,000		Widen to 2 lanes
NW Mcintosh Rd.	2	202nd St. to S.E. Brady Rd.	Low	1,298,000		Construct 2 Lanes
SE Brady Rd. Improvements	2a	NW 16th Ave. to NW Mcintosh Rd.	Low	800,000		Widen to 2 lanes
NW Brady Rd. Improvements	3	NW 16th to Pacific Rim Blvd.	Low	679,000		Widen to 2 lanes
NW Cascade St. Const.	4	NW 28th Ave. to NW 38th Ave.	Medium	831,000	**	Construct 2 Lanes
NW Cascade St. Improv.	5	NW 23rd to NW 18th Ave.	Medium	297,000		Widen to 2 lanes
Crown Road Improvements	6		Low	876,000		Widen to 2 lanes
Hood Street Improvements	7	NW 16th to NW 18th Ave.	Low	131,000		Widen to 2 lanes
Industrial Road Construction	8	NW 16th to Pacific Rim Blvd.	Medium	1,209,000	**	Construct 2 Lanes
Industrial Road Construction	9	Pacific Rim Blvd. to Lake Rd.	Medium	4,350,000	**	Construct 2 Lanes
NW Lake Road Improv.	10	Parker St. to Leadbetter Rd.	High	1,745,000		Widen to 2 lanes
Leadbetter Rd. Construction	11	Lake Road to NW 38th Ave.	Medium	873,000	**	Construct 2 Lanes
NW Mcintosh Road Improv.	12	SE Brady to NW 11th St.	Low	1,019,000		Widen to 2 lanes
NW Mcintosh Rd. Construction	13	NW 11th to NW 18th	Low	971,000		Construct 2 Lanes
NW Pacific Rim Blvd. Const.	14	Parker to NW 38th Ave.	Medium	835,000	**	Construct 2 Lanes
NW Parker St. Improv.	15	Pacific Rim Blvd to NW 38th	High	1,403,000		Widen to 4 lanes
NW Parker St. Construction	16	NW 38th to NE 1st	High	1,840,000		Construct 2 Lanes
NW Sierra St. Construction	17	NW 28th Ave. to NW 38th Ave.	Low	1,081,000	**	Construct 2 Lanes
NW 43rd Improvements	18	NW Astor St. to NW Sierra St.	Low	192,000		Widen to 2 lanes
NE 1st St. Improvements	19	202nd to Parker Street	Medium	1,326,000		Widen to 4 lanes
NE 3rd Ave. Improvements	20		Medium	468,000		Center Lane
NW 6th Avenue Realignment	21		High	3,300,000		Construct 2 Lanes
NW 16th Ave. Improvements	22	NW Brady to Hood St.	Medium	449,000		Widen to 2 lanes
SE Payne St. Improvements	23	NW Pacific Rim to NW Brady	Low	969,000		Widen to 2 lanes

**CITY OF CAMAS • 1994 COMPREHENSIVE PLAN**

NW 18th Ave. Improvements	24	Hood to Cascade	Low	205,000		Widen to 2 lanes
NW 38th Ave. Improvements	25	202nd to Industrial Rd.	Low	906,000		Widen to 2 lanes
NW 38th Ave. Improvements	26	Industrial Road to Parker St.	Low	504,000		Widen to 2 lanes
NE 23rd Ave. Construction	27	NE Birch to Fargo St.	Medium	4,820,000	**	Construct 2 Lanes
NW 23rd Ave. Improvements	28	Sierra to Astor St.	Low	293,000		Widen to 2 lanes
NW 23rd Ave. Improvements	29	Astor to Cascade St.	Low	155,000		Widen to 2 lanes
NW 38th Ave. Improvements	30	Parker to Astor St.	High	1,344,000	**	Widen to 2 lanes
SR 500 Improvements	31	23rd to North of Leadbetter Rd.	Low	1,172,000	**	Widen to 2 lanes
Ivy Connection	32		Medium	590,000		Widen to 2 lanes
S.E. 23rd Street	33	Crown to SR 500	Low	2,022,000	**	Construct 2 lanes
Ostensen-Canyon	34	Fargo to S.E.23rd	Low	1,232,000	**	Construct 2 lanes

TOTAL 41,051,000

TOTAL FOR IMPACT FEE CALCULATION 21,282,000

- \* - Assumes Curb, Gutter, and Sidewalk, Lighting, and Appurtenances
- \*\* - Not Included in Impact Fee Calculation

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

**COST ESTIMATES**

Deficiencies in pavement width were calculated for each roadway segment listed in the Capital Facilities Plan. Deficient pavement width was defined by proposed number of lanes, as detailed in the comprehensive plan. Cost estimates for each roadway segment were prepared to correct pavement width deficiencies and provide new construction. The following items were used to determine cost for each road:

- Mobilization
- Clearing
- Grading
- Drainage (storm drain, catch basins, and outfall structures)
- Pavement widening and overlay
- Curb, gutter, and sidewalks
- Lighting
- Landscaping
- Engineering and contingencies
- Miscellaneous

A sample cost estimate (see below) for extension of S.E. Brady Road from 202nd to NW McIntosh is attached. Cost estimates for each road were summed to determine the cost to build the street system (as defined in the comprehensive plan). The total cost of all projects is now estimated at \$41,051,000, and includes right-of-way acquisition. The table on the next page shows the preliminary project priority program for the estimated project improvements. This will be refined as the detailed Six Year Capital Facilities Program and Budget are done each year.

**EXAMPLE  
S.E. BRADY ROAD - 202ND STREET TO N.W.  
MCINTOSH**

ITEM/QUANTITY	UNIT COST	COST
1. Mobilization (5%)		\$ 38,500
2. Clearing (2%)		15,400
3. Grading	\$ 7.00	40,450
4. Drainage		
12-inch Storm Drain	25.00	82,800
Catch Basins	1,200.00	28,800
Outfall Structures	3,000.00	6,000
Manholes	2,000.00	48,080
5. Pavement Widening	36.00	210,600
Overlay	39.00	
6. Curb, Gutter, Sidewalk	21.00	126,000
7. Lighting/units	2,500.00	53,600
8. Traffic Control	25.00	25,000
9. Landscaping	1.00	78,000
10. Miscellaneous (10%)		<u>70,000</u>
SUBTOTAL		823,100
11. Engineering and Contingencies (30%)	246,900	
12. Right-of-Way		<u>228,000</u>
TOTAL		\$ 1,298,000

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

PROJECT PRIORITY PROGRAM  
CITY OF CAMAS

PRIORITY PROJECT	MAP NO.	PROJECT DESCRIPTION	PROJECT PRIORITY PROGRAM		
			1995-2000	2001-2006	2007-2015
Astor Street Improvements	1	NW 38th to NW 43rd St.		299,000	
SE Brady Rd. Construction	2	202nd St. to McIntosh			1,298,000
SE Brady Rd. Improvements	2a	NW 16th Ave. to NW McIntosh Rd.			800,000
NW Brady Rd. Improvements	3	NW 16th to Pacific Rim Blvd.			679,000
NW Cascade St. Const.	4	NW 28th Ave. to NW 38th Ave.		831,000	
NW Cascade St. Improv.	5	NW 23rd to NW 18th Ave.		297,000	
Crown Road Improvements	6				876,000
Hood Street Improvements	7	NW 16th to NW 18th Ave.			131,000
Industrial Road Construction	8	NW 16th to Pacific Rim Blvd.		1,209,000	
Industrial Road Construction	9	Pacific Rim Blvd. to Lake Rd.		4,350,000	
NW Lake Road Improv.	10	Parker St. to Leadbetter Rd.	1,745,000		
Leadbetter Rd. Construction	11	Lake Road to NW 38th Ave.	873,000		
NW McIntosh Road Improv.	12	SE Brady to NW 11th St.			1,019,000
NW McIntosh Rd. Construction	13	NW 11th to NW 18th			971,000
NW Pacific Rim Blvd. Const.	14	Parker to NW 38th Ave.	835,000		
NW Parker St. Improv.	15	Pacific Rim Blvd to NW 38th	1,403,000		
NW Parker St. Construction	16	NW 38th to NE 1st	1,840,000		
NW Sierra St. Construction	17	NW 28th Ave. to NW 38th Ave.			1,081,000
NW 43rd Ave. Improvements	18	NW Astor to NW Sierra			192,000
NE 1st St. Improvements	19	202nd to Parker Street		1,326,000	
NE 3rd Ave. Improvements	20			468,000	
NW 6th Avenue Realignment	21		3,300,000		
NW 16th Ave. Improvements	22	NW Brady to Hood St.		449,000	
SE Payne St. Improvements	23	NW Pacific Rim to NW Brady			969,000
NW 18th Ave. Improvements	24	Hood to Cascade			205,000
NW 38th Ave. Improvements	25	202nd to Industrial Rd.			906,000
NW 38th Ave. Improvements	26	Industrial Road to Parker St.			504,000
NE 23rd Ave. Construction	27	NE Birch to Fargo St.		4,820,000	
NW 23rd Ave. Improvements	28	Sierra to Astor St.			293,000
NW 23rd Ave. Improvements	29	Astor to Cascade St.			155,000
NW 38th Ave. Improvements	30	Parker to Astor St.	1,344,000		
SR 500 Improvements	31	23rd to North of Leadbetter Rd.			1,172,000
Ivy Connection	32			590,000	
S.E. 23rd Street	33	Crown to SR 500			2,022,000
Ostensen-Canyon	34	Fargo to S.E. 23rd			1,232,000
		TOTAL	11,340,000	14,639,000	15,072,000
		TOTAL	41,051,000		

**MITIGATION PAYMENT SYSTEM**

To determine the proposed transportation impact fees, local funds based on the total cost estimated above was divided by the total number of additional trips generated per average weekday. Total additional average weekday trips, as mentioned earlier, were estimated at 78,280 by the Regional Transportation Council of Clark County in their transportation model based on population and employment figures provided by the City of Camas.

The total estimated cost of new road construction and improvements of roads for impact fee calculations is \$21,282,000. Of this cost, a portion will be obtained through local funds. The percentage of local funds for each road was obtained from the 1993-1998 Transportation Improvement Program (TIP) project list of the City of Camas.

The local fund percentages of all projects is 50 percent. This is split with approximately 35% of the funds from grants and 15% from City sources. This will be monitored annually.

The total revenues that would be needed through local funds is \$10,641,000. This revenue, divided by the total additional

projected trips (78,280 per day), gives the cost per trip. Cost per trip, therefore, is  $\$10,641,000 \div 78,280 = \$136.00/\text{weekday trip}$  or \$1,360 per PM peak hour trip.

**IMPACT FEES CALCULATION FOR SPECIFIC USES**

The cost per trip multiplied by the total trips generated by a particular land use (residential, commercial, industrial, etc.) gives the impact fee for that use. Typically, the following steps are followed:

- Determine the specific land use category (single-family residential, multi-family residential, office, commercial, etc.) as defined in the *I.T.E. Trip Generation Manual*, 5th edition
- Determine the independent variable applicable to the specific land use (dwelling units for residential areas, gross square feet for office, etc.)
- Find the PM peak hour trip generation rate for the specific land use using the *ITE Trip Generation Manual*, 5th edition
- Calculate total trips by multiplying the trip rate by the size of the independent variable
- Multiply total trips by cost per PM peak hour trip (\$1,360) to determine impact fee

The following is an example for different land uses.

**EXAMPLE FOR IMPACT FEE CALCULATION**

LAND USE	ITE LAND USE CODE	INDEPENDENT VARIABLE (3)	ITE PM PEAK HOUR TRIP GENERATION RATE (4)	TOTAL TRIPS (5) (3) X (4)	IMPACT FEES \$1,360 X (5)
Single-Family House	210	1 Dwelling Unit	1.01	1.01	\$1,375
Multi-Family House	220	1 Dwelling Unit	0.63	0.63	860
General Office Building	710	5,000 gross sq.ft.	4.09/1,000 gross sq.ft.	20.45	27,800
Shopping Center	820	100,000 gross sq.ft.	6.56/1,000 gross sq.ft.	656.00	892,000
Quality Restaurant	831	3,000 gross sq.ft.	7.66/1,000 gross sq.ft.	22.98	31,250
Light Industrial	110	100,000 gross sq.ft.	0.98/1,000 gross sq.ft.	98.00	133,300

**VII.      PARKS, RECREATION, OPEN SPACE AND  
         TRAIL/BIKEWAY ELEMENT**

## VII. PARKS, RECREATION, OPEN SPACE, AND TRAIL/BIKEWAY ELEMENT

The purpose of this element of the City of Camas Plan is to identify the demands for park and recreation facilities and service and to develop the long range plan and implementation program. This is an update of the city's current plan adopted March 23, 1987 and amended in 1991.

This plan element is being done in conjunction with the City's overall comprehensive plan to meet the provisions of the Growth Management Act. It is consistent with the requirements of the Interagency Committee for Outdoor Recreation (IAC) for funding eligibility. The content has been determined by the nature, location and size of existing park, recreation, open space and trail/bikeway facilities in the vicinity.

The Background Chapter of the Comprehensive Plan contains the background information required for planning purposes, such as population distribution and growth, land uses, and related development policies. The Open Space network of this plan element is recognized the primary feature of the overall physical development concept of the City as well as the organizing element of the park system.

This Chapter has integrated the parks, recreation and open space goals, policies and plans with trails, bikeways and facility identification. A number of tools have been utilized to enable the City to carry out the plan. Some of these are listed below:

- A parks/open space bond was approved in 1989, with funds designated from the acquisition and development of parks;
- Land use regulations require a set aside of 30% of the developable acreage of all residential developments was adopted in 1990;
- Sensitive lands are protected through land use regulations adopted in 1990; and

- Impact fees for parks/open space acquisition and development were adopted in 1991 and have been collected since that time.

The combination of these strategies has produced significant additions to the City's park and open space holdings. The City has been able to acquire properties along the Washougal River, Lacamas Lake and Ostenson Canyon. The City acquired and developed what is now known as Dorothy Fox Park, which is a neighborhood park located on Prune Hill. As these areas have started to take shape, it has become important to address how they interconnect. This plan also evaluates the existing trail and bikeway network and those new trails and bikeways needed to accommodate the projected population growth.

### EXISTING CONDITIONS

#### PARKS

The City of Camas currently manages seven park sites and a community center and has an extensive greenway and open space network that is an integral part of the overall city structure. The following summarizes each of these facilities that are also shown on the map on the following page.

*Crown Park* (7.1 acres) provides an outdoor swimming and wading pools, two tennis courts, two handball courts, a shuffle board court, horseshoes, volleyball area, rest rooms, basketball court, picnic tables, and children's playground equipment. The lighted tennis courts are heavily used during the summer months, as is the swimming pool. The playground equipment and basketball court receive regular year-around use. A new lighted picnic shelter has space to accommodate up to 30 picnickers.

*Louis Block Park* (4.0 acres) provides an outstanding lighted baseball field with

bleachers, basketball courts, picnic tables, rest rooms, and children's play equipment. The baseball field is used regularly all summer long by both youth and adult teams.

*Forest Home Park* (5.9 acres) provide two baseball fields with bleachers, a basketball court, picnic tables, rest rooms, and children's play equipment. This park contains the primary, most heavily used, little league baseball facility in the city.

*Goot Park* (5.5 acres) provides two baseball fields with bleachers, a basketball court, volleyball area, picnic tables, rest rooms, and small covered children's play equipment. This park is heavily used in the summer months by area residents and by families and groups from throughout the cities of Camas and Washougal. Its location next to a large open space owned by Bonneville Power Administration (BPA), plus proximity to the Washougal River Greenway, makes it a candidate for possible expansion into those areas.

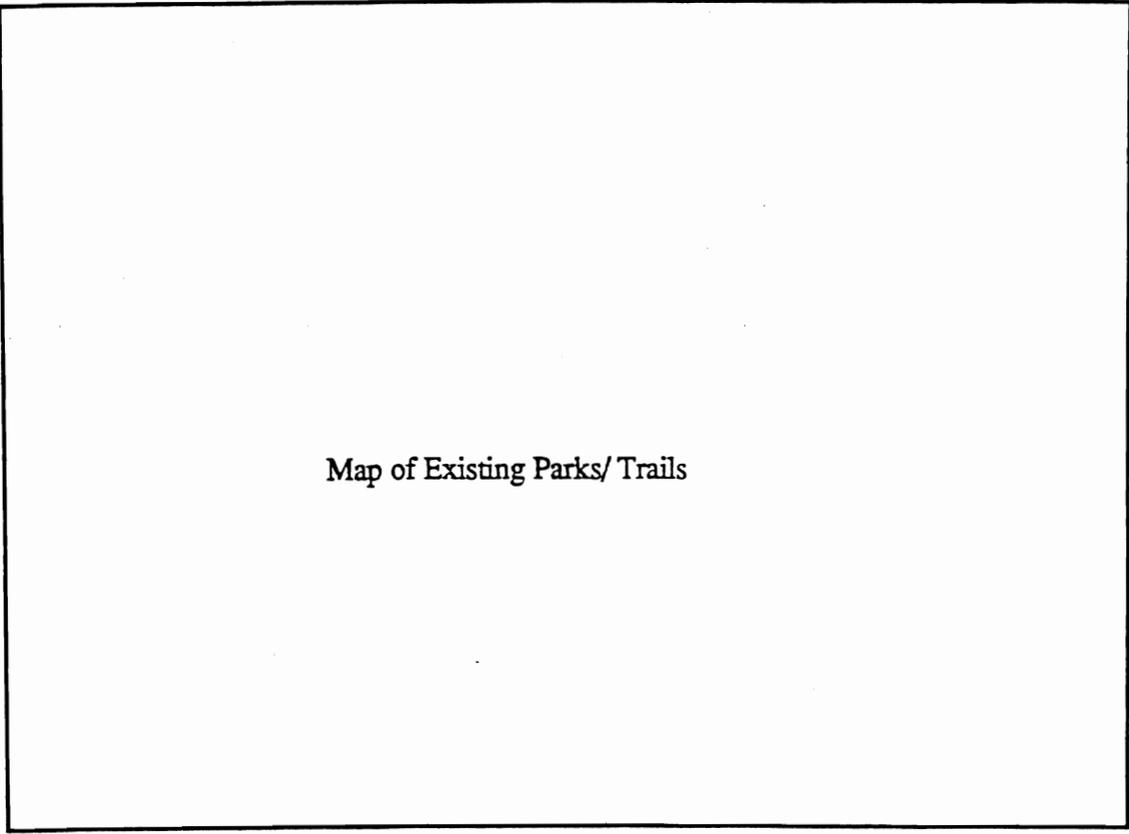
*Lacamas Creek Park* (51.4 acres) is undeveloped (formally known as the Lacamas Tree Farm). This park, with a 12

acre donation from Clark County in 1992, now has land on both sides of Lacamas Creek and is heavily forested with native timber. It is a beautiful and pristine area, largely untouched, with the exception of a service road which serves as a multi-use trail through this area.

*Oak Park* (1.5 acres) is a future mini park next to the new City Shop. It will be linked to the Washougal River Greenway.

*Dorothy Fox* (2.5 acres) is a small neighborhood park adjacent to the Dorothy Fox Elementary School. This park completed in 1993 provides playground equipment, picnic tables and benches, and informal play fields areas.

*Camas Community Center* (0.93 acres) is an approximately 7000 sq.ft. ex-elementary school building providing activity rooms, kitchen and rest room facilities, parking, and an equipped playground area. It is well used by citizens of the entire city for recreation events, business training seminars, club and public meetings, wedding receptions, parties and community events..



Map of Existing Parks/ Trails



## TRAILS AND BIKEWAYS

The following lists those trails and bikeways that currently exist or which are presently programmed for construction including those that will be constructed as part of approved developments.

*Lacamas Park /Lacamas Creek Park* There are a number of trails located within this park located along the northeast side of the city. The park is bounded on the west side by Round Lake and by Everett Road (SR-500) and on the east by SE Crown Road. The trail system within the park links these two corridors and also connects through the Lacamas Creek Park, which is located to the south of Lacamas Park. The trail through Lacamas Creek Park connects to SE 3rd Avenue and also to the single family neighborhood to the west via the Catholic Church Trail.

*Lacamas Lake Trail* This trail runs along the south and west side of Lacamas Lake. It was developed as a condition of approval of the adjoining subdivision (Lacamas Shores). The trail currently exists from the trail head located along NW Lake Road to the northern end of the subdivision. This trail is scheduled to expand to the north and south of its present location, connecting a major county trail being proposed in the vicinity of the BPA power lines adjacent to NE 18th Avenue and NE Everett Road and Lacamas Park.

*Washougal River Greenway* A trail will be constructed from the boat facilities located near the NE 3rd Avenue bridge to approximately the intersection of NE 3rd Avenue and NE 3rd Loop. The greenway extends farther than this location and along both sides of the river, but only the trail section listed above has been programmed for construction at this time.

*North Everett Bike/Pedestrian Way* Pavement was added to both sides of NE Everett (SR-500) from NE 22nd Avenue to Lacamas Park to accommodate bike/pedestrian lanes. The funds for this project

were derived from Enhancement Funds as allocated through the Intermodal Surface Transportation Efficiency Act (ISTEA). This trail links Lacamas Park with the surrounding neighborhoods and schools.

*Lake Road Bike/Pedestrian Way* This project will be constructed in 1994 and also be funded through the Enhancement Funds. It will add pavement width to the existing street section sufficient to accommodate both bikes and pedestrians. The trail will link the North Everett path to the trailhead for the Lacamas Lake Trail.

*Applewood Hills Trail* This development is located along the north face of Prune Hill and contains approximately 5 acres of dedicated open space. The developer was required to construct a trail through the open space which also connects to the developed area of the project. This trail will eventually connect to trails in adjoining developments as they are constructed.

*Skyview Trail* This development is located at the top of the Ostenson Canyon corridor. The trail will be completed as the next phases are developed. The completion of the trail in Skyview will provide pedestrian access from Dorothy Fox Park to the top of Ostenson Canyon.

There are a number of approved developments that have not been started at this point in time, but they will be required to construct trails as part of the conditions of approval. These include:

*Developments with Formal Trail Requirements* Skyview, Phases 2-4, Willow Creek, Wooded Ridge, Prune Hill Park, Parker Estates and Summit Oaks Estates.

*Developments with Informal Trail Systems* Columbia Summit 1 and 2, Columbia Ridge and Lacamas View.

Where developments were not required to develop trails or do not have open space, these developments have been designed to provide pedestrian and bike access to a sidewalk/street network that will connect to various trails.

INDIAN CAMPSITES

The Columbia River Indians separated into many small nations which settled at the confluence of streams with the Columbia River. One of their most important gathering places was at the confluence of the Washougal and Columbia Rivers where they found hunting and fishing bountiful and the Camas lily, an important part of their diet.

The following are four of the most well-known Indian campsites.

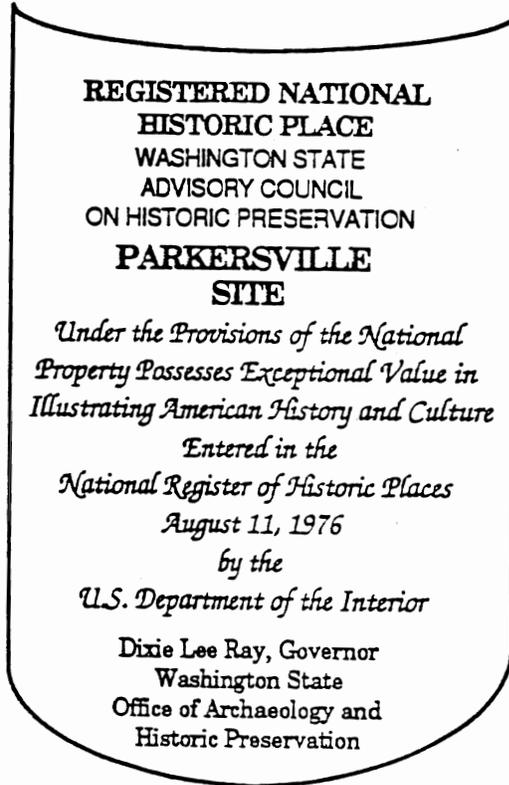
*Parkerville* The Van Fleet property located on the Columbia River in Washougal adjacent to Camas is known as the Parkerville Archeological site. In 1976, it was placed on the State and National Register of Historic Places. The Parkerville site contains Indian artifacts and it is one of the last remaining portions of the terrace location that is relatively undisturbed.

*Property Adjacent to the Parkerville Site* This is the area west of the Parkerville site on the same terrace level immediately adjacent to the Camas City limit. When it was excavated in 1968-69 for the construction of two homes, mortars, pestles, hammerstones, net weights and a stone effigy were found. (Housed by the Historical Society.) These artifacts indicate that the Parkerville site may have been an extensive one, taking in an additional 210 meters to the west along the terrace.

*Wagon Wheel Park Site* This site is located west of the Riverside Bowling Alley on the north shore of the Washougal River. The site was a village of eleven pit houses. Part of this site is in the Washougal River Greenway.

*Bead Island* The fourth campsite was located on Bead Island at the mouth of Lacamas Creek. Bead Island was known by the Chinook Indians as a Memaloose or death island. The Indians placed their dead on the island in canoes raised above the

ground. Artifacts were placed along with the bodies in the canoes. This site is part of the 18.78 acres donated to the City on December 30, 1986 by Paul and Belva Baz and is part of the Washougal River Greenway. *Additional references to donors to be added.*



**PARKS, RECREATION, & OPEN  
SPACE GOALS AND POLICIES**

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The primary goal of this element is to preserve and enhance the quality of life of the present and future residents of the City through the maintenance of existing park facilities and the acquisition and improvement of new parks, recreational facilities, trails, bikeways and open spaces.

To implement this goal the policies of the City of Camas are to:

- Ensure that all new development in its urban growth area is compatible with the proposals of this plan;
- Save and preserve the sensitive natural areas and bodies of water within Camas and the surrounding area so the community can continue as a beautiful place to live and visit offering a wide range of recreational opportunities;
- Identify and protect significant cultural resources as part of new park, recreational facilities, trails, bikeways, and open spaces, in order to preserve these resources for enhancing the quality of life and the recreational experience of users and for the enrichment of future generations of Camas citizens.
- Provide trails that are compatible with the environment and adjoining property;
- Encourage the development and building industry to include in their site plans provisions for preserving the natural vegetation, public access, and recreational opportunities;
- Jointly acquire, develop, and maintain playfields adjacent to school facilities—such as Dorothy Fox School;
- Recognize the special needs of population segments (residents and visitors) that arise due to such factors as age, disabilities, or income levels;

- Encourage, support, and initiate activities, where possible, to preserve, conserve, or improve the shorelines of the Columbia and Washougal Rivers; Lacamas Creek; and Lacamas, Fallen Leaf and Round Lakes;
- Actively seek funds for the acquisition and development of park and recreation land and facilities to meet the city's present and future demands;
- Provide trails and bikeways that are multi-use in nature and that are interconnecting;
- Cooperate with other government agencies in the provision of park and recreation services in the vicinity;
- Develop a safe, scenic and enjoyable trail and bikeway system for City of Camas residents and visitors;
- Encourage continuing citizen involvement in park and trail planning; and
- Provide for the establishment of a park and recreation department with sufficient staff to investigate and pursue park land acquisition through purchase and donations, to study methods and sources of funding, to coordinate with private and public entities, and to encourage volunteer participation in development activities.

## DEFINITIONS AND STANDARDS

The following describes the types of park, greenway, open space, trail and bikeway, and recreation facilities and their development standards for the City. These are the basis for preparing the Capital Facilities Element of the plan, for preparing grant applications and for calculating impact fees.

### PARKS

The major types of active parks in the City are neighborhood and community parks supplemental by special facilities and regional parks. These standards have been adopted by the City and are based on an analysis of National Park and Recreation Association (NPRA) guidelines, Clark County Parks standards and community values.

*Neighborhood Parks:* These parks are intended to serve residential areas within a 1/4- to 1/2-mile radius of the park site. The minimum desirable size is half an acre; the sites will not normally exceed 6-10 acres. Access will be mostly pedestrian, and park sites should be located so most persons living within the service area will not have to cross a major arterial street in getting to the site. Development within a neighborhood park might include landscaping, irrigation, playfields, pedestrian paths and trails, picnic tables, bike racks, play equipment, paved courts and backboards.

The standard for neighborhood parks is 2.5 acres/1000 population.

*Community Parks:* These parks serve groups of neighborhoods within a 1/2- to 3-mile radius of the park site. The minimum desirable size is 20 acres; the sites will not normally exceed 40 acres. Access to community parks will most likely be by car, as well as bicycle or on foot. Swimming pools or recreation centers may

be built on these sites. Other development might include picnic shelters, picnic tables, tennis courts, horseshoe pits, soccer and baseball fields, bike and pedestrian trails, rest rooms, parking lots, and drinking fountains.

The standard for community parks is 2.5 acres/1000 population.

*Regional Parks:* These parks serve large geographical areas, which may encompass several cities and unincorporated areas and are the responsibility of the County or State. Person living in the regional parks' service area will be within one hour's driving time. These parks are typically located in areas with outstanding natural features or qualities. Clark County's existing regional parks such as La Camas Park range in size from 100 to more than 325 acres. Development might include group picnic sites, swimming beaches, bathhouses, hiking trails, fishing piers, barbecues, and overnight camping sites.

The NPRA standard for Regional Parks is 25 acres/1000 population. This combines the NPRA standard for "Major Parks" (5 acres/1000 population), with the NPRA standard for "Regional Parks" (20/acres/1000 population).

*Special Facilities:* These sites are generally developed to serve one recreation activity. There are no size standards, but the land-base must be large enough to accommodate the specific use. The County Rifle Range is an example of an existing special facility.

Other examples are RV parks, golf courses, archery ranges, ball field complexes reserved for league play, private recreation facilities, boat launches and view points which are not part of larger park developments.

