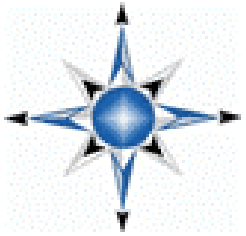
The Damascus Area Design Workshop

A Regional Model for a Clean, Green, Affordable and Fair UGB Expansion

Prepared by Patrick M. Condon, PMC Associates, Vancouver B.C. for
1000 Friends of Oregon and Coalition for a Livable Future, August 2002



Coalition for a
Livable Future

1000 Friends
of Oregon

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Foreword

We are pleased to present this summary report of the results of the Damascus Community Design Workshop. This project represents a new effort by 1000 Friends of Oregon and the Coalition for a Livable Future, the project sponsors; to translate our values and principles into a positive alternative for the region's urban development.

The results of the project is a design model that illustrates urban development that uses land efficiently, protects our natural resources and fish and wildlife habitat, provides for a fair share of the region's jobs, and includes a full range of choices in types of housing and transportation, that meet the needs of families of all incomes and types. Although we focused our project on the likeliest area for urban expansion, we believe our ideas, principles and design insights will be relevant no matter where or when the urban growth boundary is expanded.

We hope this design inspires a regional discussion that focuses on the quality of urban development and not just the quantity, and we look forward to your contributions to that regional discussion.

Sincerely,
Robert Liberty Jill Fuglister

The Project Sponsors wish to extend our deep appreciation and thanks to our grantors for their valued support, without which this project would not have been possible.

The David and Lucile Packard Foundation

The Meyer Memorial Trust

We also extend our thanks to the many who have contributed to this project, and have given generously of their time, money, and/or materials towards its success.

St. Paul of Damascus Lutheran Church

Deep Creek Elementary School

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Higgins Restaurant and Bar

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American Institute of Architects, Portland Chapter

Stan Schwartz, Catering

New Seasons Market

On the cover: Aerial perspective view of a characteristic neighborhood, showing mixed-use high density buildings at the top, residential streets including many housing options in the center, and green infrastructure (in the form of parks, green streets, and natural areas) brought deep into the neighborhood from below.
Drawing by Stacy Moriarty, Moriarty Condon Ltd.

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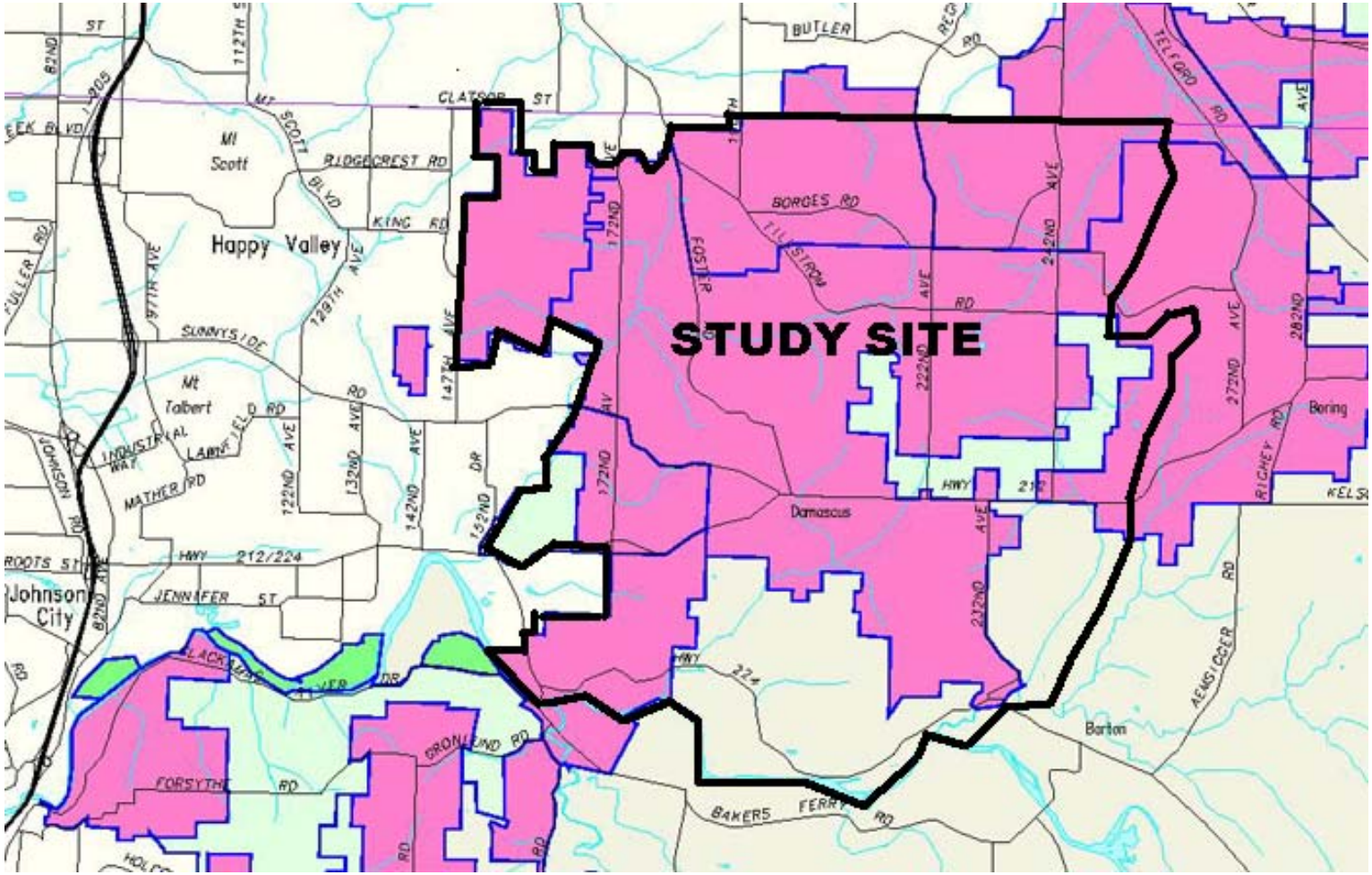
Metro Must Decide Where and How Much to Expand the UGB. Damascus is the Most Likely Candidate Area

The Portland metropolitan area regional planning authority (Metro) is considering a substantial expansion of the Portland area urban growth boundary (UGB)[i]. Metro must make this decision to comply with a law passed by the Oregon Legislature in 1995. This law requires Metro to ensure enough land inside the UGB such that there is a twenty-year supply of land available for development. Metro is similarly obligated to consider lands called "exception lands" first, before allowing urbanization of productive farm or forestlands. Exception lands were identified in 1974 when the Oregon Senate passed Bill 100, the legislation that created Oregon's land use planning program. The lands identified were not easily classified as farm, forest, or urban land, and thus were considered "exception" lands. By far the largest single area of exception lands are in the 25 square miles immediately southeast of the Portland UGB – lands within Pleasant Valley and Sunshine Valley that converge at the village of Damascus. If the UGB expands in this area and present policies for urbanization are applied, these valley landscapes will be dramatically altered. One hopes they will be altered for the better, but recent experience leaves many in doubt.

Thirty-eight people who had never worked with each other before, and who had no direct responsibility for this momentous decision, came together to answer one overarching question: *If the Damascus area was included within the UGB and*

The Study Area in the Portland metropolitan region.



The Study Site in the Damascus Region. Map is from Metro Council and shows "resource lands, lands subject to consideration for UGB expansion but with various levels of importance as resource lands, mostly for farming and forestry. The green color parcels in the study (in the "tier three" resource lands category) site are considered to be the highest value for farming.

subsequently urbanized, could it become a <u>better</u> place in the process? Their responses and ideas are captured in this report.

All of the plans shown in this report were produced in the six days between May 29 and June 3, 2002. Participants came from many places and from many walks of life. Many participants, including the project sponsors, are concerned about the proposed UGB expansion. Many have fought against expansion in the past, and greet the prospect of an expansion many times larger than those of the past with grave misgivings. Their experience has shown them, over and over again, that opening new land to urbanization inevitably leads to sprawling development, unaffordable housing, traffic congestion, a proliferation of strip malls, and natural resource destruction, producing a world of "land use" and "infrastructure" instead of a community to belong to.

So it was that this group assembled to suggest another way. They began by asking: If the UGB does expand in the Damascus area, is there any way to avoid this all too familiar outcome? Is there a way to create a real community, a place to belong to, with decent homes for people of all incomes, with adequate family wage jobs nearby, where you can get around without a car if you choose, where you can readily access healthful, locally grown food, and where nature is a part of your everyday experience?

The answer arrived at after six exhausting days is a qualified yes. Yes it is possible to have such a place, but only if the community grows from the valuable features that are there, and not bury them under a proliferation of homogenous subdivisions. Yes, it is possible to have such a place, but only by insisting on a network of streets, paths and riparian areas that unite the community, not impenetrable barriers that divide it. Yes, it is possible, but only if the people who serve your coffee at your local café, patrol your street, and teach your kids to read can live nearby, not forced to live in far off districts because they cannot afford to live in yours. Yes, it is possible, but only if important natural features are preserved and cherished, not buried under concrete or locked behind a fence. Yes, it is possible, but only by creating and preserving land for growing food. Yes, it is possible, but only if family wage jobs are integrated into the fabric of the community and not isolated to areas beyond transit lines or located a frustrating hour's drive away.

If all of these conditions can be met, then the urbanization of this beautiful pair of valleys might constitute an upward trade: the emergence of a fair, green, and affordable community as equitable compensation for the loss of open fields and rural residential parcels.

If, however, a business as usual approach is maintained, where UGB expansion is followed by the all too familiar process of dividing up the landscape like so many cuts of

beef, to be sold by the pound, then no such consensus would exist. Workshop participants would likely advise against expanding the UGB in the Damascus area.

At the same time, should Metro propose expansion into any *other* candidate landscape, workshop participants most probably could not accept there that which they could not condone for Damascus. Wherever the UGB expands, the expansion should only be allowed if there are sufficient assurances that whatever is built will conform to publicly approved policies for green, fair, and affordable communities. In the pages that follow is a collective vision for just such a community.

Six Principles For A Clean, Green, Affordable And Fair Community

The designs shown in this report conform to a detailed set of design instructions, referred to as the *Design Brief* (see Appendix). In some ways the design brief is as important as the designs that it informs. The design principles and instructions contained in the brief are tailored for the Damascus area, but could be applied anywhere else in the Metro region, or even beyond – anywhere that a clean, green, affordable, and fair community is desired.

The process for developing the design brief revolved around a series of stakeholder roundtable events that involved people with a direct professional, emotional, or economic interest in the issue. (See Appendix for the Design Principles Group membership list). The first step in this process was to distil a voluminous body of existing federal, state, regional and local policy and law into six community design principles. Distilling such a volume of policy and legislation was a difficult task; however, at the end of the process the design principles group was virtually unanimous in their support for the following six principles, and for the design instructions that flowed from them.

1. ***Design Complete Communities***
2. ***Provide an Interconnected System of Streets Parkways and Greenways***

3. ***Establish Green Infrastructure Systems to Bound, Protect, and Reinforce All Neighborhoods***
4. ***Shift to Lighter, Greener, Cheaper, Smarter Infrastructure***
5. ***Build a Healthy Economy***
6. ***Preserve Present Homes; Introduce New Ones***

(See Appendix for a more complete description of the six principles)

These six principles provided the basis for the detailed instructions included in the brief. The instructions in the brief explicitly described the required workshop outcomes and were stated either in the form of numeric requirements (such as a specific number of jobs or housing units to accommodate) or performance requirements (such as mandates to protect and enhance stream function).

Three Design Teams: Go, Home, and Green

Twenty-five square miles is a large area to design in six days. It is a daunting task even when there is a detailed design brief, talented and knowledgeable team members, and ample base information. To make it more manageable, the task was broken into three issue areas. The participants were divided into three teams to address each issue area. Each team was then asked to start from their assigned issue when developing proposals, but also directed to prepare a complete plan that satisfied all of the other imperatives of the brief. It was hoped that this would allow each team to give adequate attention to their assigned issues without losing sight of the plan in its entirety.

The first team approached the task with a special emphasis on protecting and repairing the natural systems and features of the area; they were the "Green Team." The second team was asked to look at the problem with a special emphasis on transportation; they were called the "Go Team." The third team was to approach the problem with a special emphasis on community and neighborhood design; they were called the "Home Team."

The Green Team

Warren Byrd, Jim Closson, Chris Eaton, Jane Green, Jim Labbe, John Gardiner, Lori Hennings, Paul Ketcham, Chris Midgley, Dee Wescott, Kennon Williams, Don Yon

Start With the Carrying Capacity of the Land

The Green Team started by examining the ecological carrying capacity of the site and by contemplating how much land could be developed before natural systems (such as salmon streams) were destroyed. The result of this method of inquiry was a diagram showing where development would be most appropriate, and where development should be precluded. This diagram created a framework for landscape preservation and development. Forested buttes were protected, as were streams (with a 300 foot riparian buffer on each side for streams in major ravines; other streams were provided with 150 foot riparian buffer on each side).

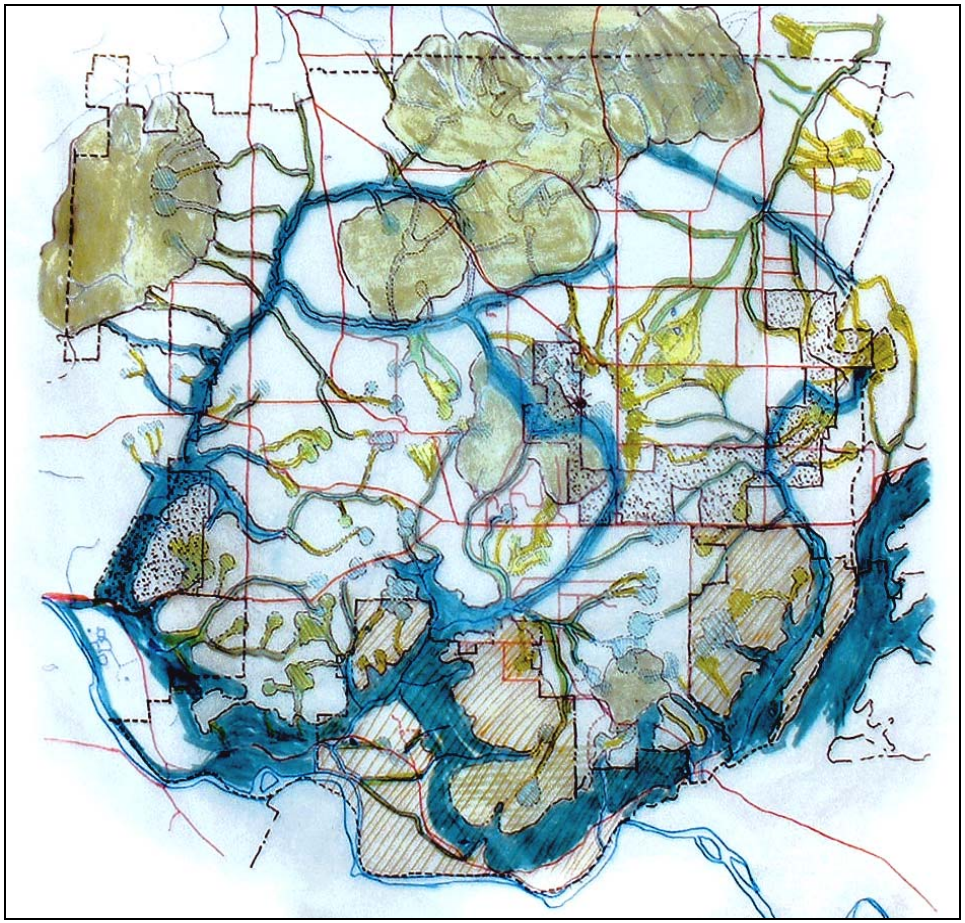
Two Basic Moves: Preserve Buttes and Stream Corridors

These two basic moves preserved the most important visual elements of the Damascus area and established a strong and attractive natural edge for future neighborhoods. The 300 or 600-foot wide riparian corridors bounding these discrete but interconnected neighborhoods would ensure the health of stream systems, preserve the most crucial habitat areas, create avenues for terrestrial wildlife movement, and provide an area-wide recreational trail system for pedestrians and bicycles. The protected buttes became the constant signature of the place, remaining visible from all parts of the site.

