



METRO

RECEIVED DEC 3 1997

November 25, 1997

The Honorable Ralph Brown  
Mayor of the City of Cornelius  
P. O. Box 607  
Cornelius, OR 97113

Dear Mayor Brown:

In accordance with Title 8 Section 4 of the Urban Growth Management Functional Plan, Cornelius requested compliance plan assistance from Metro. Enclosed is the Compliance Plan Assistance Report which contains recommendations for amendments to Cornelius' Comprehensive Plan and Zoning Code. These recommended amendments, when implemented, will assist Cornelius in achieving compliance with the requirements of the Functional Plan.

The report is divided into five sections. The first section provides a general introduction. The second section deals with recommendations for amendments to the Comprehensive Plan. The third section deals with recommendations for amendments to the Zoning Code, listed by Functional Plan title. The fourth section contains a number of "Next Steps" to assist Cornelius in achieving compliance with the Functional Plan. The fifth section contains a number of compliance resources including a copy of the Functional Plan, a technical appendix and maps. In addition to the recommendations, where appropriate staff has identified a number of optional measures which would help Cornelius achieve some of the objectives of the Functional Plan. These include a discussion on shared parking under Title 2 and direction for the Cornelius Transportation System Plan under Title 6.

If you have any questions or concerns regarding the recommendations contained in the compliance plan, please call Barbara Linssen at 797-1840. Metro staff have worked with Ben Altman in preparing these recommendations. We look forward to continuing to work with Cornelius as the 2040 Growth Concept is implemented.

Sincerely,

Mike Burton  
Executive Officer

cc: Ben Altman  
John Greiner  
Jon Kvistad, Council Presiding Officer  
Barbara Linssen  
Mary Weber

# Cornelius Compliance Plan Assistance Report November 25, 1997

## Section 1. Introduction

Cornelius' Compliance Plan Assistance Report (the report) is divided into five sections: Section 1 provides a general introduction to the report. Section 2 deals with recommendations for amendments to the Comprehensive Plan. These include general recommendations and chapter specific recommendations. Section 3 deals with recommendations for amendments to the Zoning Code. These recommendations are laid out by Urban Growth Management Functional Plan (functional plan) title requirements. Section 4 lists a series of next steps to assist Cornelius in achieving compliance with the functional plan. Section 5 contains a number of compliance resources including a copy of the functional plan, a discussion on housing and employment capacity, maps and a draft Water Quality and Flood Management model ordinance.

Metro, working with citizens and the 24 cities and 3 counties, is responsible for managing the region's growth. Setting the framework for managing growth has included the establishment of Regional Urban Growth Goals and Objectives (RUGGO), the development of the 2040 Growth Concept, the drafting of the Regional Framework Plan and the adoption of the functional plan.

The RUGGO is the policy document that provides a guide for Metro as it addresses regional concerns, by providing land use goals and objectives and a process for coordinating and planning in a way that maintains livability. They were developed to do the following:

1. Guide efforts to maintain and enhance the ecological integrity, economic viability and social equity and overall quality of life of the urban region;
2. Respond to the direction given to Metro by the legislature through ORS 268.380 to develop land-use goals and objectives for the region that would replace those adopted by the Columbia Regional Association of Governments;
3. Provide a policy for the development of the elements of Metro's regional framework plan and its implementation of individual functional plans; and
4. Provide a process for coordinating planning in the metropolitan area to maintain metropolitan livability.

While the RUGGOs are not directly applicable to local plans, they state regional policy as Metro develops plans for the region. Goal II provides the broad framework needed to address the issues accompanying urban growth.

The 2040 Growth Concept, in the RUGGO, sets the direction for the long term growth management of the Metro area. It provides a general approach to approximately where and how much the Urban Growth Boundary (UGB) should be expanded.

Key elements to the success of the Growth Concept include the coordination of land use decisions

established for each jurisdiction for the year 2017. The target capacities reflect the capacity increase from 1994 necessary to accommodate the anticipated growth to 2017. The table below was taken from the functional plan. The dwelling unit target capacity reflects the needed increase in dwelling unit capacity for Cornelius. The mixed use area targets were specified to focus development in regional, town, station areas and along main streets. The target capacities for the City as a whole include the mixed use area targets.

Table 1 Target Capacity for Housing and Employment Units - Year 1994 to 2017  
Cornelius

City as a Whole		Mixed Use Areas	
Dwelling Unit Capacity	Job Capacity	Dwelling Unit Capacity	Job Increase
1,019	2,812	48	335

Since 1994, Cornelius has been working towards the 2017 targets with the addition of 157 dwelling units on vacant land.

## **Land Use Element**

1. We recommend that Cornelius include a policy to allow higher density housing near transit, employment and shopping on page IV-8 of the Comprehensive Plan.
2. We recommend that Cornelius develop a policy which allows accessory units within any detached single family dwelling on page IV-8 of the Comprehensive Plan.(Title 1, section 2)
3. We recommend that Cornelius update the policies on pages IV-10 and 11 to reflect the policies and objectives established for the four Core Area Special Districts identified in the Transportation System Plan:
  - Residential/Civic Core
  - Commercial/Employment Core
  - Pedestrian Linkage Core
  - Auto Oriented Core

The recently completed Cornelius Main Street plan should also be described and referenced in the Comprehensive Plan.