### GREENWAYS AND OPEN SPACE

*Greenways:* Typically greenways are long, relatively narrow pieces of property which follow rivers, streams, creeks, and other natural corridors. The greenways

themselves serve several purposes: help preserve sensitive natural environments; provide natural buffers in between and within urban areas; provide access between parks and other facilities; and help protect watersheds. These steep wooded hillsides such as those around Prune Hill make major contributions to the character of the City of Camas. Development tends to be limited to trail systems, interpretive markers, small picnic sites, boat launch areas and viewpoints.

*Open Space Network:* These are parcels of property which have been acquired without the intent to develop for active recreation although they may incorporate public paths, viewpoints, and natural/cultural/historic interpretive markers.

There are three types of open space which fall into this category:

- Land that may have been acquired or provided, for example, to provide a buffer between an existing park site and an industrial area, or to preserve an isolated sensitive natural area.
- A network of permanent open space, called the Permanent Open Space Network, composed of relatively continuous areas with development constraints. Development constraints are defined as steep slopes (40+%) and unstable slopes.

The land included within the Permanent Open Space Network may also contain land without significant development constraints when this additional land is necessary to achieve a continuous network. This additional land normally will have some characteristics which suggests it also would be appropriate for the system such as wooded areas or slopes of 15-40%.

Ravines are steep slopes, normally wooded which abut and rise from the valley floor of a stream and which were created by the action of the stream. Examples include Ostenson Canyon and the areas adjacent to Forest Home Road.

These should be preserved in a natural state with a minimum of development except trails and roads where they currently exist.

- Wetlands adjacent to the slope and other wetlands such as those in the light industrial area. These are to be evaluated to develop a program of enhancement and preservation consistent with related development.

In addition to protecting adjacent development the Greenway and Permanent Open Space Network provides a number of functions which enhance the entire City:

- Provide continuous habitat to support wildlife;
- Connect to, thus extending and enhancing, the private open spaces provided in adjacent subdivisions and planned unit developments;
- Retain wooded areas to protect drainage courses and streams from siltation and pollution;
- Retain wooded slopes as a visual backdrop for the City;
- Provide interpretation and educational opportunities for citizens; and
- Retain critical function of wetlands for drainage and habitat.

The Greenway and Permanent Open Space Network Standard is 30 acres/1000 population.

#### TRAILS AND BIKEWAYS

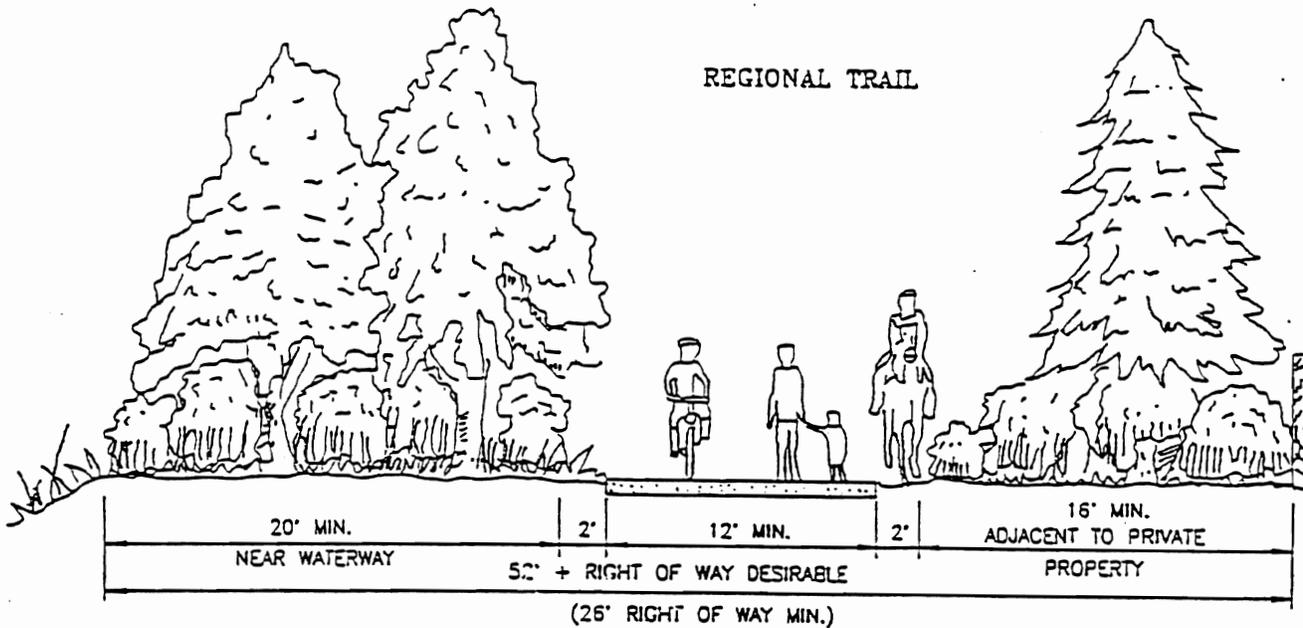
The City of Camas has adopted trail and bikeway classifications and standards to ensure continuity within the City's trail and bikeway system and also those of adjoining jurisdictions. The classifications and standards contained herein are consistent with national, state and local criteria. For the purpose of this section, these will be reviewed within two categories, Trails and On-road Bike Lanes..

TRAILS

There will be four classifications of trails. Trails will generally be located off paved thoroughfares and within their own right of ways or easements. The trail designations include: Regional, Local, Rustic and Semi-Primitive. A detailed description and typical section of each of these options follows:

*Regional Trail* This trail type is designed to accommodate multiple uses (walking, running, bicycles) and connect the City of

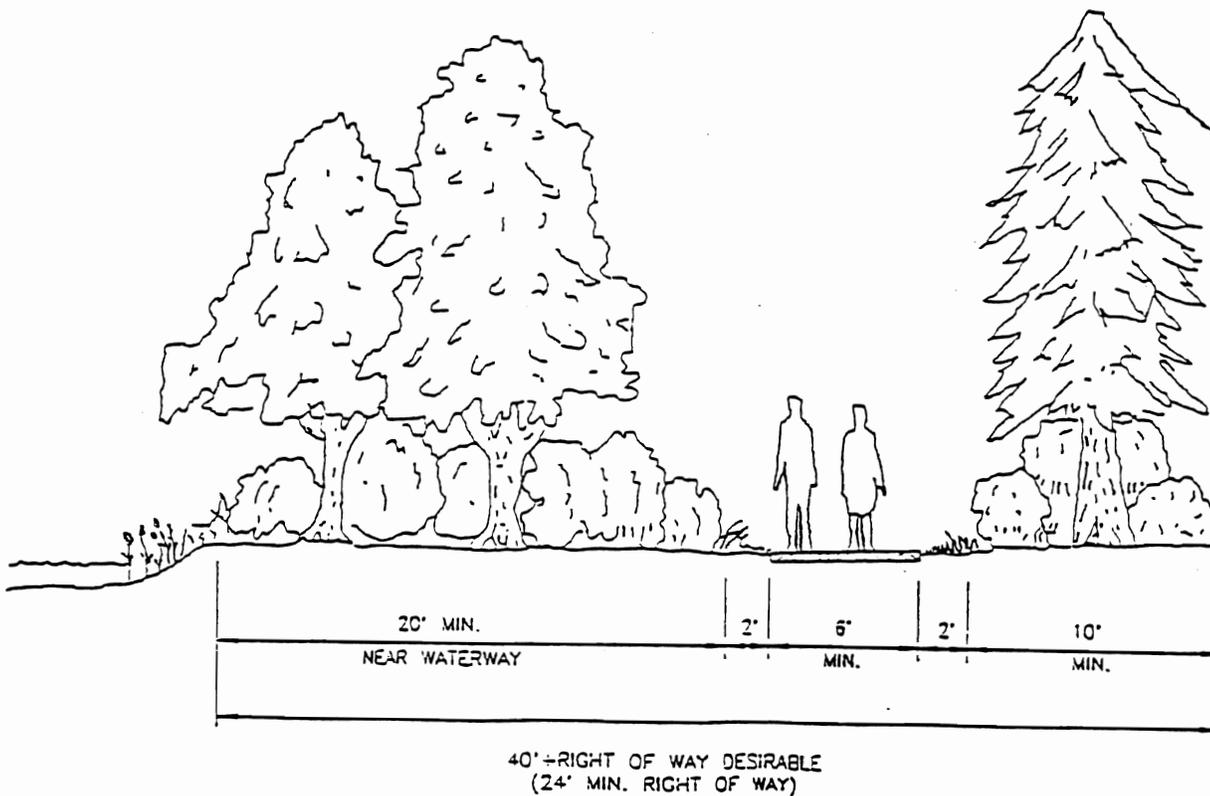
Camas to adjoining jurisdictions or destinations. The surfacing would be a minimum of 12 feet wide and would be constructed from asphalt or concrete. The use of the trail by equestrian interests would also be permitted if additional unpaved area was provided along the paved surface. The right of way required for regional trails can be significant depending on their location and surroundings. A minimum right of way is 26 feet and can range up the 52 feet. This type of trail is typically located off roadway surfaces and within its own corridor.



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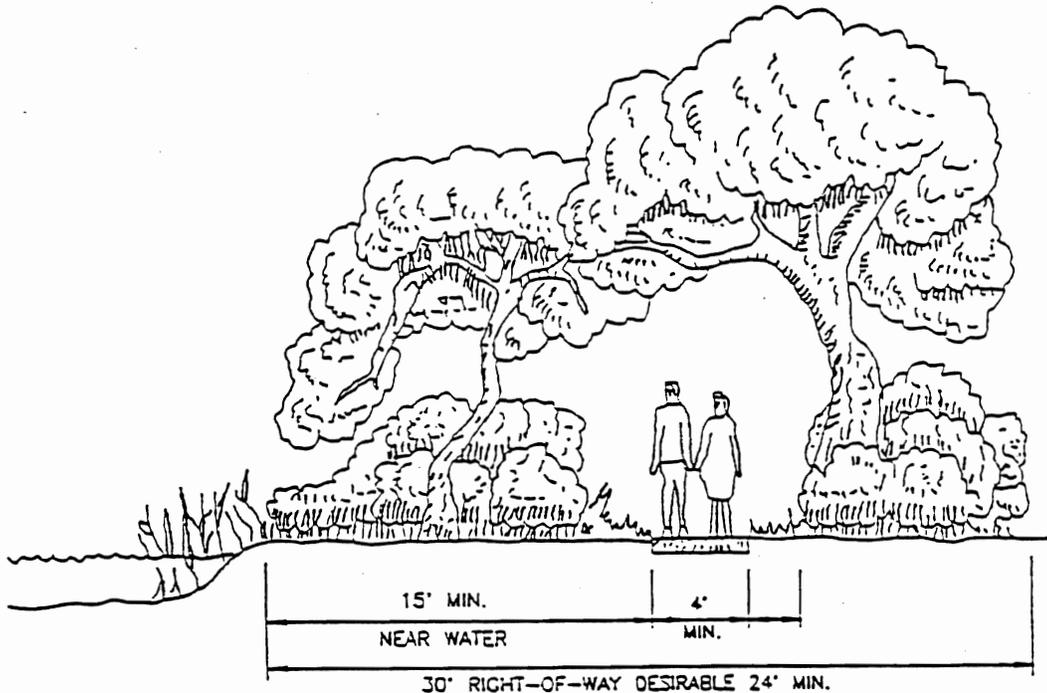
*Local Trail* This trail type is designed to serve the local community and also provide access to the regional trail systems. It will be considered the "backbone" of the City of Camas' trail network. The trail width would range from 6 feet to 10 feet depending on the use proposed and the

terrain involved. It can be designed to accommodate the same uses listed for the regional trail. The surface used for this type of trail may be paved or crushed aggregate depending on the use. The right of way for the local trail can range from 24 feet to 40 feet and can also be located on-road or off-road.



**Rustic Trail** This trail type is more neighborhood oriented and will provide access to the local trails. These trails will act as collectors for neighborhoods or developments to other adjoining destinations. The rustic trail would be a minimum of 4 feet wide and would be a

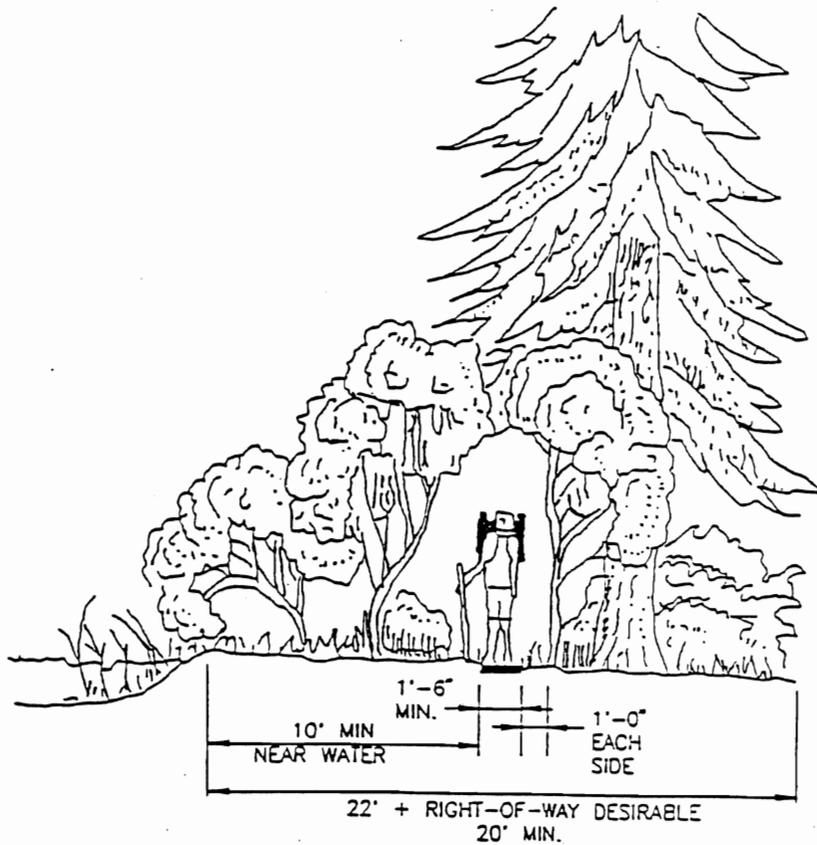
crushed aggregate type surface. The primary uses of a rustic trail would be walking, mountain bikes (as opposed to on-road bikes) and equestrian. The right of way widths needed for the rustic trail can range from 24 feet to 30 feet. These trails are always off-road in nature.



Rustic Trails Illustration

**Semi-Primitive Trail** This trail type is more specialized with regard to use, but it is more easily adaptable to the open space areas. It will serve in the more sensitive open space areas located within the City. It is designed to accommodate walkers/hikers, mountain bikes and equestrian. It is typically 2 feet to 4 feet in width and is made of a compacted earth surface or

crushed aggregate surfacing in select situations. It is designed to blend in with the natural setting more than to accommodate efficient movement. The right of way width can range from 10 feet to 20 feet. Typically maintenance of these type of facilities is a low priority. The narrower the trail, the more difficult the facility is to access and maintain with conventional type vehicles.



**ON-ROAD BICYCLE LANES**

Bicycle lanes are located along existing street and road right of ways or can be incorporated into the overall width required for new construction. The use of bike lanes has increased as the call for multi-modal transportation options has increased. Developing a regional and local bike network will help the City of Camas meet trip reduction measures as required by the Commute Trip Reduction law. It will also increase safety and efficiency for those individuals who already use bikes for recreational purposes. A secondary benefit associated with bike lanes is the increased use by pedestrians of these type of facilities. In areas where no sidewalks exist, the construction of bike lanes improves safety and access for pedestrians as well as bike riders. All construction standards for bike lanes will be in accordance with State and/or Federal guidelines.

There are two primary designations for bike lanes. The **Regional** bike lane is designed to move bikers from the City of Camas to other jurisdictions or destinations adjoining Camas. They will move a high number of users in an efficient manner and will complement the regional trail systems mentioned earlier. The **Local** bike lane will serve as the "backbone" for the City's bike network. It will be designed to safely and efficiently move the residents of Camas from one area of town to another. Of course, these bike lanes will connect to regional facilities and complement the trail system. The following figures illustrate the typical sections of separated and non-separated bike lanes.

**SUMMARY**

The following chart illustrates the various requirements and standards for the trail and bikeway classifications previously discussed.

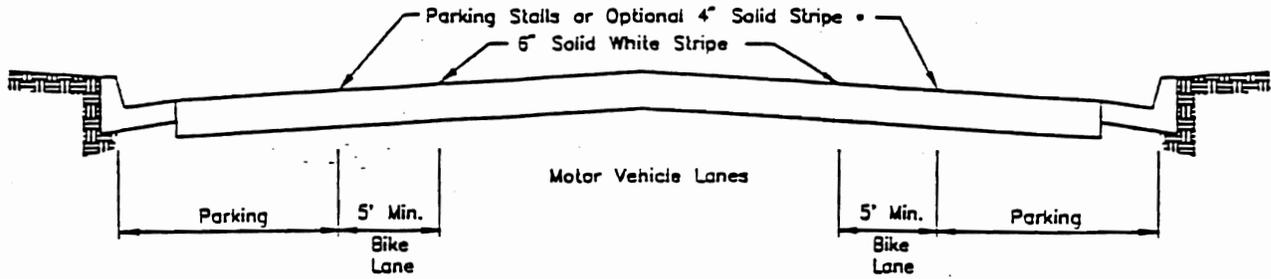
**TRAIL AND BIKEWAY CLASSIFICATIONS**

	TRAILS TYPE	RW WIDTH	TRAIL WIDTH	SURFACING	USERS	CLEARANCE	RELATIONSHIP TO ROAD
1A	Regional Multi-use Trail	26' Min 50' + Desirable	12'+	paved asphalt or concrete surfacing	walking, slow bicycles & equestrian where posted	side 2'-0" min. height 10'-0" min.	Off-road
1B	Regional Bike Lane	NA	5' Min.	paved asphalt or concrete surfacing	bicycle	-	Off-road
2A	Local Trail	20' Min. 40' + Desirable	6'-10'	paved asphalt or crushed rock surfacing	walking, slow bicycles, & equestrian where posted	-	Off-road/ On-road
2B	Local Bike Lane	NA	4' Min. May not be striped	-	bicycle	-	On-road
3	Rustic	24' Min. 30' Desirable	4' +	crushed rock surfacing	walking, mt. bikes, & equestrian where posted	-	
4	Semi Primitive	22' Min.	1.6' +	packed earth or crushed rock	walking, mt. bikes, & equestrian where posted	side 1'-0" min. height 8'-0" min.	

Equestrian-desirable to have shoulder or separated path 4' minimum with crushed rock or wood chips over crushed rock.

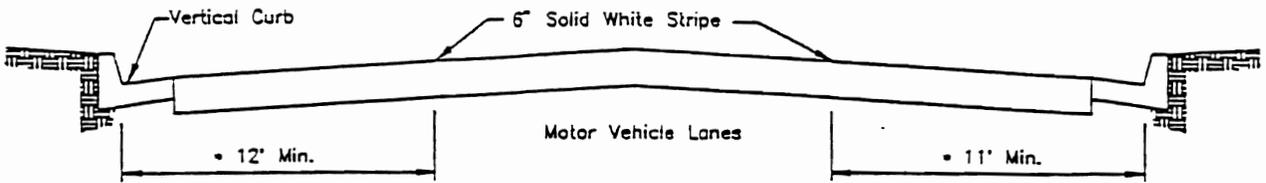
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## BICYCLE LANE AND BICYCLE BI-WAY CROSS SECTIONS



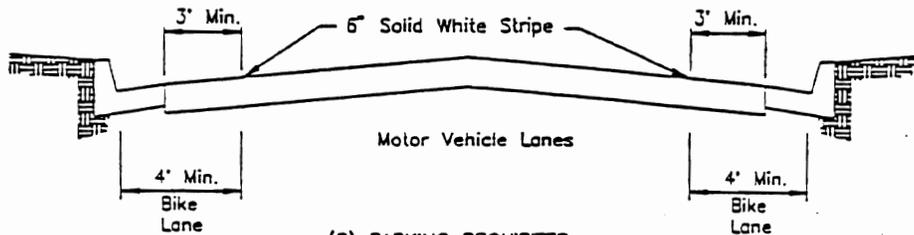
- The optional solid white stripe may be advisable where stalls are unnecessary (because parking is light) but there is concern that motorists may misconstrue the bike lane to be a traffic lane.

(A) STRIPED PARKING

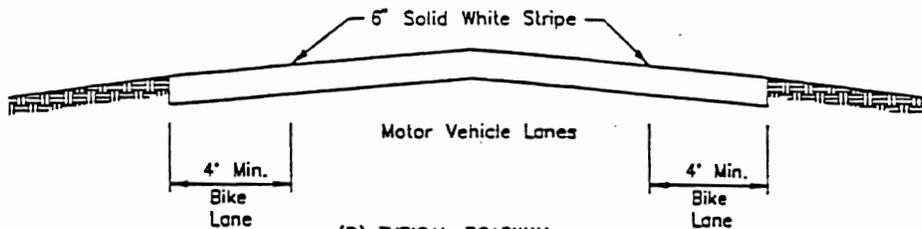


- 13' is recommended where there is substantial parking or turnover of parked cars is high (e.g. commercial areas).

(B) PARKING PERMITTED WITHOUT PARKING STRIPE OR STALL

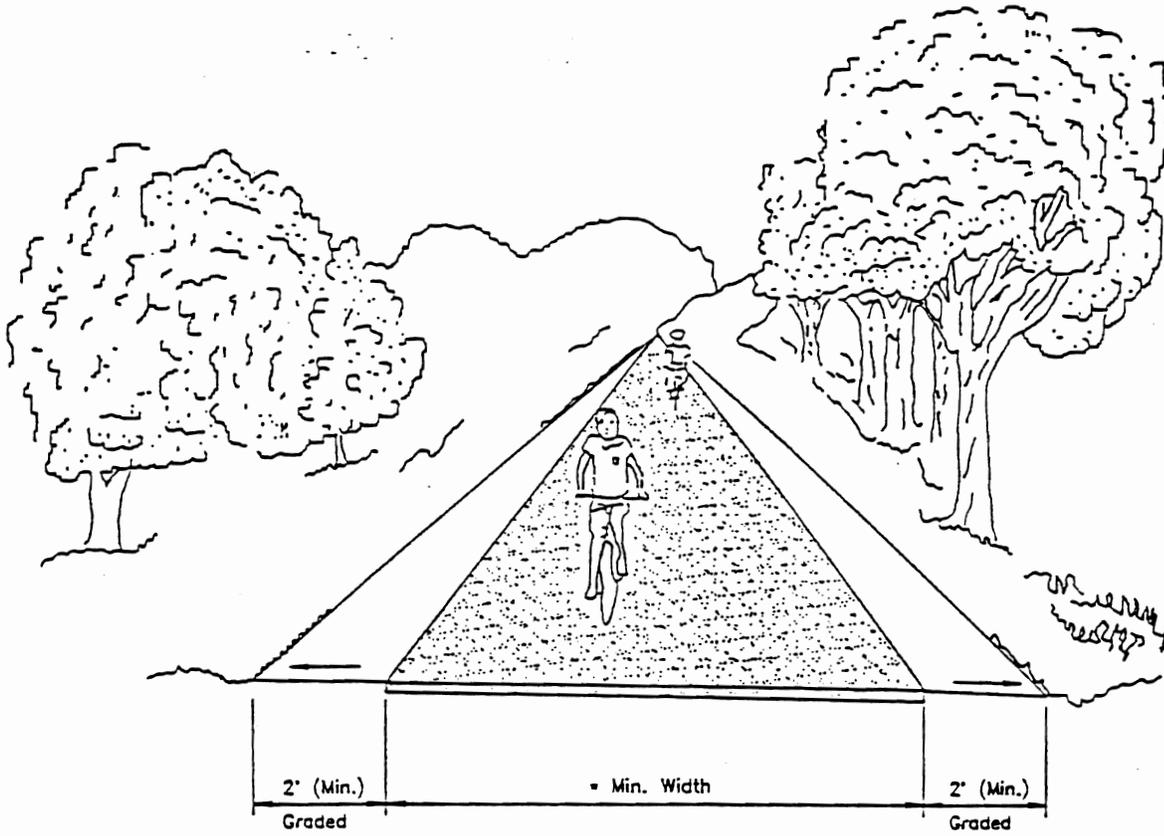


(C) PARKING PROHIBITED

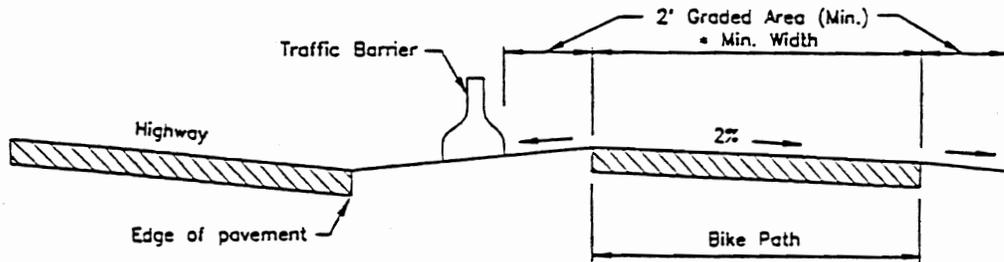


(D) TYPICAL ROADWAY IN OUTLYING AREAS

BIKE PATH ON SEPARATED RIGHT-OF-WAY



TYPICAL CROSS SECTION BIKE PATH ALONG HIGHWAY



- One-Way: 5' Minimum Width
- Two-Way: 8' Minimum Width

BICYCLE PATH CROSS SECTIONS

Source: Washington State Department of Transportation

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

RECREATION FACILITIES

The following table provides standards for various types of Recreation facilities. The table identifies standards adopted by the

National Recreation and Park Association (NRPA) and Clark County. These standards can be used as guidelines to determine recreation needs in the Camas Urban Growth Area.

ACTIVITY	NRPA STANDARD	CC URBAN STANDARD	NUMBER OF CITIES WITH A STANDARD	CITY AVERAGE STANDARD	CITY RANGE OF STANDARDS	CAMAS FACIL
Archery	1/50,000	1/50,000	--	--	--	0
Badminton	1/5,000	1/5,000	--	--	--	0
Ball (youth)	1/5,000	1/5,000	--	--	--	0
(outdoor)	1/5,000	1/5,000				6
Baseball	1/5,000	1/5,000	7	1/5,290	4,000-6,000	2
(w/lights)	1/30,000	N/A				1
(Little League)	N/A	N/A				2
Basketball (indoor)	1/5,000	1/5,000	1	1/2,000	--	6
Football	1/20,000	1/20,000	3	1/4,670	4,000-5,000	1
Golf (9 hole)	1/50,000	1/50,000				0
(18 hole)	1/50,000	1/50,000	2	1/50,000	--	1
(driving range)	1/50,000	1/50,000				0
Handball (outdoor)	1/10,000	1/10,000	--	--	--	1
(indoor)	1/10,000	1/10,000				0
Ice Hockey	1/25,000	1/25,000	--	--	--	0
Multi-use court	1/10,000	1/10,000	2	1/4,500	3,000-6,000	0
Running Track	1/20,000	1/20,000				1
Skeet/Trap	1/50,000	1/50,000				1
Soccer	1/10,000	1/10,000	5	1/4,400	2,000-7,000	0
Softball	1/5,000	1/5,000	5	1/3,200	2,000-5,000	1
Swimming (indoor)	N/A	1/50,000				0
(outdoor)	1/20,000	1/20,000				1
Tennis (outdoor)	1/2,000	1/2,000	6	1,3250	1,500-5,000	6
Trails (Bicycle)	--	--	1	.5 mi/1,000	--	--
(Bicycle)	--	--	3	4.3 ac/1,000	.5 ac - 10 ac	--
(Jogging)	--	--	1	.5 mi/1,000	--	--
(Jogging)	--	--	3	4.3 ac/1,000	.5 ac - 10 ac	--
(Hiking)	--	--	1	10 ac/1,000	--	--
Volleyball (indoor)	1/5,000	1/5,000	1	1/2,000	--	0

**NEEDS ANALYSIS**

There are two aspects to determining the need for parks:

- current deficits from adopted standards; and
- facilities required to accommodate future growth.

**ANALYSIS OF EXISTING NEED**

For purposes of this analysis we have assumed a 1993 population of 7,656 in the Urban Growth Boundary. The following chart identifies the current need based on standards, the present available acreage and identifies whether there is a deficit (-) or a surplus (+) in acreage.

PARK TYPE/ STANDARD	NEED (ACRES)	PRESENT ACREAGE	DEFICIT/ SURPLUS
Neighborhood Parks 2.5 ac/1000	19.14	21.3	+2.16
Community Parks 2.5 ac/1000	19.14	30.78	+11.64
Greenways Open Space* 30 ac/1000	229.7	297.0	+67.3
Major/Regional Parks † 25 ac/1000	191.4	295.0	+103.6

\* Includes Lacamas Park, Washougal River Greenway, Lacamas Shore, Lacamas Creek and the Blake ownership in Ostenson Canyon.

† Includes Lacamas Lake Park (Clark County) which serves population outside Camas.

Based on this analysis, the City of Camas has a surplus in the present park and open space system. However, it should be noted that over the past 2-3 years nearly 2,000 lots have been platted, a majority of which have not been built. The resulting potential population of about 4,500 people indicates that these surplus acreages are essentially committed and when the homes are built will result in the following deficits:

- Neighborhood Parks 9+ acres
- Greenways/Open Space 67+ acres
- Major/Regional Parks 9 acres

These figures do not include potential recreation use of school sites.

**ANALYSIS OF FUTURE NEED**

The Urban Growth Boundary has been sized to accommodate a total twenty year growth of 17,000 people (13,600 assigned by County plus 3,400—25% market factor). The park and open space need based on that potential population on the City's standards results in the need shown in the following chart:

PARK TYPE/ STANDARD	ACREAGE TO MEET STANDARDS †	FACILITIES REQUIRED
Neighborhood Parks 2.5 ac/1000	40.3	7-9 parks @ 5-6± acres
Community Parks 2.5 ac/1000	42.9	2 parks @ 20+ acres
Greenways/Open Space 30 ac/1000	510.0	Part of Designated Open Space Network, 20± acres/year
Regional Parks 25 ac/1000	425.0	1-2 @ 200-225 acres

† Standard with or without surplus or deficit.