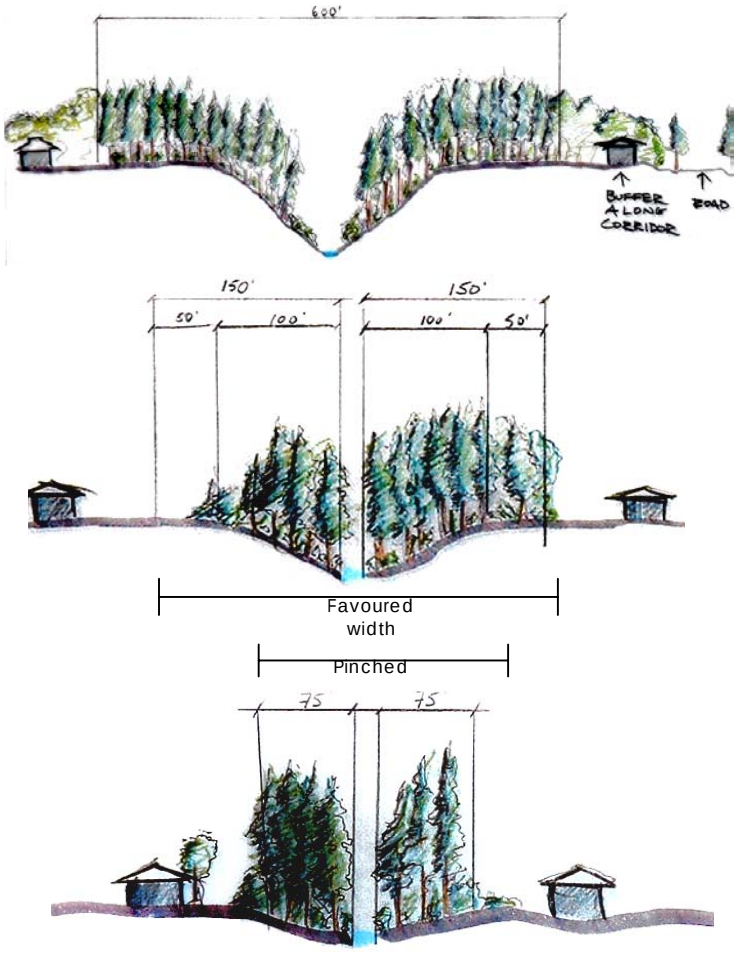
The plan proposed connecting the protected butte top forest zones to the Clackamas River via the wide stream buffers. Research has shown the overarching importance of a connected system of habitat, inclusive of all of the various types of habitat on the site (wet/shady, dry/sunny, etc.) and the blended ecotones (the transition zones between plant communities) that connect them. The continuous riparian connections between buttes and river would ensure the protection of a portion of all of these important ecotones and would protect migration paths and habitat for terrestrial animals as well.

The 600-foot Interconnectivity Standard.

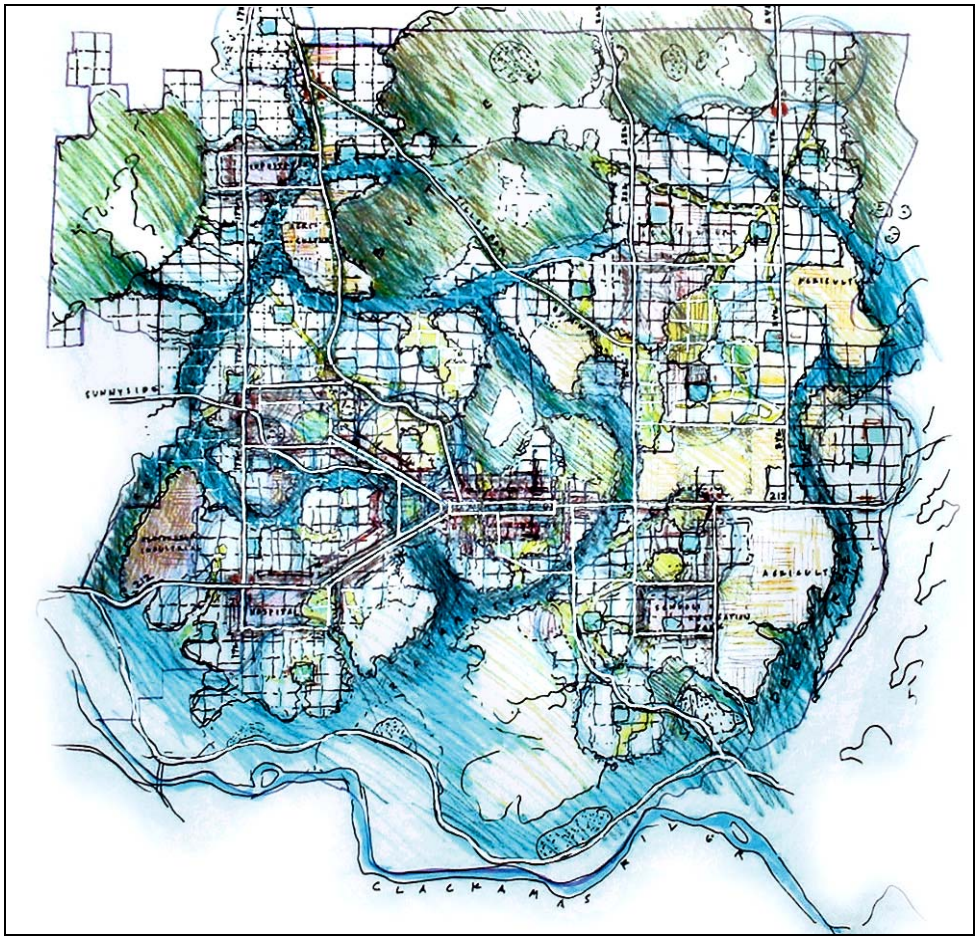
The Green Team's next important move was to impose a concept for an interconnected street system over portions of the landscape unconstrained by steep slopes or stream corridors. The interconnectivity increment they used conformed to Metro's "600-foot maximum distance to through streets" standard, which is crucial for reducing gridlock on suburban arterials. They laid this interconnected network along the cardinal axis lines (due north/south and due east/west) to align with existing roads and parcel boundaries, thus insuring that the community could develop incrementally as parcels became available. After a meeting of all three teams, the Green Team land use diagram became the basis for the Go Team's transportation planning efforts and for the Home Team's more detailed neighborhood concepts. The clear logic embodied in this plan



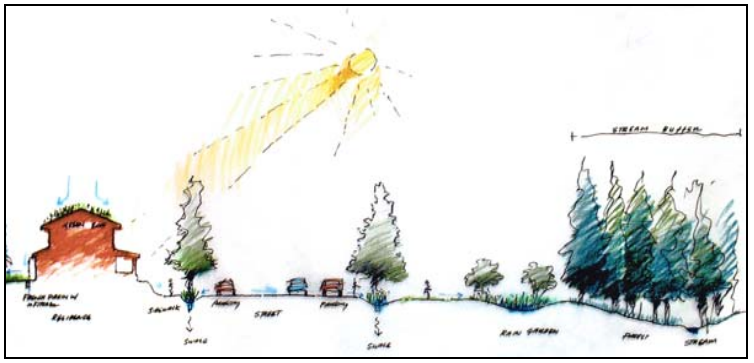
The inherent natural beauty and ecological capacity of the site provided the basis for an assessment of land use suitability and environmental protection. A key priority emerging from this diagram was to protect and connect the ribbons of green space that interlace the site. This included riparian and wildlife corridors, steep buttes, and key agricultural areas.



Riparian setbacks ranging from 150 ft. to 600 ft. wide, measured from top of bank to top of bank, were proposed to ensure the health of the site's stream network, preserve the most crucial habitat areas, create corridors for terrestrial wildlife movement, and build an area-wide system of trails and greenways.

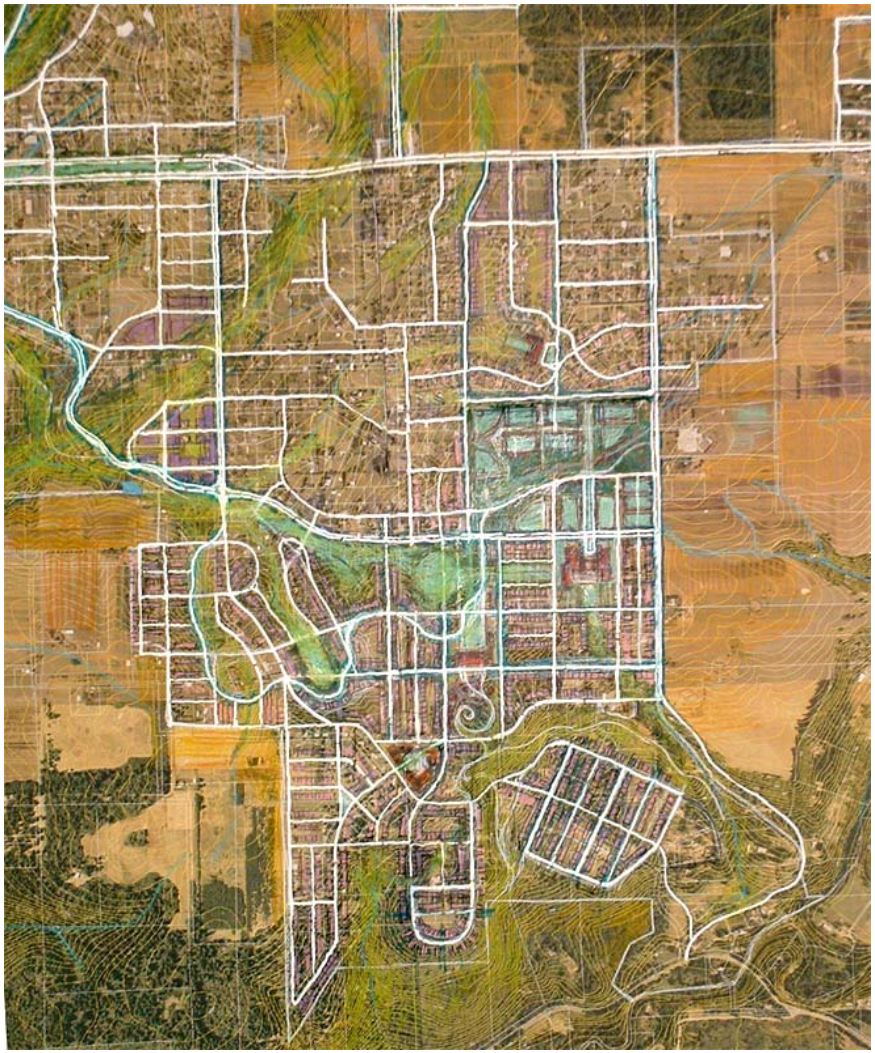


A community structure based on a 600 X 600 ft. block increment forms around the interlaced network of streams, buttes and agricultural areas. Damascus center is the focus of the most intense development with four smaller centers in surrounding areas. A total of 28 individual neighborhoods are envisioned, each organized around a five-minute walk, and each with a public park as its center.



Top: *Interconnected streets and pathways easily give way to the ecological underlay that bounds and reinforces each neighborhood.*
Bottom: *This section of a green street shows how runoff from roofs and streets can be managed and cleaned within the road right-of-way before being released slowly to receiving streams.*

Green Team's detail plan for the northeast portion of the site. Note how natural systems influence the end shape of the district, and how citizens are never but a few steps from natural areas. Natural areas provide recreational trails and a secondary circulation system for bikes and pedestrians. Generous buffers and green infrastructure system tendrils that extend deep into the neighborhoods protect streams. Note the mixture of densities apparent, and the retention of various existing low-density development. Also note preservation of "tier three" farm lands and forested slopes.



Detail from the final Green Team rendering showing southeast portion of the site (centered on the intersection of Rt 212 and 242nd Street). Area suggested for education campus (community college or branch campus for example) shown center right. This plan shows how the Green Team adapted to existing parcels, roads, and stream ravines to formulate a plan that could grow over time.

Close up detail from the Green Team rendering showing east central portion of the site centered just south of Wilson's Corner. The attention paid by Green Team members to existing parcel lines, drainage ways, and roads is apparent. The intention was to formulate a plan that could evolve over time through the independent decisions of property owners to develop or add housing to parcels.

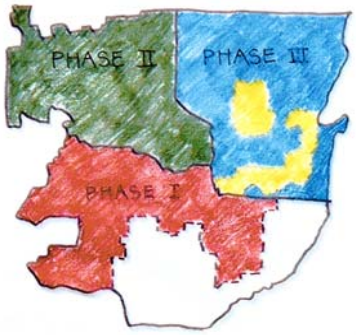
meant that a process designed to be open to the creation of three different plans ended up arriving at an early consensus supporting one basic plan.

While the Green Team's proposal sacrifices many acres of agricultural land for urban uses, virtually all of the "Tier 3" resource lands were preserved (i.e., those situated in a large "U" shape [as depicted on Metro's Alternative Analysis Map] to the west of Damascus north of Route 212).[ii] Preservation of these large fields would maintain a key aspect of the existing visual quality of the area as it develops while leaving options open for possible land use changes beyond the year 2040. These preserved fields would also clearly mark the transitions between one community district and the next.

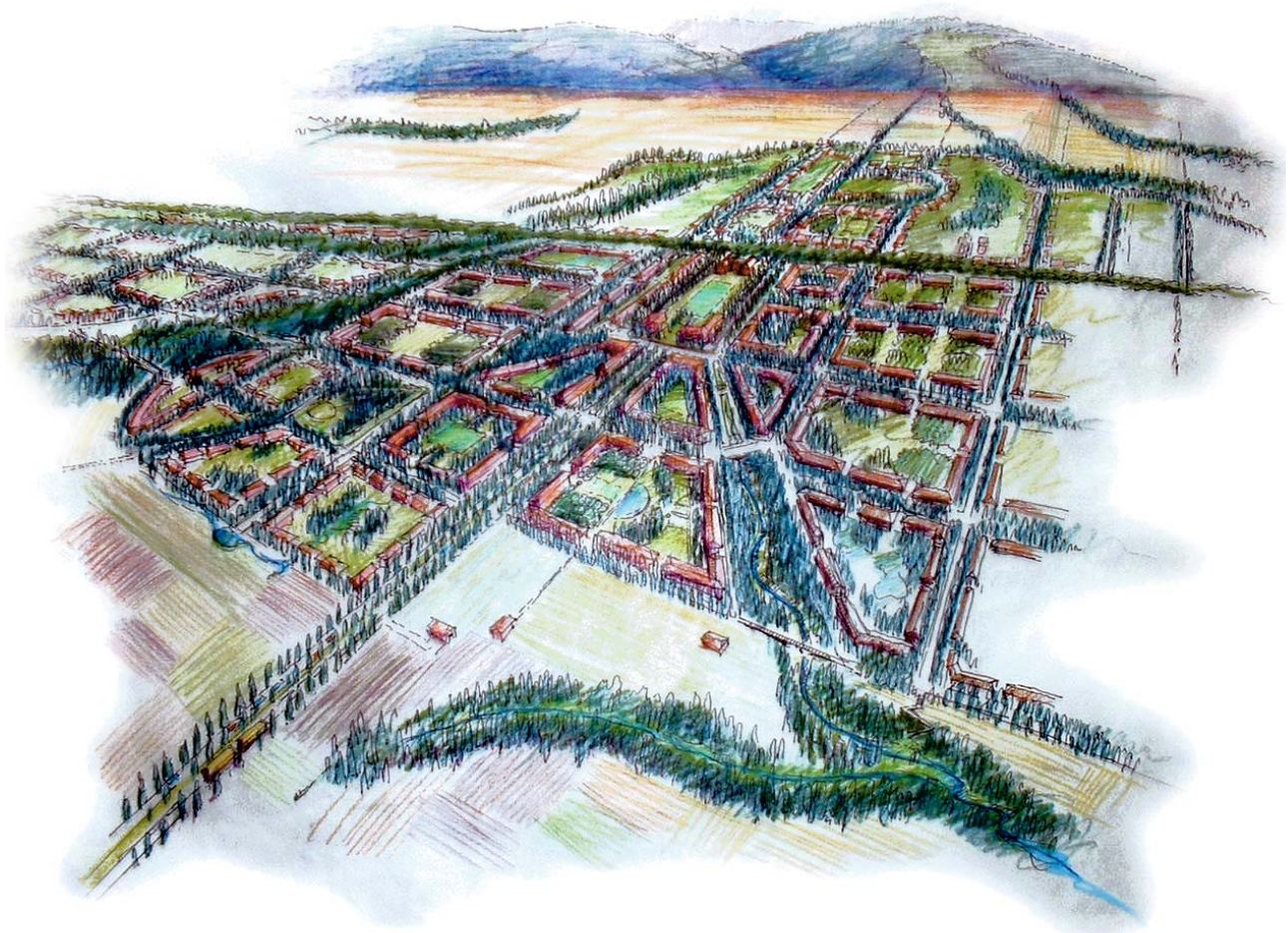
A Framework for Land Use

The initial Green Team concept plan provides a logical framework for land use, with Damascus at the hub of four new community nodes. Finally, and in conformance with design brief targets for provision of job sites, the Green Team suggested two industrial centers in the west portions of the site and a third at the northeast corner of the site, in view of Highway 26. Up to 700 acres of dedicated industrial/business lands would be available during the first 20 years of development (and potentially 400 acres more after that). All of these lands would be close to either Interstate 405 via Route 212 or to Highway 26.