## **Housing Element**

1. Background information on population and growth trends on pages V-8 and 9 should be updated to reflect the 2017 planning time horizon and the 2040 Growth Concept. (Title 1, Section 1)
2. We recommend that the City adopt a policy to indicate that minimum density standards will be implemented in all zones allowing residential use. (Title 1, Section 2.)

## **Public Facilities and Services Element**

1. We recommend that the City include a new policy on page VIII-16 to recognize that the State Transportation Planning Rule and 2040 Growth Concept call for more compact development as a means to encourage more efficient use of land, promote non-auto trips and protect air quality. (Title 2, Sections 1 and 2)
2. We support the City's focus on public facilities planning and transportation system planning through periodic review.
3. We support Policy 1 of the TSP (page 13) and the emphasis on integration of transportation and land use planning issues. The Circulation element is appropriately focused on enhancing multi-modal circulation throughout the Core Area, with particular attention given to non-auto modes of transportation.
4. We recommend that the Transportation System Plan include a reference to the Boulevard Design elements and performance standards in the functional plan. (Title 6, Sections 2 – 4)

### Section 3. Zoning Code - Recommendations for Compliance with the Functional Plan

*As noted in Section 2, the recommendations below represent one way Cornelius could achieve compliance with the functional plan. As there is flexibility built into the functional plan, there are other ways to achieve compliance. This flexibility allows cities and counties to adopt policies and ordinances that reflect the unique character of their jurisdictions while meeting regional goals.*

#### Title 1 - Requirements for Housing and Employment Accommodation

State law and Metro Code require that the Metro UGB have sufficient capacity to accommodate the expected growth for 20 years. It is Metro's policy to minimize the amount of UGB expansion required for the expected population and employment growth by 2017. To further that policy, it is necessary to selectively increase the capacity for development within the UGB. Increasing the capacity within the UGB will require changes at appropriate locations in both the rate of development permitted per acre (zoned density) and the rate at which housing and employment are actually built within the UGB. Development consistent with the design types of the 2040 Growth Concept will focus these efforts. As a matter of regional policy, each city and county must contribute its fair share to increasing the development capacity of land within the UGB.

#### Zoning Code Amendments to meet the Requirements of Title 1

##### Recommendations:

1. Currently, Cornelius has no minimum residential density standard. We recommend that either option A or option B below be used to establish minimum density standards in Section 11 of the Zoning Code:
  - a) Establish a minimum density standard in the zoning code based on 80% of the maximum number of dwelling units per net acre permitted by the zoning designation. (note: net acre is defined under Title 10 of the functional plan, see Section 5 Compliance Resources);or
  - b) Establish minimum density standards that would apply to each development application. For purposes of compliance with Table 1, only those dwelling units that are allowed at these minimum density standards would be counted. The advantage of this option is that it allows a wider spread of density than the 20% (minimums at 80% of maximums) provided in Option i. above and allows a variety of minimum densities. This option would allow Cornelius to set minimum density standards that would ensure that the target capacity could be met while permitting development of higher densities in specified locations such as the Main Streets and lower densities in other areas. (Title 1 Section 2.A.1.b)
2. We recommend that the portion of Chapter 11, *Subdivisions*, not prohibit partitioning or subdividing land inside the UGB where existing lot sizes are two or more times that of minimum lot size of zone; this could be added under Section 11.532 Compliance. (Title 1. Section 2.B)

A region wide estimate of 1.8% of single family detached structures containing accessory dwelling units was used to calculate Cornelius' probable accessory unit development. This figure, from the 1990 American Housing Survey for the Portland Metropolitan Area, was applied to the total number of single family detached dwelling units within Cornelius resulting in an estimate of 44 accessory units for the City.

Cornelius' employment capacity under current zoning has been estimated at 2,783 additional jobs. This falls short of the 2017 target of 2,812 jobs (adjusted to 2,726 for projected home based jobs) by 57 jobs.

The details and assumptions used in this analysis appear in the *Capacity Estimate for Cornelius* (Section 5, Compliance Resources). While calculations were based on vacant lands; there may be additional opportunities for dwelling units and jobs on redevelopable lands. In 1994 Metro ran several computer models to simulate full compliance with the 2040 Growth Concept. As a result of this general analysis we saw that there may be a potential for an additional 91 households, and 463 jobs in the City of Cornelius. Through implementation of the 2040 design types as prescribed in this title, the City may be able to realize some or all of that potential. As this redevelopment potential is based on full implementation of the 2040 Growth Concept, these numbers are not factored into the city's current capacity. In particular, the Main Street designations on Baseline, Adair, 10<sup>th</sup>, and 19<sup>th</sup> and the Corridor designations on Baseline Street, Adair Street, and Pacific Avenue are appropriate locations for increased housing and employment densities. More intensive land use in these areas may help the city to realize some of the redevelopable potential of these areas. For more information about the calculations of redevelopment potential see the Technical Appendix of this report.

A capacity analysis for the proposed Cornelius Main Street is not part of this report. The estimated capacity for housing and employment for the Main Street should be included with the City's Compliance Plan, which is due August 1998.