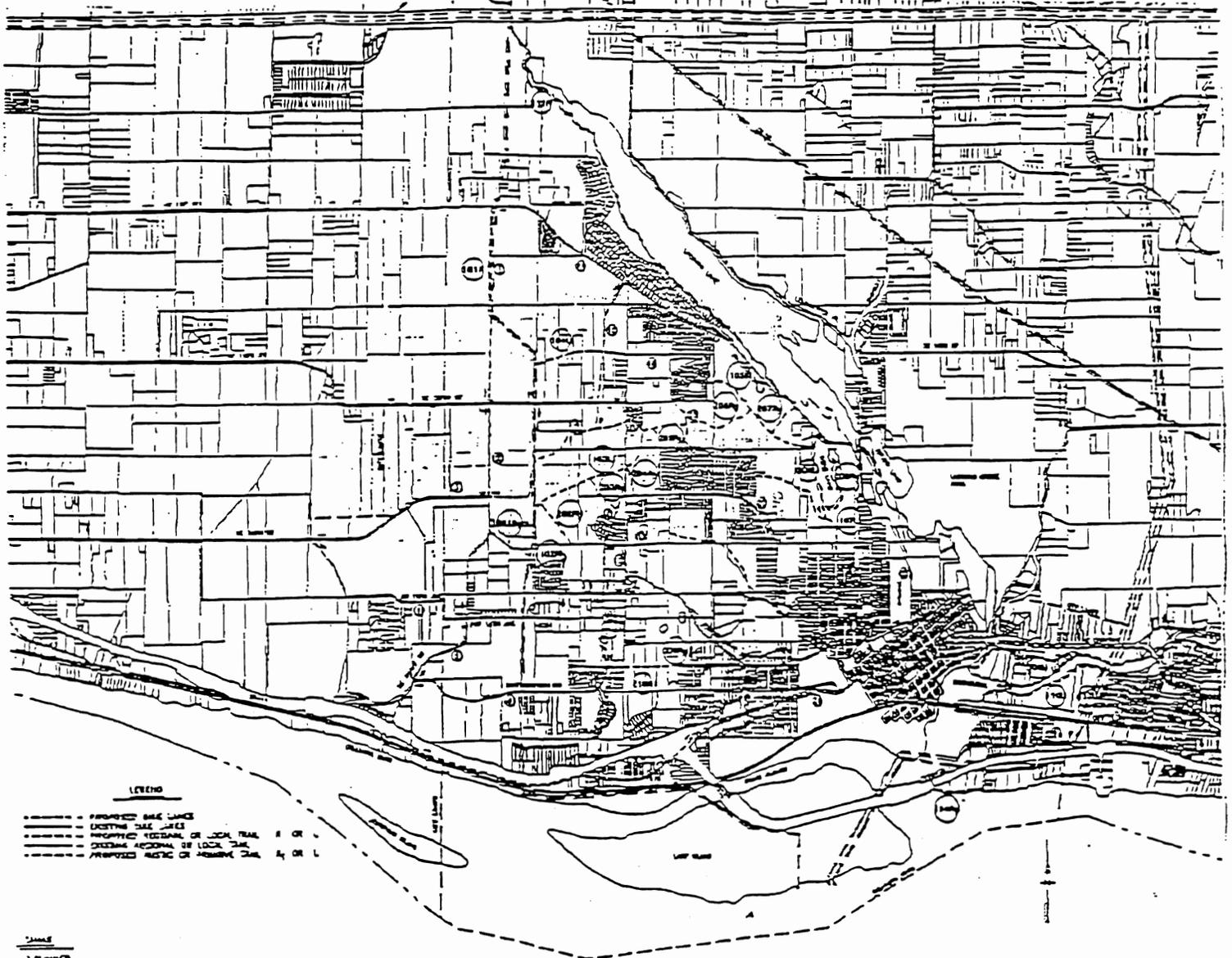
The plan for park recreation and open space facilities identifies the geographic distribution for all of the facilities identified above since it is designed to accommodate 17,000 people. The number of actual facilities required to be built over the next twenty years to meet the estimated growth of 13,600 population and to meet the standards is as follows:

PARK TYPE/ STANDARD	ACREAGE FOR 13,600	FACILITIES REQUIRED
Neighborhood Parks 2.5 ac/1000	34 ac	6-7 parks @ 5-6± acres
Community Parks 2.5 ac/1000	34 ac	1-2 parks @ 20± acres
Greenways/Open Space 30 ac/1000	408 ac	20.4 ac/year
Major/Regional Parks 25 ac/1000	340 ac	1 @ 235 acres (less 103.6 surplus)

**TRAIL AND BIKEWAY PLAN**

The following map illustrates the existing trail and bikeway facilities and those that will need to be constructed to enable the City of Camas to meet the future needs of its citizens. The basis of this map is the 1987 Comprehensive Park Plan Trail Map, the Greenway/Open Space Network and recently approved developments. The map

is diagrammatic and the final location of the trails and bikeways will be determined at the time of design. This provides the City general locations and an estimate of the potential length and costs associated with the construction of these facilities. It will also be a tool to evaluate our progress and make changes that may be necessary. It is also the basis for the Capital Facilities Program. The map was refined at community meetings and the citizens input and comments derived from them.



CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

BIKE PATHS AND TRAIL PROJECTS

The following charts identify the bike path and trail projects contained in the Trail and Bikeway Plan.

BIKE PATHS AND LANES

PROJECT NAME	PROJECT ORDER	DESCRIPTION	COST (\$1000S)
NW Parker St. (1st/38th)	1	4' bike lanes	78
NW Parker St. (38th/16th)	2	4' bike lanes	90
NW Pacific Rim (34th/Parker)	3	Stripping/Signs	6
NW 38th (WCL/Astor)	4	4' bike lanes	108
NW Brady (16th/SCL)	5	4' bike lanes	36
NW 18th (PacRim/Brady)	6	4' bike lanes	90
NW 16th (Brady/18th)	7	4' bike lanes	48
NW McIntosh (Brady/11th)	8	4' bike lanes	96
NW Cascade (11th/18th)	9	4' bike lanes	45
NW Cascade (18th/Sierra)	10	4' bike lanes	84
NW 18th (Hood/Astor)	11	4' bike lanes	42
NW Astor (18th/23rd)	12	4' bike lanes	18
NW 23rd (Cascade/28th)	13	4' bike lanes	48
NW PacRim (Parker/Astor)	14	4' bike lanes	78
NW Leadbetter (Lake/38th)	15	4' bike lanes	60
NW Lake (Parker/Sierra)	16	4' bike lanes	96
NW Lake (Sierra/trailhead)	17	4' bike lanes	66
NW Astor/43rd/Sierra	18	4' bk ln/strp/signs	43
NW Sierra Dr. (28th/Sierra)	19	Stripping/Signs	6
NW Fargo/18th/28th	20	Stripping/Signs	8
NW Forest Home (Astor/10th)	21	Stripping/Signs	4
NE 19th (Division/Everett)	22	Stripping/Signs	1
NE 15th (Division/Everett)	23	Stripping/Signs	2
NE Everett/Garfield (23rd/3rd)	24	Stripping/Signs	4
NE 22nd/lone (14th/Everett)	25	Stripping/Signs	4
NW 6th (Garfield/SR14)	26	Stripping/Signs	7
NE Dallas (3rd/15th)	27	Stripping/Signs	2
SW 6th (SR14/WCL)	28	4' bk ln/strp/signs	98
NE Adams/ 3rd (6th/Dallas)	29	Stripping/Signs	1
NE 3rd (Dallas/ECL)	30	Stripping/Signs	11
SE Whitney (3rd/SCL)	31	Stripping/Signs	3
SE 6th (Dallas/SR14)	32	Stripping/Signs	6
<b>BIKE SUBTOTAL</b>			<b>\$1,289,000</b>

**CITY OF CAMAS • 1994 COMPREHENSIVE PLAN**

**TRAILS**

PROJECT NAME	PROJECT ORDER	DESCRIPTION	COST (\$1,000S)
SE 1st/NW 38th	101R	Regional Trail	190
NW 38th/NW McIntosh	102R	Regional Trail	262
Parker Est/Applewood	103L	Local Trail	122
NW 43rd/PP&L Easement	104L	Local Trail	81
Lacamas Resv./Dead lake	105L	Local Trail	107
Lake Rd./Dead Lake	106L	Local Trail	70
Crown View Plaza/Division	107L	Local Trail	116
Ostenson Canyon/D. Fox Park	108L	Local Trail	116
Wash. Rvr. Grmwy (North)	109L	Local Trail	220
Wash. Rvr. Grmwy (South)	110L	Local Trail	128
Heritage Trail (Remainder)	111R	Regional Trail	136
Shepard Rd/NE 3rd	112Rs	Rustic Trail	80
Goot Park/110L	113L	Local Trail	50
Oak Park Treatment Plant	114Rs	Rustic Trail	50
Col. Smt. II/Parker	201Rs	Rustic Trail	11
Col. Ridge/103R	202Rs	Rustic Trail	10
Col. Smt. V/103R	203Rs	Rustic Trail	10
Comstock/103R	204Rs	Rustic Trail	8
Prune Hill Park/Smt. Oaks	205Rs	Rustic Trail	12
Applewood/105L	206Rs	Rustic Trail	24
Lake Rd./105L	207Rs	Rustic Trail	6
Dead Lake Loop	208Rs	Rustic Trail	14
NW 10th/NW 11th	209Rs	Rustic Trail	10
Sierra/Lane/209Rs	210P	Primitive Trail	4
		<b>TRAIL SUBTOTAL</b>	<b>\$1,837,000</b>

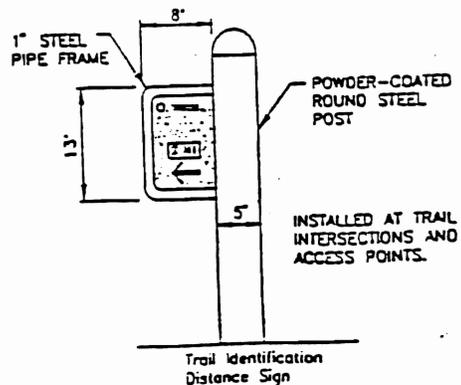
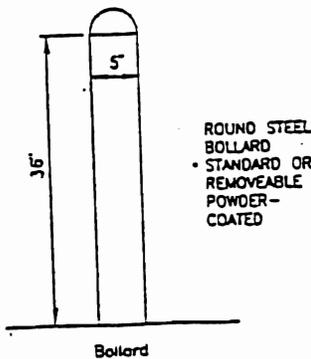
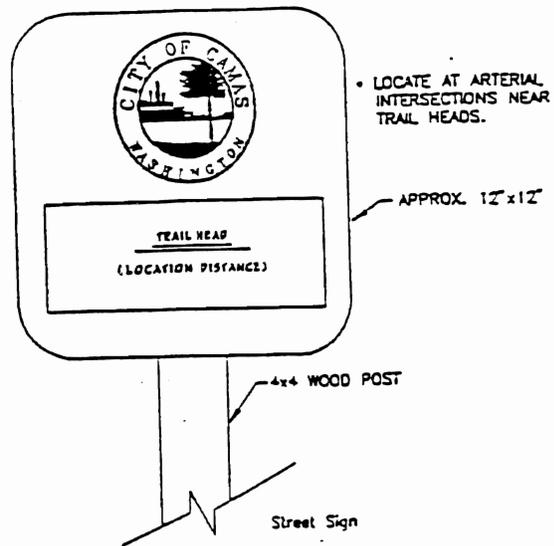
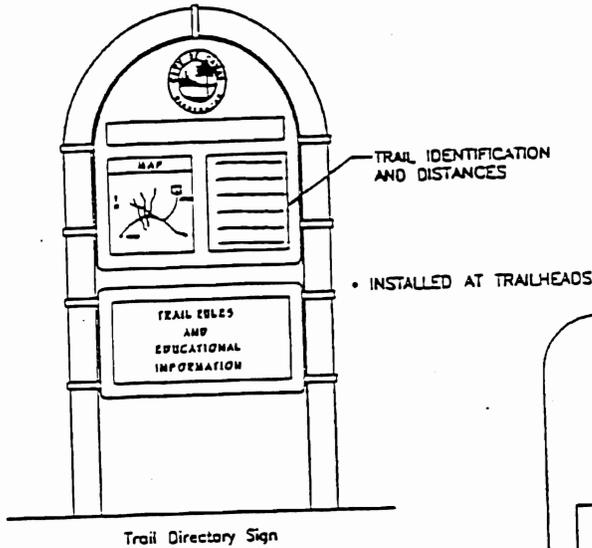
**BIKE PATH AND TRAIL PROGRAM TOTAL COST: \$3,126,000**



**FACILITY IDENTIFICATION AND SIGNAGE**

A significant element of a parks, recreation and open space system with a trail/bikeway network is to provide a means of clearly

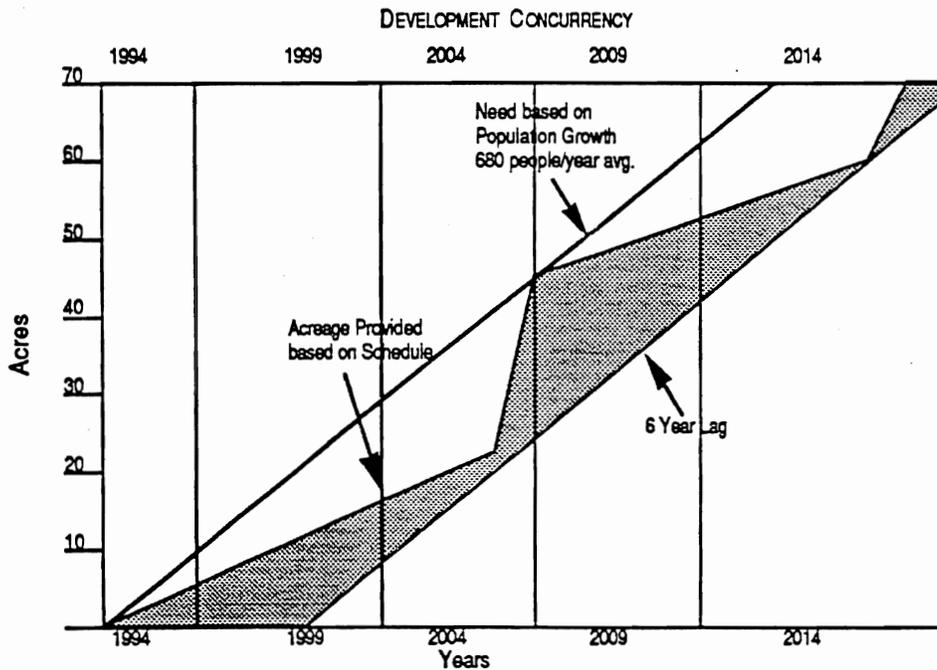
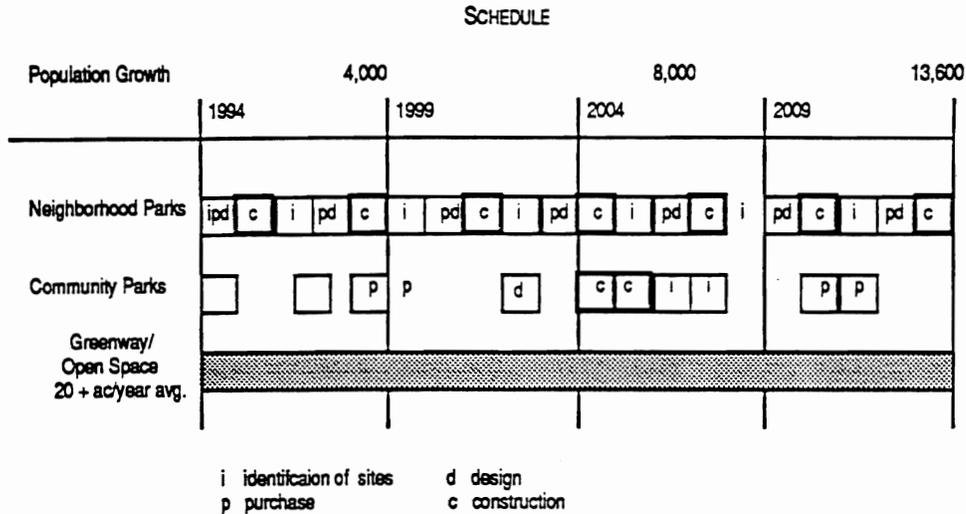
identifying the facilities with clear maps, and direction for their use and with interpretive signs to understand the historical environmental or community significance of various sites. The following drawings illustrate trail/ bikeway directories, trail/bikeway identification names and distance markers which could be expanded for overall park signage.



**SCHEDULE AND CONCURRENCY**

The charts on the following page illustrates the schedule which would be required to have facilities available to serve the projected population. The upper chart shows the schedule for identification of sites (i), purchase (p), design (d) and construction (c). The chart emphasizes the necessity of early identification and

purchase of the larger community park sites. The second chart shows the cumulative annual need for parks in acreage based on consistent growth and their actual provision based on the schedule. This schedule would assure that the facilities are provided within six years as required by the Growth Management Act for collection of impact fees. This will be the basis for the Capital Facilities Element for Parks, Recreation and Open Space.



**COSTS**

There are a number of cost factors, which must be taken into account when estimating the cost for a particular facility. In addition to acquisition, design and construction costs, which most individuals think about, two other items that must be addressed are ongoing maintenance costs and public safety or policing costs. The following information illustrates estimated construction costs for parks, open space and the trail and bikeways being proposed by the City of Camas.

TYPE	COST PER ACRE		TOTAL
	LAND ACQUISITION <sup>1</sup>	DEVELOPMENT	
Neighborhood	\$17,500	\$50,000 <sup>2</sup>	\$67,500
Community	\$17,500	\$50,000	\$67,500
Open Space	\$8,750	\$2,5000	\$11,250

TRAIL CLASSIFICATION	ESTIMATED COST	ESTIMATED LENGTH IN MILES
Regional Multi-use Trail	\$34/LF	3.28
Local Trail	\$29/LF	6.27
Bike Lane (on road)	\$15/LF	15.53
Rustic Trail	\$6/LF	3.31
Semi-Primitive Trail	\$3/LF	0.25
Bike Lane (stripping only)	\$1/LF	12.57

These costs are being reevaluated based on recent acquisitions and actual costs for park improvements.

**FUNDING**

There are a number of funding sources available for the development of parks, open space, trails and bikeways. The following chart illustrates the various options available to the City. There are three major sources that will be utilized by Camas.

The primary source will be through development contributions. This will be in the form of impact fees or dedication and construction. The impact fees would be collected when a building permit is issued and consist of a parks fee and open space fee. The dedication and construction of these facilities would be as conditioned in the preliminary plat process for subdivisions.

Securing grant funds through various state and local programs will be a secondary source. More particularly, the City would have access to IAC (State of Washington Interagency Committee for Outdoor Recreation) grant funds, which would facilitate the development of trails. Also, Transportation Enhancement funds would be available for the construction of bike and pedestrian paths, which serve a more regional basis.

The last source the City would anticipate using is general fund dollars. These funds would be used for matching funds for the two previous sources to make up the difference between the grant funds and actual cost.

<sup>1</sup> Based on a range of \$15,000-20,000 from local realtor's (1992).

<sup>2</sup> Estimates for Dorothy Fox School.

**CITY OF CAMAS • 1994 COMPREHENSIVE PLAN**

<b>POTENTIAL FUNDING SOURCES</b>	<b>FUND SOURCE</b>	<b>USE POTENTIAL</b>
(IAC) State of Washington Interagency Committee for Outdoor Recreation	Utilizes funds from various sources including state bonds, specific programs targeted for various segments of recreational activities potential  Washington Wildlife Recreation Fund *County must complete on statewide basis	Acquisition Development matching funds required up to 50% grants \$500,000.00 ceiling for acquisition grant \$300,000.00 ceiling for development
(ALEA) State of Washington The Aquatic Lands Enhancement Account	State aquatic land lease proceeds	Enhance public access on and the recreational and environmental use of aquatic lands. Limited to navigable waterways.
Washington State - Distributed Motor Vehicle Funds	Motor vehicle funds	Highway or right-of-way related trails not less than .05% of total revenue to be spent on trails.
Washington State Department of Transportation will administer federal program (ISTEA) Intermodal Surface Transportation Efficiency Act transportation enhancements	Federal grant money 20/80 match (Section 132)	Bicycle/pedestrian facilities, acquisition, historic preservation, wetland mitigation
National Recreation Trails Fund Act (Section 141)	Gas tax, Highway trust fund, Grants	Trail development
Bicycle & pedestrian issues (Section 217)	Federal grant money 20/80 match	Bicycle/pedestrian facilities
City Bonds	Voter approved	Acquisition and development
· General obligation	Borrowed money paid by excess property tax	
· Councilmanic	Without voter approval borrowed money paid by existing city revenue	
Tax (Sales, real estate property)	Voter approved or non voter approved measures for additional tax for dedicated uses	Acquisition development support services
Park and Open Space Impact Fees	Adopted by Council	Acquisition and development
Interagency agreements	Agencies can cooperate and pool resources	Agency related projects Acquisitions
Private/Corporate Sponsorship	Private funds, land, materials and services	Acquisition development, support services
Volunteers	Labor donations	Development support services

**VIII. PUBLIC FACILITIES, UTILITIES AND SERVICES**

## VIII. PUBLIC FACILITIES, UTILITIES AND SERVICES

The City of Camas provides a wide range of public services. The services discussed in this section are:

- Schools
- City Facilities/Services:
  - Police protection
  - Fire protection and ambulance service
  - Library
  - Facility Plan
- City Utilities
  - Water
  - Sewer
  - Water and Sewer Policies
  - Storm Water Drainage
  - Solid Waste Disposal
- Utilities
  - Electrical
  - Gas
  - Telecommunication

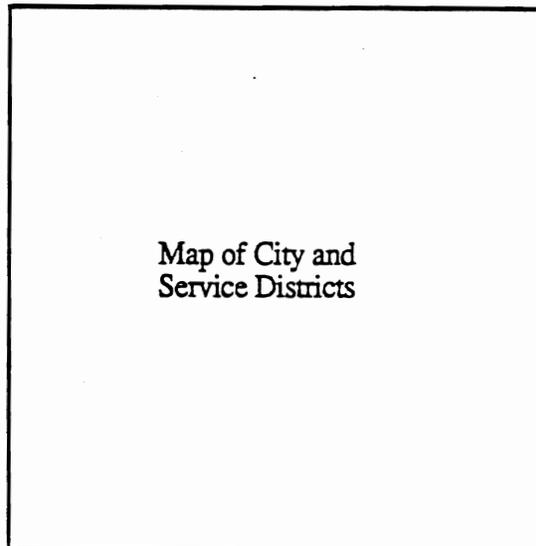
- Identify strategic plans and actions to maintain or improve services consistent with the vision
- Provide a framework for guiding the necessary budgetary and operational plans
- Provide the basis for integrating Public Facilities and Services with other elements of the Comprehensive Plan, such as Land Use, Transportation, and Capital Facilities.

Streets and Parks and Recreation are other services maintained by the City, that are discussed separately in the Transportation and Parks Elements. Most of these are only provided within the City limits. In addition, few of the services have specific plans for serving the entire study area at this time.

This Comprehensive Plan forecasts a population of 21,200 within the Urban Growth Area by 2013. This equates to a sustained annual population growth rate of 6%; compared to a growth rate between 4 and 5% over the past six years. The proposed Urban Growth Area would add approximately three square miles to the total area within the city limits when all of it has been annexed.

The purpose of this section of the Comprehensive Plan is to:

- Provide a future vision of Public Facilities and Services in Camas and its Urban Growth Area that is concurrent with anticipated growth



**SCHOOLS**

The Camas School District is facing significant growth, but unlike many of the other public facilities and services described in this chapter this is due to growth in the district not the expansion of the city.

**EXISTING SCHOOL DISTRICT**

The Camas School District serves the City of Camas, the area east of Lacamas Lake continuing up to Livingston Mountain and on to Skamania County. The following describes the existing school facilities.

**CAMAS SCHOOL DISTRICT FACILITIES<sup>1</sup>**

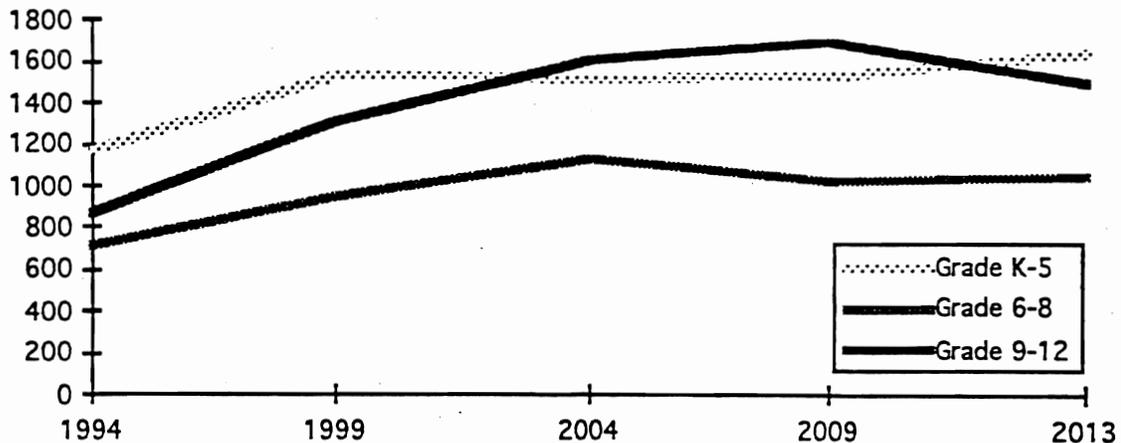
FACILITY	ORIGINAL CONSTRUCTION	BUILDING SQUARE FEET	SITE ACRES	STUDENT CAPACITY	1993-94 ENROLLMENT
Camas High School	1952+	114,102	25.3	950	757
Garfield Center	1937	47,589	2.75	400	NA
JD Zellerbach Middle School	1966	62,757	8.7	570	655
Elementary Schools:					
Hellen Baller	1948	40,728	13.4	509	368
Dorothy Fox	1982	39,436	6.0	493	375
Lacamas	1962	41,685	6.2	521	442
<b>TOTAL</b>		<b>346,297</b>	<b>62.35</b>	<b>3,043</b>	<b>2,597</b>

**FUTURE NEEDS AND ASSUMPTIONS**

Enrollment trends are the result of the baby boomlet affecting schools nationwide. Baby boomers have grown and are in prime childbearing ages of 25-35. The fertility rates are lower than they were in the 1950-60s, but the sheer number of women of childbearing age offsets the lower birth

rates. During the 1980s births in Clark County increased 14% over the 1970s.

Determinants of school enrollment other than the birthrate are population, housing, and employment trends. The following chart shows the anticipated rates of growth for each level of school, based on the general land use plan's population projections.<sup>2</sup>



<sup>1</sup> Study and Survey, Camas School District No. 117, Nov. 1991.

<sup>2</sup> Bond & Levy Information Packet, Feb. 8, 1994; High Growth Enrollment Forecasts

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

CAMAS SCHOOL ENROLLMENT: HISTORICAL AND HIGH GROWTH FORECAST

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
K-5	795	818	850	900	976	1011	1073	1109	1067	1088	1171	1251	1329	1409	1456
6-8	507	466	430	450	483	519	584	615	647	652	714	752	825	880	938
9-12	760	755	774	690	666	650	674	715	698	760	873	1009	1094	1159	1254
Total	2062	2039	2054	2040	2125	2180	2331	2439	2412	2500	2758	3011	3248	3447	3648

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
K-5	1533	1577	1571	1566	1547	1519	1507	1498	1500	1512	1535	1571	1595	1620	1645
6-8	945	988	1033	1106	1147	1136	1128	1117	1093	1070	1031	1003	1012	1034	1056
9-12	1311	1380	1476	1492	1524	1616	1650	1721	1753	1716	1698	1662	1613	1563	1512
Total	3789	3945	4080	4164	4218	4272	4284	4337	4346	4298	4264	4236	4220	4217	4213

One of the most important goals of the Camas School District is to properly house all of its students in safe structures that will fit the educational plans and programs of the district. Based on the study of the facilities and needs of the Camas Schools the following facilities area needed:

- Build a new middle school
- Modernize Lacamas Elementary School
- Modernize and convert present middle school to an elementary school
- Upgrade all other schools

The other method for assessing the district's needs was an Attitude and Awareness Survey done in October 1993. Overall the district was "graded" the highest that any school district in Washington and Oregon that the researchers had seen. However, respondents were uncertain about the overcrowding of the schools and the need for new schools.

**CITY FACILITIES**

This section describes the City's emergency services (Fire and Police), as well as Library and Administrative Services.

**FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES<sup>3</sup>**

The City of Camas was founded in 1845 and has structures ranging from 100 year old historical sites to new construction. The oldest part of the city lies along the lower elevations near the Columbia River and SR 14. Newer construction is taking place on top of Prune Hill, to the west of it in the Business Park, and along Lacamas Lake.

**Existing Fire Department**

Camas Fire Department currently operates a full-service fire department from one location at 313 NE Franklin Street in the downtown core area. The fire station is part of a city hall/police/fire complex constructed in 1967. The fire station portion encompasses a total area of 8,500 square feet.

In addition to the active station, the department acquired two rural volunteer stations through annexation. One is on top of Prune Hill, a two bay metal clad pole building that is currently used for storage. The second, a two bay cinder block building, is still in use by the former fire

<sup>3</sup> Information based on: Camas Fire Department Strategic Plan, Draft Feb. 10, 1994.

district for storage of two of its reserve apparatus. Both of these out stations are about 6-700 square feet and are currently suitable for storage only, lacking any facilities necessary for a staffed station.