Phasing Concept



The Green Team recommended a managed approach to growth to retain the area's sense of community and unique identity. To achieve this, they recommended that the City of Damascus be incorporated or annexed to surrounding areas and that expansion of urban services (i.e., road improvements and urban zoning) occur only when services can be provided. These measures would help to limit the market tendency for "more of the same" type of *development, seen in adjacent urbanizing areas.*



An aerial view of the center-east portion of the site as it might appear in 2040. The Green Team's careful approach to protecting the site's ecology and visual beauty does not come at the expense of creating an integrated, diversified and distinct community. Agricultural land and community plots bound this community node on 3 sides and maintain views from the surrounding buttes. The fine-grained grid of green streets and blocks gives way to streams and wildlife corridors, making natural systems a visible and vital part of everyday life.

The Go Team

Patrick Condon, Steve Coyle, Rudy Kadlub , Michael Hammons, Sherry Larue, Renate Mengelberg, Susan Milley, Lynn Peterson, Ken Pirie, Lidwien Rahman, Jackie Teed, Carol Witbeck

By the third day of the workshop, the Go Team had agreed on six key strategies:

1. Metro's 600 foot interconnectivity standard would be adhered to wherever possible;
2. existing property lines would be respected when imposing a new movement system;
3. a distributed system of movement would reduce the need for a limited access freeway and lower overall servicing costs for the area;
4. all streets would be "green streets" to reduce or eliminate the consequence of roadway impervious surfaces on watershed function;
5. one new major east/west connection was necessary to prevent bottlenecks in Damascus Center; and
6. there was a less expensive and more transit friendly option for moving traffic to and through Damascus Center than the Sunrise Freeway.

The 600-foot Standard for an Interconnected System of Streets and Blocks

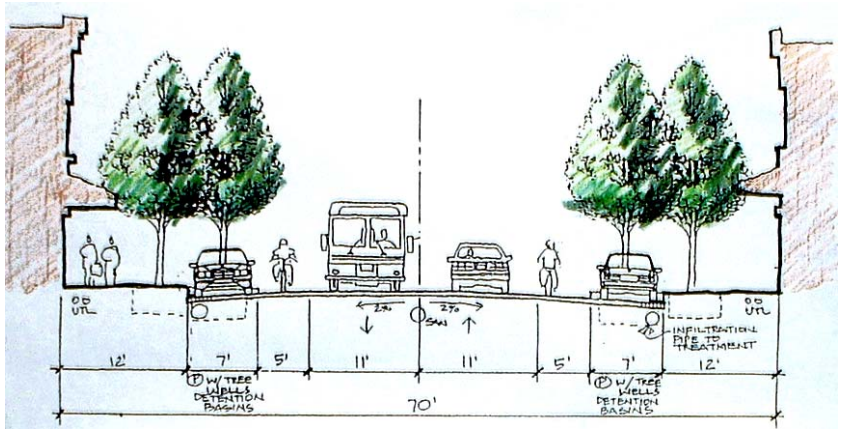
Research shows that an interconnected streets system can help reduce auto dependence.[iii] An interconnected street system, in concert with a fine grain pattern of land use and an average density in built up areas of 8-10 dwelling units per gross acre[iv] (a density common to many of Portland's older neighborhoods) can lead to reductions in

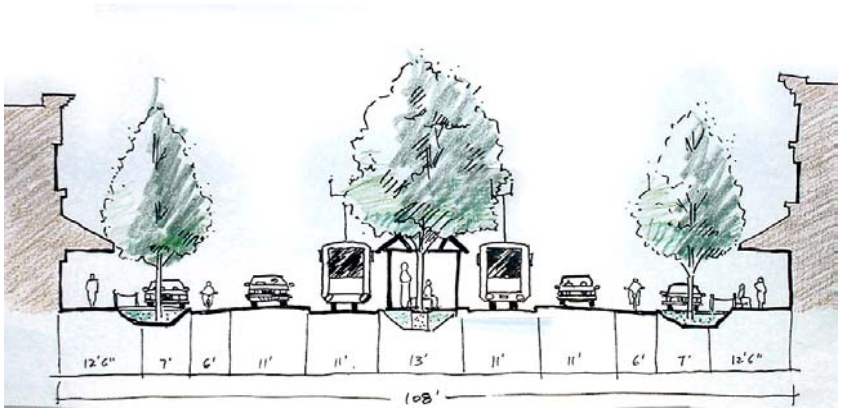
vehicle miles traveled per person per day (VMT) of over 40%. Metro, as part of a comprehensive and multi part strategy for reducing congestion, has instituted a policy calling for a 600-foot maximum distance between through streets in newly developed areas. When the Go Team attempted to apply this standard, they found that the 600-foot measure was easily applied to the Damascus area landscape. Like most North American rural landscapes, the Damascus area was originally subdivided into 40-acre squares called "quarter sections."[v] The edges of these agricultural sections were always aligned to the cardinal directions. These sections are still visible in the region's pattern of land ownership and road layout. In many cases the parcels have been divided into 20, 10, 5, or 2 acre pieces, but these pieces still sit inside the original 40-acre square – their edges aligned north/south and east/west. The 600 foot increment, when made into a square and then cut in half to form a useful 300 by 600 foot rectangular block, easily adapts to the existing pattern of property ownership and, consequently, to the existing community pattern of the Damascus area. Using this increment, and respecting the north/south east/west orientation of parcels, makes it possible to urbanise this rural landscape a little bit at a time without large-scale land assembly and without relocating existing residents. Indeed, parcels as small as 300 feet by 600 feet (4.2 acres) are easily developable, as this is enough land to complete one urban block. Other adjacent blocks can be added later as circumstances dictate without loss of system integrity.

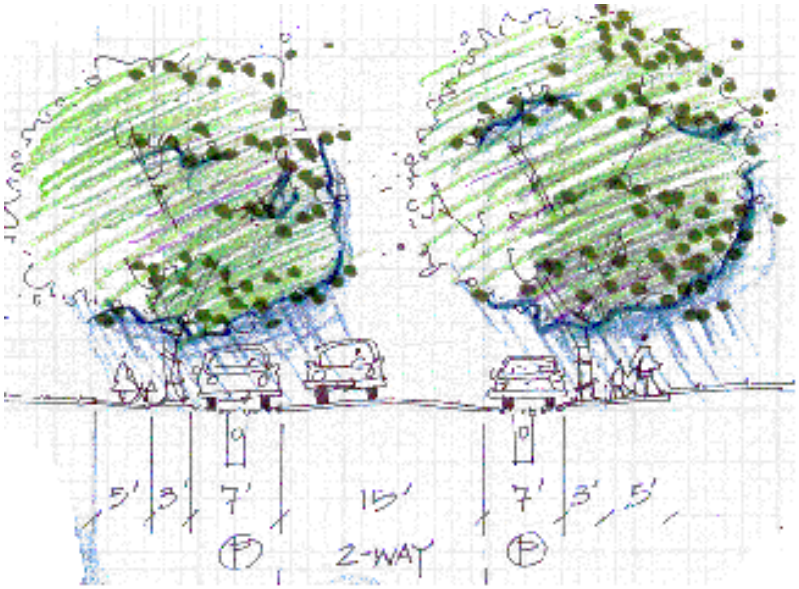
Existing Street System. *The road network is formed, on the one hand, by the original agricultural grid, and, on the other, by a street pattern that follows the natural contours of the landscape.*

First concept for new street system. *Thick red lines denote major streets; thin red lines denote medium capacity streets; dotted line denotes a possible Southern Parkway alignment. The agricultural grid and the 600 X 600 ft. block increment was used as a basis for expanding the street network. Existing east-west connections along the existing 212 and 224 corridors are supported by an additional east-west connection to the north of highway 212. North-south routes are strengthened to accommodate the increase in demand and to increase interconnectivity through the site.*

Street Prototypes

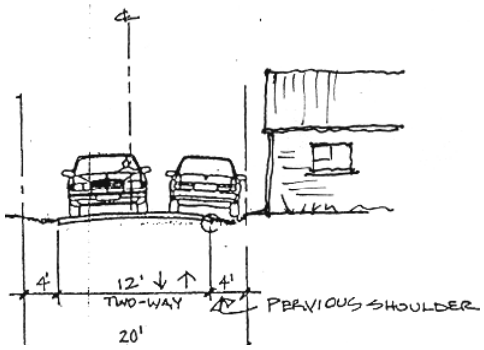






Above: Main Street prototypes. *Slower speeds, on-street parking, and buildings pushed to the sidewalks make for a lively and pedestrian-oriented Damascus Main Street. On the right, a wider right-of-way accommodates a streetcar, proposed for the primary east-west spine (currently, Highway 212).*

Left: Local Street prototype. *A 45 ft. right-of-way handles two way traffic on old fashioned take your turn "cuing" street, on street parking on both sides, sidewalks on both sides of the street; and many planted trees. Parking areas double as infiltration trenches that absorb runoff from the road surface. Service and garage access to homes on these streets is via rear alleys to make the sidewalks safer for pedestrians and to allow more room for parking.*



Section of a typical alley

Alleys for All Higher Density Blocks

The Go Team examined how this prototypical block would work for various housing types, how much pavement would be required to provide car access, and how pedestrian activity could be given the priority demanded in the design brief. The team concluded that for all blocks with a gross residential density of over 8 dwelling units per acre or mixed-use blocks with floor/area ratios of 0.7 or higher, cars and services should be handled at the back of the lot, accessed by an alley. Alleys would be constructed of low impact materials such as pervious pavement or crushed stone. Use of driveways at densities higher than 8 du/acre would add excessive amounts pavement to the landscape (in the form of two- and three-car wide driveways), create a landscape of "snout houses," and make sidewalks unsafe for children.

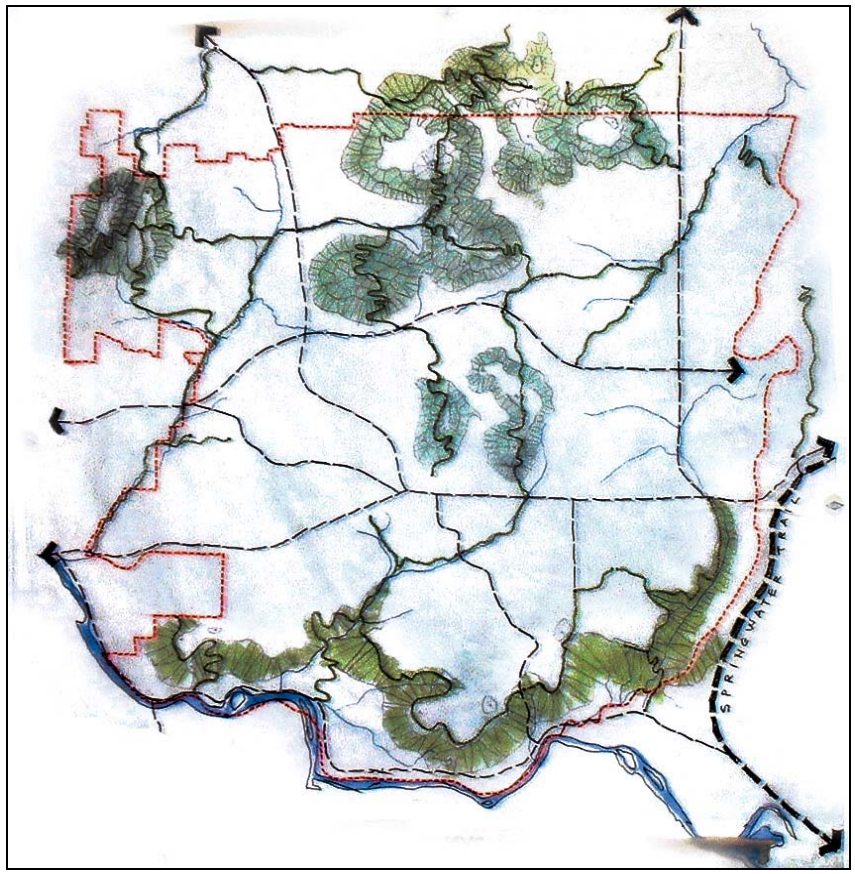
Green Streets for All Streets

With the street network chosen, the Go Team devised a strategy to reduce the impact of paved street surfaces on watershed function. Given the density targets set out in the design brief, even narrowed streets would cover over 25% of the total acreage of developed areas. If this much impervious surface were drained into nearby streams via conventional storm drain systems, the streams and their fish would be destroyed. The Go Team decided that this impact could only be avoided if all streets in the watershed were "green streets," built in conformance with Metro's emerging "Green Streets" standard.[vi]

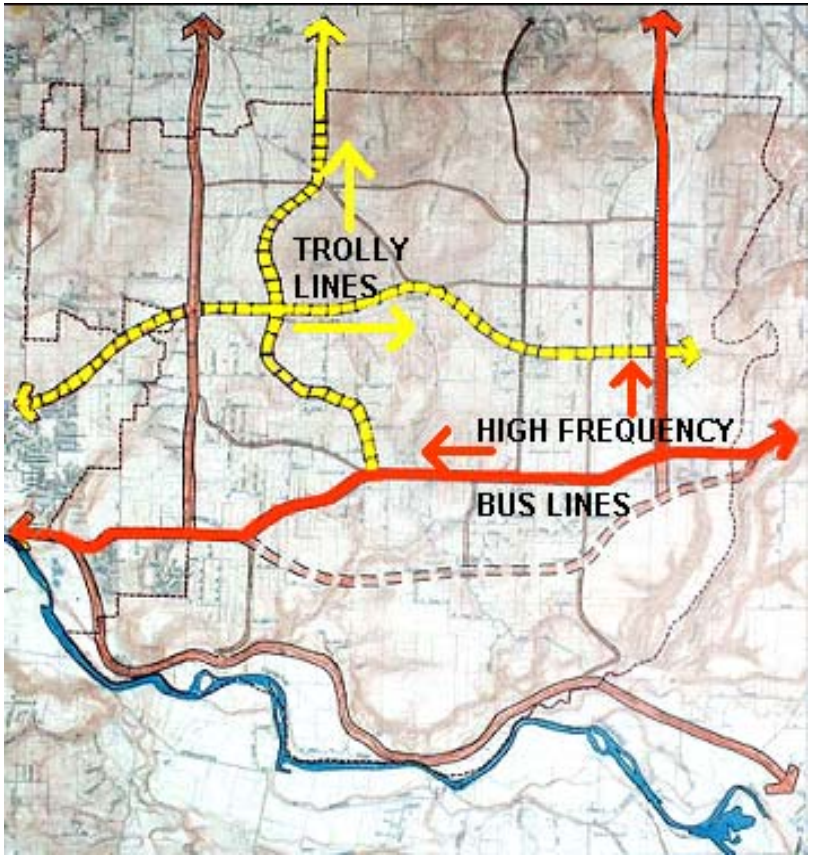
The plan assumes that all streets will be "self mitigating," in that they infiltrate 90% or more of the rainwater that was absorbed by site soils prior to development. [vii]