### Recommendations

1. We recommend that Cornelius undertake a review of its residential zones in order to look for opportunities to increase housing capacity within existing residentially zoned land to meet the 2017 housing targets.
2. We recommend that Cornelius consider methods of increasing housing and employment opportunities in the Main Streets, in Employment Areas and along Corridors to meet the 2017 housing and employment targets.
3. We recommend that the City explore redevelopment potential along the Corridor and in the Main Street and consider it as a method for the City to meet its target capacity.

4. With the exception of the residential parking standards listed below, the Cornelius standards are equivalent to or lower than the Title 2 minimum standards, so they will not need to be altered. We recommend changing Cornelius Code Section 11.792 as shown below.

Current Cornelius Standard	Title 2 Requirement
Single Family Detached: 2 per unit	1 per unit
Multi-family: 2 per dwelling unit (if three or more dwelling units)	unit less than 500 sq. ft. = 1 space 1 bedroom = 1.25 spaces 2 bedroom = 1.5 spaces 3 bedroom = 1.75 spaces

### Optional Measures

While the following items are *not* requirements of the functional plan, they are additional measures which may help the Cornelius jurisdiction meet its parking requirements and allow for compact, mixed use areas and efficient land utilization. These measures may be most appropriate in the Main Street core district and other compact commercial centers.

1. Cornelius does not currently address the dimensions of parking spaces. If such a section is added, Cornelius may wish to address provision for compact parking spaces and parking stall standards. Most area cities allow up to 50% of the spaces to be "compact spaces" which are defined as 7 to 7.5 feet wide and 15 to 16 feet long (as measured for a 90 degree parking stall). The typical standard non-compact parking space in the region is defined as 8.5 or 9 feet wide by 18 to 20 feet long (for 90 degree stall).
2. It is suggested that cities and counties count adjacent on-street parking spaces, nearby public parking and shared parking toward required parking minimum standards.
3. Cornelius may wish to rewrite Section 11.796 (4) to read: "Owners of two or more uses.....may agree to jointly utilize the same parking...when the peak hours of operation do not substantially overlap..". Shared parking works well between businesses with overlapping hours, so long as the peak use times do not conflict. For more information, see Metro's shared parking handbook and model ordinance.
4. Cornelius may wish to amend Section 11.796 (3) to read: "If several uses occupy a single structure or parcel of land, the total requirements for off-street parking shall be the sum of the requirements for the several uses computed separately with a reduction of 10 - 25% to account for cross-patronage of adjacent businesses or services."
5. Cornelius may wish to offer further incentives to reduce parking. Some typical examples are listed below:
  - a) Reductions for mixed use sites and uses which are complimentary to the primary tenant: In developments where several uses typically provide services to the same patrons (i.e. coffee shop within a hotel, gift shop within an office building) the parking requirement for the smaller secondary use may be reduced up to 60%.

preventing soil erosion everywhere is an issue that impacts water quality. Title 3 requires erosion and sediment control for all new development regardless of the size or location of the site. Refer to Section 6 of the Title 3 Model Ordinance (attached as a resource), for one way to meet the erosion and sediment control performance standards for water quality.

3. The Cornelius Zoning Code states that "removal of riparian vegetation (should) be kept to a minimum" (Section 11.783). Under Title 3, all Water Quality Resource Areas defined in the Title 3 Model Ordinance and map (including wetland areas) must be protected with a vegetated corridor. We recommend that the City amend the Zoning Code to implement vegetation cover protection measures for all Title 3 Water Quality Resource Areas in order to comply with the performance standard for water quality. Refer to the Title 3 Model Ordinance and map for one way to meet the vegetation protection standard and for a list of Water Quality Resource Areas that require protection.
4. We recommend that the City adopt Code language to prohibit new uses of uncontained areas of hazardous materials as defined by DEQ in the Water Quality and Flood Management Areas in order to meet the performance standard for water quality.

#### **Title 4 - Retail in Employment and Industrial Areas**

---

It is the intent of the 2040 Growth Concept that Employment and Industrial Areas contain supportive retail development. This retail would primarily serve the needs of people working or living in the immediate area, not larger market areas outside the Employment and Industrial areas. The areas of Cornelius designated as Employment Area are zoned as General Industrial (MI) and Core Commercial Employment District (CE). Cornelius has no areas designated as Industrial Area.

#### **Recommendations**

1. In accordance with 2(C) of Title 4, it is recommended that Cornelius amend its Zoning Code (Section 11.762 - General Industrial) to clarify that applications for retail uses larger than 60,000 square feet of gross leasable area per building or business in the areas identified as Employment Areas would require a public hearings process.
2. Also in accordance with 2(C) of Title 4, it is recommended that Cornelius amend its Zoning and Development Code (section 11.720 - Core Commercial Employment District) to clarify that applications for retail uses larger than 60,000 square feet of gross leasable area per building or business in the area identified as Employment Area would require a public hearings process. Currently, the CE guidelines call for a Type II procedure, which only has a public hearings process if determined appropriate by the City Manager. While the intent of the CE zone, to create a mix of complimentary uses, would not encourage retail uses larger than 60,000 square feet, the code does not specify a maximum size for a land use in the zone.
3. Cornelius may apply for an exemption to the Title 4 requirements, the exemption should be requested at the time the City submits its Compliance Plan to Metro on or before August 19, 1998.