Services include fire suppression, public education, inspection, prevention, and code enforcement activities within the City of Camas, covering about 11.3 square miles. An Advanced Life Support transport ambulance is provided to a service district encompassing approximately 100 square miles in southeastern Clark County with a population of approximately 40,000. It includes the Cities of Camas and Washougal, Clark County Fire Districts 1 and 9, and a portion of Fire District 5 along 164th Avenue.

The ambulance service area currently encompasses four density areas: Urban densities occur along the 164th Ave. corridor to the west as well as the core areas of Camas and Washougal. Suburban densities occur within both the Camas and Washougal city limits, and the remainder of the service area falls mostly into the rural density category with a small amount of wilderness area.

Services are provided by a career staff of firefighters and firefighters/paramedics and administrative staff. A group of volunteer personnel provide additional resources for working fire emergencies.

The paramedic personnel cross-trained as firefighters gives Camas a ratio of 2.4 fire capable personnel/1,000 population available when the ambulance is not in use, and 1.3 when it is. In a study of fire and emergency medical services in 12 cities<sup>4</sup> firefighters per 1,000 population ranged from a low of .8 FFs/1,000 to a high of 2.3 FFs/1,000 population.

Emergency fire responses remained fairly stable through most of the 1980s at an average level of about 110 responses per year. Beginning in 1989, service demand

<sup>4</sup> International City Management Association, Feb. 1993.

for fire response began to climb, averaging an 11% increase annually from 1989 through 1992, reaching 161 responses in 1993.

Demand for ambulance services have been increasing at an average rate of 9% annually since 1985 climbing from a response total of 967 in 1985 to 1930 responses in 1993. Significant increases have been experienced by this service as well since 1989, increasing an average of 12% annually since then, with a major one year increase in excess of 20% between 1992 and 1993. The corridor along 164th Avenue to the west of Camas is rapidly urbanizing and is at the limit of the 8:59 minute response time required by the County. This area experienced a one year increase in medical responses of 73% between 1992 and 1993. As this area continues to urbanize and generate increased numbers of medical responses, meeting the time standard to this area will become increasingly difficult from the current station location.

#### *Future Needs and Assumptions*

Emergency medical responses will continue to increase at a rate between 8 and 15% annually through the next 10 years. Fire incident responses will continue to increase at a rate between 4 and 6% annually through the next 10 years.

The increase in valuation and population on and west of Prune Hill will necessitate a west fire station at some point in the future. (\$40 million in residential and industrial construction took place in 1993 alone; \$100 million in the last 4 years.) Residential housing units will continue to be added at a rate of 6% annually over the next 10 years. The Light Industrial Country Tech Park is assumed to develop at an average rate of \$20 million in assessed valuation annually over the next 10 years.

The main fire station facility in downtown is at capacity on a regular basis. Two small volunteer stations acquired through annexation do not have facilities for on-duty staff, although one has some

possibility for use on an interim basis prior to construction of a new west station.

Future office space requirements cannot be met within the existing space. Planning is currently underway for a new, separate police facility at another location, freeing space for expansion of the fire department offices. Movement into this space, coupled with construction of a second fire station should be sufficient to meet fire department needs over the next 20 years. (Existing fire station: 8,500 sq.ft.; Projected need downtown: 11,000 sq.ft.; Existing police station: 4,400 sq.ft.; Space available with police relocation: 12,900 sq.ft.)

The second station should accommodate an eventual total of 6 personnel on-shift. This level is a 20 year, build-out projection. This station should be planned for operation of an ambulance and a fire company to serve the western top of Prune Hill as well as the area west of the hill, including the High Technology park. A west station of about 6,500 square feet will be required to meet eventual needs, and includes a meeting/training room that might be made available to the public for meeting space. Another option is additional space for use by police officers in the western areas of the city. Based on projected growth, the west station will need to be in service sometime between 1996 and 1998.

The City currently has property available for use as a fire station on 38th Avenue approximately .25 mile east of the intersection with Parker Street. This property has some area that would be considered wetland and thus not buildable, but does have enough buildable area for a fire station and possibly a small park. This general location will serve well for a future fire station given the planned future expansion of roads in the area.

During the interim period, the annexation acquired Fire District #9 Grass Valley fire station might serve as a temporary fire station for the west area with the addition of some temporary living quarters. This could provide some flexibility to provide service to the area for a relatively small initial

investment and create a transition period in which to finance and construct a permanent station.

An additional long-term need is for a training tower facility. Some work has already been done in planning for a facility. James River Corporation, based on requests from Camas Fire Department, has approved long term use of some of its property on Lady Island for this purpose. It is zoned appropriately and is accessible to other area departments (such as Washougal and Fire Districts 1 and 9) easily via SR 14. Such a facility could be constructed in phases.

The Camas Fire Department was rated Fire Protection Classification (FPC) 4 at its last review. The deficiencies that identified were: lack of an elevated fire stream device; excessive first due response distance in the western Camas area; lack of a fire officer on-duty at all times with each engine company; lack of sufficient firefighters on-duty; lack of a fire hose replacement program; lack of a fire training facility; lack of sufficient regular training; inadequate frequency of regular fire safety inspections. Improving this rating to FPC 3 would result in a decrease in commercial fire insurance rates of about 6%.

The community is not inclined to require built-in fire protection systems in excess of building and fire code requirements except in unusual circumstances as a trade off for other requirements.

*Standards*

- 1.3 firefighters per 1,000 population
- 1.5 miles or less from a fire station (Insurance grading parameters); 2 miles from residential properties, 1.5 miles from commercial properties, 1 mile from properties requiring over 5,000 gmp fire flow (NFPA Standard).
- Approximately \$300 million in valuation in the area identified for a new fire station, as an indicator of need and tax base to support it

- Emergency response time of 6 minutes from dispatch to arrival
- Advanced Life Support Medical Services response times (59 seconds less than set by County ordinance):
  - Urban Density* (2,000+ pop./sq. mi.): 8 minutes 90% of the time
  - Suburban Density* (1,000-2,000 pop./sq. mi.): 12 minutes
  - Rural Density* (1-1,000 pop./sq. mi.): 20 minutes
  - Wilderness Areas* (<1 persons/sq. mi.): 60 minutes

**POLICE PROTECTION<sup>5</sup>**

The City of Camas is having to cope with the current and future effects of substantial population growth. The ability to effectively execute police responsibilities rests with the resources allocated to maintain a level of service expected by the citizenry. This plan creates a vision to guide the growth of the Camas Police Department to meet the needs of the growing community. Through that growth there has been the expectation that existing citizenry would not suffer from lack of police services because of increased population and territory.

**Existing Police Department**

Camas Police Department currently operates a full-service police department from one location at 313 NE Franklin Street in the downtown core area. The police station is part of a city hall/police/fire complex constructed in 1967. The police station portion encompasses a total area of 4,400 square feet.

Camas currently has a ratio of 1.8 officers per 1,000 population. There are 16 patrol officers, 1 vice/narcotics officer, 4 detectives, 3 sergeants, 1 investigations sergeant, 2 lieutenants, 1 parking

<sup>5</sup> Information based on: Police Dept. 1993 Annual Report, Feb. 8, 1994; City of Camas Master Facilities Plan, 1991.

enforcement officer, 2 community service personnel, and 1 animal control person.

*Future Needs and Assumptions*

The formula of officers per thousand population is a conservative measure to determine level of service. There are some risks in using this method of assessment. The basic premise is that increased population requires increased service. The ratio formula does not allow for citizen requests in annexed area with scattered population. It does not allow for required patrol in those areas that takes officers away from more populated areas.

The department does have a responsibility to provide municipal police services to new citizens. A substantial attraction for residents seeking annexation is increased service expectations. Currently, a normal, uninterrupted patrol route, covering the outlying areas, takes an officer about 30 minutes from the west city limits to the east limit. Geographically, requests for police service are unpredictable.

The Camas Police Department will insure that additional officers are dedicated to patrol. This department will not form specialized units, though many other police departments do form them. Individuals will be trained in specialties in order to conduct initial assessments, but systems will not be designed that create divisions requiring staffing which degrades the ability to provide basic police functions. The way to insure access to specialized expertise is to form partnerships with the larger agencies with existing specialty teams.

The police station facility in downtown is at capacity on a regular basis. Future office space requirements of 12,000 sq.ft. cannot be met within the current space or building. Planning is currently underway for a new, separate police facility at another location; a site on NE Third Ave. east of Crown Road is under consideration. Movement into this facility, coupled with the possible construction of a second police station (jointly with the fire department) should be

sufficient to meet police department needs over the next 20 years. The second station should serve the top of Prune Hill as well as the area west of the hill, including the High Technology park.

#### Standards

- 1.8 police per 1,000 population

#### LIBRARY<sup>6</sup>

The City of Camas has maintained a municipal library since 1929. Library service has traditionally been a top priority for the citizens of Camas. With the expansion of the city, anticipated growth, and many demands on the budget, the city is currently reviewing the system demands.

#### Existing Library

In the early 1970s when the Fort Vancouver Regional Library (FVRL, a junior taxing district serving Clark, Skamania, and Klickitat Counties) was formed, Camas chose to maintain its independence from the library district.

Currently, the Camas Public Library serves the citizens of Camas and the surrounding area. In 1982, the library's Community Planning Committee defined the library's service area as "the Camas and Washougal school districts," an area with a current total population estimated by the two school superintendents to be about 20,000 people. Due to long-standing policies of reciprocity and cooperation, no non-resident fees are charged by either Camas Public Library or FVRL.

Each year Camas stands at or near the top of the list for per capita spending for library service by Washington cities. The city's excellent and continuously growing tax base has made it possible for Camas to fund its library at this high level while at the same time reducing the actual proportion of General Fund monies being spent for library service. (For example, in 1980, the

<sup>6</sup> Information based on: City of Camas Master Facilities Plan, 1991; Camas Public Library memo, dated February 28, 1994..

library's budget cost 75¢ per thousand dollars of assessed valuation; the 1994 budget requires only 55¢ per thousand dollars from the city's general fund.)

The library maintains a collection of about 40,000 volumes, or about 5 volumes per capita. Annual materials expenditures are about \$10 per capita. Circulation of materials has approximately doubled in the past ten years. Total circulation for 1993 was 145,615 an 18% increase over the previous year. Approximately half of the library's annual circulation goes to persons who live outside the Camas city limits.

In 1992, in cooperation with FVRL and Clark College, the Camas Library installed an automated circulation system and catalog that links the collections and patron databases of all the participating libraries. Camas paid for its share of the automated system from general fund reserves.

The Camas Library currently operates from one location across from city hall on Franklin Street in the downtown core area. The library shares the building with the courts and the historical museum, in the old city hall structure built in 1940, and remodeled in 1975 to accommodate library expansion. The library portion occupies a total area of 8,750 square feet on the primarily first floor.

#### *Future Needs and Assumptions*

The library intends to continue to expand the links with the participating libraries. Future enhancements to this system will include availability of full text periodical databases and an Internet connection. The cost of participation in future enhancements to the system will become an issue for consideration.

The library is at capacity for patron seating, collection storage, and staff work space. Remodeling may be able to accommodate some of the libraries needs followed by a second phase expansion. This will probably accommodate the library's needs for the next 20 years. However, as the city expands to the west, the library may

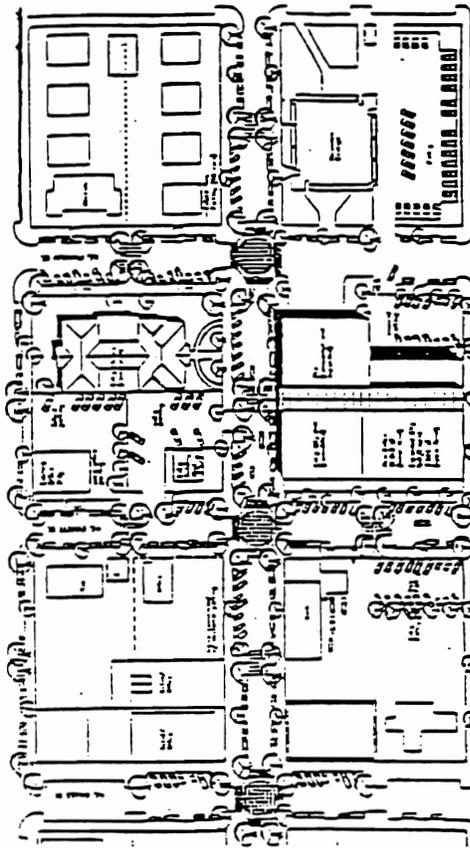
consider a small secondary facility in a commercial district to serve that area's population.

Camas officials have several options for providing library service as the city grows. They may choose to maintain an independent municipal library and to fund the library at a level that provides the collection, staff, and facilities to continue to serve outlying areas as well as the citizens of Camas. Alternatively, they may decide to institute non-resident fees as a way of limiting use of the library and deferring for a time the need for additional staff and facilities. A third option would be to contact for service with or annex to the Fort Vancouver Regional Library.

The Library Board of Trustees will appoint a Community Planning Committee in March of 1994 to update the library's strategic plan through the year 2000. The Planning Committee is expected to make recommendations to the Board regarding appropriate levels of service for the library as well as the costs and benefits of non-resident fees and library district membership. The Library Board is expected to adopt the planning document, with any revisions they deem appropriate, in December 1994. Their recommendations can be further incorporated at that time.

*Standards*

The American Library Association no longer provides standards.



CITY FACILITIES PLAN

In 1992 the City of Camas conducted a study for its downtown facilities. The following plan diagram and sketch illustrate the preferred option. In planning and designing new and rehabilitated facilities (i.e., library) the objective is the preservation of the historic structures with new facilities complementary to them in terms of siting, scale, and materials

The Library is renovated allowing a more functional circulation system and entry off of 4th Ave. This allows the library a new expansion into the existing east entry courtyard. Library administration and some support areas along with meeting rooms would be moved to the second floor.

A new Police building is proposed. This would allow the Police to be the first phase of construction.

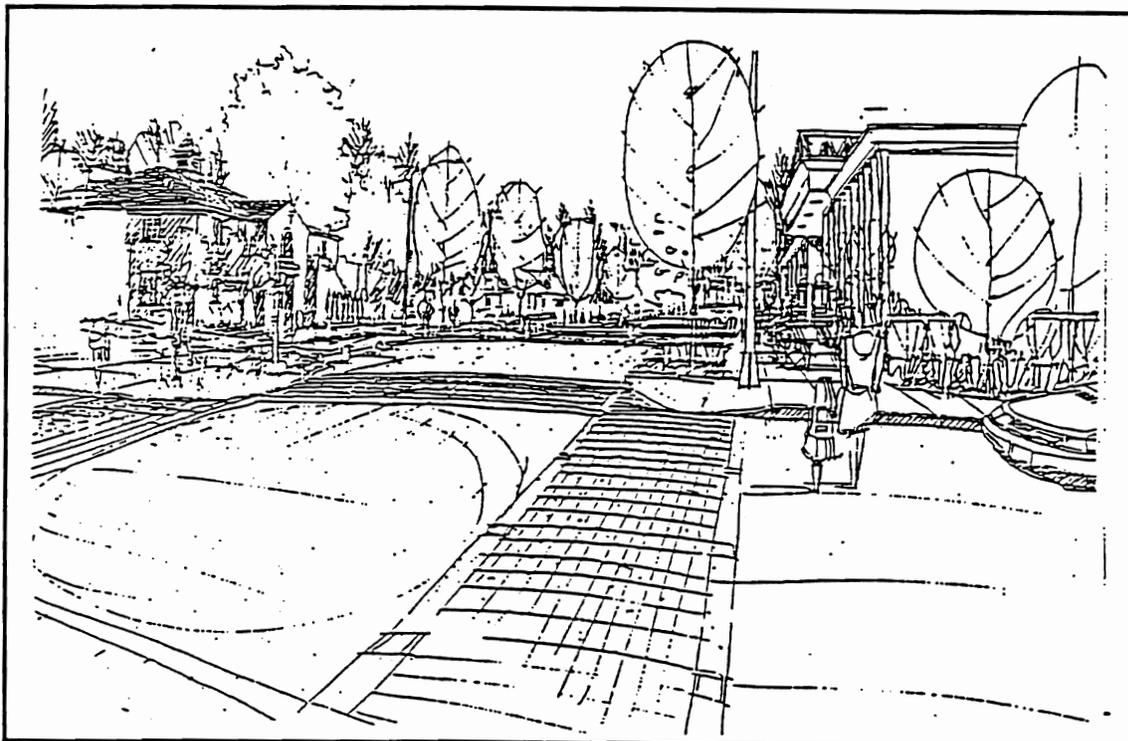
The City Hall expansion above the Police would be built to provide needed space from the program. The fire department

space is remodeled and updated. The downtown mall is extended two blocks east.

Parking remains a major concern in the option and the City will do a detail vehicle survey of users and develop a parking management program.

This preferred option includes the following:

FACILITY	CONSTRUCTION COST	PROJECT COST
Library	\$805,961	\$1,188,267
Police	\$1,310,076	\$1,543,487
Fire	\$622,305	\$755,354
City Hall	\$1,31,902	\$1,594,938
Site work	\$355,911	\$389,854
Total Estimated Cost	\$3,226,155	\$5,471,900
Land Acquisition and Parking		\$478,100
Total Project Cost		\$5,950,000



## CITY UTILITIES

### WATER

The City's water system is described in a report titled *Water System Study Update for the City of Camas, Washington* in 1984 which is in the process of being updated. The report describes the existing water supply and distribution system as well as proposed improvements necessary for serving the land in the north and west portions of the study area that either have been or are proposed for annexation to the city.

#### Description of System

The City of Camas water utility is a Class A water system within the State of Washington, serving approximately 3,000 customers. The system is made up of approximately 43 miles of water mains which are predominantly cast or ductile iron. The city's water source is provided from nine wells, of which three are actively used, and two surface sources, one at Boulder Creek and one at Jones Creek, located approximately seven miles northeast of the city.

In total, the city has water rights for 9,320 gallons per minute. The city currently has just over 6 million gallons in water storage located in seven reservoirs, ranging in size from 100,000 gallons to 2,000,000 gallons. Five service areas are located throughout the city which relate to the various elevations.

#### Surface Water

The surface water sources are used by the City of Camas whenever possible to minimize pumping requirements. The surface source has sufficient static head to flow through the water treatment plant and into the lower Prune Hill Reservoirs. Treatment of surface water consists of coarse screening at the headworks and pressure filtration at the water treatment plant. Soda ash and fluoride are added at

the filter plant for turbidity control and tooth protection, respectively. Chemical characteristics of the surface water make it very desirable for use with high-tech manufacturing facilities. This is predominantly due to the low conductivity and low silica content. The surface water sources are capable of providing approximately 1,000 gallons per minute.

#### Ground Water Wells

Eight of the nine wells pump water from the aquifers that underlie east Camas. Well #9 is in the Fisher Basin area northwest of Camas, but at this point has not been developed. Camas' wells draw water from the upper Troutdale formation and range in depth from 73 feet to 300 feet. Each well is enclosed within a building outfitted with propeller meters, chlorine injectors, and telemetry. The wells are monitored and can be operated through the telemetry system.

#### Level of Service Criteria

In accordance with the Clark County Coordinated Water System Plan Update, dated April, 1991, prepared by the Intergovernmental Resource Center, the City of Camas currently utilizes the following standards and design considerations in developing its system:

#### Design Consideration

The minimum main size shall be 6" in diameter for a loop system and 8" for an unloop system. A 4" diameter line may be allowed under limited exceptions. The minimum main size is established by a hydraulic analysis using the appropriate land use designation to develop both domestic and fire flow requirements.

#### Flow Requirements

Required minimum fire flows are 1,000 gallons per minute for sixty minutes within the urban service area. Systems are hydraulically designed to provide a maximum pressure range of 30 to 100 pounds per square inch (PSI) with a desired range of 40 to 90 PSI. A minimum residual pressure of 20 PSI under peak domestic and fire flow conditions is

required. Minimum fire storage volumes shall be sized to be compatible with fire flow requirements of the Department of Health and the City Fire Chief. Fire flow storage is in addition to equalizing storage.

#### *Construction Criteria*

Valving shall be installed at all crossings and "T's" in a number equaling the number of connecting pipes minus one, except in cases of short blocks under 100 feet, thereby eliminating the need for one of the valves. In addition, un-valved lengths of pipe should not exceed 500 feet in school, commercial, or multi-family areas and 800 feet in residential areas where customers are being served.

Fire hydrants shall be required in all developments. Fire hydrants shall be connected to a 6" minimum diameter main. In general, fire hydrants shall be located at street intersections wherever possible, and shall have a normal spacing of 600' within residential areas and 300' in commercial or industrial areas.

A 3' minimum cover is required from the finished grade to the top of pipe for all transmission and distribution piping. Transmission and distribution water piping shall be separated by at least 10' from on-site disposal piping, drainfields, and/or waste water gravity or force mains. All piping shall be installed in accordance with Washington State Criteria for Sewage Works Design published by the Department of Ecology. All service lines shall be installed so that each is metered. Fire flow lines will be equipped with flow detection check or other appropriate metering devices.

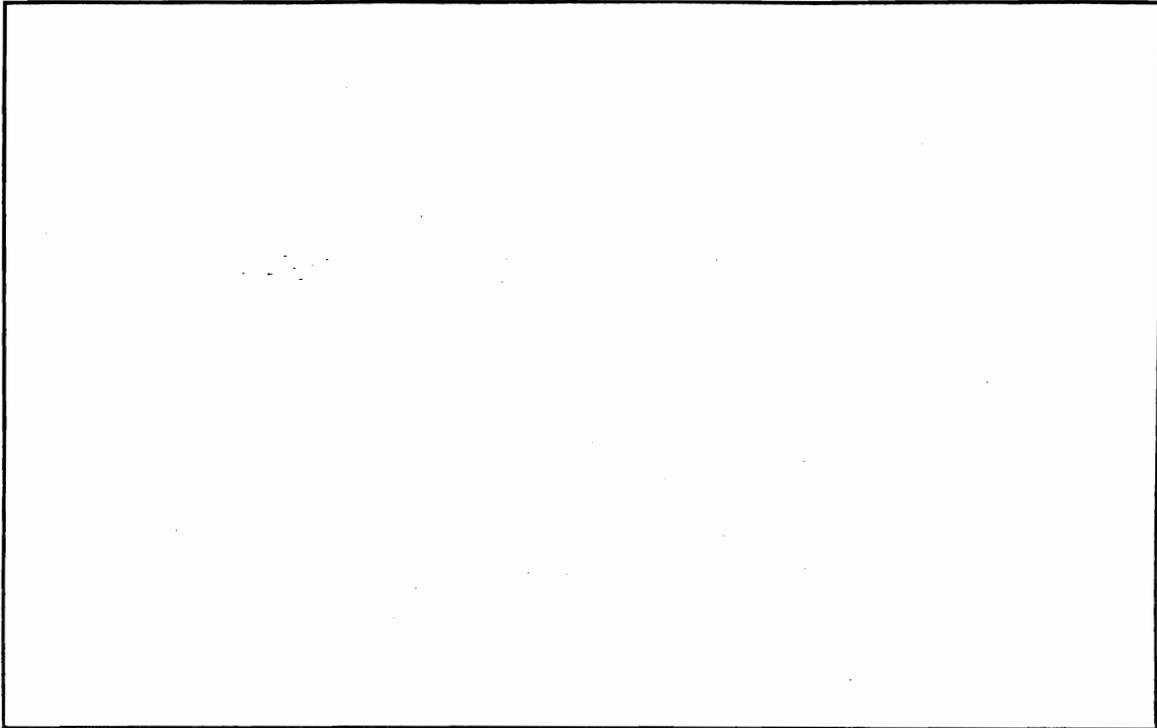
In general, all materials and specifications shall be in conformance with the most current edition of the American Public Works Association (APWA) "Standard Specifications for Road Bridge, and Municipal Public Works Construction", the specifications of the American Water Works Association (AWWA), and the specifications of the specifications of the American Society of Testing and Materials (ASTM). Ductile iron pipe shall conform to the requirements of AWWA C151

specifications. Pipe thickness shall be a minimum of Class 50. All service lines shall be rated in accordance with ASTM designation B88, Type KSoft Copper Tubing. All gate valves shall be manufactured and tested in accordance with AWWA C500 specifications, equipped with mechanical joints or flange ends of Class 125 in accordance with ANSI B16-1. Butterfly valves shall meet all AWWA C504 specifications and shall be Class 150-B with short bodies which are suitable for direct-bury. Fire hydrants shall be dry barrel fire hydrants conforming to AWWA standards for post-type, dry barrel, self-draining hydrants for 36" depth. Each hydrant shall be equipped with a 6" inlet, a minimum valve opening of 5 1/4", two 2 1/2" hose connections, and one 4 1/2" pumper port.

#### *Current Deficiencies/Excess Capacity*

The current water system of Camas meets or exceeds the level of service criteria identified in the aforementioned section with limited exception. Due to the topography of the community, there are limited pockets which periodically have in excess of 100 PSI. Adequate storage and treatment is available to meet the on-going needs of the city. System improvements are scheduled to maintain this current level of service. The city will be undertaking an update of the water system plan commencing in 1994.

The potable water issue was addressed in the recent water facility study completed by the City of Camas, which is included by reference. The study reviewed water facility modifications required to accommodate the next 20 year's growth. All facility requirements and funding sources needed to accomplish the plan were contained in the 20 year Capital Facilities Plan.



*Major Elements of the Plan*

The 1994 plan update will focus on several areas. The following is a tentative list of focus points:

*Water Supply*

An evaluation will be made of the existing supply, considering quantity, quality, and ability to meet current and expected state and federal water quality regulations. A hydrologic study will be conducted within the Fisher Basin to determine the feasibility of supply within the Fisher Basin.

*Water System Model and Evaluation*

A hydraulic computer model of the water system will be conducted. System improvements required to meet demands projected 5, 10 and 20 years into the future will be determined. Areas identified for improvement include piping, pumping, and treatment.

*Capital Improvement Plan*

A Capital Improvement Plan (CIP) will be developed which includes recommended

projects, costs, and schedules for construction.

*Finance*

The City of Camas' water financing is reviewed approximately every three years, most recently in November of 1991. These studies review the water system, the system revenue requirements, projected expenses, and develop water rates using a cost of service analysis as the basic framework. Under this cost of service framework, users are charged their proportionate share of the costs of the utility, where the shares are based on the respective uses of the system. The rate structure of the city is predicated on the concept that each user or user class pays for the services received and neither subsidizes others nor receives a subsidy. This approach results in water rates that are adequate to meet the financial needs of the utility and are equitable for as many users as possible. Revenue requirements are calculated based upon historical trends, anticipated system growth, expected levels of inflation, and planned capital improvements. The reviews further factor in non-rate revenue

(e.g., system development charges and interest income).

#### *Operation and Maintenance Costs*

Operating expenses are evaluated and broken into categories for source of supply, pumping, treatment, transmission and distribution, customer accounts, and administration and general functions. Historically, changes in the O&M costs represent an average annual increase of between 3-5%.

#### *Capital Costs*

Capital costs include debt service payments, coverage requirements, and cash outlays for non-debt funded capital expenditures. Most of the funding for capital costs will come from revenue bonds. Non-debt funded capital improvements and debt service payments on new and existing bonds are typically the largest capital expense items.

#### *Non-Rate Revenue*

Non-rate revenue is comprised of systems development charge, interest earnings, and connection fees. Typically, the systems development charges are used to fund capital improvements. Connection fees are generally directed to the operating fund.

#### *Revenue From Rates*

Revenue generated from water rates support the operation and maintenance expenses of the utility and are on a cost of service basis. Rates consist of a base monthly charge and a volume rate for each customer class. A uniform rate exists for single family and multi-family residential users. Outside city customers pay a 50% surcharge. The rate structure is designed to recover the desired costs of the system under existing general economic conditions, moderate growth in the number of system users, and the proposed capital improvement plan. Historically, water trends for the City of Camas indicated increased consumption in the commercial and industrial user categories with a relatively constant consumption within the residential classes. The total system

revenue requirements consist of total O&M and capital costs with no deduction for non-rate revenue.

Operation and maintenance costs are segregated into the following categories:

- Source and supply
- Pumping
- Treatment
- Transmission distribution
- Customer accounts
- Administration

#### *Non-Local Revenues*

Non-local revenues will rely on state and federal grants and loans. Typical sources for such will be the Department of Community Development, Public Works Trust Fund, Farmers Home Administration Sewer and Waste Development Program and Trade and Economic Community Board Funds. The City of Camas consistently pursues outside funding for construction for infrastructure improvements.

SEWER<sup>7</sup>

## Description of System

The sanitary sewer system within the City of Camas contains approximately fifty miles of mains and laterals. The sanitary system can be divided into three basins. One serves the Fisher Basin area which ranges from the Fisher Swale on the west, Lacamas/Round Lake on the east and north, and Prune Hill to the south. Service within this area is septic tank effluent, gravity, or pump. A second basin exists serving the central business area of Camas and that area northwest of the community up to the summit and along the south flanks of Prune Hill. This system is predominantly conventional gravity sewer. The third basin serves the area of east Camas, typically from Lacamas Creek easterly. The sewer system utilizes seven pump stations to convey waste water to the waste water treatment plant located near the Washougal River's confluence with the Columbia River. Station sizes range between 370-700 gallons per minute, typically, except the main sewage lift station has a discharge capacity of 5,300 gallons per minute. There are two types of systems which convey waste water in the City of Camas. One is the older system, which is predominantly conventional gravity sewer. This sewer relies on maintaining negative grads and removes all waste water and waste products from the various service areas. Typically, these lines are constructed of concrete or PVC. The second type of system serving Camas is known as the septic tank effluent pump (S.T.E.P) or septic tank effluent gravity (S.T.E.G.). The primary difference between this and the conventional gravity sewer system is that it conveys gray water only and retains all solids on site in a subterranean interceptor tank. The tanks require maintenance on a frequency between seven and ten years. The waste removed from the tanks is treated at the

## Camas Water Pollution Control Plant (WPCP).

All waste flows are currently treated at the City of Camas WPCP. The plant is a conventional, activated sludge plant built in 1972 for a designed average flow of 2.33 million gallons per day (mgpd) and a peak flow of 7.0 mgpd. The plant includes a headworks, secondary treatment units, and disinfection. Solids facilities include an aerobic digester and sludge drying beds. The influent waste water is of domestic/commercial and industrial origin. The headworks, which consists of a comminutor, a bypass manual bar screen, and an influent Parshall flume, is the first liquid process that treats the incoming waste water. Plant recycle loads are also returned to the headworks.