Minimize Stream Crossings. Where Stream Crossings are Necessary Use Narrow Bridges

Reducing the impact of road systems on watershed hydrology by 90% will not guarantee habitat health if riparian zones are not protected. Typical street crossings can devastate a riparian stream corridor. Certainly, the fewer the crossings, the less the damage. However, significant gains to riparian protection that would result by limiting stream crossings could be offset by the increases in automobile congestion and increased trip distances that would result by limiting the interconnectivity of the street system. The Go Team proposed a solution for overcoming this seeming contradiction. Stream crossings would be reduced, but not beyond the point at which interconnectivity would be compromised. The standard used by the Go Team was 1,200 feet (or two blocks or a five minute walk) maximum distance between crossings. For local roads with trip rates of fewer than 1,500 trips per day (about two cars per minute on average during the daytime), these crossings would take the form of one-lane "take your turn" bridges, a form of bridge common on even high volume state highways prior to WWII. These very narrow bridges could be "inserted" through the preserved canopy of the riparian zone without opening up the tree canopy of the corridor and exposing fish to the harmful

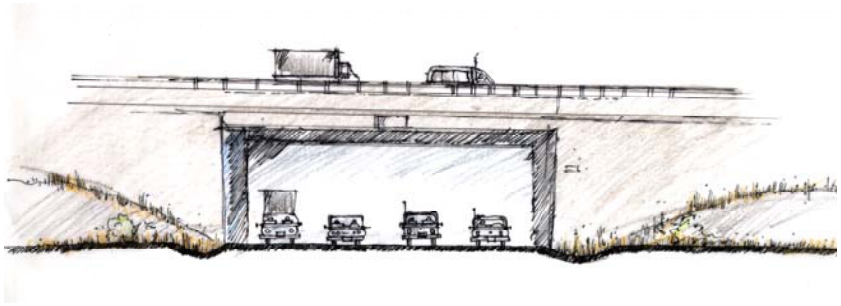


Proposed Trails and Greenways



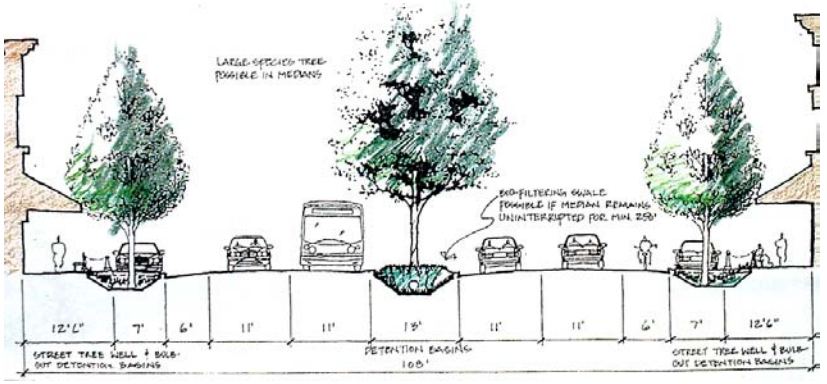
Proposed Transit Routes: *Yellow lines denote streetcar routes; the orange line indicates high frequency bus routes.*

Not This



An eight-lane, limited access, grade separated Sunrise Corridor is a high cost option with substantial ecological impact. However, the same capacity can be accommodated on a network of Parkways and Boulevards, shown below and at right. These alternative corridor types can yield substantially higher social and ecological benefits than the option above.

But This



A Main Street boulevard, like the one above, is a more urban alternative to the freeway option at left. Four travel lanes accommodate a high capacity of traffic and a diversity of travel modes. Parking on the street, trees planted in infiltration boulevards and shallow building setbacks keep speeds moderate and encourage pedestrian activity.

And This

In the less urban areas of the site, a Parkway handles as many cars per hour as the freeway option(albeit at more moderate design speeds) but in a way more in keeping with the special character of Damascus. A wider central boulevard becomes an artificial stream corridor that handles runoff, replenishes the water table and provides islands of foraging areas for birds and other small creatures.

heat of the sun. Construction specialists on the Go Team predicted that one lane pre fabricated concrete bridges spanning top of bank to top of bank (within a protected riparian canopy zone) could be constructed for less then $50,000 – a considerable sum, but not by itself an impractical amount, especially if other green street economies (such as reduced road widths and crushed stone paved lanes for example) were incorporated into site servicing requirements.

A Parkway Runs Through It

By far the most contentious issue confronted by the Go Team was that of the Sunrise Corridor Freeway proposal. This proposal for linking Highway 26 to Interstate 205 has been debated for 25 years with no resolution in sight. After continuing this debate in the design workshop, the members of the Go Team coalesced around a proposal, not for a limited access *grade separated freeway*, but rather for a controlled access *surface parkway*. Go Team members felt that such a roadway could be built at a fraction of the cost of a freeway, carry as many cars per hour at 45 m.p.h. as a freeway designed for 65 mph, more easily incorporate Green Streets standards, provide a better setting for integrating industrial, commercial, and residential land use functions, and accommodate transit and pedestrian activities more easily than a freeway.

A Parkway to Connect Pleasant Valley to Sunshine Valley through Rock Creek Notch

The Go Team concluded that the Sunrise Parkway solution would not, in itself, provide adequate east-west access for the community if additional corridors were not also provided. A line of buttes form a natural separation between Pleasant Valley on the west and Sunshine Valley on the east. These attractive landscape features also created a serious barrier to east west connection. There was one quite obvious place to breech the line of buttes: at the Rock Creek notch where Rock Creek originates. Unfortunately this area also showed up in many of the documents as a sensitive habitat and watershed area. Considerable debate ensued between and within teams on the feasibility of a cross connection at this point. In the end, workshop participants agreed that it would be possible to build a low impact parkway connection in such a way that environmental damage could be minimised if appropriate engineering specifications were applied.

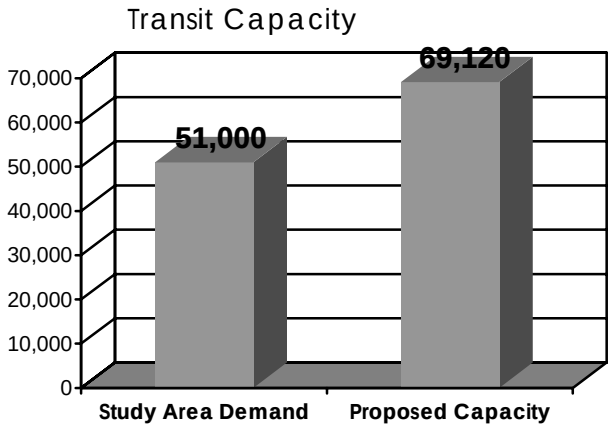
A complete and varied movement system centered on "Trolley Car Arterials"

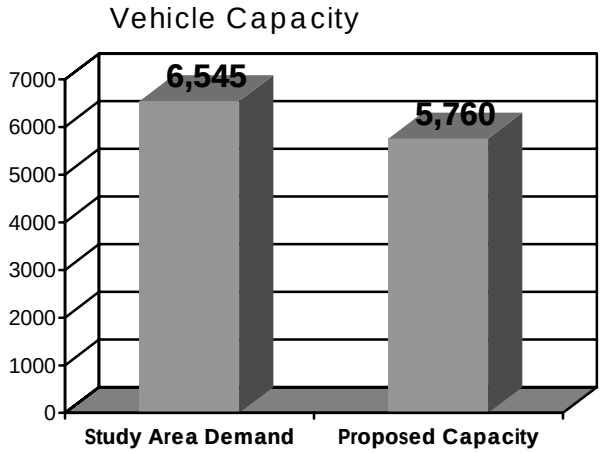
The basic elements of the movement system proposed by the Go Team are outlined below.

Roads
2 Parkway Road at 45 mph
6 Major roads at 35 mph

Transit
1 E/ W Sunnyside Street car
1 N/ S Foster Streetcar
2 10- minute frequent bus (172nd and 242nd)

Bike/ Walk
25 miles of pathway
24 miles of on- road/ sidewalk





All residents in this system would be within a ten-minute walk of a fast bus or "trolley car arterials," a road type characterized by a mixture of movement types (such as trolley, bus, car, delivery, walking, biking) occurring on the same corridor and mixed land use (i.e., residential, office, commercial, institutional) on both sides of the street. In the minds of the participants, this integration between land use, human activity, and transportation would ensure that citizens of all ages and incomes could get where they needed to go and that the transit system would be well used and affordable.

What the Numbers Say

While in no way an extensive analysis, Go Team members were able to use Metro's basic transportation demand modeling algorithms to evaluate their proposals. As the charts show the interconnected system of parkways, mixed-use arterial roads, and local roads show a capacity in excess of demand. On the transit side, the same model showed that the proposed streetcars and rapid buses would be well utilized, as the model indicated more riders than comfortable capacity.

The Home Team

Ayesha Batra, Karen Buehrig, Maggie Dickerson, Paul Dupont, Mike Faha, George Faris, John Hartsock, Katherine Issac, Rob Lane, Kirsten Kinzer, Terry Long, Marcy McInelly, Scott Montgomery, Joanne Proft

After exploring many alternative options the Home Team settled on six key strategies for community design:

1. Ensure that housing is affordable for working families and for those who cant work;
2. design and build compact high density mixed use centers;
3. interlink neighborhoods and the green network, and provide easy access to a range of open spaces;
4. incorporate employment and industrial development into the community;
5. place as many employment opportunities and public facilities within walking distance as possible;
6. create 28 neighborhoods centered on small schools, not as distinct "pods", but as connected elements of the larger community; and,
7. provide many kinds of housing for many kinds of families, including co-housing and co-operative housing.

The Critical Question: Can Those Who Teach, Protect, and Serve the Community Afford to Live There?

Of critical importance to the Home Team was the question of affordable housing. With the recent dramatic increase in Portland area housing costs, many people are feeling housing stress. This stress is not confined to the poor. Those who make the median family income of $38,000 – $52,000 per year are feeling the pinch as well. Recently some have

claimed that the UGB is to blame for much of this increase.[viii] Others argue increases in home prices in Portland have more to do with increased demand, outdated subdivision regulations, and rising costs of materials. Several independent studies have shown that Portland's housing cost increases have been lower than housing price increases found in most other western US metropolitan areas, none of which have urban growth boundaries.[ix] A new study by the Brookings institution finds that Portland's growth management measures may actually be off-setting the housing price inflation being created by rapid population growth. [x]Whatever the cause, no one denies the problem: housing is getting more expensive. Wherever the UGB expands, Metro must ensure that the widest possible range of income and family type demographics are accommodated. To do less would threaten a return to patterns of race, income and age segregation that the Portland area has recently made great strides to reverse. The challenge is to find a way to house those at the bottom quarter of the income pyramid, families making between $11,000 (for one) and $25,000 (for four) per year. These are the people who serve the food, take care of our kids, maintain and protect our buildings, and do the hundred other things that contribute to a livable community.

A Decent Home in a Quality Neighborhood for as Little as $500 per Month

Home Team members understood the affordable housing issue from various perspectives. Housing advocate members explained what the real needs were, and

suggested policy tools for meeting these needs. Developers and builders were available to compute how much it would cost to produce certain types of housing, and how much rent from tenants would be required to amortize the mortgage held by the owner for the cost of this unit. Working together they made huge progress in bridging the gap between what the housing market can provide and what people actually can afford to pay. After wrestling with this problem for a number of days the Home Team concluded that one of the best strategies for housing those at the lower end of the income spectrum, *and* for opening up new opportunities for homeownership to moderate income families, was to include secondary rental suites in a large percentage of new detached and attached homes. As the graphs on the following pages make clear, secondary suites are the most economic way to provide low cost housing. Given their low cost to manufacture (up to 30% cheaper to build than apartments built in complexes), they could be profitably rented for as little as $500 per month.

Own Your Own House for $1,050 per Month

The other side of this secondary suite equation involves the homeowner to whom rent is paid. This "mortgage helper" rent makes owning a single-family home affordable to families at the 80% of median family income level, or those who can afford to spend $1,050 on monthly rent. These are families who could not otherwise afford to own a home. The economic and social synergy of this relationship between principal owner

and renter is obvious. Economic capital stays in the neighborhood, with the renter helping the owner afford a home, and the owner helping the renter live in a neighborhood, rather than in a "housing complex". If economic circumstances change for either family it need not mean abandoning their community. A renter whose circumstances improve can eventually move into homeownership if that is their desire. An owner who's family or economic circumstances change (divorce being the most common example) can more easily sort out living arrangements that will minimize disruption to them and their children.

For Those Who Can't Afford $500

A monthly income of $500 doesn't help if you only have $275 a month for rent, which is all a full time day care provider living alone can afford to pay. Nor will it help a four-person household headed by a special education teacher, which has only $390 a month to spend on rent, nor someone living on general assistance, social security, social security insurance, or a half time job at minimum wage -- people who can afford between $94 and $204 a month for housing. Workshop participants concluded that the market can and should provide most housing through free market mechanisms at market rates; but for those whose incomes fall below what the market can satisfy, more must be done. Most of what could be done for this group is impossible to show on the drawings. The

suggestions provided by the Home Team are policy based and thus invisible. The suggestions include:

- require fees on market developments to offset the cost for producing low rent housing in other areas;
- establish and finance a Damascus Area community land trust to ensure long term availability of decent and affordable housing;
- require the provision of affordable housing before economic development for jobs can proceed;
- Use federal and state housing programs more aggressively to enhance the capacity of low income households to compete in the rental housing marketplace;
- Establish agreements with developers to provide a certain percentage of units in new developments as affordable, to be managed by non-profit housing groups (these and other approaches are described in the housing appendix).