## 1. Boulevard Design

The Baseline/Adair Street couplet is designated as a Boulevard Design district. We recommend that the City consider amending the TSP in the following way:

- Policy 2 on page 13 of the TSP could be amended - and its intent reinforced - by making specific reference to the Baseline/Adair couplet as a designated boulevard design district.
- Policy 3 on page 14 of the TSP could be revised to specifically address Section 2 (A-H) boulevard design elements. These elements include pedestrian crossings, wide sidewalks and landscape strips. (Title 6, Section 2, A-H)
- The first sentence, page 25 of the TSP could be revised to affirmatively state that on-street parking is generally consistent with enhanced bike and especially, pedestrian travel.
- We recommend that the code amendments 5-12 on page 6 of Appendix A of the TSP be revised to incorporate Title 6, Section 2, A-H Boulevard Design standards.

*There are currently amendments proposed to Title 6, if approved they will help to better define the types of regional route classifications and add specificity to the design elements of each classification.*

## 2. Street Connectivity

Cornelius has a number of TSP and Zoning Code provisions that govern street connectivity. The following revisions are recommended for compliance with Title 6, Section 3 of the functional plan:

If the City chooses the "design option" under Title 6 Section (3A) the City should consider:

- Code Section 11.562 (2)(e) regarding cul-de-sac permissibility and length should be amended to meet Title 6 Section 3.A.1(b) and (h) standards; and
- Section 11.562 (2)(f) regarding minimum street widths should be reviewed for consistency with Title 6 Section 3.A.1 (f) "skinny streets" standards; and
- Review Figure 7 of the TSP to assure compliance with Title 6 Section 3.A.2 regarding mapping of vacant parcels 5 acres or more and indication of street connections at intervals of no greater than 660 feet.

*There are proposed revisions to this standard which may establish a new target range of 10 to 16 connections per mile which translates to one connection every 530 feet.*

If the City of Cornelius chooses the performance option under Title 6 Section 3 (B), the performance measures shall be derived from data produced in the Regional Transportation Plan update and the City's TSP update.

## 3. Alternative Mode Analysis

Title 6, Section 4(A) of the functional plan requires mode-split targets for the central city, regional centers and station communities. The City of Cornelius does not include any of these design types, and therefore is not required to comply with this section.

## **Title 7 - Affordable Housing**

---

Title 7 contains no requirements for cities and counties. Metro encourages all jurisdictions to adopt strategies for affordable housing such as those recommended in Title 7.

## **Title 8 - Compliance Procedures**

---

All cities and counties are required to amend their comprehensive plans and zoning codes to comply with the provisions of the functional plan by February 19, 1999. On or before August 19, 1998, Cornelius is required to send to Metro the following:

1. An evaluation of the local plan, including public facility capacity and the amendments necessary to comply with the functional plan;
2. Copies of all the applicable Comprehensive Plan and implementing Zoning Code ordinances and public facility plans, as proposed to be amended;
3. Findings that explain how the City Comprehensive Plan and Zoning Code will achieve the standards required in Titles 1 through 6 of the functional plan.

In developing the evaluation, plan and ordinance amendments and findings, Cornelius is required to address the 2040 Growth Concept and explain how the proposed amendments implement the 2040 Growth Concept. (Title 8 Section 2.A.)

After February 19, 1997, any amendments to Cornelius' Comprehensive Plan and Zoning Code must be consistent with the requirements of the functional Plan. Metro is available to assist the City in achieving compliance and will review proposed comprehensive plan and zoning code amendments for consistency prior to adoption. (Title 8 Section 3.)

Amendments to Title 8 were adopted by the Metro Council on September 25, 1997. As the amendments to this Title were necessary to ensure Metro's ability to require compliance with the functional plan, they became effective upon passage. A copy of Ordinance 97-691C is included in Section 5 of this report.

## Section 5. Compliance Resources

To assist you with implementing your compliance plan, a "compliance resources" packet has been prepared. Included in this packet are the following:

1. Urban Growth Management Functional Plan;
2. Metro Ordinance 97-691C Amending Title 8;
3. Five-Part Capacity Estimate for Cornelius
  - a) Summary Page -- Metro Estimate of Dwelling Unit and Jobs Capacity of Current Zoning on Vacant Land
  - b) Technical Appendix -- Methodology for Determining the Calculated Capacity of Dwelling Units and Jobs for Existing Zoning on Vacant Lands
    - i) Process for Determining Net Vacant Buildable Land
    - ii) Methodology for Estimating Dwelling Unit Capacity of Existing Zoning
    - iii) Methodology for Estimating the Jobs Increase Capacity of Existing Zoning
    - iv) Methodology for Estimating the Capacity of Mixed Use Zones
    - v) Methodology for Estimating Household and Job Capacity on Redevelopable Lands
    - vi) Adjustments to Target Capacity and Capacity Estimates Associated with Annexations
  - c) Metro Estimate of Dwelling Unit Capacity for Current Zoning on Vacant Land
  - d) Metro Estimate of Jobs Increase Capacity for Current Zoning on Vacant Land
  - e) Description of Employment Density Estimates Used
4. Draft Water Quality and Flood Management Model Ordinance
5. Title 2 Map - Parking Zone Map
6. Shared Parking Handbook
7. Title 3 Map - Proposed Protection Areas for Water Quality and Flood Management  
(Cornelius' planning staff has already reviewed and received Title 3 maps.)
8. Title 4 Map - Retail Restrictions: Industrial and Employment Areas
9. Title 6 Map - Boulevard Treatment
10. 2040 Growth Concept Map for Cornelius to assist the City in drawing boundaries of each of the 2040 design types.
11. 1995 Regional Transportation Plan
12. Proposed Changes to Title 6
13. Creating Livable Streets - handbook on Boulevard Design