Waste water flows by gravity from the headworks into the aeration basin distribution structure. The aeration basin is a complete-mix activated sludge system, operating under the extended aeration mode. Within the single aeration basin, there are four two-speed floating surface aerators in the basin. Mixed liquor flows by gravity from the basins into the secondary clarifier. The secondary clarification process consists of one secondary clarifier. Return activated sludge (RAS) is pumped via the return sludge pump station and introduced at the headworks. There, it is blended with the influent waste water, creating an activated sludge mixture for treatment in the aeration basin. The chlorine contact chamber is an annular channel around the secondary clarifier. Chlorine is added to the front end of the channel prior to final disposal into the receiving waters. Currently, the plant's permit requires effluent biological oxygen demand (BOD) and total suspended solids (TSS) average monthly concentrations of thirty milligrams per liter.

<sup>7</sup> Draft Wastewater Facilities Plan, City of Camas, WA by CH2M HILL; October 1993, expires Nov. 20, 1994.

*Level of Service Criteria*

The sewage disposal system and treatment plant serving the City of Camas is designed and regulated in accordance with the "Criteria For Sewage Works Design Manual" prepared by the State of Washington Department of Ecology. The manual serves as a guide for the design of sewage collection and treatment systems. The manual used by the City of Camas:

- ensures that the design of the sewage collection and treatment systems are consistent with public health and water quality objectives of the State of Washington;
- establishes a basis for the design and review of plans and specifications for sewage treatment works and sewage systems;
- establishes the minimum requirements and limiting factors utilized by the State Department of Ecology and the State Department of Health for review of sewage treatment work and sewage system plans and specifications; and
- assists the city in preparation of plans, specifications, reports and other data.

*Current Deficiencies/Excess Capacity**Collection System*

The City of Camas currently has seven collection system pump stations. All stations have adequate capacity to serve existing flow rates. Pump station capacity expansion will be necessary as the areas tributary to each continue to develop. Pump station expansions are guided by the sewage facilities plan and guided by actual loads and flows entering the respective pump stations.

The existing sewer pipe lines have capacity to convey current flows. Similar to the pump stations, some pipeline will reach capacity as growth within Camas continues. The proposed new pipelines are set forth in the waste water facilities plan, which is updated regularly.

*Water Pollution Control Plan—Capacity Limitations**• Headworks*

The existing headworks at the Camas WPCP consists of a commuter channel, bar screen, bypass bar screen, the influent flow measurement Parshall flume, and the sludge recirculation box. The communter and bypass screen are designed for peak hydraulic flow of seven MGD and the Parshall flume can measure influent flows up to 10 mgd. Based on current 1994 data, peak flows as high as 5.5 mgd have been recorded. Hydraulically, the headworks is still within its design capacity. However, the communter appears to be ineffective in keeping debris from passing through and into the downstream processes.

*• Aeration Basin*

The aerators are capable of treating approximately 3,900 lbs. of B.O.D. per day. The aeration basin was designed to accommodate a design average flow and peak flow of 2.33 and 10 mgd (including recirculation), respectively. Current B.O.D. loadings to the basin are 1,100 lbs/day. There is an excess capacity of 2,800 lbs/day. Based on current system analysis, the mechanical aerators will require upgrading to meet the demands of maximum month flow.

*• Secondary Clarifier*

The clarifier was originally designed for an overflow rate of 527 gal/ft<sup>2</sup> per day, at 2.33 mgd design average flow, and 1,584 gal/ft<sup>2</sup> per day at a peak flow of 7 mgd. The clarifier has a side water depth of ten feet. Based on Department of Ecology criteria for secondary clarifier overflow rates, average rates for design flows should be bracketed within 400 to 600 gal/ft<sup>2</sup> per day. The design solids loading to the clarifier is 15.4 ft<sup>2</sup> per day at 3.3 mgd recirculation flow and 2,450 milligrams per liter MLSS (mixed liquor suspended solids). According to the Department of Ecology design criteria for sewage works, recommended design criteria for secondary clarifiers, average

and peak solids loading rates are 25 and 40 lbs/ft<sup>2</sup> per day, respectively.

*Chlorine Contact Basin*

The annular chlorine channel is designed for a detention time of 60 minutes and an average design flow of 2.33 mgd. The detention time at peak flow of 7 mgd is approximately twenty minutes. These detention times are consistent with current design criteria. An average of approximately 30 lbs. per day of chlorine is injected into the secondary effluent for disinfection. The existing chlorinator has a capacity of 2,000 lbs/day of chlorine. Modifications to the outfall structure are anticipated to improve dilution of chlorine residuals within the mixing zone.

*Major Element of the Plan*

The Camas Wastewater Facilities Plan is a comprehensive analysis of the Camas wastewater system, incorporating proposed improvements to the treatment plant and collection system. The purpose of the Plan is two-fold:

- The Plan is intended to identify and guide future sewerage improvements to the Camas wastewater system.
- The Plan is intended to satisfy State Department of Ecology requirements for a General Sewer Plan.

CH2M HILL designed the Camas Water Pollution Control Plant (WPCP) in the early 1970s. Relatively minor modifications have been incorporated since then. CH2M HILL also completed a Wastewater Facilities Plan in 1977. Numerous expansions and improvements to the collection system have been accomplished since then. Several reports have subsequently been written about various components of the system, but none are as comprehensive as the scope of work for this Facilities Plan.

CH2MHILL completed the Evaluation of sewer System Alternatives in April 1993 for the City as the first step toward development of a Facilities Plan. The

Evaluation analyzed alternatives for sewer service to unsewered areas of Camas, including septic tank effluent systems, conventional gravity sewers, and a combination. The recommendation, adopted by the City, is to use a combination.

Work for the Wastewater Facilities Plan was conducted as a series of technical memorandums. The technical memorandums have been assembled to form the content of the Facilities Plan. Following is a summary of each technical memorandum.

*Population, Flow, and Loadings Projections*

Population, flow and loadings projections for Camas were updated from the information presented in the April 1993 "Evaluation of Sewer System Alternatives" report. Population projections were distributed geographically for the purpose of locating and sizing proposed sewer lines. A 50-year projection to the year 2043 was used to size the sewers. A 20-year projection to the year 2015 was used to size proposed WPCP improvements. Current and projected populations within the Camas WPCP ultimate service area are:

YEAR	POPULATION
Current	7,656
2015	23,548
2043	45,000

*Collection System Improvements*

The "Evaluation of Sewer System Alternatives" report recommended that a combination of septic tank effluent (STE) and conventional gravity systems be implemented in unsewered areas where each is determined to be most appropriate. The report showed locations for the proposed pipelines and pump stations but did not propose sizes. This technical memorandum determines proposed pump station and pipeline sizes and evaluates existing pump station and pipeline capacities and reliabilities.

Conventional gravity sewers, STE pressure sewers, STE gravity sewers, pump stations, and force mains are proposed for the unsewered areas. Improvements to the existing system include pump station upgrades/repairs and parallel or replacement pipelines. An implementation schedule is included for the years through 1996, 1997 through 2000, 2001 through 2005, 2006 through 2015, and 2016 through 2043.

#### *Outfall Dilution and Water Quality Compliance Evaluation*

A computer modeling analysis of the outfall from the Camas WPCP was conducted to determine compliance with water quality standards. The 36-inch diameter outfall extends approximately 850 feet into the Columbia river. Its 150-foot long diffuser includes 16 6-inch diameter port risers on 10-foot centers. The ports are oriented to discharge downstream with the river current.

The minimum dilution required for residual chlorine at the acute criteria zone boundary in the river is not achieved under most current and projected conditions. Several potential solutions were evaluated including eliminating chlorine as the disinfection method at the WPCP. The most appropriate solution appears to be a reorientation of the outfall ports to discharge upward instead of with the current to achieve better mixing. For this solution to work, WPCP effluent residual chlorine concentration must be no greater than 1.045 mg/l.

#### *Infiltration/Inflow Analysis*

The infiltration/inflow (I/I) analysis is conducted to determine the amount of I/I that is cost effective to remove from the sewer system through rehabilitation. The I/I analysis relied on results of the 1979 I/I analysis and sewer system evaluation survey; subsequent rehabilitation efforts, and current flow recordings. Projected treatment costs were compared with costs for rehabilitation, and it was concluded that it will be less costly to treat existing I/I than

to enact a rehabilitation program to remove it.

All technical memorandums in this Facilities Plan assume that the current I/I situation will continue and not worsen. Because sewer systems deteriorate with age, a continuous maintenance/rehabilitation program will be necessary to ensure that I/I remains non-excessive. The City should conduct a smoke testing program as soon as possible to assess the extent to system problems. Based on the results, additional steps toward maintenance and rehabilitation should be conducted as appropriate.

#### *Treatment Plant Weak Links*

The weak links technical memorandum analyzed the existing WPCP to determine capacity and expected life of the process components. Preliminary and secondary treatment and disinfection alternatives were evaluated. Activated sludge alternatives to incorporate into the existing system were mechanical and diffused aeration.

Proposed improvements are scheduled to be implemented in two phases, between years 1995 and 1998 and years 2003 and 2005. Recommended improvements for the near term include a new headworks to provide a better screening of influent and for grit removal, replacement of existing aeration basin aerators with a diffused air system, a new secondary clarifier, a new chlorine contact basin, and outfall diffuser modifications outlined in Technical Memorandum Number 3. The recommended improvement for the second phase is the addition of a new aeration basin.

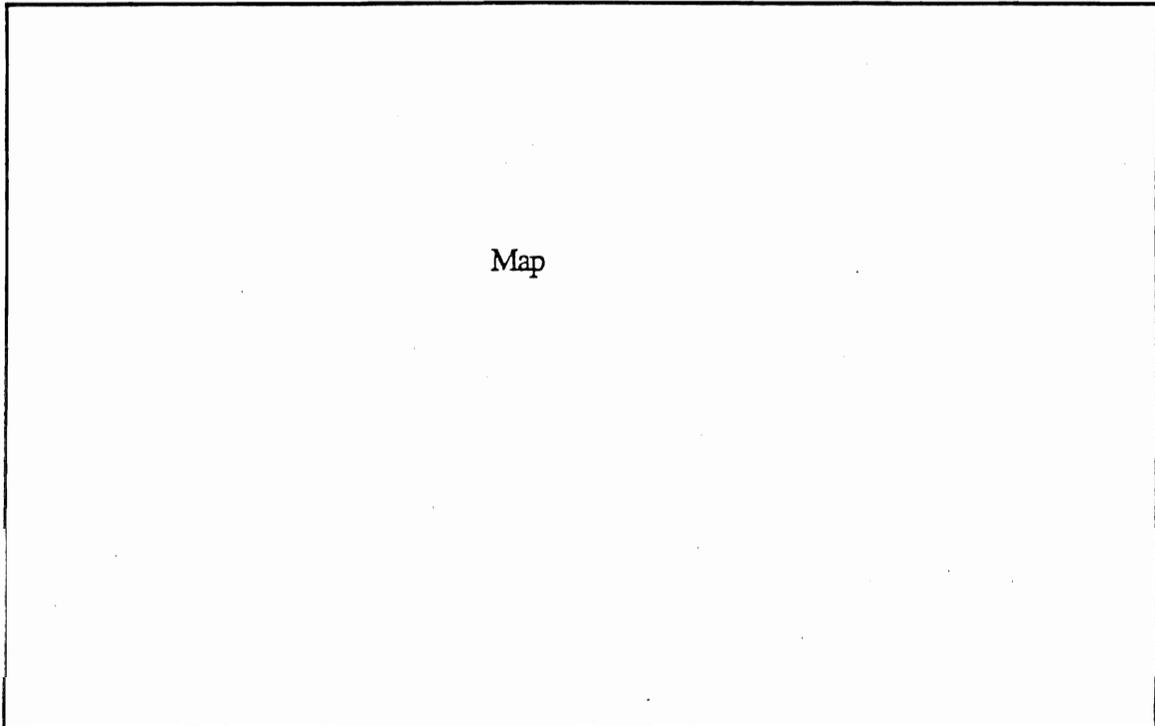
#### *Sludge Disposal Options*

This technical memorandum addresses solids treatment, handling, and disposal options for the WPCP. It is assumed that the new headworks proposed in Technical Memorandum Number 5 will effectively screen undesirable material, such as plastics, from the solids process.

Stabilization alternatives include aerobic and anaerobic digestion, autothermal thermophilic aerobic digestion (ATAD), and lime stabilization. A thickening facility (gravity belt thickener) is required for each alternative. Storage alternatives are unconfined storage with a bulking agent, tank storage, and lagoon storage. Disposal

alternatives are incineration, landfills, and application to land for beneficial reuse.

Based on regulations, practicality, and cost, the recommended sludge handling option is anaerobic digestion, with storage in a lagoon, and application to land for beneficial reuse. All recommended facilities should be constructed as soon as possible to comply with EPA regulations.



*Financing*

The City of Camas' sewer rates are reviewed approximately every three years, most recently in November of 1991. These studies review the sewer system, the system revenue requirements, projected expenses, and develop sewer rates using a cost of service analysis as the basic framework. Under this cost of service framework, users are charged their proportionate share of the costs of the utility, where the shares are based on the respective uses of the system. The rate structure of the city is predicated on the concept that each user or user class pays for the services received and neither subsidizes others nor receives a subsidy. This approach results in sewer rates that are adequate to meet the financial needs of the utility and are equitable for as many users as possible. Revenue requirements are calculated based upon historical trends, anticipated system growth, expected levels of inflation, and planned capital improvements. The reviews further factor in non-rate revenue (e.g., system development charges and interest income).

*Operation and Maintenance Costs*

Operating expenses are evaluated and broken into categories for pumping, treatment, collection, customer accounts, and administration and general functions. Historically, changes in the O&M costs represent an average annual increase of between 3-5%.

*Capital Costs*

Capital costs include debt service payments, coverage requirements, and cash outlays for non-debt funded capital expenditures. Most of the funding for capital costs will come from revenue bonds. Non-debt funded capital improvements and debt service payments on new and existing bonds are typically the largest capital expense items.

*.c5 Non-Rate Revenue*

Non-rate revenue is comprised of systems development charge, interest earnings, and connection fees. Typically, the systems development charges are used to fund capital improvements. Connection fees are generally directed to the operating fund.

*Revenue From Rates*

Revenue generated from sewer rates support the operation and maintenance expenses of the utility and are on a cost of service basis. A uniform rate exists for single family and multi-family residential users. Outside city customers pay a 50% surcharge. The rate structure is designed to recover the costs of the system under existing general economic conditions, moderate growth in the number of system users, and the proposed capital improvement plan. The total system revenue requirements consist of total O&M and capital costs with no deduction for non-rate revenue. Operation and maintenance costs are segregated into the following categories:

- Collection
- Pumping
- Treatment & disposal
- Customer accounts
- Administration and general services
- Taxes

*Non-Local Revenues*

Non-local revenues will rely on state and federal grants and loans. Typical sources for such will be the Department of Community Development, Public Works Trust Fund, Farmers Home Administration Sewer and Waste Development Program, and Trade and Economic Community Board Funds.

POLICIES FOR WATER AND SEWER

Work in urban areas to: eliminate private water and sewer/septic systems; encourage connection to public water and sewer systems; prohibit construction of new private wells and subsurface sewage disposal systems.

Within Urban Growth Areas, cities and towns should be the providers of urban services. Cities and towns should not extend utilities without annexation or commitments for annexation. Exceptions may be made in cases where human health is threatened. In areas where utilities presently extend beyond city or town limits, but are within Urban Growth Areas, the city or town and the County should jointly plan for the development, with the County adopting development regulations which are consistent with the city or town standards.

Plans for providing public utility services shall be coordinated with plans for designation of urban growth areas, rural uses, and for the transition of undeveloped land to urban uses.

Public utility services shall be planned so that service provision maximizes efficiency and cost effectiveness and ensures concurrency.

The County, municipalities and special districts shall, to the greatest extent possible, agree upon present and future service provision within the urban area.

Public sanitary sewer service will be permitted only within urban areas, and should be extended throughout urban areas, except to serve areas where imminent health hazards exist.

Adequate public water service should be extended throughout urban areas. (An "adequate" public water system is one that meets Washington State requirements and provides minimum fire flow as required by the Fire Marshal.)

In areas where utilities presently extend beyond city or town limits, but are within Urban Growth Areas, the city or town and the County should jointly plan for the development, with the County adopting development regulations which are consistent with the city or town standards. Areas that are within Urban Growth or Urban Reserve Areas which will be annexed and are provided utilities, the utilities should meet the standards of the city that they will be annexed to.

STORM WATER DRAINAGE<sup>8</sup>

The City will utilize the Puget Sound manual for the disposal of storm water generated by any development. The City has also completed the Fisher Basin Storm Water study to address disposal of water in the northern part of Camas.

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<sup>8</sup> Draft Wastewater Facilities Plan, City of Camas, WA by CF2MHILL; October 1993, expires Nov. 20, 1994.

## UTILITIES

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One of the evaluation criteria used in defining the Urban Growth Area was that urban services would be available concurrent with all development. These services include all utilities which are privately and publicly provided. This section addresses the privately provided utilities.

The Growth Management Act requires all comprehensive plans to include an element describing existing and proposed utilities, including electrical lines, telecommunication lines and natural gas lines. For the City of Camas, these are provided by Clark Public Utilities, Northwest Natural Gas and General Telephone of the Northwest (GTE), all regulated by the Washington Utilities and Transportation Commission (WUTC).

Utility providers have typically worked with the City in their primary responsibility to serve their customers. However, with Growth Management and defined Urban Growth Areas and more intense urban development, it becomes increasingly

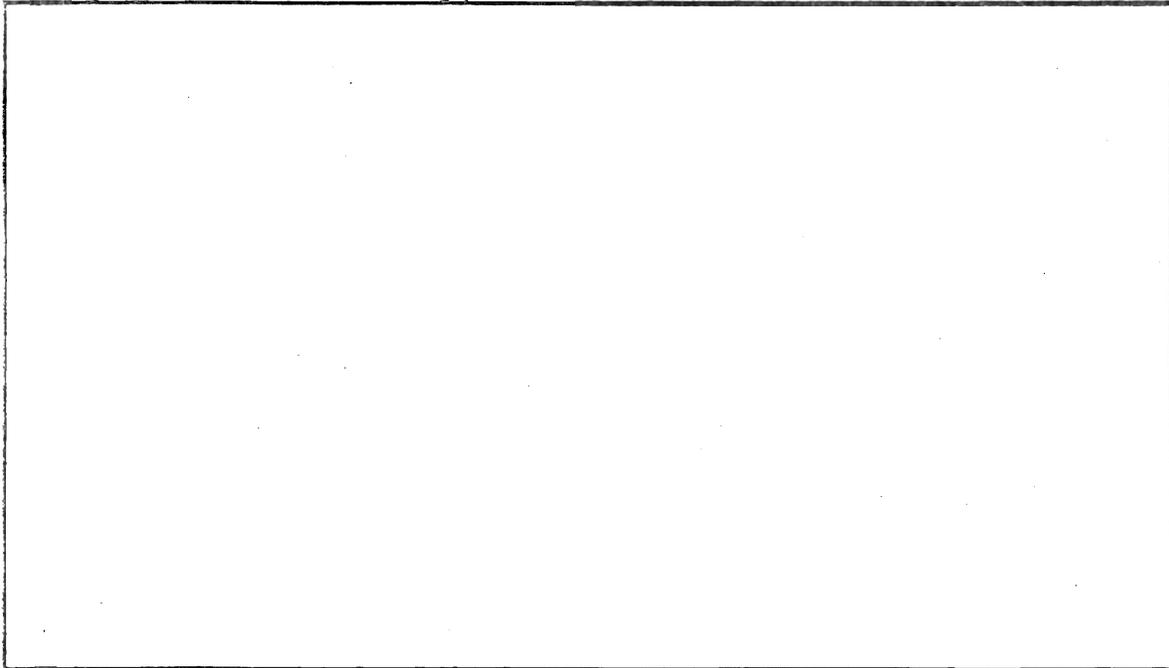
important that these efforts be better coordinated. Although each utility has the responsibility to plan to provide this service it is becoming increasingly important to the quality of the environment that the siting of facilities, provision of logical corridors and their related community and visual relationships be improved. Likewise, programs encouraging the conservation of energy resources require increased coordination and cooperation.

### EXISTING CONDITIONS AND FUTURE NEEDS

This section summarizes general information pertaining to the existing utilities in the City. It does not inventory the capacity of the existing system since that information is unavailable.

#### Electrical

The Clark Public Utility indicates there is ample capacity to meet existing demand for both the incorporated City limits as well as the Urban Growth Area. The following map illustrates existing and proposed facilities as well as the main Bonneville Power Administration (BPA) transmission line corridors through and within the City.



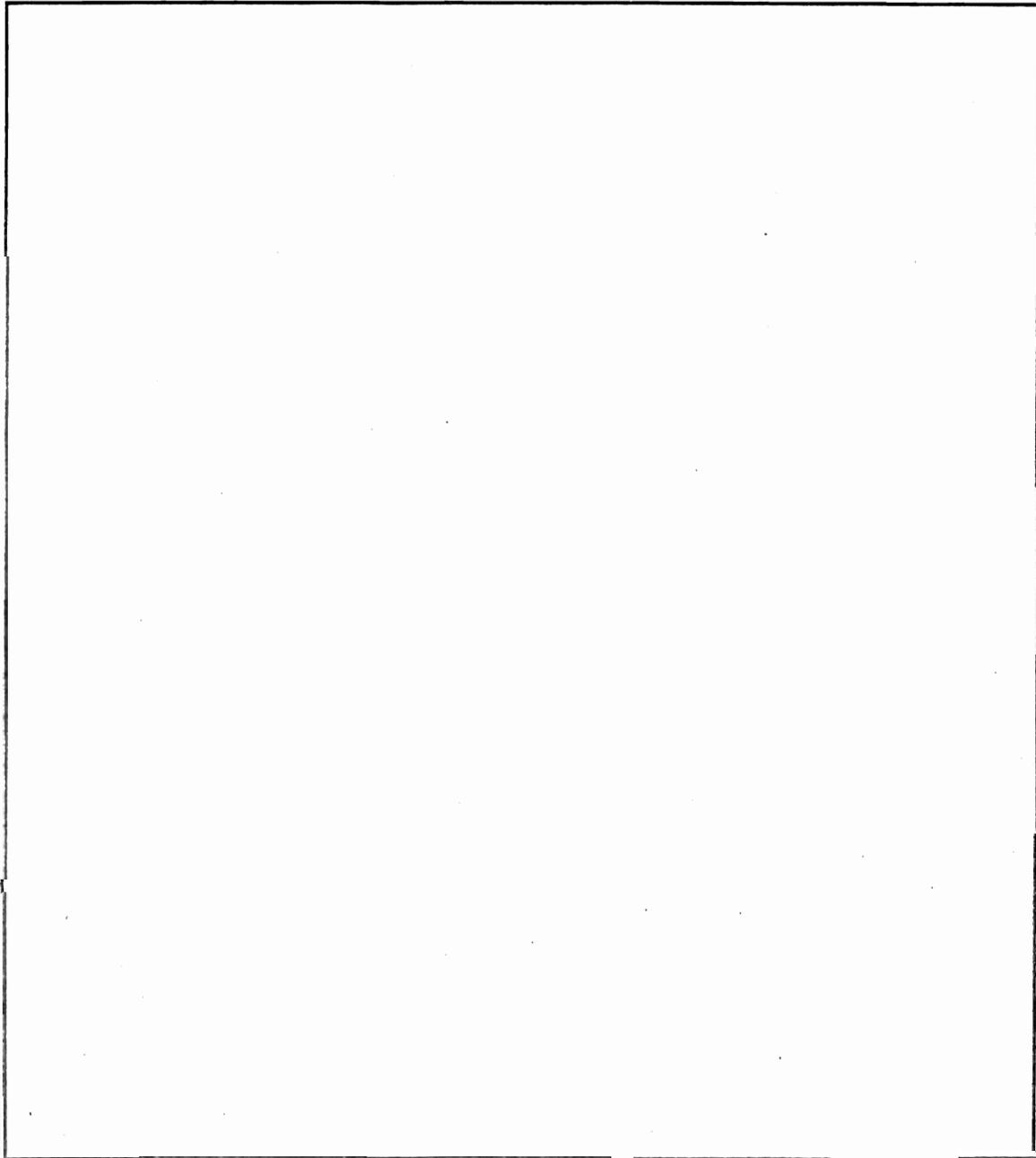
*Natural Gas*

Delivery of natural gas to Camas and its Urban Growth Area is provided by Northwest Natural Gas. The delivery of natural gas is governed by the Federal Energy Regulatory Commission, the National Office of Pipeline Safety, the Washington Utilities and Transportation Commission (WUTC), and the City of Camas' regulations include safety and

emergency provisions, level of service standards, and rate limitations.

Natural gas service to Clark County is provided by the Northwest Pipeline Corporation pipeline. The main Northwest Pipeline Corporation pipeline alignment crosses the Columbia River at the Camas-Washougal Port area.

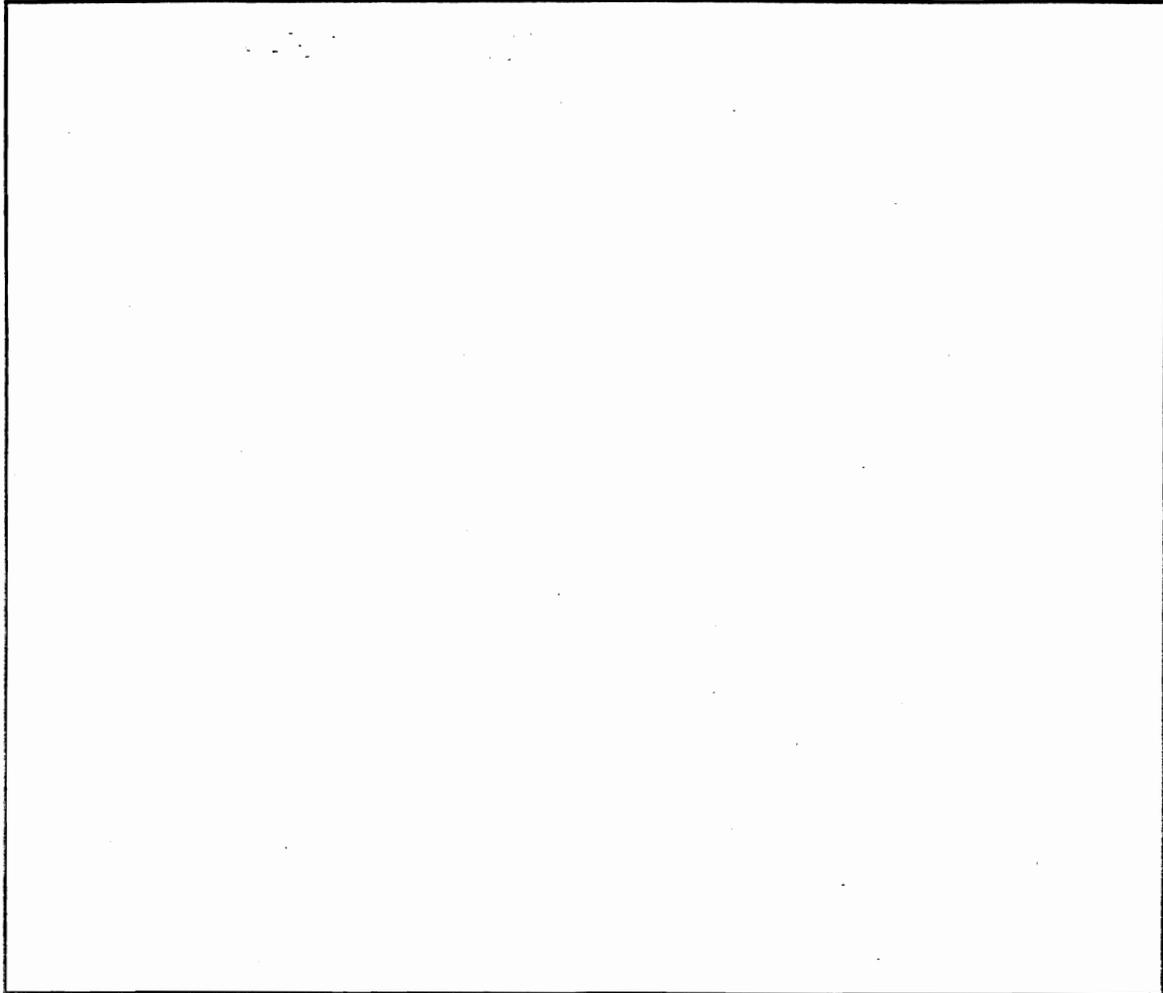
The following map illustrates major existing and proposed facilities in the City of Camas and its Urban Growth Area.



*Telecommunications*

General Telephone of the Northwest (GTE) provides local telephone service to the City of Camas and its Urban Growth Area.

Many of the telecommunication facilities, including aerial and underground, are co-located with those of the electrical power provider. GTE currently has a fiber optic line located in this area.



**SUMMARY**

The proposed location and capacity of future utilities is not specifically addressed in this section because the location, capacity and timing of utility improvements depend greatly on opportunities for expansion, specific locations and the rate of growth of the City. In general, the siting and expansion of service will be coordinated with the development phases of the City.

In general, it is the goal of the City to ensure that energy and communication facilities and their services are available to support future development when they are needed. The City will work with each utility in the permit approval process to assure timely development. The siting, development, operation and maintenance of these facilities should be done to minimize effects on adjacent properties, the environment and the visual quality of the community. The City will also encourage conservation of energy resources through adoption of appropriate energy codes and efficient land use patterns and transportation systems.