The Cost to Produce A Home – *A " Back of the Envelope" Analysis from the Damascus Design Workshop*

Housing Type	Interior Space in sq. ft.	Residential Density, Units/Arce (gross incl. street ROW)	Unit Sale Price	Developed Land Value	Development Cost Per Unit	Residual Value per Unit	Mortgage or Rent per month Required to Amortize Cost
Single Family Detached							
Estate housing	3,200	3.5	500,000	100,000	47,000	47,000	$ 3,200
Medium lot (4,500 sq. ft.	2,150	7.3	280,000	56,000	22,000	22,000	$2,000 – 1,500 with rental suite
Small lot (3,500 sq ft.)	1,700	8.4	220,000	44,000	20,000	20,000	$1,550 – 1,050 with rental suite
Single Family Attached							
Town House	1,100	18.2	150,000	30,000	12,500	17,500	$1,050
Row House	1,300	19.9	180,000	36,000	12,500	23,000	$1,300 – 800 with rental suite ("stacked townhouse" form)
Duplex	1,750	15.8	170,000	34,000	10,500	23,520	$1,200 – 700 with ground floor suite
Rental Units or Condo. Apt.							
1-2 BR Apartments	700	30.3	80,000	16,800	5,800	11,000	$780
2-3 BR Apartments	800	27.6	90,000	18,000	6,500	11,500	$875
Secondary Suite in Detached Residence	600-800	On 25% of all lots					$500

The Cost to Actually Live There! – *A "Back of the Envelope" Monthly Rental Requirement Analysis from the Damascus Area Design Workshop*

Housing Type	***Residential Density, Units/Acre (gross including street ROW)***	***Mortgage or Rent per month Required to Amortize Cost***
Single Family Detached		
Estate housing	3.5	$ 3,200
Medium lot (4,500 sq. ft.	7.3	$2,000 – 1,500 with rental suite
Small lot (3,500 sq ft.)	8.4	$1,550 – 1,050 with rental suite
Single Family Attached		
Town House	18.2	$1,050
Row House	19.9	$1,300 – 800 with rental suite ("stacked townhouse" form)
Duplex	15.8	$1,200 – 700 with ground floor suite
Rental Units		
1-2 BR Apartments	30.3	$780
2-3 BR Apartments	27.6	$875
Secondary Suite in Detached Residence	On 25% of all lots	$500

Different Dwelling Types on the Same Block

Members of the Home Team felt that simply providing housing stock for the various income and demographic groups was not enough. It was also important that the house types be mixed on each block such that different family types and income groups would be located closer together than is the norm in suburban communities. Team members produced block studies (shown on the following page) to demonstrate a mixed income block that still maintains the "single family home feel". They felt that Portlanders do not object to people of different incomes living next to them so much as they object to completely different types of *buildings* situated near their own.

Good Jobs Near Home

The Damascus region could never thrive if it grew into a 25 square mile bedroom community – yet another suburban area where residents travel long distances in search of family wage jobs. Generally, community planners try to provide at least one job site per household. For the Damascus area, this would mean a minimum of 40,000 jobs. However, the larger Clackamas County area presently has a very large jobs-to-worker deficit. There is, therefore, a strong rationale for the Damascus area to be a net provider of jobs for the other parts of the County and for adjacent parts of the Portland metropolitan area. In such instances, planners often use a target of two jobs per household or a minimum of 80,000 jobs.

The Home Team used the target figure of 40,000 living wage[xi] jobs at the low end, and 80,000 living wage jobs at the high-end to guide their deliberations. The plan that they developed is quite flexible in adapting to this wide spread. The modularity of the block structure allows the plan to adapt to unforeseen economic development opportunities with much greater ease than can a rigid "pod" based land use plan.

Work at Home

In keeping with the directives contained in the design brief, the Home Team developed a plan that would provide a significant number of jobs in homes. Live-work options were assumed to be allowable in most residential areas, with certain centrally located residential areas designed specifically to take advantage of their strategic location through incorporation of architectural features that would make home occupations especially practical (such as stacked townhouses where the ground floor unit could be used as a consultant office, coffee shop, or home repair service for example). The Home Team developed a community design approach that could provide between 5% and 10% of all jobs (or 5,000 to 10,000 jobs) in live-work settings, with no upward limit on the number of jobs that could eventually be provided in this form.

Work Close to Home

While live-work constitutes a rapidly expanding percentage of the contemporary workforce, the Home Team recognized that this emerging sector still constitutes a relatively small share of the *total* workforce and will likely remain a relatively small share for some time. Consequently, the Home Team assumed that dedicated job sites would provide over nine tenths of all jobs. The Home Team calculated that 25,000 jobs would be in settings that were an ordinary part of the community: in schools, health care facilities, dental clinics, accountants offices, etc. (for example, there would be 3,000 jobs for elementary and high school teachers alone), and the myriad other services we seldom think about until needed such as car, appliance, computer, and plumbing repair facilities. These are "service sector" jobs and consistently rank as the largest single sector in the job marketplace. It is important to note that these jobs do not show up in the form of large tracts of land zoned for single purposes. Rather, they are integrated into predominantly residential districts where they serve the needs of the people who live there.

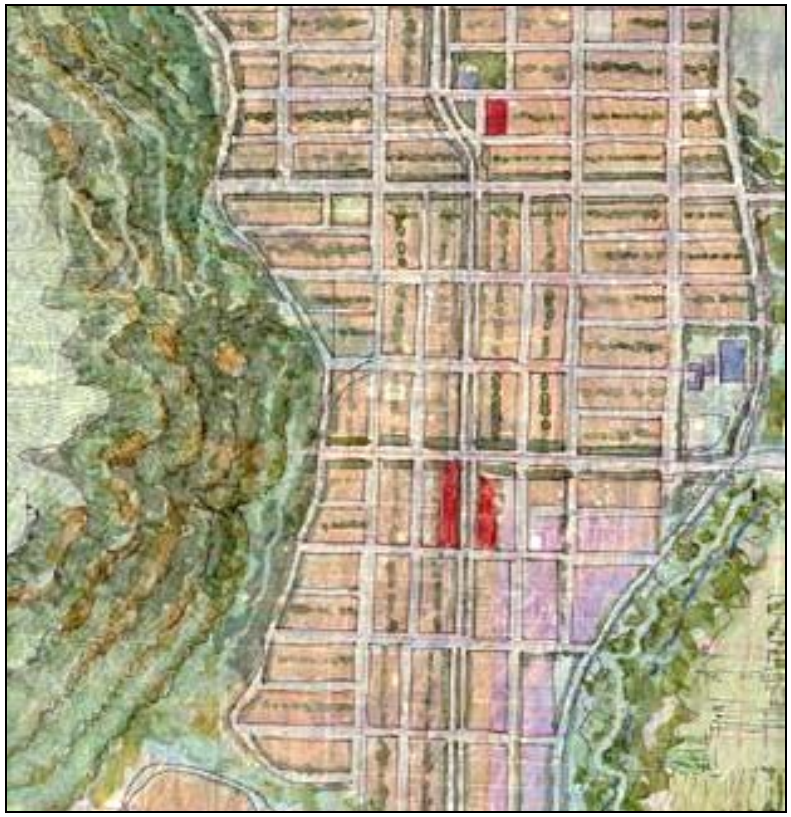
Work at the "Business City"

The plan provides a minimum of 450 acres of land zoned for business and industrial uses. Using a figure of 1,000 feet of land per job (or 43 jobs per acre) the plan provides for 21,500 tech/business/industrial jobs in dedicated sites. These figures could be much

higher if the team's recommendations for a change in the way we imagine industrial development are realized. For decades, we have expected large industrial/corporate clients to demand vast campus like settings where one-story structures are surrounded by parking and landscaping. Jobs in such settings are very hard to access by transit and relatively inefficient users of serviced land. This being said, the plan preserves a minimum of two unencumbered 50-acre parcels for industrial clients who require campus settings.

At the heart of the Home Team's industrial development plan is the new "Business City" concept for Damascus – a large 300-acre urban zone that would resemble thriving and dense industrial/business areas of Portland. This area integrates with the interconnected street system and the residential and commercial areas that surround it. The Home Team anticipated floor area ratios of up to 1.5 would be achievable. Corporate offices, back offices, and research centers would be housed in multi-story urban scale buildings. This would accommodate an emerging and powerful trend in industrial development, where clients are beginning to prefer more centralized multi story facilities for many of the new highly knowledge-intensive modern corporate activities. Other industrial "big box" structures of one story could also find a suitable setting in this location, occupying one, two, or four full blocks (or 5, 10 or 20 acre sites). Industrial/business park development of this type can provide up to four times as many jobs per acre as can suburban "campus" type development and be easily serviced by transit. For these compelling reasons

The Home Team's approach to economic development hinged on designing and building compact high density employment centers that are integrated – rather than segregated – from homes, transit and shopping. The largest of these is the 300-acre "Business City" site, located to the south-west of the Damascus Center. Here, corporate offices, back offices, and research centers are located in multi-story urban scale buildings that integrate with their surrounding residential and commercial context.

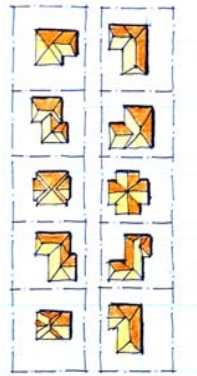


Another approach to employment is shown in the detail above. A total of 100-acres of employment sites (shown in purple) are incorporated into the block and parcel structure proposed for the new community bordering Rock Creek Road in Pleasant Valley.

Block Studies

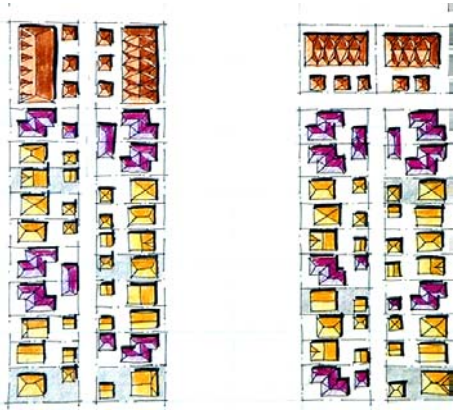
Low Density

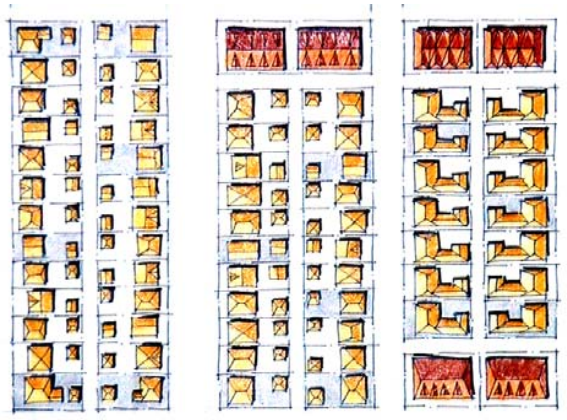
- *approx. 16% of all units*
- *large lot single-family*
  3 – 4 du/acre



Medium Density

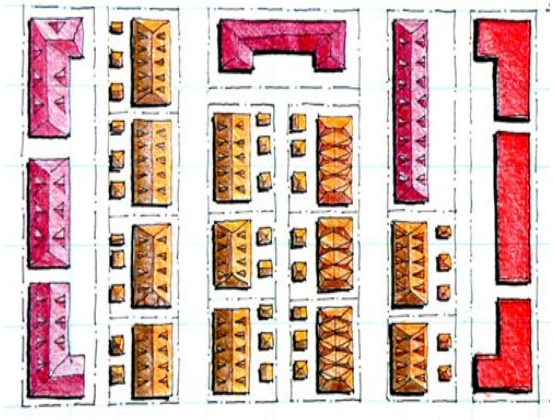
- *approx. 30% of all units)*
- *small lot single family; duplex; secondary suites + coach houses (shown in grey).; townhouses.*
- *13.5 - 15 du/acre*





Low – medium Density

- *approx. 34% of all units*
- *single-family detached; duplex; secondary suites + coach houses (shown in grey).*
- *8.5 – 12.5 du/acre*



High Density

- *approx. 20% of all units*
- *townhouse; apartments; residential above commercial.*
- *21 – 35 du/acre*

the Home Team strongly recommends an examination of not just the amount of land required for jobs but also the urban design rules to apply to these job sites. Changes to these urban design rules could result in tremendous increases in job yields and transit use. Changes in corporate development trends are already visible, with corporate clients beginning to prefer more urban settings for their investments. If these trends unfold in the way the Home Team anticipates, the 500 acres of "Business City" space could yield up to 40,000 jobs. Whatever the final form of the buildings and sites in this area, this land would have easy access to Interstate 405 via Highway 212 and to Highway 26 via the new proposed Sunrise Parkway.

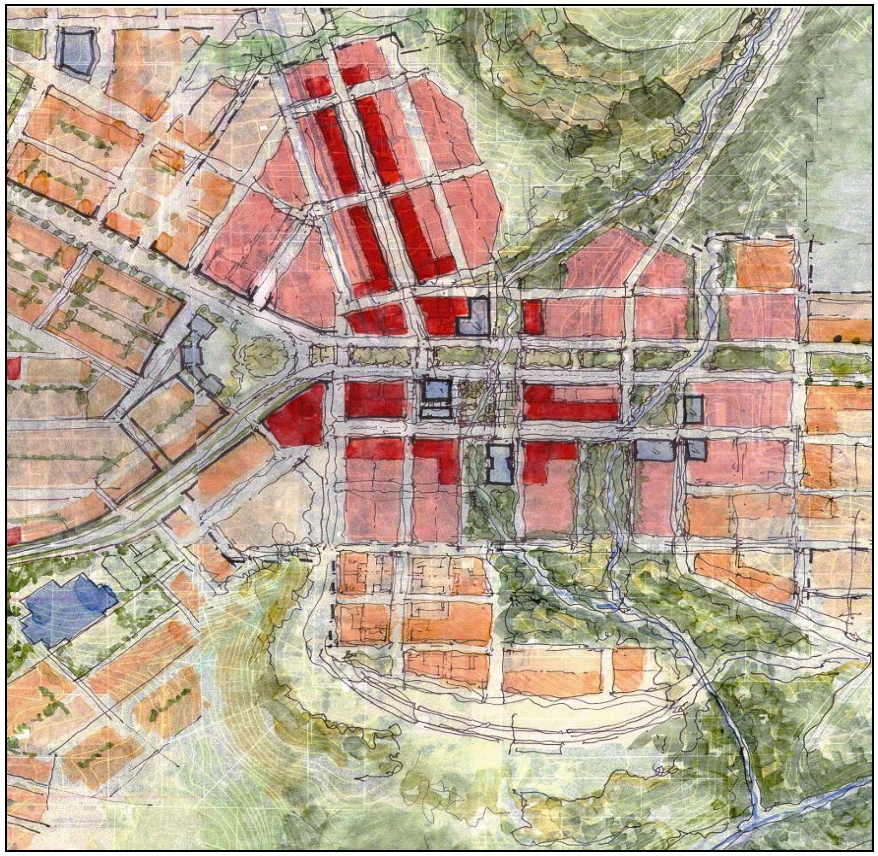
Community-Scale Job Centers

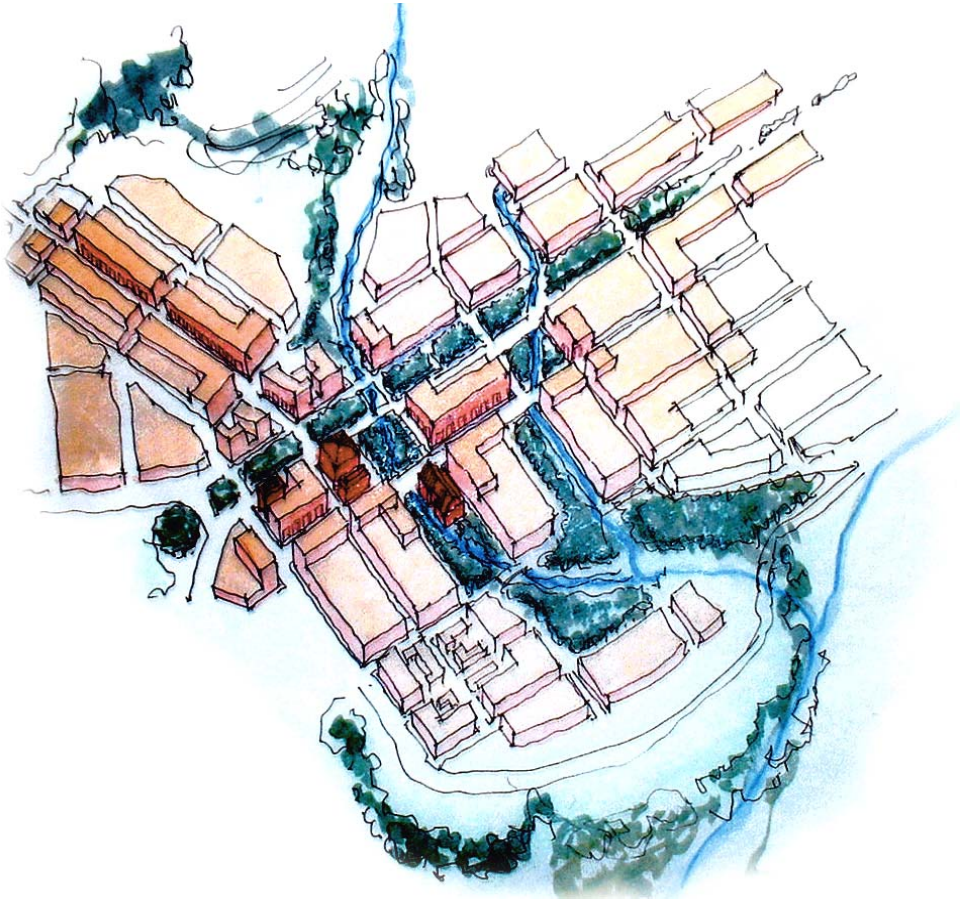
An additional two hundred acres of business/industrial lands are designated in the plan. One hundred acres of this amount is incorporated into the block and parcel structure proposed for the new community bordering Rock Creek Road in Pleasant Valley. The other 100 acres are in an unencumbered area at the extreme northeast corner of the site at the north end of Sunshine Valley (within sight of Highway 26).