that has occurred between September 1, 1994 and August 31, 1996 (aerial flight photograph dates).

#### **PROCESS FOR DETERMINING NET VACANT BUILDABLE LAND**

To update the vacant lands coverage, Metro's Data Resource Center (DRC) uses digitized aerial photographs from August, 1996, rectified to match parcel maps from county assessors' records (scale varies by location from inch: 100 feet, to inch: 400 feet). To see where development has occurred, each fully or partially vacant parcel is manually checked between the most recent photographs and previous existing inventory maps of vacant land. With each tax lot update, the parcels are coded as partially or fully vacant. A fully vacant parcel has no improvements. A partially vacant parcel has improvements on the property, but the remainder of the parcel exceeding one-half acre has none. A line is drawn on partially vacant parcels to indicate the portion remaining vacant. This line is equivalent to a half acre buffer around the improved portion of the property. Before any calculations are made, however, non-contiguous vacant areas less than 1,352 s.f. (the area of a half grid-cell on GIS Arc-Info) are excluded from the supply calculations, and receive no capacity.

#### **Gross-to-Net Reductions for Environmentally Constrained Land**

Environmentally constrained land is subtracted from vacant land to arrive at gross vacant buildable land. In these capacity estimates, environmentally constrained land includes:

- Slopes greater than or equal to 25 percent,
- Flood prone soils, as derived from Natural Resource Conservation Service county soil surveys,
- Title 3 - Related areas
  - Flood Hazard Areas, defined as:
    - FEMA flood plains
    - February, 1996 inundation areas
  - Wetlands from an enhanced National Wetlands Inventory and local wetlands inventories
  - Wetland Areas
    - 50' from edge of wetland or 200' from edge of wetland on steep slopes
  - Riparian Corridors
    - 200-ft corridor on either side of all mapped streams in the region

Some specific areas can be taken out of the environmentally constrained land category described above, and returned to the vacant buildable land supply (development capacity was calculated on them). This is usually carried out at the request of the local jurisdiction for well-developed areas, such as regional centers. In all cases, riparian corridors retain their designation as constrained land.

After removing environmentally constrained lands, Arc-Info's grid module generates a file of vacant, buildable parcels within each local zone for the respective jurisdiction. In the majority of cases, overlay zones and other zones for which Metro does not keep data are not included in the calculations.

#### **Gross-to-Net Reductions for Parks, Schools, Churches and Streets**

## METHODOLOGY FOR ESTIMATING DWELLING UNIT CAPACITY OF EXISTING ZONING

Table 2 shows the inputs used to calculate dwelling unit capacity. For residential areas, zoning codes/comprehensive plans are consulted to determine the permitted densities in *dwelling units per net acre*. Where codes indicate dwelling units per *gross* acre (dwelling unit capacity on a per acre basis with streets and right-of-way included), the densities are adjusted upwards by 20 percent to account for the capacity that would be gained when considering capacity without streets, right-of-way, or other constraints — as these have already been removed from gross vacant buildable land in Metro's calculations.

Example: A zone that allows 6 dwelling units on a gross acre (an acre of land with streets and right-of-way) would allow approximately 7.2 dwelling units on a net acre (an unimproved acre of land with no streets/right of way).

In cases where the jurisdiction's codes define minimum lot sizes instead of dwelling units per acre, the lot sizes are converted directly into dwelling units per net acre (5,000 s.f. minimum lot size = 8.7 dwelling units per net acre).

In keeping with the functional plan requirements outlined in title 1, an underbuild factor of 20 percent of maximum zoned residential density is applied to the net residential densities. Jurisdictions may apply a lower underbuild factor if such can be demonstrated for housing developed between 1990 and 1995. Underbuild factor is defined as the percentage difference between permitted and developed density.

When calculating capacity for each net vacant, buildable parcel, metro allocates one dwelling unit to single family zoned parcels less than or equal to 3/8 of one acre (16,335 s.f.), regardless of the minimum lot size specified for that zone. This is in keeping with the methodology used in Metro's Urban Growth Report, which assumes that parcels in single family zones that are less than or equal to 3/8 of one acre were intended for one dwelling unit. Multi-family zoned parcels less than or equal to 3/8 of one acre receive their full calculated capacity (less underbuild factor).