IX. CAPITAL FACILITIES PLAN ELEMENT

## IX. CAPITAL FACILITIES PLAN ELEMENT

This section summarizes the City of Camas Capital Facilities Plan for the following categories: General (i.e. City Departments); Capitalized Equipment (i.e. Fire Trucks); Streets; Water; Sewer; Fisher Basin Storm Drainage Area; and Parks and Open Space. A second section deals with the Camas School District. In each of the chapters of the plan discussing each of these items we have typically identified facilities needed to accommodate the projected twenty year growth, general available funding sources, and standards/level of service and concurrency. This information has been derived from various studies and plans prepared to address the specific items covered by the overall capital facilities plan. More information on the specific studies and plans is listed in the Structure and Definition section of this element.

One of the initial steps following the passage of the Growth Management Act that the City did was to adopt a Capital Facilities Plan (CFP), which was incorporated into the City's Comprehensive Plan. The adoption of a Capital Facilities Plan enabled the City to assess and collect impact fees for new development, which had not been permitted under Washington State law. However, beyond the ability to now charge impact fees, the Capital Facilities Plan was needed to plan and budget the facilities and services that are required by the residents and businesses of the City of Camas. Presently the City of Camas is responsible for providing facilities and services which include police and fire protection, paramedic service, water and sewer service, streets, parks, library and solid waste collection. It is imperative that a realistic CFP be formulated, adopted and reviewed to ensure the acquisition, maintenance and construction of the capital facilities needed to sustain the residents, businesses and industries at an acceptable level of service, while protecting the health, welfare and safety of the community as a whole.

A key point to remember is that planning what is needed is itself only the beginning of the CFP. Planning how to pay for these facilities is another large step. Only so much can and will be afforded and it is very important for the City to get the most out of the dollars available. Financial planning and implementation of capital facilities cannot be effectively carried out on an annual basis, since their financing requires multi-year commitments of fiscal resources. Thus the CFP becomes a long term planning and budgeting tool. If the funding for new capital improvement falls short of the assumed levels in this element, the City will reassess the land use to bring the plan and its required funding into balance.

This Capital Facilities Plan was the product of several months of input, review and discussions involving the general public, CFP Committee, Planning Commission, City Council, School District and staff. The initial process to finalize and adopt the CFP was more detailed than what might be expected for the annual reviews which will follow. Annual reviews will begin at the first of every year and be concluded in time for the preliminary budget proceedings. It will continue to be the goal of the City to involve the citizens and businesses of this community to ensure the capital facilities required to sustain the existing quality of life are provided.

### STRUCTURE AND DEFINITIONS

For the purpose of this chapter a capital item shall be defined as follows:

An individual item or project which is expected to have a life span of three or more years and a cost of \$30,000 or more. Some selected items which do not meet this definition may be included in the plan to facilitate policy decisions or revenue identification.

The projects identified for inclusion in the CFP will be categorized into one of the seven following areas:

*General* This section will deal primarily with facilities required to house the various departments of the City. Any new building construction, remodels, expansions, etc. would fall into this category.

*Capitalized Equipment* This section will encompass major purchases such as fire trucks, garbage trucks, street maintenance equipment, etc. It may also include computer hardware and software needed to facilitate various city services.

*Streets* This category would cover the construction and/or maintenance of the City's streets. A key element for this section is the City's 6-year Street Plan. The information contained in the 6-year Street Plan correlates directly with the projects listed in the CFP. The 6-year Street Plan is mandated by Washington State law and is updated annually, as will the CFP. In addition to the 6-year Street Plan, the City has also performed an area-wide modeling of the transportation facilities. This model was based on projected land use and population projections for 20 years and was designed to determine future needs. Storm drainage projects will also be addressed under the Street section, because the two usually take place simultaneously.

*Water* This section will detail the capital improvements required to upgrade and maintain the City's water system. The condition of the existing system and proposed improvements are listed in the February 1984 Water System Study Update for the City of Camas.

*Sewer* This section will detail the capital improvements required to upgrade and maintain the City's sewer system. The condition of the existing system and proposed improvements are listed in the Wastewater Facilities Plan currently being completed.

*Fisher Basin Storm Drainage Area* This is a special section that deals primarily with the Fisher Basin Storm Drainage Study. Implementing the recommendations outlined in the study will be funded by contributions made to the Fisher Basin Storm Drainage Utility account.

*Parks and Open Space* This section will provide for the acquisition and development of park and open space land as outlined by the City's Comprehensive Park Plan as adopted in March 1987 and subsequent updates in 1991 and this plan. The City has made substantial capital outlays to this point to secure park and open space land, so the inclusion of Parks and Open Space in the CFP will only solidify the City's commitment to park and open space development. A new element related to trails and bikeways is included in this document and will be updated as required.

*Schools* The section was prepared by the Camas School District. It was developed in conjunction with the policies of the County Community Framework Plan, including the Urban Reserve policies and Rural area policies, where applicable, and the City of Camas land use policies, population allocations and projected densities.

## FINANCING OF CAPITAL FACILITIES

Financing a capital facilities plan is a complex issue. Anticipating the availability of financial resources to fund projects in the future cannot be accomplished with any degree of certainty. Nonetheless, an analysis of what resources appear to be available for such long term purposes is needed since most of the projects listed would be considered long term and will have a significant impact on future resources. Without a long term view of both resources and needs, imprudent decisions would be made on both ends of the spectrum. However, as desirable as such a long range view may be to the present decisions, it must be remembered that any such view is inherently speculative

and must be continually reviewed to be of any value. This section will provide the "best guess" as to how the long range capital needs of the City of Camas might be financed. Its purpose is to provide information for more detailed budgetary decisions and not to prescribe a specific course of action.

It is anticipated the City will utilize the following methods to finance the projects listed in the CFP:

*General Fund:* The funds obtained from this source would be taken from the general fund account, which is derived from the general tax base of the city. Over-committing this fund may cause shortages for other needed facilities or raise taxes for the citizens of the community.

*Grant Funds:* There are a number of grant and loan programs available on a Federal and State level. These programs can fluctuate substantially from year to year and should be viewed as an added bonus if secured, but not as the sole funding source.

*Developer Funds:* The use of developer funds in either the form of cash contributions or constructed improvements is a major portion of the CFP. The City of Camas has developed and adopted impact fees for open space, parks, schools and transportation. The impact fees have been developed to ensure the developer is only being assessed for their fair share of the growth. The City will also continue to use the LID, UID and SEPA process when applicable and appropriate.

*Fisher Basin Utility Fund:* This is a special fund, which has been established to fund for the completion of the improvements specified in the Fisher Basin Storm Drainage Study. This fee is collected on a per acre basis for the particular type of development being proposed.

*Water and Sewer Funds:* These revenues will be used to fund those projects falling under the water and sewer designations.

*Revenue Bonds:* When deemed necessary, the City will bond for the funds required to construct or purchase certain large ticket items. It is anticipated the use of bonds will be kept to the required minimum.

*Other:* Under many circumstances a project may be financed with a combination of the previous funding methods. The type of funding utilized will be described more fully on the project description list and also during the annual budgetary process.

The funding source(s) assigned to projects is in most cases fairly straight forward. However, there were several projects which could easily use several of the funding sources. Therefore, the funding source assigned to those projects should be considered tentative and reevaluated as they approach their funding year.

It is the goal of the City to put together a viable, yet realistic CFP, which when administered will provide the necessary facilities and services to the citizens of the community.

#### CAPITAL FACILITIES PLAN— PROJECT LIST (1995-2015)

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The Capital Facilities Plan Project List is a complete listing of all projects which have been identified in various planning documents as projects which will need to be completed over the next six years. The implementation dates listed for the projects are tentative and should be viewed as such, but said dates are invaluable as a long term planning tool. These projects are proposed to be financed by a variety of methods and denoted as follows: GRA for grant funds, GEN for general government funds, which can be federal, state or local, BON for committed or possible funds from bond issues, DEV for revenue raised through developer contributions, W/S for funds raised through water/sewer revenues, FBV for revenues raised through Fisher Basin Utility charges and OTH for combinations of all the above listed options.

**CITY OF CAMAS • 1994 COMPREHENSIVE PLAN**

**FISCAL YEAR 1995**

DESCRIPTION	COST (\$1000'S)	TYPE	FUND	YEAR
NW 6th Ave. Realignment	3,593	Str	GEN/OTH	1995
Lake Road (Everett/Sierra)	100	Str	GEN	1995
General Street Projects	50	Str	GEN	1995
15th/Bybee NP (Acq)	300	Park	GEN/DEV	1995
McIntosh NP (Acq)	300	Park	GEN/DEV	1995
Lake Rd. Bk Ln. (Sier/trlhd)	66	Park	GEN/DEV	1995
General Park Devel.	40	Park	GEN/DEV	1995
Grass Valley Complex (Acq)	600	Park	GEN/DEV	1995
Mitchell Street STEP	200	Swr	GEN/GRA	1995
Collection Sys Srvy/Upgrade	100	Swr	W/S	1995
General Sewer Projects	80	Swr	W/S	1995
Raw Waterline (Buttler)	110	Wtr	W/S	1995
Chlorination Equipment	30	Wtr	W/S	1995
G. Valley Inter-tie	600	Wtr	W/S	1995
Fisher Basin Well #10	150	Wtr	W/S	1995
Fisher Basin Storm Utility	30	Stm	FBU	1995
Asphalt Spreader Box	30	CE(r)	GEN	1995
10 yd. Dump Truck/Ditchmstr	140	CE(r)	GEN	1995
Garbage Truck	85	CE(g)	GEN	1995

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**1995 TOTAL \$6,604**

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

FISCAL YEAR 1996

DESCRIPTION	COST (\$1000'S)	TYPE	FUND	YEAR
NW Parker (PacRim/38th)	1,403	Str	GEN/DEV	1996
Benton St. Area CDBG Project	400	Str	GEN/GRA	1996
NE 5th Avenue (Oak/Dallas)	50	Str	GEN	1996
NE Dallas (6th/14th)	60	Str	GEN	1996
NE 23rd, Enclose Ditch	30	Str	GEN	1996
General Street Projects	50	Str	GEN	1996
Brady/McIntosh Grnwy. (Acq)	300	Park	GEN/DEV	1996
Trail #109L	220	Park	GEN/DEV	1996
Parker Bike Lane (16th/38th)	90	Park	GEN/DEV	1996
General Park Devl.	50	Park	GEN/DEV	1996
Grass Vally Complex (Devl)	400	Park	GEN/DEV	1996
Oak Park (Devl)	150	Park	GEN/DEV	1996
New Police Facility	3,000	Gen	GEN/BON	1996
Remodel Fire Facility	800	Gen	GEN/BON	1996
Sldge Trtmt/Clarifier Upgrd	2,000	Swr	GEN/GRA	1996
General Sewer Projects	80	Swr	W/S	1996
General Water Projects	80	Wtr	W/S	1996
Fisher Basin Well #9	170	Wtr	W/S	1996
Fisher Basin Storm Utility	30	Stm	FBU	1996
Computer Upgrd (City Hall)	100	CE(c)	GEN	1996
Dump Truck	50	CE(w)	W/S	1996
Maintenance Van	30	CE(s)	W/S	1996
Ladder Truck	405	CE(f)	GEN/OTH	1996

1996 Total \$9,948

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

FISCAL YEAR 1997

DESCRIPTION	COST (\$1000'S)	TYPE	FUND	YEAR
NW 38th (Parker/Astor)	1,344	Str	GEN/DEV	1997
NE Lechner (3rd/4th)	75	Str	GEN	1997
SE 7th (Union to west)	50	Str	GEN	1997
Pac. Rim Blvd (Parker/38th)	835	Str	DEV	1997
Forest Home CDBG Project	250	Str	GEN/GRA	1997
General Street Projects	50	Str	GEN	1997
McIntosh NP (Devl)	150	Park	GEN/DEV	1997
Heritage Trail #111R	136	Park	GEN/DEV	1997
38th Bk Lane (WCL/Astor)	108	Park	GEN/DEV	1997
Lacamas Lake Park (Devl)	400	Park	GEN/DEV	1997
Washougal Grmwy, ph 2 (Devl)	150	Park	GEN/DEV	1997
General Park Devl.	50	Park	GEN/DEV	1997
Pool Rehab/Cover	1,000	Gen	GEN/DEV	1997
Library Remodel	500	Gen	GEN/DEV	1997
General Sewer Projects	80	Swr	W/S	1997
Telemetry Sys. (Data Coll.)	80	Wtr	W/S	1997
Watershed Property (Acq)	500	Wtr	W/S	1997
Screens @ Water Intakes	30	Wtr	W/S	1997
General Water Projects	80	Wtr	W/S	1997
Fisher Basin Storm Utility	30	Stm	FBU	1997
Pesticide/Paint Truck	80	CE(r)	GEN	1997
Backhoe	50	CE(w)	W/S	1997
Refurbish Fire Pumper	100	CE(f)	GEN/OTH	1997
Water Tanker	80	CE(f)	GEN/OTH	1997

1997 TOTAL \$6,208

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

FISCAL YEAR 1998

DESCRIPTION	COST (\$1000'S)	TYPE	FUND	YEAR
NW Leadbetter (Lake/38th)	835	Str	DEV	1998
NW 7th (Ivy/6th)	30	Str	GEN	1998
General Street Projects	50	Str	GEN	1998
15th/Bybee NP (Devl)	200	Park	GEN/DEV	1998
Brady/McIntosh Grwy (Devl)	200	Park	GEN/DEV	1998
Trail #102R	262	Park	GEN/DEV	1998
Leadbtr Bk Land (Lake 38th)	60	Park	GEN/DEV	1998
General Park Devl.	100	Park	GEN/DEV	1998
Fire Training Facility	200	Gen	GEN/OTH	1998
Main Sewer Wet Well Ugrd	250	Swr	W/S	1998
Headworks Solids Handling	150	Swr	W/S	1998
General Sewer Projects	80	Swr	W/S	1998
General Water Projects	80	Wtr	W/S	1998
W. Prune Hill Resr. (Acq)	150	Wtr	W/S	1998
Fisher Basin Storm Utility	30	Stm	FBU	1998

1998 Total \$2,677

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

FISCAL YEAR 1999

DESCRIPTION	COST (\$000)	TYPE	FUND	YEAR
NW Lake Rd. (Parker/Leadbtr)	1,745	Str	GEN/OTH	1999
NW 38th (Parker/WCL)	60	Str	GEN	1999
NW Astor (11th/23rd)	30	Str	GEN	1999
NE Franklin (14th/22nd)	35	Str	GEN	1999
NE lone (Garfield/19th)	44	Str	GEN	1999
General Street Projects	50	Str	GEN	1999
Trail #103L	122	Park	GEN/DEV	1999
Lake Bk Ln (Parker/Sierra)	96	Park	GEN/DEV	1999
General Park Devl.	100	Park	GEN/DEV	1999
Trans. Line (Joy/Dallas)	200	Swr	W/S	1999
General Sewer Projects	80	Swr	W/S	1999
General Water Projects	80	Wtr	W/S	1999
W. Prune Hill Resr. (const)	2,400	Wtr	W/S/BON	1999
Fisher Basin Storm Utility	30	Stm	FBU	1999

1999 Total \$5,072

**CITY OF CAMAS • 1994 COMPREHENSIVE PLAN**

**FISCAL YEAR 2000**

DESCRIPTION	COST (\$1000'S)	TYPE	FUND	YEAR
NW Parker St. (38th/1st)	1,840	Str	GEN/OTH	2000
NW 28th (Comstock/CSE1)	40	Str	GEN/DEV	2000
General Street Projects	50	Str	GEN	2000
Trail #108L	116	Park	GEN/DEV	2000
Trail #112Rs	80	Park	GEN/DEV	2000
Parker Bk Ln (1st/38th)	78	Park	GEN/DEV	2000
Greenway Acquisition	200	Park	GEN/DEV	2000
General Park Devl.	100	Park	GEN/DEV	2000
General Sewer Projects	80	Swr	W/S	2000
General Water Projects	80	Wtr	W/S	2000
Fisher Basin Storm Utility	30	Stm	FBU	2000

**2000 Total \$2,694**

**YEAR BY YEAR SUMMARY - 1995 TO 2000**

1995 -	\$ 6,604,000
1996 -	\$ 9,948,000
1997 -	\$ 6,208,000
1998 -	\$ 2,677,000
1999 -	\$ 5,072,000
2000 -	\$ 2,694,000
<b>Total All Years -</b>	<b>\$ 33,203,000</b>

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

FISCAL YEAR 2001-2006

DESCRIPTION	COST (\$1000'S)	TYPE	FUND	YEAR
NW Astor St. (38th/43rd)	299	Str	GEN/DEV	2001-06
NW Cascade (28th/38th)	831	Str	GEN/DEV	2001-06
NW Cascade (18th/23rd)	297	Str	GEN/DEV	2001-06
Indust. Rd. (16th/PacRim)	1,209	Str	GEN/DEV	2001-06
Indust. Rd. (PacRim/Lake)	4,350	Str	GEN/DEV	2001-06
1st St. (202nd/Parker)	1,326	Str	GEN/DEV	2001-06
NE 3rd Ave. Improvements	468	Str	GEN/DEV	2001-06
NW 16th Ave. (Brady/Hood)	449	Str	GEN/DEV	2001-06
NE 23rd Ave. (Birch/Fargo)	4,820	Str	GEN/DEV	2001-06
Ivy St. Connection	590	Str	GEN/DEV	2001-06
General Street Projects	300	Str	GEN	2001-06
Park Devl and Acq.	1,000	Park	GEN/DEV	2001-06
Trail #101R	190	Park	GEN/DEV	2001-06
Trail #105L	107	Park	GEN/DEV	2001-06
Trail #106L	70	Park	GEN/DEV	2001-06
Trail # 107L	116	Park	GEN/DEV	2001-06
Trail #110L	128	Park	GEN/DEV	2001-06
Trail #113L	50	Park	GEN/DEV	2001-06
Trail #114Rs	50	Park	GEN/DEV	2001-06
Brady Bk Ln (16th/SCL)	36	Park	GEN/DEV	2001-06
18th Bk Ln (PacRim/Brady)	90	Park	GEN/DEV	2001-06
16th Bk Ln (Brady/18th)	48	Park	GEN/DEV	2001-06
Cascade Bk Ln (11th/18th)	45	Park	GEN/DEV	2001-06
Cascade Bk Ln (18th/Sierra)	84	Park	GEN/DEV	2001-06
18th Bk Ln (Hood/Astor)	42	Park	GEN/DEV	2001-06
PacRim Bk Ln (Parker/Astor)	78	Park	GEN/DEV	2001-06
Recreation Center	2,000	Gen	GEN/BON	2001-06
General Sewer Projects	2,000	Swr	W/S	2001-06
General Water Projects	2,000	Wtr	W/S	2001-06
Fisher Basin Storm Utility	360	Stm	FBU	2001-06

2001-06 Total \$23,433

**CITY OF CAMAS • 1994 COMPREHENSIVE PLAN**

**FISCAL YEAR 2007-2015**

DESCRIPTION	COST (\$1000'S)	TYPE	FUND	YEAR
SE Brady Rd. (202nd/McInt)	1,298	Str	GEN/DEV	2007-15
SE Brady Rd. (16th/McInt)	800	Str	GEN/DEV	2007-15
NW Brady Rd. (16th/PacRim)	679	Str	GEN/DEV	2007-15
Crown Road Improvements	876	Str	GEN/DEV	2007-15
Hood St. (16th/18th)	131	Str	GEN/DEV	2007-15
NW McIntosh (Brady/11th)	1,019	Str	GEN/DEV	2007-15
NW McIntosh (11th/18th)	971	Str	GEN/DEV	2007-15
NW Sierra (28th/38th)	1,081	Str	GEN/DEV	2007-15
NW 43rd (Sierra/Astor)	192	Str	GEN/DEV	2007-15
SE Payne (PacRim/Brady)	969	Str	GEN/DEV	2007-15
NW 18th (Hood/Cascade)	205	Str	GEN/DEV	2007-15
NW 38th (Bybee/Industrial)	906	Str	GEN/DEV	2007-15
NW 38th (Industrial/Parker)	504	Str	GEN/DEV	2007-15
NW 23rd (Sierra/Astor)	293	Str	GEN/DEV	2007-15
NW 23rd (Cascade/Astor)	155	Str	GEN/DEV	2007-15
Ostenson Canyon Road	1,232	Str	GEN/DEV	2007-15
General Street Projects	300	Str	GEN	2007-15
Park Devl. and Acq.	1,500	Park	GEN/DEV	2007-15
Trail #104L	81	Park	GEN/DEV	2007-15
McIntosh Ek Ln (Brady/11th)	96	Park	GEN/DEV	2007-15
23rd Bk Ln (Cascade/28th)	48	Park	GEN/DEV	2007-15
Astor/43rd/Sierra Bk Ln	43	Park	GEN/DEV	2007-15
General Sewer Projects	3,000	Swr	W/S	2007-15
General Water Projects	3,000	Wtr	W/S	2007-15
Fisher Basin Storm Utility	360	Stm	FBU	2007-15

**2007-15 Total \$19,739**

**TOTAL COST OF 20 YEAR CAPITAL FACILITIES PLAN - \$76,375,000**

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

**CAMAS SCHOOL DISTRICT  
CAPITAL FACILITIES PLAN**

**INVENTORY OF CURRENT FACILITIES**

SCHOOLS	LOCATION	YEAR OF OCCUPANCY	TOTAL BLDG. SQ. FT.	1993/94 ENROLLMENT	CAPACITY	NUMBER OF PORTABLES	NUMBER OF STUDENTS IN PORTABLES
<b>Elementary</b>							
Helen Baller (K-1)	1954 N.E. Garfield Camas, WA 98607	1948	40,728	368	509	0	
Lacamas Heights (2-5)	11205 S.E. 262nd Ave. Camas, WA 98607	1962	41,685	442	521	0	
Dorothy Fox (2-5)	2623 N.W. Sierra Camas, WA 98607	1982	39,436	375	493	4	89
	Total Elementary		121,849	1,185	1523	4	89
<b>Middle</b>							
Zellerbach (6-8)	841 N.E. 22nd Ave. Camas, WA 98607	1966	62,757	655	570	1	65
<b>High</b>							
Camas High (9-12)	1612 N.E. Garfield Camas, WA 98607	1957	72,144	757	950		

**NON-INSTRUCTIONAL FACILITIES**

TYPE	LOCATION
Garfield Performing Arts Center	1612 N.E. Garfield Camas, WA 98607
Bus Barn, Bus Shop and Warehouse	1707 N.E. Ione Street Camas, WA 98607
Transportation Office	1707 N.E. Ione Street Camas, WA 98607
Administration Center	2041 N.E. Ione Street Camas, WA 98607

**CITY OF CAMAS • 1994 COMPREHENSIVE PLAN**

**NEEDS FORECAST**

**EXISTING FACILITIES**

	FUTURE NEED	ESTIMATED COST
Helen Baller Early Childhood Center	Modernize existing facility	\$650,000
Dorothy Fox Elementary	Modernize existing facility	\$400,000
Lacamas Heights Elementary	Modernize existing facility	\$3,600,000
Camas High School	Modernize existing facility	\$6,080,000

**NEW SCHOOLS**

TYPE	PROPOSED LOCATION	YEAR OF COMPLETION	TOTAL BLDG. SQ. FT.	CAPACITY	ESTIMATED COST
New Middle School	Refer to Comprehensive land use plan map for potential areas for new school	95-96	88,000	727	\$13,310,000
Convert Existing Zellerbach Middle School to Elementary School	Existing School Site	95-96	62,757	784	\$3,040,000

**SIX-YEAR FINANCE PLAN**

**ESTIMATED TOTAL REVENUE IN 6-YEAR PERIOD**

SECURED FUNDING SOURCES	AMOUNT
UNSECURED FUNDING SOURCES	AMOUNT
Bond	\$ 32,330,000
State Match	\$ 1,330,000
Impact Fees	\$ 330,000 <sup>1</sup>
	\$ 33,960,000 <sup>2</sup>

**TOTAL EXPENDITURE IN 6-YEAR PERIOD = \$ 33,600,000.**

<sup>1</sup> Impact Fees to be spent or used for middle school and portables.

<sup>2</sup> These funds, once secured, will be used to decrease the need for future bonds or used capital facilities such as portables.

CITY OF CAMAS • 1994 COMPREHENSIVE PLAN

**SCHOOL IMPACT FEE CALCULATION**

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**SCHOOL IMPACT FEE PER SINGLE FAMILY RESIDENCE<sup>1</sup>**

Gross School Impact Fee for Middle School Facilities	\$1,661.88
LESS	
Tax Credit	\$852.55
EQUALS	\$809.33
MULTIPLIED BY	85%
Total Maximum Impact Fee Per Single Family Residence	\$687.94

**SCHOOL IMPACT FEE PER MULTI FAMILY RESIDENCE**

Gross School Impact Fee for Middle School Facilities	\$477.39
LESS	
Tax Credit	\$238.67
EQUALS	\$238.72
MULTIPLIED BY	85%
Total Maximum Impact Fee Per Multi Family Residence	\$202.91

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<sup>1</sup> See Volume IV of County Comprehensive Plan for more details on the calculation of the fee. This fee shall be recalculated soon, based on an annual review requirement, as provided by the Clark County Impact Fee Ordinance.

**X.        OPTIONAL ELEMENTS**

## X. OPTIONAL ELEMENTS/SUB-AREA PLANS:

### ECONOMIC DEVELOPMENT ELEMENT

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#### INTRODUCTION

Economic Development for the City of Camas is the creation and sustainability of a diverse array of employment opportunities, ensuring the tax base currently enjoyed by the City is sustained and strengthened. The economic health and well being of the City of Camas is thus tied to a commitment to promote a wide range of employment opportunities for the citizens of the community as well as to provide a setting and quality of life that attracts businesses and residents.

The development of this comprehensive plan element can be linked to the adoption of the Washington State Growth Management Act adopted in July of 1990. Although not specifically required by the Growth Management Act, the City of Camas feels it is vitally important that an Economic Development Element be included in its Comprehensive Plan.

The following information comprises the Economic Development Element for the City of Camas. It reviews:

- Historical and existing economy
- Goals and policies for a future vision
- Implementation and financing strategies to achieve that vision

#### BACKGROUND AND EXISTING CONDITIONS

For most of Camas' history, its economic health has been tied directly to the wood and pulp industry. The James River paper mill has been the mainstay of the City's economy. In an effort to widen the economic base and strengthen the community, the City Council in 1985 aggressively pursued the annexation of land on the western boundary of Camas to

permit a high technology industrial park. This area was not meant to replace the mill as the mainstay of the local economy, but to diversify the City's tax base, thus buffering it from the economic downswings in the wood and pulp industry.

#### DOWNTOWN

Adjacent to the James River mill is Camas' downtown. Many of the long-term businesses in the City are located in the downtown area and are also dependent upon the paper mill. Though these businesses are not the foundation of the economy in terms of dollars, they provide essential services and goods to mill workers and citizens, and are the physical center to the community. Reinforcing the downtown as the city's "heart", is governmental services located in downtown: city hall, fire, police, and library.

Downtown made significant modifications a number of years ago by means of a beautification project. It made the downtown more attractive physically and functionally, and had helped maintain downtown's central role in the community.

#### COMMERCIAL AREAS

The development of commercial properties along the SE 164th corridor to the west of Camas will serve much of the newer areas of Vancouver. The City of Camas will provide appropriate new commercial — mixed-use — centers to serve the areas west and north of downtown. Existing centers will be reinforced to retain their economic viability.

## INDUSTRIAL PARK

Though James River paper mill is the largest employer within the City, Hewlett/Packard, just to the west, has become the largest employer in the county. Its rise is indicative of a new arena of business. Hewlett/Packard does not directly contribute to the economy of Camas, but its location near the City's industrial park provides indirect benefit to Camas.

The Fisher Basin industrial park now has five industries operating or in design and construction phase. These companies are:

- Sharp Microelectronics
- Heraeus Shin-Etsu
- Underwriter's Laboratories
- Furuno
- Linear Technology

These companies have chosen Camas for:

- Quality of Life
- Housing
- Proximity to Air, Water, Rail, Highway
- Availability of water, sewer and power
- Proximity to similar industries
- Responsive permit review times
- Quality schools

This is indicative of the close relationship between economic strategies and the character of a community in attracting and keeping businesses.

The overall economic future for the City of Camas is dependent upon how well this area supplements the paper mill. This area is designed to be responsive to the overall needs of the community. The primary uses permitted in this area are campus style light industry/high technology developments. A portion of the area will be utilized for a major mixed-use center incorporating a retail center, motel, offices and a research institute. It will also include high density

residential. Thus the City is able to respond, and preserve the vitality of Camas.

## FACTORS AFFECTING THE FUTURE

The following issues and events have and will set the direction for the growth and economy for the City of Camas.

- The City has invested heavily in the infrastructure to support the industrial and commercial ventures discussed above, and will continue to do so. (See the Capital Facilities Element)
- The City is committed to balancing the jobs to people ratio so that Camas is not a bedroom community.
- Conversely much of the growth Camas is experiencing can be attributed to people leaving Vancouver and Portland. An indirect factor influencing Camas' growth is the current tax structure in Oregon.

The City of Camas is in a strong position to continue its economic growth. The City should continue to enjoy its high tax base, while spreading the responsibility for that base from James River. This will ensure a balanced local economy that is important in providing the quality of life associated with the City of Camas.

## GOALS AND POLICIES

The Washington Growth Management Act of 1990 has identified the following statewide goal for economic development:

*Encourage economic development throughout the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.*

The Clark County Community Framework Plan, adopted in May 1993, contains policies for economic development. This element builds on these policies, provides more specific direction for implementation of the goals, and coordinates with other elements of the comprehensive plan.

This economic development element has been organized around goals, policies and strategies developed by the Columbia River Economic Development Council, especially high wage jobs.

*Goal 1:* Ensure that there is a balance of economic and population growth, and that the type of economic development that occurs contributes to maintaining and improving the overall quality of life in the City of Camas.