Make Jobs a Part of the Community

A dominant principle informing economic development proposals emerging from the workshop was that jobs must be integrated into all parts of the community. It was

therefore inadvisable to concentrate too heavily on discrete areas zoned for business and industry. Surely, some separation is needed in many instances, and is attractive to corporations in others. Yet policy discussions on this topic have all too often operated from the assumption that business activities must be confined to separate districts, cut off from connection with their community. Casting a keen eye toward the interrelationship between regional economic development policy and related policies promoting a rational transportation system and equitable access to jobs for all, the Home Team took a different tack. Rather than separate jobs from people, the team strove to connect them. Thus, many of the job sites are not visible in the plan. They are the second and third floors of downtown commercial buildings. They are corporate headquarters or branch offices that are a block away from the town hall. They are the incubator industrial spaces that occupy the second block back from the transit corridor. There is no accurate means to estimate the numbers of jobs that would emerge in this integrated way. Certainly numbers in the range of an additional 25, 000 are readily imaginable. The principle is not, however, to count up acres and calculate the jobs confined behind those fences. Rather, it is to allow jobs to flourish throughout the community, where people live, and as part of *how* they live.



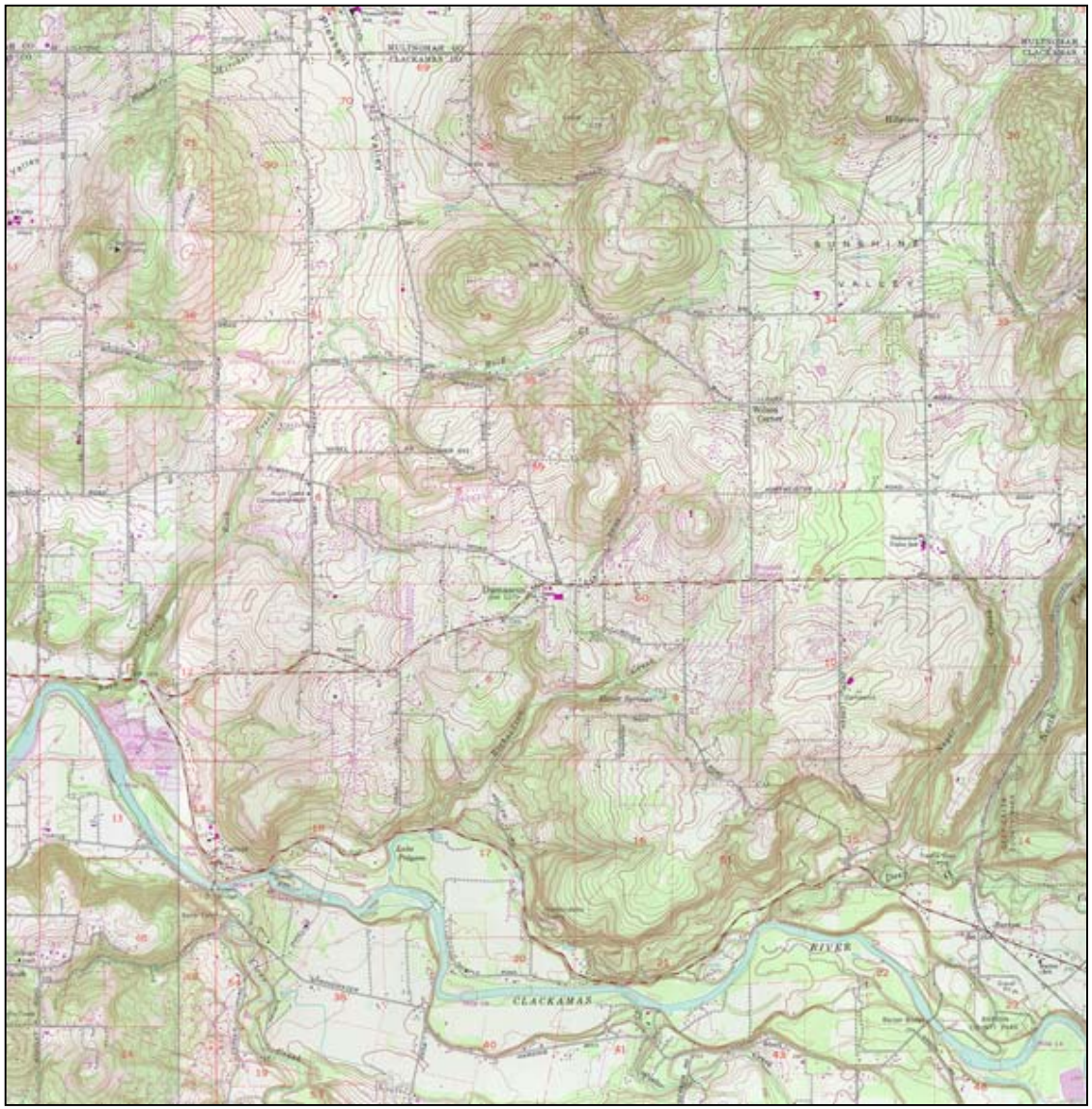


The Damascus Centre is envisioned as a concentrated and high-activity urban core. Housing and employment density is highest along the Main Street corridor, where mixed-use buildings would create a strong street frontage. Medium-density housing forms, such as townhomes and apartments, would surround the center and be linked to shopping, jobs, and parks via the interconnected street and pathway system.

Conclusion

At right is a copy of the U.S. Geologic Survey map of the Damascus study area. On this map major features of the landscape can be discerned, including the high buttes and the deeply incised stream chasms. Patterns of development, presently confined almost exclusively to the forgiving valley bottoms can also be discerned. Also note more recent changes in the landscape, indicated in a purple tone. On the pages that follow we will show how this landscape might change over the years if the vision presented in these pages were followed.

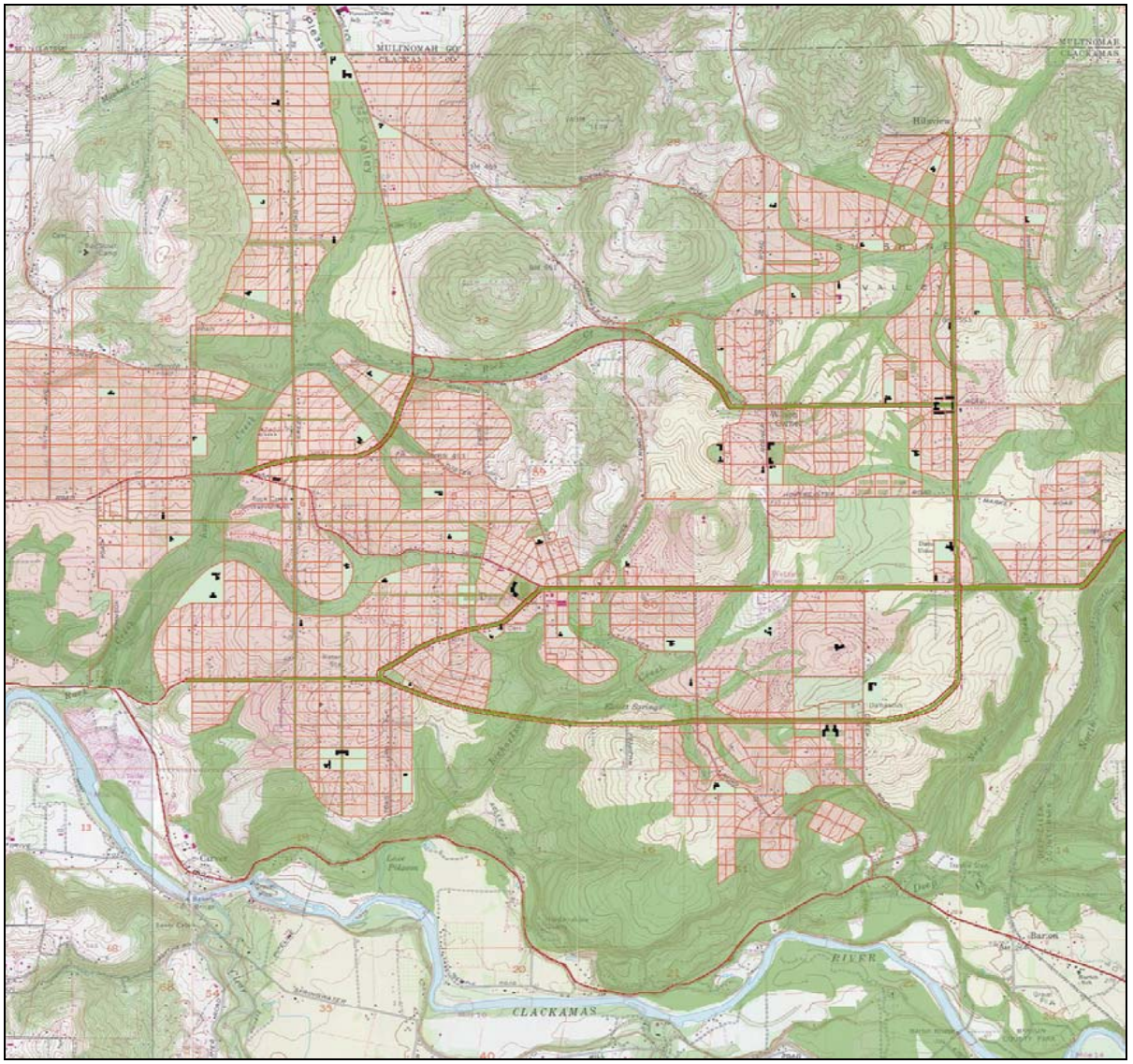
Note: The map at right only current to 1985



A Possible Future

At right is the view of how the community might look in 20-30 years. It is a composite view that incorporates all of the work done by the three workshop teams. About half of the site is intensively developed, lowering housing costs, increasing access to transit, and preserving green space as a result. Most trips take place within the district. Numerous surface and transit connections to other parts of the metropolitan region now exist.

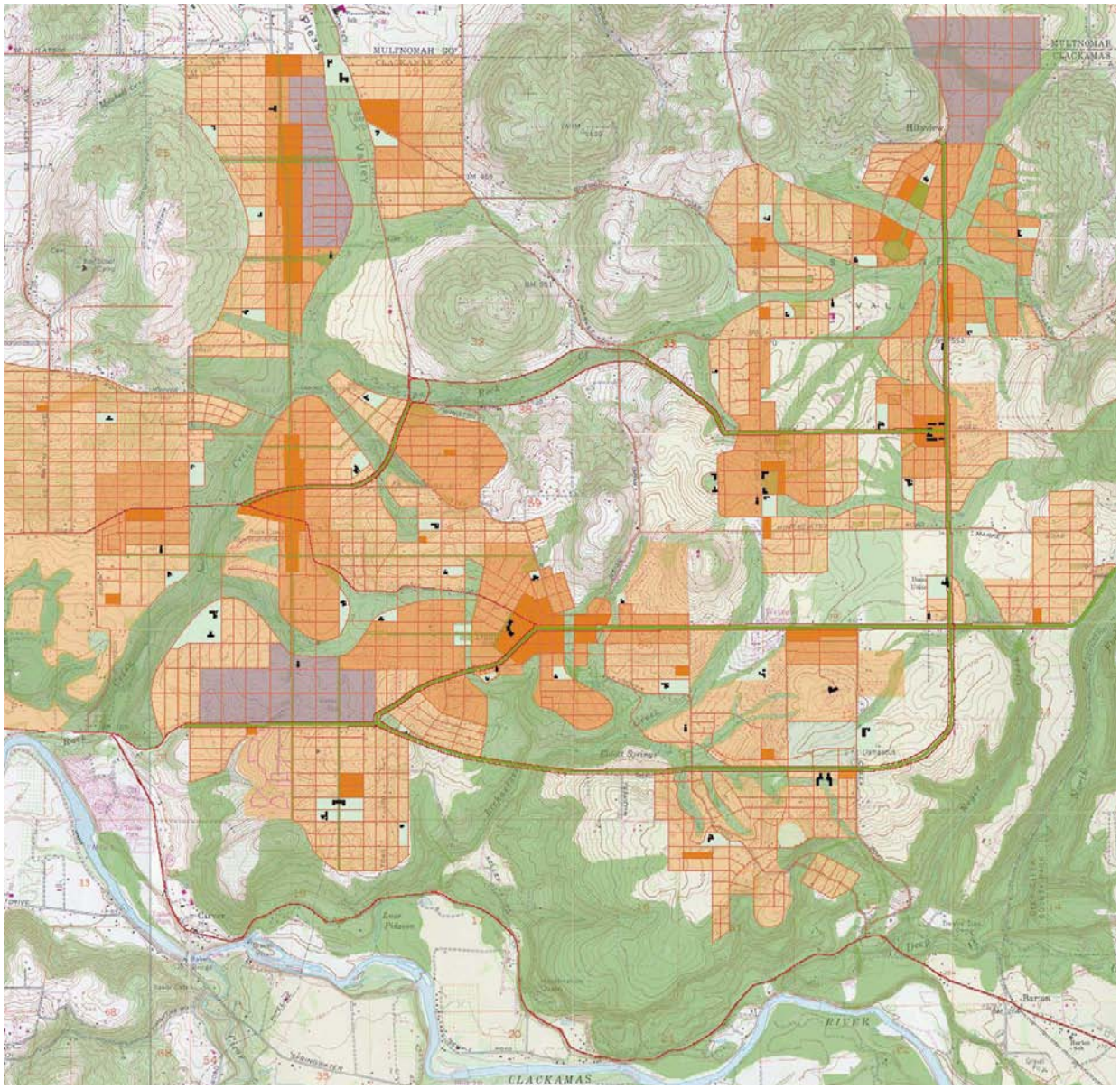
TYPE OF USE	LAND IN ACRES
Total Site Area	13,600
Natural Resource/ Agricultural Area	4,000
Buildable Area	9,600
Residential/Mixed Use Res.	6,100 - 6,600
Dedicated Industrial/Business Park	450 - 900
Schools, Parks, Institutional	600
Roads	1,500



A Plan That Accommodates Two Jobs Options for the Damascus Area

Jobs Options 1 – 40,000 Jobs

- 450 Acres Dedicated Business Sites
- 40,000 Jobs, 20,000 jobs in Dedicated Business Areas, 20,000 Jobs Integrated Into the Community.
- One Job Per Household