### Infill Development

In these calculations, Metro makes estimates for dwelling units likely to be constructed through infill development. Infill development is the act of building additional housing units on tax lots that are currently considered *developed*. For the purpose of this analysis, additional units are added to tax lots between three and ten times larger than the minimum tax lot permitted within that zone. The estimates are based on the following rate:

- one additional unit was assumed for lots three to five times the allowable minimum size
- two additional units were assumed for lots six to ten times the allowable minimum size

jurisdiction's jobs target capacity. *The estimate that Metro has used for Cornelius' home based employment is 3.07% (2017 jobs capacity target).*

### **Employment Density Estimates**

For each jurisdiction, employment zones are assigned an estimate for gross square feet per employee. Metro's 1990 Employment Density Study, which describes different employment densities by SIC code, sets the basis for these estimates. The assignments are based on zoning descriptions of uses permitted within the zone, and are weighted by the likely occurrence of each use. Table 4 shows the employment densities calculated and applied for each employment zone. In setting these estimates, Metro considered the need to standardize zoning categories to maintain some degree of region-wide consistency in final calculations. However, because two light manufacturing zones in two jurisdictions may allow a different range of uses, they may have different assigned densities. Local planners may be able to provide better estimates as to the employment density of actual uses which cluster in the different zones.

### **Estimating Building Area**

A weighted average for gross square feet per employee is divided into the maximum gross building area that could be built upon each vacant, buildable parcel. The maximum gross building area for each parcel is estimated from a model that considers the following elements:

- required building setbacks (from local code)
- permitted stories of building area (from local code)
- square feet per parking space + alleys (350 s.f. unless otherwise indicated)
- parking spaces per 1,000 s.f. of building area (from local code and/or functional plan title 2)
- stories of parking (1 story assumed for calculations herein, unless otherwise indicated)

The factors listed above are determined from local zoning codes, with some consideration given to existing development patterns and/or input from the jurisdiction where codes do not provide adequate definition.

This approach estimates building area by considering the ratio of building footprint per 1,000 s.f. of building area to parking footprint per 1,000 s.f. of building area, and applying this ratio to the parcel size after removing required setbacks. The estimated building footprint is multiplied by the permitted number of building stories (within that zone) to arrive at a total estimated building area.

As building codes most frequently define setback requirements as raw numbers rather than proportions, it is necessary to estimate dimensions of vacant, buildable parcels by assuming a regular configuration. Since parcels do not typically take a regular configuration, this methodology errs on the side of slightly overestimating maximum potential building area (and thus, employees). However, the reductions to vacant, buildable parcels from parking and setback calculations may compensate for a possible overestimate. Local planners may be able to improve on this methodology for specific areas within the jurisdiction.

Main Street - 70% or less  
Corridor - 50% or less  
Mixed Use Employment Area - 50% or less  
Industrial Sanctuary - 50% or less

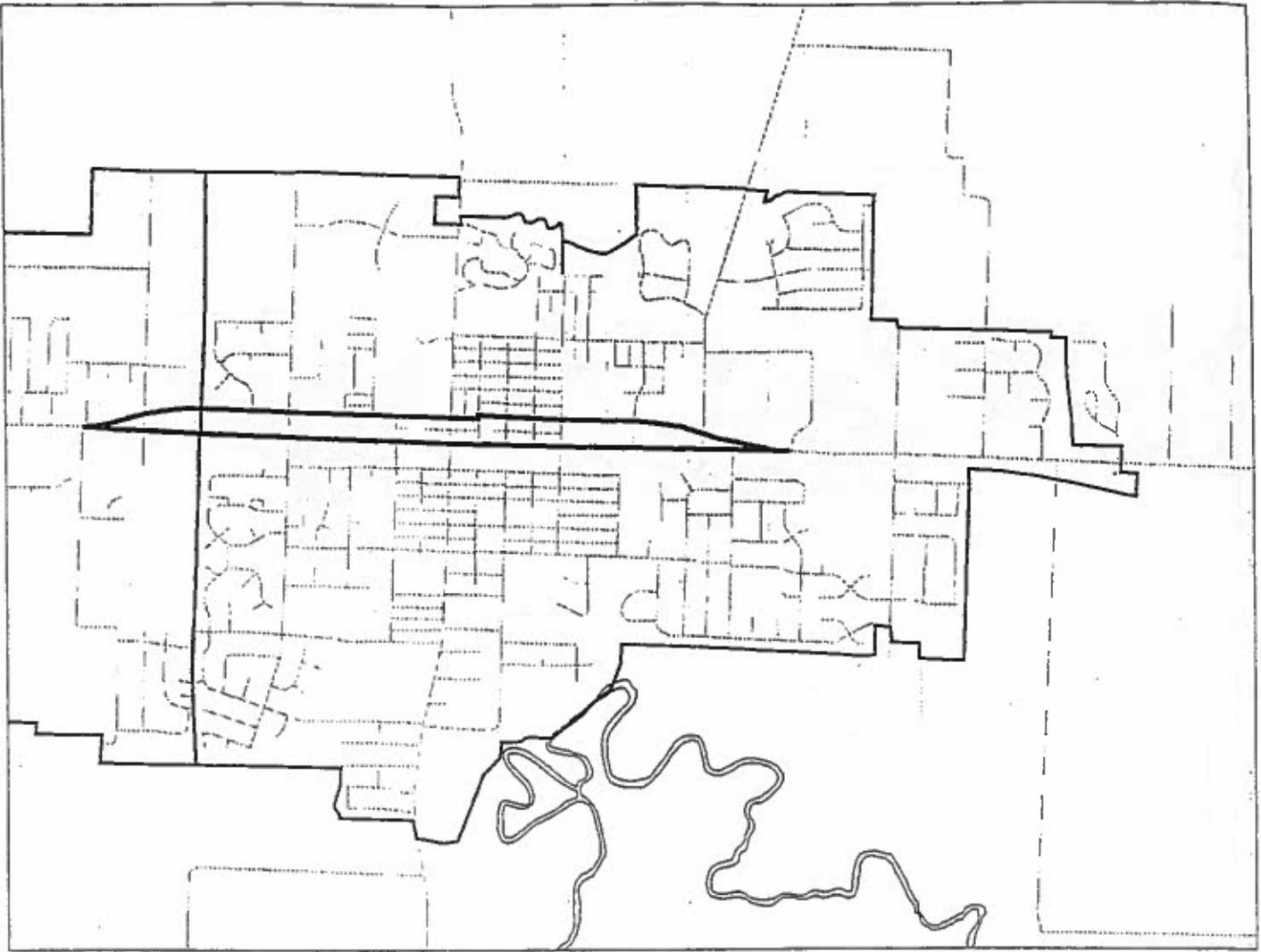
The above description applies only to tax lots smaller than one acre. As tax lots one acre or larger frequently define their own periphery, tax lots larger than one acre are considered redevelopable when the assessed building value is less than the assessed land value.