*Policy:* The City of Camas will promote a diverse economic base through growth that improves the lifestyle of Camas' citizens.

*Strategies:* Sustain commitment to existing enterprises that have created the economic base of the City, support their continued growth, thereby encouraging investment and job growth.

Provide economic opportunity for all residents including unemployed and special needs populations.

Support retention, expansion and recruitment activities for businesses of all types and sizes with a commitment to the environment and the community.

*Goal 2a:* Keep and attract businesses that sustain a strong economy and are supportive of the community.

*Goal 2b:* Bring private sector annual wage rates to parity with the Washington state average by the year 2000 and to parity with the U.S. by the year 2005, maintaining or exceeding parity with U.S. average annual wage rates thereafter.

*Policy:* The City of Camas will actively encourage business investments that generate net fiscal benefits to the community, are environmentally conscious, and are consistent with the overriding goal of higher wage jobs for Camas residents.

*Strategies:* Provide priority assistance to employers who pay an above average wage and will improve the community's standard of living.

Encourage the recruitment of new business employers to absorb the local labor force, and to provide long term employment to a greater proportion of local residents who are currently employed outside the area.

Facilitate industrial and commercial investments that generate tax revenues in excess of infrastructure and ongoing service costs.

Adopt benchmarks that are common with adjoining jurisdictions to measure the community's overall economic viability.

Promote productivity and quality among business, thereby meeting world and market standards for their products and services.

*Goal 3:* Assure an adequate supply of prime industrial sites to meet market demands for industrial development over 20 year time horizon.

*Policy:* The City will implement policies and strategies to maintain a minimum ten year supply of prime or potentially prime industrial land.

*Strategies:* Locate present and future industrial land in such a manner as to be accessible to roadways of an arterial classification or higher. Require that utilities are present or can be realistically extended.

Assure that rezoning of industrial parcels for non-industrial uses should not occur unless and until suitable replacement sites

Encourage businesses to design projects in such a way as to support non-single occupancy vehicle access (transit, high occupancy vehicles, bicyclists, pedestrians).

Give priority to high density residential, industrial, commercial, and mixed use developments located on current or planned transit corridors.

Encourage transit-oriented site planning and design.

Establish densities for neighborhoods served by both fixed route and high capacity transit, and that they are appropriate for the levels of service available to the City.

*Goal 6* Provide a continuum of educational opportunities responsive to the changing needs of the work place, both locally and regionally.

*Policy:* Camas, in association with the business community, will participate with providers of elementary, secondary, and higher education to support education in the City of Camas.

*Strategies:* Utilize Clark College and WSU-Southwest Washington campuses to the fullest extent possible.

Encourage residents to attend institutes of higher education.

Consider incentives to link proposed industrial and commercial development projects with job training and education programs.

Encourage continuing education, skills upgrading, mentoring, and lifelong learning programs suitable for large and small employers.

Encourage employers to provide information, employees, and other resources to schools with the goal of improving the quality of education and students' awareness of future opportunities.

*Goal 7:* Assure an adequate range of housing affordable to the local work force. Assure that it is located near major employment centers and/or transit corridors throughout the community.

*Policies:* The housing element of the City of Camas will primarily be based on the housing element for Clark County. It will address the needs for income appropriate work force housing and jobs/housing balance within Camas.

*Strategies:* Encourage that at least 25% of the city's housing can be afforded by persons earning the average annual wage.

Designate land for housing that is affordable to the full range of employee incomes. This land should be located convenient to employment centers.

Determine land uses that will ensure at least a 40:60 jobs to population ratio.

Encourage innovative mixed use developments with high density housing located within walking distance of high density employment centers.

Revise commercial and industrial development standards to allow for mixed use developments and to ensure compatibility with residential and public uses included within and adjacent to them.

*Goal 8:* Improve the air quality of the area. Preserve airshed capacity to accommodate job generating activities.

*Policy:* Camas will adopt policies and strategies aimed at reducing pollution from mobile sources and thereby preserving the remaining usable airshed for potential industrial and commercial users.

*Strategies:* Continue to participate in Commute Trip Reduction (CTR) and Transportation Demand Management (TDM) programs to reduce the number of Single Occupant Vehicles (SOV).

Encourage the use of transit and participate with C-TRAN to ensure service is available when warranted.

Plan for long-term economic growth that enhances the capacity of existing air shed for job-generating activities.

*Goal 9:* Build infrastructure in advance of its demand by industrial and commercial development.

*Policy:* The City of Camas will ensure the capital facilities element addresses the infrastructure required to facilitate the locating of industrial and commercial employers in Camas.

*Strategies:* Prioritize infrastructure development to areas that are suitable for industrial and commercial development and that can be served on a cost effective basis.

Consider incentives to encourage improved utilization of existing facilities.

Regularly update the Capital Facilities Plan to ensure it addresses the current and future goals of the City. Maintain awareness of and sensitivity to changes in the business community to guarantee the City does not lose its favorable jobs to population ratio.

Implement level of service (LOS) and concurrency management systems that are realistic and make it possible to achieve the economic goals and policies adopted by the City.

*Goal 10:* Implement permitting processes and fee schedules that maintain a competitive advantage for high wage business and industry to locate in the Camas area.

*Policies:* The City of Camas will pursue policies and strategies that are aimed at streamlining the permitting process, establishing predictable project approval mechanisms, and establishing fees for development commensurate with benefits received.

*Strategies:* Provide precise and timely information to potential businesses.

Streamline land use approval and permitting processes to assure predictability, flexibility, and responsiveness.

Ensure that economic and fiscal benefits will outweigh costs of impact fees for industrial, commercial, and residential development.

**City of Camas,  
Washington**

**Capital Facilities Plan**

**As of March, 1998**



## MEMORANDUM

**TO:** Mayor and Council  
**FROM:** Joan Durgin, Finance Director  
**DATE:** April 20, 1998  
**SUBJECT:** Capital Facilities Plan

Each year, the city's Capital Facilities Plan is updated to refine existing projects, include new projects, and to forecast and identify other capital needs. The 1998 plan is attached.

The CFP is driven both by need and financial means, which helps explain the dramatic fluctuations in capital outlays throughout the years. The first five years contain a higher degree of detail and are tied to the adopted facilities plans of the City (Park, Water, Sewer, Comprehensive). Whereas, years 2004-2011 and years 2012-2019 contain a few known major capital projects, but are more heavily influenced by general long-term capital projections.

The following is a breakdown of some of the larger capital projects planned for years 1998-2011:

	<u>Amount</u>
<u>1998</u>	
• NW Parker Street completion	\$ 1,416,000
• Sewer treatment plant expansion-design	5,000,000
• Frank's Moorage	472,000
• Grass Valley Fire Station land acquisition	330,000
<u>1999</u>	
• Southeast 1st Street Improvements	\$ 9,619,500
• Sewer treatment plant expansion-construction	8,000,000
<u>2000</u>	
• Sewer treatment plant expansion-construction	\$ 5,400,000
• Library land acquisition and design	1,250,000
• Grass Valley fire station construction	1,500,000
<u>2001</u>	
• NW 16th et al Hood to Pacific Rim street improvements	\$ 850,000
• Angelo booster station	800,000
• West Camas well field	650,000
• Library /Court remodel and addition	5,750,000
<u>2002</u>	
• Northwest Brady/16th to 25th	\$ 700,000

**2003**

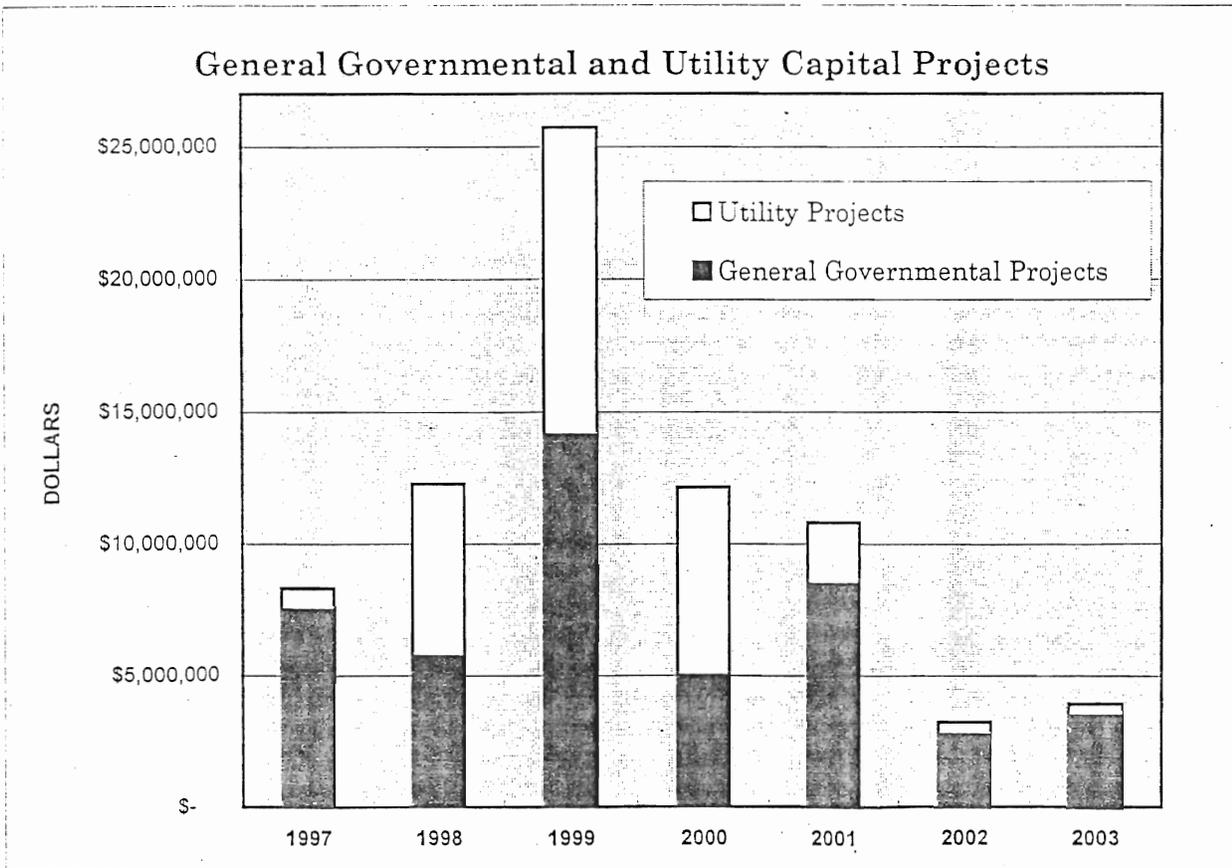
- Recreation Center \$ 2,000,000

**2004-2011**

- Future City Hall \$ 6,000,000
- Aquatic Facility 2,000,000

The graph below displays total capital projects for the first seven years as detailed in the city's plan. This graph also separates the totals by general governmental projects and utility projects to aide in identifying the necessary funding sources and the impact to general fund.

	General Governmental Projects	Utility Projects	TOTAL PROJECTS
1997	\$ 7,469,220	\$ 841,227	\$ 8,310,447
1998	5,721,440	6,565,748	12,287,188
1999	14,105,500	11,620,000	25,725,500
2000	4,986,000	7,165,000	12,151,000
2001	8,464,250	2,340,000	10,804,250
2002	2,740,525	480,000	3,220,525
2003	3,467,000	465,000	3,932,000



**Assessed Value Projection and  
Computation of Future Legal Debt Margins**

4/27/98

	1998	1999	2000	2001	2002	2003	2004
Estimated Assessed Valuation	\$ 1,380,239,672	\$ 1,560,324,000	\$ 1,731,143,000	\$ 1,919,931,000	\$ 2,111,924,000	\$ 2,323,116,000	\$ 2,555,427,600
Section I:							
General purpose indebtedness without a vote							
Legal limit 1.5% of assessed value	20,703,595	23,404,860	25,967,145	28,798,965	31,678,860	34,846,740	38,331,414
Indebtedness:							
GO bonds & loans less assets	5,326,000	5,106,000	7,436,000	12,776,000	11,986,000	12,459,300	11,529,000
Margin of indebtedness available without a vote	\$ 15,377,595	\$ 18,298,860	\$ 18,531,145	\$ 16,022,965	\$ 19,692,860	\$ 22,387,440	\$ 26,802,414
Section II:							
General purpose indebtedness with a 3/5 vote							
Legal limit 2.5% of taxable property value	34,505,992	39,008,100	43,278,575	47,998,275	52,798,100	58,077,900	63,885,690
Indebtedness							
GO bonds & loans less assets	972,000	897,000	817,000	732,000	642,000	547,000	447,000
Margin of indebtedness available with a 3/5 vote:	\$ 33,533,992	\$ 38,111,100	\$ 42,461,575	\$ 47,266,275	\$ 52,156,100	\$ 57,530,900	\$ 63,438,690
Margin of indebtedness available - general purpose based on legal limit of 2.5% of assessed value	\$ 28,207,992	\$ 33,005,100	\$ 35,025,575	\$ 34,490,275	\$ 40,170,100	\$ 45,071,600	\$ 51,909,690

**Current and Projected  
General Obligation Debt Principal Balance**

4/27/98

Amount of issue	1998	1999	2000	2001	2002	2003	2004	
<b>Current Debt:</b>								
1989 Park acquisition bonds - unlimited	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
1996 G.O. refunding bonds - unlimited	975,000	960,000	880,000	795,000	705,000	610,000	510,000	
1989 Storm sewer construction - limited	125,000	65,000	65,000	-	-	-	-	
1996 G.O. and refunding bonds - limited	2,820,000	2,660,000	2,490,000	2,315,000	2,130,000	1,935,000	1,730,000	
1996 PWTF loan - Parker Street	1,500,000	1,500,000	1,500,000	1,500,000	1,400,000	1,300,000	1,200,000	
PWTF loan for Parker Street project	900,000	900,000	900,000	900,000	900,000	850,000	800,000	
<b>Future Debt Issues:</b>								
<u>Library</u>								
Land acquisition and design	\$ 1,250,000	-	-	1,250,000	1,180,000	1,105,000	1,025,000	940,000
Remodel and addition	\$ 5,750,000	-	-	-	5,750,000	5,420,000	5,085,000	4,745,000
<u>Fire</u>								
Construction of Grass Valley Fire Station	\$ 1,250,000	-	-	1,250,000	1,150,000	1,050,000	950,000	850,000
<u>Parks &amp; Recreation</u>								
Recreation Facility construction	\$ 1,333,300	-	-	-	-	-	1,333,300	1,283,000
Total unlimited issues	1,035,000	960,000	880,000	795,000	705,000	610,000	510,000	
Total limited issues	5,345,000	5,125,000	7,455,000	12,795,000	12,005,000	12,478,300	11,548,000	
<b>Total General Obligation Debt Issued</b>	<b>\$ 6,380,000</b>	<b>\$ 6,085,000</b>	<b>\$ 8,335,000</b>	<b>\$ 13,590,000</b>	<b>\$ 12,710,000</b>	<b>\$ 13,088,300</b>	<b>\$ 12,058,000</b>	

**Current and Projected  
General Obligation Debt Service Payments**

4/27/98

	1998	1999	2000	2001	2002	2003	2004
<b>Current Debt:</b>							
1989 Park acquisition bonds - unlimited	\$ 131,413	\$ 127,453	\$ -	\$ -	\$ -	\$ -	\$ -
1996 G.O. refunding bonds - unlimited	63,478	62,855	127,203	128,642	129,775	130,545	130,985
1989 Storm sewer construction - limited	72,090	68,190	69,290	-	-	-	-
1996 G.O. and refunding bonds - limited	302,543	301,110	304,150	301,500	303,450	304,755	305,395
1996 PWTF loan - Parker Street	-	-	100,824	100,824	100,824	100,824	100,824
PWTF loan for Parker Street project (pmt starts in 2003)	-	-	-	-	-	100,000	100,000
<b>Total current debt</b>	<b>569,524</b>	<b>559,608</b>	<b>601,467</b>	<b>530,966</b>	<b>534,049</b>	<b>636,124</b>	<b>637,204</b>
<b>Future Debt Issues:</b>							
<u>Library</u>							
Land acquisition and design	-	-	-	124,532	124,532	124,532	124,532
Remodel and addition	-	-	-	-	491,234	491,234	491,234
<u>Fire</u>							
Construction of Grass Valley Fire Station	-	-	-	125,000	125,000	125,000	125,000
<u>Parks &amp; Recreation</u>							
Recreation Facility construction	-	-	-	-	-	-	113,000
Total unlimited issues	194,891	190,308	127,203	128,642	129,775	130,545	130,985
Total limited issues	374,633	369,300	474,264	651,856	1,145,040	1,246,345	1,359,985
<b>Total General Obligation Debt Service Payments</b>	<b>\$ 569,524</b>	<b>\$ 559,608</b>	<b>\$ 601,467</b>	<b>\$ 780,498</b>	<b>\$ 1,274,815</b>	<b>\$ 1,376,890</b>	<b>\$ 1,490,970</b>

**Capital Facilities Plan  
1998**

3/10/98

			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
1997 balance forward			\$ 633,232	\$ 560,394	\$ 317,668	\$ 935,490	\$ -	\$ -	\$ -	\$ -	\$ 250,943	\$ 2,218,617	\$ 2,771,854	\$ 7,688,198
1998 projected revenues			1,200,000	-	32,000	50,000	3,034,000	2,500,000	2,372,308	1,415,000	149,057	550,000	2,022,295	13,324,680
1998 Total funds available			\$1,833,232	\$ 560,394	\$ 349,668	\$ 985,490	\$3,034,000	\$ 2,500,000	\$2,372,308	\$ 1,415,000	\$ 400,000	\$ 2,768,617	\$4,794,149	\$ 21,012,858
Year - 1998			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Funding Sources				Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
Total Project							Bonds	Loan	Grants	Developer				
<b>Dept - Other Govt. Services</b>														
City wide software upgrade			35,000											35,000
<b>SUBTOTAL</b>			<b>35,000</b>											
<b>Dept -ENG/PLANNING</b>														
Computer new & upgrades			8,000											8,000
New software			10,000											10,000
Miscellaneous equipment			6,000											6,000
<b>SUBTOTAL</b>			<b>24,000</b>											
<b>Dept - BUILDING</b>														
Remodel upstairs			6,000											6,000
<b>SUBTOTAL</b>			<b>6,000</b>											
<b>Dept. - STREET</b>														
4 foot developer reimbursement			15,000							15,000				15,000
City wide overlays			200,000											200,000
Lake Rd./SR 500 intersection imp.			250,000						150,000					250,000
Payne Rd. improvements			40,000											40,000
Miscellaneous storm imp.			15,000											15,000
Miscellaneous retaining wall			3,000											3,000
Path-NW Lake Rd.			60,000											60,000
Misc. guardrail/NW Lake Rd.			17,000											17,000
Sidewalks-City Wide/CDBG			324,440						168,000					324,440
NE 3rd Bridge painting			124,000						94,560					124,000
NW Parker St. Improvements			1,416,000					240,000	666,000				510,000	1,416,000
Traffic Signal/CDBG			130,000						85,000					130,000
Pickup			20,000											20,000
<b>SUBTOTAL</b>			<b>2,614,440</b>											
<b>Dept. - SANITARY</b>														
Automatic packer truck (2)			246,000					186,000			60,000			246,000
Garbage bins			154,000								154,000			154,000
<b>SUBTOTAL</b>			<b>400,000</b>											
<b>Dept. - WATER/SEWER</b>														
Filter plant improvements			30,000									30,000		30,000
McIntosh loop water line			100,000							100,000				100,000
Well land acquisition			90,000									90,000		90,000
#2 clarifier retaining wall			4,500									4,500		4,500
Meter purchase			13,000									13,000		13,000
Facility landscaping			3,000									3,000		3,000
General machinery & equipment			78,000									78,000		78,000
Brady waterline upsize			24,000									24,000		24,000
Sewer Facility- I&I work			425,000									425,000		425,000

**Capital Facilities Plan  
1998**

3/10/98

			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
1997 balance forward			\$ 633,232	\$ 560,394	\$ 317,668	\$ 935,490	\$ -	\$ -	\$ -	\$ -	\$ 250,943	\$ 2,218,617	\$ 2,771,854	\$ 7,888,198
1998 projected revenues			1,200,000	-	32,000	50,000	3,034,000	2,500,000	2,372,308	1,415,000	149,057	550,000	2,022,295	13,324,660
1998 Total funds available			\$1,833,232	\$ 560,394	\$ 349,668	\$ 985,490	\$3,034,000	\$ 2,500,000	\$2,372,308	\$ 1,415,000	\$ 400,000	\$ 2,768,617	\$4,794,149	\$ 21,012,858
Year - 1998			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Funding Sources			Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds	
Total Project							Bonds	Loan	Grants	Developer				
Sewer Facility-STP plant expansion	5,000,000						3,034,000	1,000,000				966,000		5,000,000
Water corrosion upgrades	20,000											20,000		20,000
Forest Home improvements/CDBG	290,748								240,748			50,000		290,748
Lacamas booster pump upgrade	87,500											87,500		87,500
	<b>SUBTOTAL</b>	<b>6,165,748</b>												
<b>Dept. - PARKS</b>														
Greenway/parks acquisition	600,000												600,000	600,000
General park	50,000		50,000											50,000
SW 6th park acquisition	100,000												100,000	100,000
Community center building improvements	27,000		27,000											27,000
Carnas pool renovation (IAC)	250,000								125,000				125,000	250,000
Bike /Trail construction	100,000												100,000	100,000
Grass Valley community park Aqu.	400,000												400,000	400,000
Vehicle - pickup truck	22,000		22,000											22,000
Tractor	40,000		40,000											40,000
Frank's Moorage	472,000		163,000						309,000					472,000
	<b>SUBTOTAL</b>	<b>2,061,000</b>												
<b>Dept. - LIBRARY</b>														
Books	85,000		85,000											85,000
Misc.	25,000		25,000											25,000
	<b>SUBTOTAL</b>	<b>110,000</b>												
<b>Dept. - FIRE/EMERGENCY</b>														
Land Acquisition for GV Fire Station	330,000												330,000	330,000
Ladder Truck (budget 97, pd for 98)	541,000				321,000								220,000	541,000
	<b>SUBTOTAL</b>	<b>871,000</b>												
1998 Projected capital expenditures	12,287,188		1,162,880	-	321,000	-	3,034,000	1,426,000	1,838,308	115,000	214,000	1,791,000	2,385,000	12,287,188
1999 Balance forward			\$ 670,352	\$ 560,394	\$ 28,668	\$ 985,490	\$ -	\$ 1,074,000	\$ 534,000	\$ 1,300,000	\$ 186,000	\$ 977,617	\$ 2,409,149	\$ 8,725,670

**Capital Facilities Plan  
1999**

3/10/98

		General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
1998 balance forward		\$ 670,352	\$ 560,394	\$ 28,668	\$ 985,490	\$ -	\$ 1,074,000	\$ 534,000	\$ 1,300,000	\$ 186,000	\$ 977,617	\$ 2,409,149	\$ 8,725,870
1999 projected revenues		1,200,000	-	60,000	50,000	5,275,000	1,426,000	9,468,425	2,283,575	30,000	550,000	2,224,525	22,567,525
1999 Total funds available		\$ 1,870,352	\$ 560,394	\$ 88,668	\$ 1,035,490	\$ 5,275,000	\$ 2,500,000	\$ 10,002,425	\$ 3,583,575	\$ 216,000	\$ 1,527,617	\$ 4,633,674	\$ 31,293,195
Year - 1999		General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
Total Project													
<b>Dept - Other Govt. Services</b>													
Networking hardware & software dev.	50,000	50,000											50,000
City Hall copier	20,000	20,000											20,000
Remodel City Hall	300,000	300,000											300,000
	<b>SUBTOTAL</b>	<b>370,000</b>											
<b>Dept -ENG/PLANNING</b>													
Computer new & upgrades	5,000	5,000											5,000
GIS	10,000	10,000											10,000
Software upgrades	5,000	5,000											5,000
New software	5,000	5,000											5,000
Misc. survey equipment	5,000	5,000											5,000
Vehicle - pickup truck	20,000	20,000											20,000
	<b>SUBTOTAL</b>	<b>50,000</b>											
<b>Dept - BUILDING</b>													
Computer upgrades	5,000	5,000											5,000
	<b>SUBTOTAL</b>	<b>5,000</b>											
<b>Dept - POLICE</b>													
Copier	10,000	10,000											10,000
Perimeter fence	7,500	7,500											7,500
	<b>SUBTOTAL</b>	<b>17,500</b>											
<b>Dept. - STREET</b>													
4 foot developer reimbursement	15,000								15,000				15,000
Six year street plan improvements	368,000	368,000											368,000
NW 23rd Cascade to Sierra	312,000	112,000						200,000					312,000
Crown Park neigh. project (CDBG)	250,000							250,000					250,000
18th and Hood St. improvements	550,000	200,000										350,000	550,000
TIF - 6th and Ivy turn lane	400,000											400,000	400,000
TIF - East 1st ST. (TIB)	9,619,500							6,350,925	2,268,575			1,000,000	9,619,500
Street sweeper (purch. w/ Washougal)	75,000	75,000											75,000
	<b>SUBTOTAL</b>	<b>11,589,500</b>											
<b>Dept. - SANITARY</b>													
Garbage bins	30,000									30,000			30,000
	<b>SUBTOTAL</b>	<b>30,000</b>											
<b>Dept. - WATER/SEWER</b>													
Fac - 18" transmission line downtown	250,000										250,000		250,000
Fac - West Camas well piping	300,000						300,000						300,000
Fac - Upper Prune Hill reservoir	1,000,000						1,000,000						1,000,000
Fac - Wells west Camas	400,000						400,000						400,000

**Capital Facilities Plan  
1999**

3/10/98

			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
1998 balance forward			\$ 670,352	\$ 560,394	\$ 28,668	\$ 985,490	\$ -	\$ 1,074,000	\$ 534,000	\$ 1,300,000	\$ 186,000	\$ 977,617	\$ 2,409,149	\$ 8,725,870
1999 projected revenues			1,200,000	-	60,000	50,000	5,275,000	1,426,000	9,468,425	2,283,575	30,000	550,000	2,224,525	22,567,525
1999 Total funds available			\$ 1,870,352	\$ 560,394	\$ 88,668	\$ 1,035,490	\$ 5,275,000	\$ 2,500,000	\$ 10,002,425	\$ 3,583,575	\$ 216,000	\$ 1,527,617	\$ 4,633,674	\$ 31,293,195
<b>Year - 1999</b>			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Funding Sources			Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
	Total Project							Loan	Grants	Developer				
Fac - 12"wl NE 22nd Everett to Garfield	40,000											40,000		40,000
Fac - PRV Lacamas Shores	70,000											70,000		70,000
General water line replacements	75,000						75,000					-		75,000
Water facility plan update	75,000											75,000		75,000
S Fac - Prune Hill pump sta upgrade	250,000						250,000					-		250,000
S Fac - I&I	400,000						-	-	400,000			-		400,000
S Fac - STP Plant expansion - construction	8,000,000						3,000,000	2,500,000	2,500,000			-		8,000,000
S Fac - Joy to p.s. step line	250,000						250,000					-		250,000
S Fac - Lacamas Creek pump station	130,000											130,000		130,000
Water corrosion upgrades	200,000											200,000		200,000
10 yd. Dumptruck (1/2 with wtr/swr)	100,000		50,000									50,000		100,000
Westside gravel yard (1/2 with wtr/swr)	50,000		25,000									25,000		50,000
	<b>SUBTOTAL</b>	<b>11,590,000</b>												
<b>Dept. - PARKS</b>														
Franks moorage (IAC)	450,000								301,500				148,500	450,000
Greenway/park acquisition	400,000												400,000	400,000
General park upgrades	60,000		60,000											60,000
Parks plan update	50,000												50,000	50,000
Bike/trail improvements	100,000												100,000	100,000
Ledbetter Park acquisition	150,000												150,000	150,000
Grass Valley park development	350,000												350,000	350,000
Louis Bloch Park irrigation	45,000		45,000											45,000
Community Center improvements	100,000		100,000											100,000
Mower	20,000		20,000											20,000
Forest Home Park drainage	90,000		90,000											90,000
	<b>SUBTOTAL</b>	<b>1,815,000</b>												
<b>Dept. - LIBRARY</b>														
Books	93,500		93,500											93,500
Misc.	25,000		25,000											25,000
	<b>SUBTOTAL</b>	<b>118,500</b>												
<b>Dept. - FIRE/EMERGENCY</b>														
Vehicle-Deputy Fire Marshall	30,000		30,000											30,000
New ambulance	110,000												110,000	110,000
	<b>SUBTOTAL</b>	<b>140,000</b>		110,000										
1999 Projected capital expenditures	25,725,500		1,736,000	110,000	-	-	5,275,000	2,500,000	10,002,425	2,283,575	30,000	840,000	2,948,500	25,725,500
2000 Balance forward			\$ 134,352	\$ 450,394	\$ 88,668	\$ 1,035,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 687,617	\$ 1,685,174	\$ 5,567,695