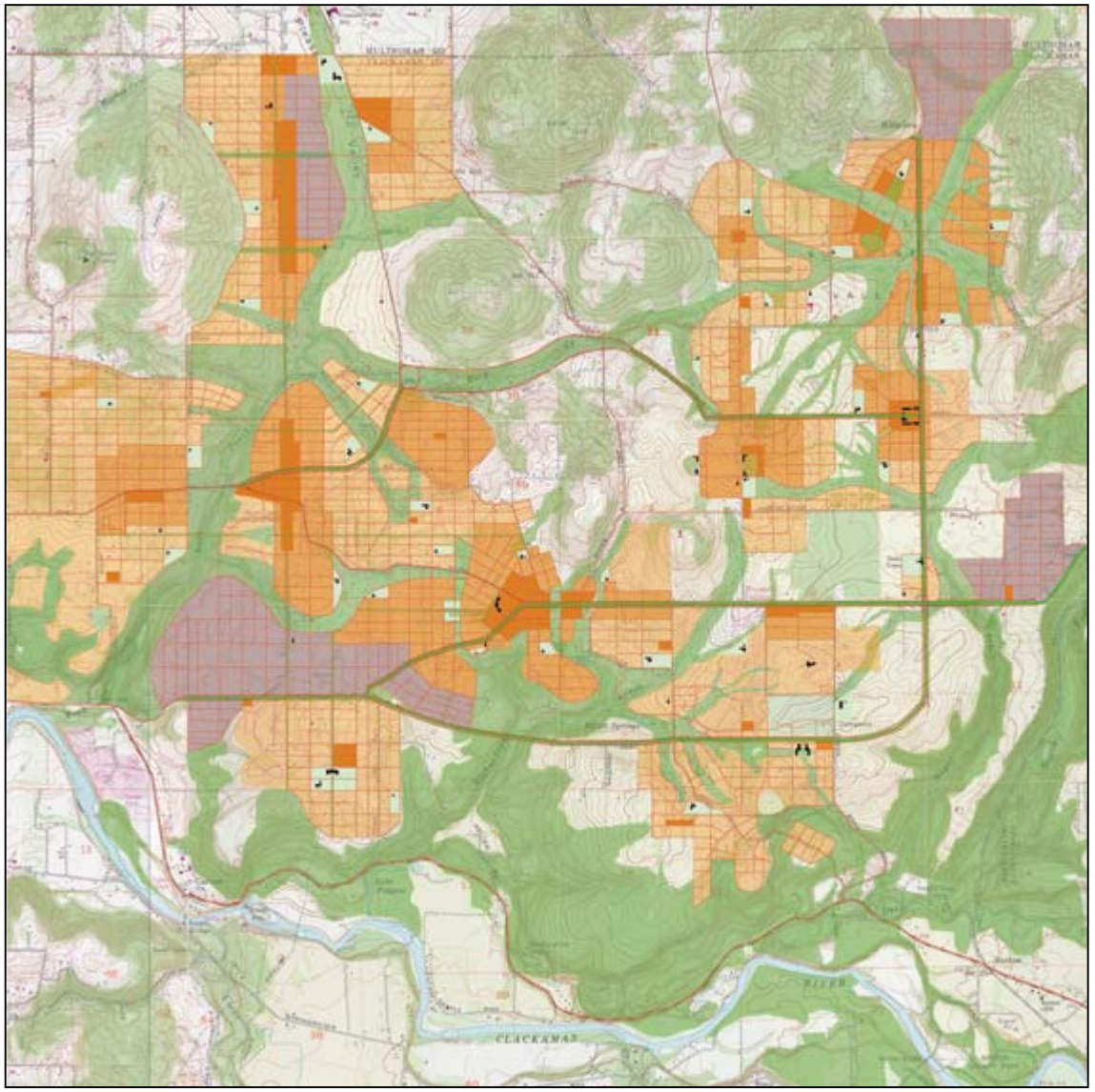
A Plan That Accommodates Two Jobs Options for the Damascus Area

Jobs Options 2 – 80,000 Jobs

- 900 Acres Dedicated Business Sites
- 80,000 Jobs Total, 50,000 in Dedicated Jobs Sites, 30,000 Integrated Into Community
- 2 Jobs Per Household

Damascus, Oregon
Land Use Map: Low Industriall

- Commercial/Mixed Use
- High Density
- Medium Density
- Industrial/Business
- Existing Community
- Proposed Community
- Parkway
- Green Street
- School Building
- Church Building



[i] An Urban Growth Boundary is a legislated line in the landscape drawn to prevent uncontrolled urban development and the loss of farm and forest lands.

[ii] As part of Metro's UGB expansion review and research process, Metro established a four-part system of classification to guide expansion. Based on the criteria established by the State, Tier One lands are the highest priority lands and are to be considered first for expansion, while tier Four lands are the lowest priority and are to be considered last.

[iii] 6 Holtzclaw, J, 1994, *Using Residential Patterns and Transit to Decrease Auto Dependence and Costs*, Natural Resources Defense Council, San Francisco, pp. 16-23; Parsons Brinckerhoff Quade Douglas, 1993, *The Pedestrian* Environment, 1000 Friends of Oregon, Portland, pp. 29-14; Cervero, Robert and K. Kockelman, 1996, "Travel Demand and the 3Ds: Density, Diversity and Design," *Transportation Research* D.

[iv] Gross residential density refers to the number of units a piece of land yields for housing inclusive of lands used for roads and other non residential uses.

[v] A full section is one mile square. A quarter section is ½ mile square. A quarter quarter section is 1/8 mile square or 40 acres in area.

[vi] Metro Regional Services, May, 2002, *Green Streets: Environmental Designs for Transportation,* Portland, OR.

[vii] The workshop design brief required that designs ensure that between 80 – 90% of all water that falls on the site during and average year can be infiltrated by the soil.

[viii] National Home Builders Association: http://www.nahb.com/default.asp

[ix] See a recent independent study from Fannie Mae Foundation: http://www.fanniemaefoundation.org/programs/hpd/pdf/hpd_1301_downs.pdf; Eban Goldstein, Dec. 1998, "Growth Management and Housing Prices: The Case of Portland, OR."

[x] Nelson, Arthur C., Rolf Pendall, Casey J. Dawkins, Gerrit J. Knapp, The Link Between Growth Management and Housing Affordability: The Academic Evidence, A Discussion Paper prepared for The Brookings Institution Center on Urban and Metropolitan Policy, February, 2002.

[xi] In the context of this workshop, "living wage" meant a wage that was sufficient to provide decent housing at market rates within reasonable distance of jobs, and also have enough left over to provide a quality of life and health for themselves and family members. In design terms this meant looking for ways to incorporate job sites for skilled workers.

Appendix A	Project Co-ordination Team List
Appendix B	Design Principles Group Participant List
Appendix C	Outside Observers List
Appendix D	Project Summary, April 2002
Appendix E	Project Timeline
Appendix F	Affordable Housing Background Information
	Table 1: What is Affordable Housing in the Portland Region?
Appendix G	Draft Land Use Summary
Appendix H	Damascus Area Design Workshop Design Package

Appendix A: Project Coordination Team

Damascus Area Community Design Workshop

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Appendix B: Design Principles Group

The project sponsors wish to express their deep appreciation to the following individuals who gave generously of their time during three lengthy and arduous workshops. The design principles, design goals and objectives, and the design instructions to the teams were reviewed, adjusted, and ultimately adopted by this group.

Damascus Design Workshop – Design Principles Working Group

Ambrose	Satya	Local Resident, Naturopathic Physician
Brandon	Bill	City Manager, Happy Valley
Budhabhatti	Jennifer	Metro Parks Department
Carlson	Michael	Clackamas River Basin Council
Collins	Maggie	Wilsonville Planner (Wilsonville Planning Department?)
Cronlund	Jayne	Executive Director, Three Rivers Land Conservancy
Faha	Lori	Natural Resource Expert
Faha	Mike	Greenworks, Landscape Architecture
Faris	George	Hanna Realty
Ferguson	John	Deep River Geotechnical Services
Furfey	Rosemary	National Marine Fisheries Service
Gardiner	John	WaterCycle Inc., The Farm at Tickle Creek, Inc.
Gleason	David	Small Business Owner

Glenn	Jessica	Clackamas Community land Trust
Grant	Eugene	Mayor, Happy Valley
Grimes	Jim	Oregon Dept. of Fish & Wildlife, Habitat Biologist
Hartsock	John	Boring Fire District
Hopkins	Stacy	Associate Planner, City of Tualatin
Ketcham	Paul	Metro Council, Growth Management Services
Kinzer	Kirsten	Clackamas Community Land Trust
Ledbury	Barb	Damascus Civic Club
Ledbury	Roy	Damascus Civic Club
Lee	Jan	Oregon State Representative
Lobo	Diana	Local Resident
Long	Terry	Longshot Construction Company
Luther	Diane	Executive Director, NHA (What does this stand for)
Mengelberg	Renate	Clackamas County (what department)
Newman	Will	Oregon Sustainable Agriculture land Trust
Noah	Ken	Deputy Superintendent, N. Clackamas School Dist.
Otto	Les	Chair, Boring CPO (what does this stand for)

Park	Rod	Metro Councilor, District 1
Peterson	Lynn	Tri-Met Strategic Planning Manager
Rahman	Lidwien	Oregon Department of Transportation, Region 1
Ruthruff	Kathy	Gresham Barlow School Board
Sharp	Lynn	North Clackamas Park Board
Stevens	Debra	Damascus Citizen's Participation Organization
Thompson	Jennifer	US Fish and Wildlife
Uchiyama	Dawn	City Of Portland Environmental Services Department
Ugrin	Renee	Stonewood Studios
Valone	Ray	Metro Council (department?)
Wagner	Julie	Editor, Damascus/Boring Observer
Wescott	Dee	Boring Fire District
White	Kim	Metro Council, Senior Transportation Planner
Wilkinson	Malu	Metro Planning Department
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Appendix D: Project Summary

DAMASCUS AREA COMMUNITY DESIGN WORKSHOP
PROJECT SUMMARY

Introduction

The Portland metropolitan region is blessed with vibrant cities and neighborhoods in a beautiful natural setting. Clean, open government and active citizens also distinguish the region with a keen concern for their quality of life and an appreciation for the role of planning for future growth to protect that quality of life.

We are lucky to have a regional government, Metro, which can help us plan for that growth within the framework of state and regional mandates that protect our natural resources while also promoting access to jobs, quality and affordable housing, and choices in how we travel. One of Metro's most important responsibilities is setting and amending the regional urban growth boundary (UGB), which marks the separation between rural and urban areas. Whenever the UGB is expanded, the land brought inside the line becomes available for urban development: stores, schools, houses, apartments, parks and natural areas, and all the other elements that make up a city.

Under a state law passed in 1995, Metro is required to ensure that the regional urban growth boundary (UGB) contains a 20-year supply of land for housing as population growth occurs, and to expand the boundary periodically if necessary to maintain that land supply. Other state laws establish priorities for the types of land that are appropriate for UGB expansions. In general, these laws direct UGB expansions first into areas already zoned for rural residential, rural commercial, or rural industrial development, while farmland should be included in UGBs only when no other land is available.

In late 2002, the Metro Council will decide whether to expand the Metro urban growth boundary. The Council will make related decisions about protecting, restoring, and managing fish and wildlife habitat, providing parks and greenspaces, and investing in our transportation systems. As areas near the UGB in Multnomah and Washington Counties consist largely of either high-quality farmland or land that is topographically inappropriate for urbanization, state law requires Metro to look first to such partially developed areas as Damascus in rural Clackamas County when considering where to expand.

There are many obstacles to urban development in the Damascus area. Its streams and forests are very important to salmon and steelhead, which are threatened or endangered. The topography of hills and buttes, coupled with the many streams running through

the area, make many portions of the area inappropriate for development. Much of the land has already been divided and developed for large-lot rural homesites, which will create significant challenges -- not only in planning and building the infrastructure (roads, sewers, waterlines and other improvements) needed for urban development, but also in finding equitable ways to pay for this infrastructure.

The Damascus Area Community Design Workshop treats these obstacles as opportunities. The Community Design Workshop is a community-based effort to create a regional model for livable, equitable, and environmentally sound urban development. This model will protect natural resources, include a wide range of housing types for people of every income level in every neighborhood, provide choices in urban transportation, and promote quality urban design as a tool to create vibrant, livable places.

This development model also seeks to achieve broader regional objectives, including protecting and restoring salmon and other wildlife habitat inside an expanded UGB, preserving farmland in Washington County and elsewhere, meeting affordable housing targets, providing a greater balance of jobs within the entire region, and using taxpayer money efficiently.

The Damascus Area project will broaden the range of choices to be considered in designing newly urbanized areas, form decisions to be made by Metro and Clackamas County officials as they consider a UGB expansion, and provide a model that can be adapted by other community design efforts in Oregon and other states.

The Project

The Damascus Area project will involve local citizens, design professionals, development experts, and community leaders in a process to develop urban design principles and design concept/master plans that will illustrate and test those principles for the potential urbanization of the Damascus area. Rather than a short-term or incremental approach to urban growth boundary expansion, the model will emphasize long-term solutions to creating a sustainable balance between urban and rural lands.
The workshop will address many vital questions, including:

- Can we design communities that provide transportation choices by accommodating cars while still enabling people to get around without them? Can we design for the safe and efficient integration of transportation corridors for cars, buses, light rail, streetcars, bicycles, pedestrians, and other modes which support our efforts to protect the natural environment, provide affordable housing, and create jobs?
- Can we ensure the availability of good jobs near every community? How can we best integrate these jobs into a complete and livable community?

- Can we develop new communities while preserving clean and natural flow in area streams?
- Can we design new communities that are attractive to those of all income levels?
- Can we ensure that the development of such a community is also fair to landowners and the developers that risk their capital to build it?

Envisioning all of these concepts in the form of urban development makes up what is commonly called "Smart Growth."

One especially important objective of the design workshop will be to demonstrate urban design strategies that, if implemented, can actually lead to the gradual improvement of salmon-bearing streams and their associated wildlife habitat. Rather than a piecemeal approach to mitigating the natural resource impacts of urban growth boundary expansion, the model will look toward long-term and permanent forms of protection for our natural resources.

Lead Organizations

1000 Friends of Oregon is a statewide non-profit organization with over 5,000 individual members throughout Oregon committed to the protection of Oregon's communities and countryside through sensible land use planning. The Coalition for a Livable Future is a non-profit organization in the Portland region that includes approximately sixty environmental, social justice, affordable housing, neighborhood, and religious groups united by a common belief that the problems of many American metropolitan areas can best be addressed by bringing people together across issues to work on creative regional solutions. These organizations are committed to participating in this process to ensure that if the urban growth boundary is expanded, the development of the area brought into it offers a model for "Smart Growth".

Participants

The community design workshop will involve area residents, landowners, urban design experts, and developers who may have a financial stake in developing the area. Also participating will be elected and appointed officials from Clackamas County and nearby cities (Happy Valley, Gresham), and representatives from groups promoting affordable housing, transportation choices, quality urban design, support of local food systems, economic vitality, and the protection of fish and wildlife habitat and natural resources.

The project will draw on the expertise of Patrick Condon, James Taylor Chair of Landscape Architecture at the University of British Columbia. Professor Condon has organized urban design planning processes at the same or larger scales in New Jersey, Florida, California and British Columbia. The project will also include other Smart Growth organizations in the West that might be in a position to help replicate the experience in their areas.

Project Area

The project study area will include approximately 17,000 acres and portions of four watersheds: Rock Creek, Richardson Creek, Johnson Creek and Deep Creek in the Damascus area. The Damascus area is an unincorporated community located approximately 6 miles east of the I-205 Freeway in northwest Clackamas County and approximately 12 miles southeast of downtown Portland. The study area is bounded on the north and west by the existing UGB and on the south by the Clackamas River. The eastern boundary follows the eastern edges (near 257th Avenue) of the Johnson/Sunshine Creek and Deep /Noyer Creek watersheds.

The workshop is not designed to provide a single comprehensive and detailed vision for every acre of this large area. Rather, it will provide illustrated urban design principles and prototypes for Smart Growth, and apply these principles and prototypes to the area at appropriate scales and locations. The intention is to provide citizens and public officials with urban design best practices and prototypes which may be implemented when actual development occurs.

The Damascus area is currently being studied by Metro for possible inclusion within the Portland UGB by the end of 2002. Clackamas County completed a Damascus Concept Planning Study in 2001 to conduct a technical analysis for 4,300 acres of the Damascus area to be developed as an urban area.