It is expected that most of the additional capacity from redevelopment would occur in mixed use and employment areas, and that redevelopment will not make a dramatic increase to the capacity of single family residential zones at their current zoned densities. Please see section 3 of the compliance report for the specific figures calculated for the jurisdiction's additional jobs and household capacity on redevelopable lands.

#### **ADJUSTMENTS TO TARGET CAPACITY AND CAPACITY ESTIMATES ASSOCIATED WITH ANNEXATIONS**

Calculations and estimates in the first part of this report are controlled for the 1994 jurisdictional boundaries. This is done to maintain consistency with table 1 target capacities established for 1994-2017. As jurisdictions annex land from surrounding areas, the respective target capacities are shifted from the area of origin to the annexing jurisdiction. When this occurs, the annexing jurisdiction receives an addition to their target capacity as well as an addition to their actual capacity (in the form of credit for dwelling units constructed between 9/1/94 and 8/31/96, and/or remaining vacant, developable land). The summary page of this technical appendix, **Table 1**, contains the following: estimates for the amount of land annexed by the jurisdiction between 1994 and 1996; the 1994-2017 target capacity that equates with that land area (dwelling units and jobs); the number of dwelling units permitted (9/1/94 and 8/31/96) which count towards the target capacity; and/or the remaining amount of vacant, buildable land (1996 vacant lands) within the annexed area.

While Metro can provide information on items such as the additional target capacity, recently permitted development, and remaining developable acres within annexed areas, Metro is not calculating the remaining capacity deficiency/surplus for jobs/dwelling units within specific annexed areas. This is because target capacity numbers are intended to apply to the jurisdiction as a whole. The manner in which these target capacity goals are allocated to smaller areas within a jurisdiction is to be determined by the jurisdiction, not by grid-based Arc-Info. Thus, when a jurisdiction annexes "x" acres, with a target capacity of "a" dwelling units and "b" employees, the target capacities are not required to be accommodated in the "x" annexed acres. Some of the target dwelling units and employees might be more efficiently accommodated in other areas, such as the jurisdiction's mixed use center.



-  City Boundary
-  Boulevard Design Streets
-  Streets
-  Riv\_fill.shp

# Cornelius Title 6 Boulevard Treatment

**METRO 2040  
Title Compliance Check List  
City of Cornelius**

Functional Plan and Title Requirements	Proposed Plan/Code	Location in Plan/Code
<p>Title 1 – Housing (1019 units) and Accommodation (2812 jobs)</p>	<p>The City of Cornelius meets the employment allotments established by Metro. The City proposes adoption of Main Street zoning districts to help accommodate the housing allotment by increasing the density within the Main Street District residential zones and allowing mixed uses in the commercial portions of the Main Street District.</p>	<p>The Main Street Plan is referenced in the Comp Plan. The Main Street Plan focuses strictly on the Main Street District. The Main Street zoning districts implement the Main Street Plan.</p>
<p>* Methods to increase capacity</p>	<p>City proposes the amendment of the code defining "Accessory Dwelling Unit and authorizing its use in the residential zones in conjunction with single family residences. The City's proposed Main Street District will provide for higher density housing and employment opportunities through mixed use zoning</p>	<p>Zoning Code: Single Family Resid. Zone, R-7 Multi-Family Resid. Zone, A-2 Main Street Zoning District, MS</p>
<p>* 80% Minimum density</p>	<p>City proposes the amendment of the code establishing a minimum density standard for all residential zones as follows; Single Family Resid. – 4 units/Ac. Multi Family – 8 units/Ac. (SFR) " " – 11 units/Ac. (Multi)</p>	<p>Zoning Code: Single Family Resid. Zone, R-7 Multi-Family Resid. Zone, A-2</p>
<p>* Design Type 1. Boundaries</p>	<p>1. The City has an adopted Main Street Plan which establishes specific boundaries for mixed commercial/residential uses along the Tualatin Valley Highway (a transit corridor). The City of Cornelius currently provides for the following Design Types – Main Street, Corridors, Employment Areas, Industrial Areas, and Neighborhoods. The current City Zoning Map and Main Street District Zoning Map identifies</p>	<p>1. Main Street District Zoning Plan; Existing Zoning Map</p>