Capital Facilities Plan  
2000

3/10/98

			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
1999 balance forward			\$ 134,352	\$ 450,394	\$ 88,668	\$ 1,035,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 687,617	\$ 1,685,174	\$ 5,567,695
2000 projected revenues			1,300,000	-	60,000	50,000	3,738,000	2,700,000	2,700,000	15,000	40,000	600,000	2,446,978	13,649,978
2000 Total funds available			\$ 1,434,352	\$ 450,394	\$ 148,668	\$ 1,085,490	\$ 3,738,000	\$ 2,700,000	\$ 2,700,000	\$ 1,315,000	\$ 226,000	\$ 1,287,617	\$ 4,132,151	\$ 19,217,672
Year - 2000			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Funding Sources			Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
		Total Project						Loan	Grants	Developer				
Dept - Other Govt. Services														
Networking hardware & software dev.		80,000	80,000											80,000
SUBTOTAL		80,000												
Dept -ENG/PLANNING														
Computer new & upgrades		2,500	2,500											2,500
GIS		10,000	10,000											10,000
Software upgrades		5,000	5,000											5,000
New software		5,000	5,000											5,000
Misc. survey equipment		5,000	5,000											5,000
SUBTOTAL		27,500												
Dept - BUILDING														
Computer upgrades		5,000	5,000											5,000
SUBTOTAL		5,000												
Dept. - STREET														
4 foot developer reimbursement		15,000	-							15,000				15,000
Six year street plan improvements		231,000	231,000											231,000
TIF project		400,000	-										400,000	400,000
Storage building (1/2 with Wa/Sw)		70,000	35,000									35,000		70,000
Equipment trailer (1/2 with Wa/Sw)		20,000	10,000									10,000		20,000
SUBTOTAL		736,000											400,000	
Dept. - SANITARY														
Garbage bins		40,000									40,000			40,000
SUBTOTAL		40,000												
Dept. - WATER/SEWER														
Fac - water leak survey		30,000										30,000		30,000
Fac - Pacific Rim water line		238,000						238,000						238,000
Fac - property acq.-reservoir sites		150,000										150,000		150,000
Fac - Gregg firm capacity upgrade		80,000										80,000		80,000
Fac - firm capacity lower P.H.		400,000						400,000						400,000
Fac - particle counter filter plant		30,000										30,000		30,000
General well replacements		75,000										75,000		75,000
S Fac - pump station upgrades		300,000						200,000				100,000		300,000
S Fac - STP plant expansion-const.		5,400,000							2,700,000	2,700,000				5,400,000
S Fac - I&I		400,000						400,000						400,000
Vehicle - pickup truck		22,000										22,000		22,000
SUBTOTAL		7,125,000												

**Capital Facilities Plan  
2000**

3/10/98

		General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
1999 balance forward		\$ 134,352	\$ 450,394	\$ 88,668	\$ 1,035,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 687,617	\$ 1,685,174	\$ 5,567,895
2000 projected revenues		1,300,000	-	60,000	50,000	3,738,000	2,700,000	2,700,000	15,000	40,000	600,000	2,446,978	13,649,978
2000 Total funds available		\$ 1,434,352	\$ 450,394	\$ 148,668	\$ 1,085,490	\$ 3,738,000	\$ 2,700,000	\$ 2,700,000	\$ 1,315,000	\$ 226,000	\$ 1,287,617	\$ 4,132,151	\$ 19,217,872
<b>Year - 2000</b>	<b>Total Project</b>	<b>General Fund</b>	<b>Emergency Rescue Fund</b>	<b>Fire Equip. Cumulative</b>	<b>Storm Drainage</b>	<b>Bonds</b>	<b>Funding Sources</b>			<b>Sanitary Fund Capital</b>	<b>Water/Sewer Capital</b>	<b>REET/ Impact Fees</b>	<b>Total Funds</b>
							Loan	Grants	Developer				
<b>Dept. - PARKS</b>													
Greenway/parks acquisition	400,000											400,000	400,000
General park improvements	60,000	60,000											60,000
Bike / trail improvements	100,000											100,000	100,000
Washougal River Greenway-sidewalk/parking	100,000	100,000											100,000
Dorothy Fox park improvements	100,000	100,000											100,000
Playing fields & park acquisition	500,000											500,000	500,000
	<b>SUBTOTAL</b>	<b>1,260,000</b>											
<b>Dept. - LIBRARY</b>													
Books	102,500	102,500											102,500
Misc.	25,000	25,000											25,000
Land acquisition and design	1,250,000					1,250,000							1,250,000
	<b>SUBTOTAL</b>	<b>1,377,500</b>											
<b>Dept. - FIRE/EMERGENCY</b>													
Construction of GV Fire Station	1,500,000	-				1,250,000						250,000	1,500,000
	<b>SUBTOTAL</b>	<b>1,500,000</b>											
2000 Projected capital expenditures	12,151,000	776,000	-	-	-	3,738,000	2,700,000	2,700,000	15,000	40,000	532,000	1,650,000	12,151,000
2001 Balance forward		\$ 658,352	\$ 450,394	\$ 148,668	\$ 1,085,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 755,617	\$ 2,482,151	\$ 7,066,672

Capital Facilities Plan  
2001

3/10/98

			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
2000 Balance forward			\$ 658,352	\$ 450,394	\$ 148,668	\$1,085,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 755,617	\$2,482,151	\$ 7,066,672
2001 Projected revenues			1,300,000	-	60,000	50,000	7,500,000		725,000	15,000	40,000	600,000	2,691,676	12,981,676
2001 Total funds available			\$ 1,958,352	\$ 450,394	\$ 208,668	\$1,135,490	\$7,500,000	\$ -	\$725,000	\$ 1,315,000	\$ 226,000	\$ 1,355,617	\$5,173,827	\$20,048,348
Year - 2001	Total Project		General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
<b>Dept - Other Govt. Services</b>														
Networking hardware & software dev.	40,000		40,000											40,000
	<b>SUBTOTAL</b>	<b>40,000</b>												
<b>Dept -ENG/PLANNING</b>														
Computer new & upgrades	2,500		2,500											2,500
GIS	10,000		10,000											10,000
Software upgrades	5,000		5,000											5,000
New software	5,000		5,000											5,000
Misc. survey equipment	5,000		5,000											5,000
	<b>SUBTOTAL</b>	<b>27,500</b>												
<b>Dept - BUILDING</b>														
Computer upgrades	5,000		5,000											5,000
	<b>SUBTOTAL</b>	<b>5,000</b>												
<b>Dept. - STREET</b>														
4 foot developer reimbursement	15,000		-							15,000				15,000
Six year street plan improvements	195,000		195,000											195,000
NW 16th et al Hood to Pacific Rim	850,000		125,000						725,000					850,000
TIF project	700,000		-										700,000	700,000
Vehicle - pickup truck	24,000		24,000											24,000
Asphalt paving machine	50,000		50,000											50,000
	<b>SUBTOTAL</b>	<b>1,834,000</b>												
<b>Dept. - SANITARY</b>														
Garbage bins	40,000										40,000			40,000
	<b>SUBTOTAL</b>	<b>40,000</b>												
<b>Dept. - WATER/SEWER</b>														
Fac - Angelo booster station	800,000						700,000					100,000		800,000
Fac - Butler rehab	400,000						400,000					-		400,000
Fac - West Camas well field	650,000						650,000					-		650,000
General water line upgrades	75,000										75,000			75,000
S fac - pumpstation upgrade	250,000										250,000			250,000
S fac - I&I	50,000										50,000			50,000
Sewer facility plan update	75,000										75,000			75,000
	<b>SUBTOTAL</b>	<b>2,300,000</b>												

Capital Facilities Plan  
2001

3/10/98

			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
2000 Balance forward			\$ 658,352	\$ 450,394	\$ 148,668	\$1,085,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 755,617	\$2,482,151	\$ 7,066,872
2001 Projected revenues			1,300,000	-	60,000	50,000	7,500,000		725,000	15,000	40,000	600,000	2,691,676	12,981,876
2001 Total funds available			\$ 1,958,352	\$ 450,394	\$ 208,668	\$1,135,490	\$7,500,000	\$ -	\$725,000	\$ 1,315,000	\$ 226,000	\$ 1,355,617	\$5,173,827	\$20,048,348
Year - 2001			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Funding Sources				Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
		Total Project					Bonds	Loan	Grants	Developer				
Dept. - POLICE														
Police car & equipment		30,000	30,000											30,000
	SUBTOTAL	30,000												
Dept. - PARKS														
General park improvements		70,000	70,000											70,000
Bike/trail improvements		100,000											100,000	100,000
Greenway/parks acquisition		400,000											400,000	400,000
	SUBTOTAL	570,000												
Dept. - LIBRARY														
Books		112,750	112,750											112,750
Misc.		25,000	25,000											25,000
Library/Court remodel & addition		5,750,000					5,750,000							5,750,000
	SUBTOTAL	5,887,750												
Dept. - FIRE/EMERGENCY														
Ambulance chassis		70,000		70,000										70,000
	SUBTOTAL	70,000												
2001 Projected capital expenditures		10,804,250	704,250	70,000	-	-	7,500,000	-	725,000	15,000	40,000	550,000	1,200,000	10,804,250
2002 Balance forward			\$ 1,254,102	\$ 380,394	\$ 208,668	\$ 1,135,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 805,617	\$ 3,973,827	\$ 9,244,098

Capital Facilities Plan  
2002

3/10/98

		General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
2001 balance forward		\$ 1,254,102	\$ 380,394	\$ 208,668	\$ 1,135,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 805,617	\$ 3,973,827	\$ 9,244,098
2002 projected revenues		1,400,000	-	60,000	50,000			328,000	15,000	130,000	650,000	2,960,844	5,593,844
2002 total expendable funds		\$ 2,654,102	\$ 380,394	\$ 268,668	\$ 1,185,490	\$ -	\$ -	\$ 328,000	\$ 1,315,000	\$ 316,000	\$ 1,455,617	\$ 6,934,670	\$ 14,837,941
Year - 2002	Total Project	General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Funding Sources			Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
<b>Dept - Other Govt. Services</b>													
	Networking hardware & software dev.	40,000											40,000
	<b>SUBTOTAL</b>	<b>40,000</b>											
<b>Dept -ENG/PLANNING</b>													
	Computer new & upgrades	2,500	2,500										2,500
	GIS	10,000	10,000										10,000
	Software upgrades	5,000	5,000										5,000
	New software	5,000	5,000										5,000
	Misc. survey equipment	5,000	5,000										5,000
	<b>SUBTOTAL</b>	<b>27,500</b>											
<b>Dept - BUILDING</b>													
	Computer upgrades	5,000	5,000										5,000
	<b>SUBTOTAL</b>	<b>5,000</b>											
<b>Dept. - STREET</b>													
	4 foot developer reimbursement	15,000	-						15,000				15,000
	Six year street plan improvements	285,000	285,000										285,000
	Tidland Ht hud pavement	49,000	5,000					44,000					49,000
	NW Brady/16th to 25th	700,000	416,000					284,000					700,000
	TIF project	700,000	-									700,000	700,000
	<b>SUBTOTAL</b>	<b>1,749,000</b>											
<b>Dept. - SANITARY</b>													
	Garbage bins	40,000								40,000			40,000
	300 & 400 gal. containers	90,000								90,000			90,000
	<b>SUBTOTAL</b>	<b>130,000</b>											
<b>Dept. - WATER/SEWER</b>													
	Operations Center Storage Bldg.	100,000	50,000								50,000		100,000
	Fac - South Prune Hill pump station	250,000									250,000		250,000
	<b>SUBTOTAL</b>	<b>350,000</b>											
<b>Dept. - PARKS</b>													
	General park improvements	70,000	70,000									400,000	70,000
	Greenspace/park acquisition	400,000										400,000	400,000
	Bike/trail improvements	100,000										100,000	100,000
	Leadbetter Park improvements	200,000										200,000	200,000
	<b>SUBTOTAL</b>	<b>770,000</b>											

**Capital Facilities Plan  
2002**

3/10/98

			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
2001 balance forward			\$ 1,254,102	\$ 380,394	\$ 208,668	\$ 1,135,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 805,617	\$ 3,973,827	\$ 9,244,098
2002 projected revenues			1,400,000	-	60,000	50,000			328,000	15,000	130,000	650,000	2,960,844	5,593,844
2002 total expendable funds			\$ 2,654,102	\$ 380,394	\$ 268,668	\$ 1,185,490	\$ -	\$ -	\$ 328,000	\$ 1,315,000	\$ 316,000	\$ 1,455,617	\$ 6,934,670	\$ 14,837,941
<b>Year - 2002</b>		<b>Total Project</b>	<b>General Fund</b>	<b>Emergency Rescue Fund</b>	<b>Fire Equip. Cumulative</b>	<b>Storm Drainage</b>	<b>Bonds</b>	<b>Funding Sources</b>			<b>Sanitary Fund Capital</b>	<b>Water/Sewer Capital</b>	<b>REET/ Impact Fees</b>	<b>Total Funds</b>
								Loan	Grants	Developer				
Dept. - LIBRARY														
Books		124,025	124,025											124,025
Misc.		25,000	25,000											25,000
		<b>SUBTOTAL</b>												
		149,025												
2002 Projected capital expenditures		3,220,525	1,047,525	-	-	-	-	-	328,000	15,000	130,000	300,000	1,400,000	3,220,525
2003 Balance forward			\$ 1,606,577	\$ 380,394	\$ 268,668	\$ 1,185,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 1,155,617	\$ 5,534,670	\$ 11,617,416

**Capital Facilities Plan  
2003**

3/10/98

		General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
2002 balance forward		\$ 1,606,577	\$ 380,394	\$ 268,668	\$ 1,185,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 1,155,617	\$ 5,534,670	\$ 11,817,416
2003 projected revenues		1,400,000	-	60,000	50,000	1,333,300				40,000	650,000	2,960,844	6,494,144
2003 total expendable funds		\$ 3,006,577	\$ 380,394	\$ 328,668	\$ 1,235,490	\$ 1,333,300	\$ -	\$ -	\$ 1,300,000	\$ 226,000	\$ 1,805,617	\$ 8,495,514	\$ 18,111,560
<b>Year - 2003</b>													
	Total Project												
<b>Dept - Other Govt. Services</b>													
Computer upgrades	50,000	50,000											50,000
	<b>SUBTOTAL</b>	<b>50,000</b>											
<b>Dept -ENG/PLANNING</b>													
Computer upgrades	40,000	40,000											40,000
	<b>SUBTOTAL</b>	<b>40,000</b>											
<b>Dept - BUILDING</b>													
Computer upgrades	5,000	5,000											5,000
	<b>SUBTOTAL</b>	<b>5,000</b>											
<b>Dept. - STREET</b>													
Six year street plan	300,000	300,000											300,000
TIF plan	460,000											460,000	460,000
	<b>SUBTOTAL</b>	<b>760,000</b>											
<b>Dept. - SANITARY</b>													
Garbage bins	40,000									40,000			40,000
	<b>SUBTOTAL</b>	<b>40,000</b>											
<b>Dept. - WATER/SEWER</b>													
W/S facility improvements	300,000										300,000		300,000
Operations Center Paving	100,000	50,000									50,000		100,000
Vehicle - pickup truck	25,000										25,000		25,000
	<b>SUBTOTAL</b>	<b>425,000</b>											
<b>Dept. - POLICE</b>													
Computer upgrades	30,000	30,000											30,000
	<b>SUBTOTAL</b>	<b>30,000</b>											
<b>Dept. - PARKS</b>													
General Park	70,000											70,000	70,000
Bike/trail	100,000											100,000	100,000
Recreation Center	2,000,000					1,333,300						666,700	2,000,000
	<b>SUBTOTAL</b>	<b>2,170,000</b>											

**Capital Facilities Plan  
2003**

3/10/98

			General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
2002 balance forward			\$ 1,606,577	\$ 380,394	\$ 268,668	\$ 1,185,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 1,155,617	\$ 5,534,670	\$ 11,817,416
2003 projected revenues			1,400,000	-	60,000	50,000	1,333,300	-	-	-	40,000	650,000	2,960,844	8,494,144
2003 total expendable funds			\$ 3,006,577	\$ 380,394	\$ 328,668	\$ 1,235,490	\$ 1,333,300	\$ -	\$ -	\$ 1,300,000	\$ 226,000	\$ 1,805,617	\$ 8,495,514	\$ 18,111,560
<b>Dept. - LIBRARY</b>														
Library books		77,000	77,000											77,000
Miscellaneous improvements		15,000	15,000											15,000
	<b>SUBTOTAL</b>	<b>92,000</b>												
<b>Dept. - FIRE/EMERGENCY</b>														
Fire pumper		250,000			250,000									250,000
Ambulance chassis		70,000		70,000										70,000
	<b>SUBTOTAL</b>	<b>320,000</b>												
Projected capital expenditures		3,932,000	567,000	70,000	250,000	-	1,333,300	-	-	-	40,000	375,000	1,296,700	3,932,000
2004 Balance forward			\$ 2,439,577	\$ 310,394	\$ 78,668	\$ 1,235,490	\$ -	\$ -	\$ -	\$ 1,300,000	\$ 186,000	\$ 1,430,617	\$ 7,198,814	\$ 14,179,560

Capital Facilities Plan  
2004-2011

4/20/98

Year - 2004-2011	Total Project	Funding Sources										Total Funds		
		General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Loan	Grants	Developer	Sanitary Fund Capital	Water/Sewer Capital		REET/ Impact Fees	
<b>Dept - Other Govt. Services</b>														
Computer upgrades	400,000	400,000												400,000
<b>SUBTOTAL</b>	<b>400,000</b>													
<b>Dept - ENG/PLANNING</b>														
Computer upgrades	320,000	320,000												320,000
<b>SUBTOTAL</b>	<b>320,000</b>													
<b>Dept - BUILDING</b>														
Computer upgrades	40,000	40,000												40,000
<b>SUBTOTAL</b>	<b>40,000</b>													
<b>Dept. - CENTRAL SERVICES</b>														
Miscellaneous improvements	75,000	75,000												75,000
Future City Hall	6,000,000					6,000,000								6,000,000
<b>SUBTOTAL</b>	<b>6,075,000</b>													
<b>Dept. - STREET</b>														
Six year street plan @ \$300K per year	2,100,000	1,785,000						315,000						2,100,000
TIF plan @ \$460K per year	3,220,000							420,000				2,800,000		3,220,000
<b>SUBTOTAL</b>	<b>5,320,000</b>													
<b>Dept. - SANITARY</b>														
Garbage bins @ \$40K per year	320,000									320,000				320,000
<b>SUBTOTAL</b>	<b>320,000</b>													
<b>Dept. - WATER/SEWER</b>														
Fac-water stripping tower corrosion	500,000										500,000			500,000
W/S facility imp. @ \$300K per year	2,100,000										2,100,000			2,100,000
Operations Center Paving	100,000	50,000									50,000			100,000
Vehicle - pickup truck	25,000										25,000			25,000
<b>SUBTOTAL</b>	<b>2,725,000</b>													
<b>Dept. - POLICE</b>														
Computer upgrades	400,000	400,000												400,000
<b>SUBTOTAL</b>	<b>400,000</b>													
<b>Dept. - PARKS</b>														
Gen park @ \$70K per year	490,000											490,000		490,000
Bike/trail @ \$100K per year	700,000											700,000		700,000
Pool Facility	2,000,000					2,000,000								2,000,000
<b>SUBTOTAL</b>	<b>3,190,000</b>													

**Capital Facilities Plan  
2004-2011**

4/20/98

Year - 2004-2011	Total Project	General Fund	Emergency Rescue Fund	Fire Equip. Cumulative	Storm Drainage	Bonds	Funding Sources			Sanitary Fund Capital	Water/Sewer Capital	REET/ Impact Fees	Total Funds
							Loan	Grants	Developer				
<b>Dept. - LIBRARY</b>													
Library books	616,000	616,000											616,000
Miscellaneous improvements	120,000	120,000											120,000
<b>SUBTOTAL</b>	<b>736,000</b>												
<b>Dept. - FIRE/EMERGENCY</b>													
Training tower	200,000	200,000											200,000
Fire pumper (2008)	300,000	300,000											300,000
New ambulance (2007)	110,000		110,000										110,000
New ambulance (2009)	110,000		110,000										110,000
Ambulance chassis (2005)	70,000		70,000										70,000
<b>SUBTOTAL</b>	<b>790,000</b>												
<b>Projected capital expenditures</b>	<b>20,316,000</b>	<b>4,306,000</b>	<b>290,000</b>	<b>-</b>	<b>-</b>	<b>8,000,000</b>	<b>-</b>	<b>735,000</b>	<b>-</b>	<b>320,000</b>	<b>2,675,000</b>	<b>3,990,000</b>	<b>20,316,000</b>

Capital Facilities Plan  
2012-2019

4/20/98

Year - 2012-2019			General	Fire Equip.	Storm		Funding Sources			Sanitary Fund	Water/Sewer	REET/	Total Funds
	Total Project	General Fund	Cumulative	Drainage	Bonds	Loan	Grants	Developer	Capital	Capital	Impact Fees		
<b>Dept - Other Govt. Services</b>													
Computer upgrades	400,000	400,000											400,000
	<b>SUBTOTAL</b>	<b>400,000</b>											
<b>Dept -ENG/PLANNING</b>													
Computer upgrades	320,000	320,000											320,000
	<b>SUBTOTAL</b>	<b>320,000</b>											
<b>Dept - BUILDING</b>													
Computer upgrades	40,000	40,000											40,000
	<b>SUBTOTAL</b>	<b>40,000</b>											
<b>Dept. - CENTRAL SERVICES</b>													
Miscellaneous improvements	75,000	75,000											75,000
	<b>SUBTOTAL</b>	<b>75,000</b>											
<b>Dept. - STREET</b>													
Six year street plan @ \$300K per year	2,100,000	1,785,000					315,000						2,100,000
TIF plan @ \$460K per year	3,220,000	-					420,000				2,800,000		3,220,000
	<b>SUBTOTAL</b>	<b>5,320,000</b>											
<b>Dept. - Sanitary</b>													
Garbage bins @ \$40K per year	320,000								320,000				320,000
	<b>SUBTOTAL</b>	<b>320,000</b>											
<b>Dept. - WATER/SEWER</b>													
W/S facility imp. @ \$300K per year	2,100,000									2,100,000			2,100,000
	<b>SUBTOTAL</b>	<b>2,100,000</b>											
<b>Dept. - POLICE</b>													
Computer upgrades	400,000	400,000											400,000
	<b>SUBTOTAL</b>	<b>400,000</b>											
<b>Dept. - PARKS</b>													
Gen park @ \$70K per year	490,000										350,000		490,000
Bike/trail @ \$100K per year	700,000										700,000		700,000
	<b>SUBTOTAL</b>	<b>1,190,000</b>											
<b>Dept. - LIBRARY</b>													
Library books	616,000	616,000											616,000
Miscellaneous improvements	120,000	120,000											120,000
	<b>SUBTOTAL</b>	<b>736,000</b>											
Projected capital expenditures	10,901,000	3,756,000	-	-	-	-	735,000	-	320,000	2,100,000	3,850,000		10,901,000

# APPENDIX A. POTENTIAL CAPITAL FACILITIES FUNDING SOURCES

This appendix is intended to provide a listing of common funding sources used or available for capital facilities in the state of Washington.

Name of Fund	Description
<b>General Purpose:</b>	
Community Development Block Grant (CDBG)	Federal entitlement funds disbursed through the U.S. Department of Housing and Urban Development.
Community Economic Revitalization Board (CERB)	Low-interest state loans to assist infrastructure improvements for economic development.
Development Regulation (DR)	Various development regulations (especially platting ordinances) may require certain facilities to be available, frequently requiring developers to finance them.
General Obligation Bonds (BONDS)	Municipal borrowing to be repaid with future general taxes and revenues (voted and non-voted).
General Fund (GF)	General tax and revenue resources of the city.
Impact Fees (Impact)	System of fees charged to new development authorized under the Growth Management Act to finance public facilities.
Industrial Revenue Bonds (IRB)	IRBs are special debt instruments under the IRS code allowing tax free interest primarily for private industrial plant and equipment investments. Bonds are retired by revenue generated from the benefited property. Can be used for streets. This power is severely limited by complex requirements in the IRS code.
Intermodal Surface Transportation Efficiency Act (ISTEA)	Authorized in 1991, ISTEA is available to fund improvements to roads, bridges, nonmotorized transportation facilities, rail crossing improvements, and transit facilities. ISTEA funding requires a 10% or 20% local match.
NEPA/SEPA Mitigation (EIS)	Public facilities, including streets, may be required in order to mitigate adverse environmental impacts.
Other Contributions (Other)	Developers may construct public facilities needed and dedicate those facilities to the public. Also various agreements may be secured from developers to participate in the financing of needed facilities at a later date.
Public Works Trust Fund (PWTF)	State loan fund for infrastructure improvements.
Real Estate Excise Tax (REET)	Two categories, now both must be used for all types of growth management plan defined capital projects, not just streets.
Revenue Bonds (RB)	Debt is secured by an identified revenue source, rather than the overall taxing power of the jurisdiction. Such revenue usually involves dedicated user fees, such as fare box revenues or toll charges. Since such revenues are less secure than taxing powers, this type of debt usually has higher interest costs than GO bonds.
Sales Tax	Cities and counties are authorized to impose an additional sales tax above the traditional one-half of 1% at a rate of up to an additional one-half of 1%. For this additional tax, the statute provides for an electoral process for repealing the tax or altering the rate. The tax is now being levied at the rate of 3/10 of 1% by the City of Woodland and Cowlitz County. An additional 2/10 of 1% is available.
Special Assessments (LID/RID)	A Local Improvement District (LID) or Road Improvement District (RID)

Name of Fund	Description
	may be formed to finance street improvements through a special assessment on benefited property. Predominant method of debt financing of developer contributions. Must be based on benefit to the assessed properties and must meet complex requirements of IRS code. Can be augmented by general revenues (usually by absorbing financing costs or "buying down" interest rates).
Undetermined/Unfunded (UNDET)	No funding source identified to date (i.e. undetermined).
User Fees (User)	Can include Transit Fare Box, Tolls, Ferry Fares, Parking Fares.
Voluntary Contributions (Vol)	Term used under state law governing a cash contribution by a developer to pay for specified facilities; usually in response to requirements under SEPA or local codes.
<b>Streets:</b>	
Arterial Street Fund (ASF)	State gas tax funds restricted to arterial street improvements.
Commercial Parking Tax (CPT)	County or city, subject to referendum. For general transportation purposes.
County Road Tax (CRT)	Property tax for road purposes, with maximum rate of \$2.25/\$1,000 assessed value; only in unincorporated areas.
Fuel Tax, 10% of State Tax for Highway	Countywide, requires voter approval. For "highway purposes".
Hazard Elimination System (HES) Replaces Federal Aid Safety Program (FASP)	Federal gasoline tax revenues provided for traffic safety projects.
Local Vehicle License Fee	Authorized and collected by county (subject to referendum), shared with cities.
Street Utility (SU)	City only with maximum charge of \$2 per month per household or per employee. Cannot exceed 50% of total street maintenance costs. Some HCT or HOV charges must be deducted from employee charge.
Surface Transportation Program (STP) Replaces Federal Aid to Urban Systems (FAU)	Federal gasoline tax revenues provided for improving urban arterial systems.
Transportation Improvement Board (TIB)/Transportation Improvement Account (TIA)	State grant fund for major arterial street improvements.
Transportation Benefit Districts (TBD)	Special taxing district for transportation purposes created by cities and/or counties. Allows more than one jurisdiction to join together for the purpose of issuing voter approved GO bonds (see bond attorney for guidance). Also has authority to establish LIDs.
Urban Arterial Board (UAB)	State grant fund for arterial street improvements.
<b>Transit:</b>	
FTA Urban Mass Transit (UMT)	To transit agencies from federal government.
HCT Employer Tax (ET)	Up to \$2.00 per employee for HCT by transit agencies in King, Pierce, Clark, Thurston, Spokane and Snohomish Counties; requires prior vote.
MVET for HCT (MVET/HCT)	Up to 8% for HCT by transit agencies in King, Pierce, Clark, Thurston, Spokane and Snohomish Counties; requires prior vote.
Sales and Use Tax for HCT (Sales/HCT)	Up to 0.9% additional sales tax for HCT by transit agencies in King, Pierce, Clark, Thurston, Spokane and Snohomish Counties; requires prior vote.
Transit Tax (TT)	Separate taxing authority for transit authorities. Voter approval is required

Name of Fund	Description
	for the B&O, household/utility, and sales and use taxes.
<b>Water/Sewer:</b>	
Centennial Clean Water Fund Program	Approximately \$4 million per year statewide to fund projects which are required because Department of Ecology (DOE) and/or Environmental Protection Agency (EPA) has taken some type of enforcement action against a community. This program has a maximum ceiling of about \$1.2 million per project per year. Applications are accepted in February of each year, there after each project is prioritized from highest to lowest priority. The highest priority projects falling within the state's budget are given a grant offer.
Replacement Reserves (R/R)	Local sewer and water fund reserve accounts which are set aside for system replacements.
Rural Economic and Community Development (RECD), formerly the Farmers Home Administration	The RECD primarily provides loans to rural communities for a variety of projects. Interest rates are lower than can be obtained through the sale of revenue bonds. RECD accepts applications throughout the year on a first come, first serve basis up to their annual budget.
State Revolving Fund (SRF)	Sources of money for this program include federal (DOE and EPA) and state funds. Since federal funds are involved, projects must comply with all the federal requirements. All 15-20 year loans will be assessed at an interest rate of 75% of the market rate, 6-14 year loans at 60% of market rate, and zero percent for loans 5 years or less. Applications are accepted at the end of May or first of June with loans beginning to be made in September of each year.
System Development Charge (SDC)	Local fund established from impact fees charged for new sewer and water connections. Set aside for system expansion projects.
<b>Stormwater:</b>	
Cowlitz Consolidated Diking Improvement District #2 (CCDID #2)	A special district with an elected board of officials that can provide assistance with storm drainage projects within their jurisdiction.
Flood Control Assistance Program (FCAAP)	Established in 1984 to assist governmental entities in flood control. Matching funds are available to counties, cities, towns, and special districts for projects specified in a Comprehensive Flood Hazard Management Plan or from emergency flooding.
<b>Parks:</b>	
Conservation Futures	By state statute, counties may impose a property tax of up to six and one-quarter cents per \$1,000 assessed valuation to acquire open space, farm and timber lands. Cowlitz County adopted a levy in October 1985.
Inter-agency Committee for Outdoor Recreation (IAC)	The IAC is a state agency which allocates funds to local and state agencies for the acquisition and development of wildlife habitat and outdoor recreation properties. Funds are awarded to local agencies on a matching basis.
Aquatic Lands Enhancement Account	The state Department of Natural Resources provides grants to state and local agencies to acquire public access on and then recreational use of aquatic lands and to acquire site committed to long-term educational and research uses.
DNR Timber Tax	Receipts from sale of timber land on state land managed by the Department of Natural Resources.