Functional Plan and Title Requirements	Proposed Plan/Code	Location in Plan/Code
<p>* Design Type</p> <p>1. Performance Standards</p> <p>Title 2 – Regional Parking Policy</p>	<p>neighborhoods farther away from employment centers with larger lot sizes and lower density.</p>	
<p>1. Variances to Parking Standards</p>	<p>Existing: The Planning Director (City Manager) may allow a 10% variation from the standards established in the code through a Type I review. An applicant requesting a variation from the standards established in the code may apply for a variance.</p>	<p>Located in the administration section.</p>
<p>2. Blended Parking Rates</p>	<p>The City proposes to allow for shared parking and a 10% reduction to account for cross-patronage &amp; sharing of spaces when peak hours do not overlap.</p>	<p>Section 11.40.12.D</p>
<p>3. Parking Maximums &amp; establish Zone A&amp;B for parking standards.</p>	<p>The City proposes to establish a parking minimum and maximum. A map identifying Zone A &amp; Zone B will be inserted. The division between the two zones will be 1/4 mile from the transit line.</p>	<p>Section 11.40.13</p>
<p>4. Parking Standards for single-family &amp; multi-family.</p>	<p>The City proposes to establish the minimum parking standard for single-family to 1 per unit, and multi-family ranging from 1 to 1.75 spaces, depending on square footage and/or # of bedrooms, consistent with Title 2.</p>	<p>Section 11.40.13</p>
<p>5. Parking Space Dimension</p>	<p>The City proposes to include the dimension of parking spaces in the code.</p>	<p>Section 11.40.15</p>
<p>6. Allow adjacent on-street parking spaces to count toward minimum parking standards.</p>	<p>The City proposes that on-street parking adjacent to a property be counted toward the minimum parking requirement in the Main Street District.</p>	<p>Section 11.40.12.E.</p>

Functional Plan and Title Requirements	Proposed Plan/Code	Location in Plan/Code
Rural Reserves	Cornelius	
* Green Corridors		
Title 6 – Regional Accessibility		
* Boulevard Design	<p>Tualatin Valley Highway is designated in the Metro 2040 Growth Plan as a regional bicycle route. The City will coordinate on the design and land configurations to comply with the ODOT Regional Boulevard standards. The Main Street District provides for unifying elements such as street trees, street lights, sidewalks, paving materials along Tualatin Valley Highway.</p>	<ul style="list-style-type: none"> <li>• Comprehensive Plan, Transportation, Pg. 46</li> <li>• Main Street District Plan, Design Guidelines, Chapter 5, Pgs. 1-4.</li> </ul>
* Street Connectivity	<p>The Subdivision section 11.562(2)(c) of the code is proposed to be removed and new language added that requires cul-de-sacs not to exceed 200 feet in length. Section 11.562(2)(f) is proposed to be amended to state that Residential local street right-of-way width shall not be less than 46 feet</p>	<p>Zoning Code: Subdivision, Special Conditions, 11.30.24.D.3.(h). Subdivision. Special Conditions, 11.30.24.D.3.(m)(i).</p>
* Performance Standards		
* Congestion Management		
Title 7 – Affordable Housing	<p>The City of Cornelius currently has a higher percentage of low-moderate rate housing in the existing housing market. The City also provides for mobile home parks and manufactured housing in the Code. The proposed Main Street District will provide for higher density housing.</p> <p>The Cornelius commitment to affordable housing and a wide range of house is discussed in the Comprehensive Plan</p>	<p>Zoning code: Single-Family Residential, R-7 Multi-Family Residential, A-2 Main Street District</p>
Title 8 – Compliance Procedures		<p>Comprehensive Plan-Housing Chapter</p>

Functional Plan and Title Requirements	Proposed Plan/Code	Location in Plan/Code
<p>2. Minimum density</p>	<p>2. The policies addressing minimum density requirements are provided in the Urbanization Element</p>	<p>30-31. 2. Comp. Plan, Urbanization Element, pg. 17</p>
<p><b>Comp Plan/Public Facilities and Service Element</b></p> <p>1. Compact development</p> <p>2. Boulevard Design standards</p> <p>3. LOS – Main Street District</p>	<p>1. The Comprehensive Plan has been amended to reflect coordination and compliance with Metro and State requirements for mixed use urban centers with local accessibility.</p> <p>2. The City has coordinated design and land configurations to align with the Regional boulevard Design</p>	<p>1. Comprehensive Plan, Vision Statement, pg. 4; Transportation Element, pgs. 51-52.</p> <p>2. Comp. Plan, Transportation Element, pgs. 52-53</p>