Damascus is currently home to approximately 5,000 residents. Large-lot rural residential lands, small-scale nursery operations, forested buttes, and Rock and Richardson Creeks characterize the area. The Damascus area has a variety of existing uses that may impede convenient assembly into a coherent community of neighborhoods, employment centers, and natural areas. The area also has poor transportation access to the rest of the region; the only major arterials are Sunnyside Road, Highway 212, Foster Road, and 172nd Avenue. There is currently limited transit service in the area.

Project Purpose

The Damascus Area Community Design Workshop will be an independent community design and planning process that will inform the current Metro UGB expansion deliberations. It will provide a positive model for future development in the Portland Metro area, and potentially serve as a model for metropolitan growth in other states and regions. The project will address two particular obstacles to Smart Growth:

- The absence of fully-conceived, large scale models for new urban development that incorporate housing equity as well as environmental stewardship into complete community design. This project will develop such a model.

- The preference for "greenfields" (farm and forest lands) as the site of new urban development. This project will demonstrate how complete and equitable community design principles can be applied in an area of smaller, fragmented parcels.

Oregon's nationally recognized planning process requires limits to urbanization, but community and urban design decisions have been a purely local prerogative. The results can often be described as more compact sprawl, but sprawl just the same. Oregon needs good models of community livability and quality urban design. This workshop will produce a concept plan for a complete and equitable community, which both protects and manages natural resources, and is economically viable and efficient.

Oregon has made great strides in encouraging infill and redevelopment through its urban growth boundary requirement, although performance in many parts of the state is still poor. The project will challenge the continuing preference for development of greenfield sites (natural areas or lands in farm or forest use) over redeveloping or reusing existing urban areas.

Another problem that has emerged in Oregon, and that is undoubtedly shaping development patterns elsewhere, is reluctance to urbanize areas that are already developed at very low densities (homesites of 2 –20 acres). Oregon's laws require cities to expand urban growth boundaries onto these lands at appropriate urban densities before considering expansion onto lands in farm, range, or forest zones.

Project Description

The project will generate a model for Smart Growth development through an intensive community workshop process. This process will develop urban design principles and best practice prototypes for urbanizing several thousands of acres in the Damascus area of

Clackamas County. The project will occur in three phases: 1) a Citizen's Design Principles Process; 2) a Community Design Workshop; and 3) Final Products and Outcomes.

The Citizen's Design Principles Process

A process facilitated by Patrick Condon of the University of British Columbia will involve a group of approximately 40 local citizens, landowners, developers, community leaders, and experts. This group will produce a set of community design goals, objectives, and specific instructions, which embody the design principles to be used as the basis for the Community Design Workshop.

Some of the key public policy objectives that will be considered include:

- Ensuring that natural areas and fish and wildlife habitat are protected, restored, and managed
- Providing transportation choices for residents, including bus, bike, foot, transit, and car
- Ensuring that every neighborhood has a wide range of types of housing that are well designed and affordable to all income levels
- Providing publicly owned parks, natural areas and open spaces that are recreational assets and natural resource treasures
- Ensuring that roads, sewers, stormwater, and other public infrastructure enhance, rather than harm, the environment, and do so in a cost-effective manner
- Providing the area with its fair share of the region's new jobs that have efficient transportation connections to the new neighborhoods as well as to other employment centers in the region
- Creating complete communities where homes, businesses, and nature areas are designed together to magnify and reinforce community quality and property value
- Preserving clean and natural flow in area streams
- Encouraging the development of food production, processing and distribution strategies that regenerate and support natural systems and biodiversity, contribute to the local economy, enrich neighborhood development patterns, build community and ensure access by all community members to healthful and affordable foods within each neighborhood.

Community Design Workshop

The community design workshop, facilitated by Patrick Condon, will provide the opportunity for local citizens, community leaders, other stakeholders, and community design and technical experts to participate on design teams to produce a model for urbanization. Citizens and public officials will also be asked at various stages of the design workshop to identify concerns, challenges, and issues.

There will be three design teams. Each team will be responsible for producing community design principles and best practice prototypes for the entire site but will have special responsibility for analyzing one of three issue areas: transportation, community design, and natural systems protection.

Examples of possible design recommendations from this process include:

- An integrated system of community parks, recreational trails, and greenspaces that provide recreational opportunities while helping to protect and restore fish and wildlife habitat.
- A mixture of housing types (including low-cost housing) in every neighborhood and even every block or two.
- The integration of housing with commercial and other business uses within the same community and even the same buildings when appropriate.
- A fine-grained system of interconnected streets characterized by safe and pleasant boulevards, generous sidewalks, pedestrian and bike paths, and easy access to frequent transit.
- Employment centers that integrate other uses (including housing and commercial services) and that use land or water efficiently.
- A district-wide system of "green streets" consistent with Metro's Green Streets Initiative, a road system engineered to reduce cost and protect stream health.

Final Products and Outcomes

The Community Design Workshop will produce scores of illustrations depicting design principles and prototypes for a complete and sustainable community in the Damascus area. Participants will produce dozens of concept plans including aerial views, ground level views, neighborhood plans, and district-wide transportation, land use, and natural resource protection concept plans. These products will be presented at the end of the workshop and, subsequently, made widely available to the public.

This part of the project will also produce a model community design process for promoting Smart Growth urban development, an example that will provide inspiration and instruction for similar efforts around Oregon and the West. Observers from other Smart Growth organizations are anticipated from locations such as Arizona, Colorado, the Puget Sound Region, and the Greater Yellowstone Region.

Summary of Outcomes:

- Creation of a Smart Growth urbanization model which is environmentally sound, equitable, and economically efficient, specifically targeted at partially developed rural lands.
- Development of a replicable community design workshop process to promote Smart Growth development in other communities in Oregon and around the West.
- Avoidance of urban growth boundary expansions onto productive farmland.
- Development of a practical set of community design principles and prototypes for the Damascus area (adaptable to other local communities facing UGB expansion) that protect natural resources and fish and wildlife habitat, offer a variety of transportation options and quality urban design, integrate affordable housing and employment opportunities, and provide a recreational trail system and ample publicly owned urban greenspaces.
- Information useful to Metro based on an urban design model to determine what is the minimum amount of land that is needed in the UGB expansion.

Appendix E: Project Timeline

Step 1:	Synthesize Existing Policy – Nov-Dec 2001	Complete
Step 2:	Draft Design Principles – Jan-Feb 2002	Complete
Step 3:	Develop Design Instructions – March-April 2002	Complete
Step 4:	Convene a six day Design Workshop – May-June 2002	Complete
Step 5:	Share the results, dialogue, get feedback – June-Nov 2002	In Progress

Appendix F: Affordable Housing Background Information

Appendix:

Housing Vision for a Complete Community

Introduction

"*Can we figure out a way to create a real community, a place to belong to, with decent homes for people of all incomes, with adequate family wage jobs nearby, where can you get around without a car if you choose, and where nature is part of your everyday experience?*" This central question was posed to participants in the Damascus Design Project. The design process provided the means for participants to be explicit both about what they meant by a "complete community," and the strategies they would advocate to achieve it

The project participants created community design principles that defined community in a way that reflected community values, policy goals, and legislative mandates. The first principle - to design complete communities –included specific instructions that focused on creating housing choice, in housing types, locations, and tenures, for all income levels. Specific targets were established to provide housing affordable to people well below the median income level.

The purpose of this appendix is to provide suggestions for a regulatory and policy framework that supports the housing portion of this design principle. It will outline some of the specific housing needs that cannot be met just using a design approach, and identify some of the key tools that could be used to encourage the development and preservation of affordable housing so that the workshop participants' vision can be achieved.

Policy Context

The Portland Metropolitan Service District is considering a substantial expansion of the Portland area's urban growth boundary to comply with a law passed by the Oregon legislature in 1995 that requires that Metro insure that there is a 20-year supply of land available for development. There are additional state and regional policies that affect housing that must be considered by regional and local policy makers.

State of Oregon: Goal 10 of Oregon's Land Use Planning Goals calls for each jurisdiction to provide for the housing needs of citizens of the state by 1) encouraging the availability of "adequate numbers of needed housing units at price ranges and rent levels which

are commensurate with the financial capabilities of Oregon households; 2) allowing the flexibility of housing location, type and density; and 3) establishing zoning designations that respond to housing needs to include attached and detached single and multi-family housing, and manufactured housing whether occupied by owners or renters."

Metro: The Region 2040 Framework Plan and Urban Growth Management functional plan address housing affordability as well as housing density. Regional equity and fair share distribution of affordable housing was adopted by Metro in 1991 as part of the regional goals for the 2040 plan.

The Regional Affordable Housing Strategy (RAHS) accepted by the Metro Council in June 2000, and adopted by amendment into the Regional Framework and Urban Growth Management Framework Plan in 2001, focused on the needs of households with the greatest needs – those earning 50% or less of the median family income (MFI) and paying more than 30% of their income for housing. Metro estimated that there are over 36,000 households with incomes below 30% median family income that pay more than 30% of their income for housing. After much discussion, Metro adopted a benchmark goal of 90,479 units of housing to be created over the next 20 years to serve households at 50% and below of the median family income. To meet those needs, the RAHS advocated specific strategies and tools, some of which are discussed in this appendix. In January 2001 the Metro Council, and local jurisdictions, affirmed their commitment to an equitable distribution of housing affordable to working families at all income levels, people with disabilities, or people living on fixed incomes with the goal of reducing or eliminating concentrations of poverty in the region.

The Housing Vision

The Damascus Area Community Design Workshop housing vision is built around creating 28 neighborhoods, each that provide a range of housing types and densities, from single-family estate housing, to townhouses, duplexes, and multi-family apartments with one to three bedrooms. The design scenario calls for mixed-income blocks that encourage an integration of different family types and income levels, rather than concentrations by one income group or another.

The workshop participants developed six key strategies for community design; the first that housing is affordable to working families. The workshop participants were sensitive to the fact that individuals and families working with one or two full-time workers often cannot find housing that is affordable. This is especially true in newly urbanized areas where, because of the uniformity of housing type and size, there may be no affordable options for low and moderate-income households.

So what does it mean to provide housing that serves "working" families? According the Northwest Job Gaps Study, in 2000, nearly 45% of Oregonians worked in the service or retail fields. Those in services earned approximately 56.5% of median family income for a family of four, those in retail, only 37.4%. About half (47%) of job openings in Oregon paid less than $10.07/hour- a living wage for a single person, while 77% of all job openings paid less than $16.37/hour- a living wage for a family of three. According to the U.S.

Department of Housing and Urban Development, housing is considered affordable if households pay 30% or less of their income for housing costs (this includes rent or mortgage payments, insurance, taxes, and utilities.). Over the past decade housing costs in the region increased at an average rate of 10% per year, which exceeded real growth in household income, despite the otherwise strong economy.

Workshop participants learned first hand just how hard it is to create a complete community with housing affordable to all income levels. The main free market strategy developed was to encourage secondary rental suites (accessory rental units) in 25% of the lots. This strategy could create 600-800 units of housing at rent levels of $500 per month (based on construction cost estimates), which could be affordable to a single or perhaps two-person household earning $1500 per month. This strategy has the additional benefit of helping moderate-income households, those at 80% of the median income, to buy homes with secondary rental units because of the additional borrowing power provided by monthly rental income.

The following table provides some real life examples of the kinds of occupations that are essential in a "complete community," the average income levels, and the range of housing affordability. From the table we can see that an accessory rental strategy could provide affordable housing for a home health aide, a data entry operator, receptionist or hairdresser. Given the average size of accessory rental units (400-500 sq. ft.) it is unlikely that it would be a viable option for more than a 2-person household. Accessory rental income could make homeownership affordable for a registered nurse or social worker with three children, or for a bank teller and a teacher's aide with 2 children.

Other non-housing strategies emerged from the design process that could make housing more affordable by boosting household income: More family wage jobs located near home could increase total income, and reduce transportation and congestion costs

What are the affordable housing options for those households for whom these recommended strategies will not work - – those low-income large family households for whom an accessory unit is not an option, or those that cannot afford a monthly rent of $500? As the workshop participants found, free market mechanisms and design solutions cannot reach the lowest end of the income spectrum: people trying to support children while working low-wage jobs, people with disabilities, on general assistance or temporary assistance for needy families (TANF), and, increasingly, elderly retired people on fixed incomes who have high medical and service needs. A retired individual or retired veteran can expect an average income of $700 to $800 per month, which translates to affordable rents of approximately $200 per month. For these households, additional affordable housing policies, programs, and tools must be developed and implemented to meet their needs.

Table 1: What is Affordable Housing in the Portland Region?

	One Person Household			Four Person Household		
	Annual Income	Converted to Hourly Wage	What is Affordable	Annual Income	Converted to Hourly Wage	What is Affordable
30 % Median Family Income	$12,000	$5.76	$300/month	$17,150	$8.24	$429/month
	Three-quarter time fast food worker, child monitor or service station attendant			Full time preschool or special ed. teacher, janitor, or laborer with 3 children.		
50% Median Family Income	$20,025	$9.63	$501/month	$28,600	$13.75	$715/month
	Full time data enterer, home health aide, nurse's aide, hairdresser, receptionist, or forest conservation worker.			Full time dental assistant, maintenance worker, or pharmacy assistant with 3 children; also a fast food worker and a service station attendant with 2 children.		
80 % Median Family Income	$32,050	$15.40	$801/month	$45,750	$21.99	$1144/month
	Full time broadcast technician, computer operator, emergency med. tech, licensed practical nurse, or truck driver.			Full time registered nurse or social worker with three children; or a teacher's aide and a bank teller with 2 children.		
100% Median Family Income	$40,050	$19.25	$1001/month	$57,200	$27.50	$1430/month
	Full time computer programmer, corrections officer, carpenter or vocational teacher.			Full time electrical engineer or health services manager with 3 children; or a dental assistant and a maintenance worker with 2 children.		

Source: HUD Portland Area Median Income, as of December 31, 2001, from the Web site of the Bureau of Housing and Community Development

Tools for Creating and Preserving Affordable Housing

There are a large number of tools and strategies that could be adopted to encourage the creation, and preservation, of affordable housing. Several of the key ones are briefly described below. Some, but not all, of the following strategies were included in Metro's Regional Affordable Housing Strategy. The purpose of including these strategies in this appendix is to ensure that they are discussed and considered for adoption concurrent with any discussion of expanding the urban growth boundary.

In the Portland region, we have a history and track record of developing adequate, if not ideal, basic infrastructure (water, sewer, transportation, etc) necessary to support the region's managed growth. What we have not done to date is consider housing to serve all income levels as part of the basic infrastructure necessary to support a complete community. There is a public cost and subsidy associated with creating the infrastructure of housing, just as there is a public cost and subsidy for developing other regional infrastructure systems. Any consideration of expanding the Urban Growth Boundary will involve discussions of the cost to provide the infrastructure for expansion. If the cost to develop (and subsidize) housing is not part of the discussion and decision, it will be virtually impossible to actually create a complete community.

There are other tools that could also help ensure a diversity of housing is created in newly urbanizing communities, some of which are described in the Regional Affordable Housing Strategy, available from Metro.

Land Use and Regulatory:

- *Density Bonuses:* This would allow more density in exchange for meeting public objectives around the creation of affordable or special needs housing.
- *Inclusionary Zoning* (voluntary and mandatory) and urban growth boundary considerations: Developers would include below-market rate housing in market rate developments. In lieu of developing the housing, they could pay a per unit fee to cover the development costs.
- *Permanent Affordability for Affordable Housing:* This could be achieved by requiring permanent affordability as a condition of receiving government housing grants or loans, or by creating of a non-profit Community Land Trust to own land in perpetuity dedicated to affordable ownership and/or rental housing.
- *Zoning Flexibility:* Accessory units as allowed uses in single-dwelling homes; reduced or no off-site parking requirements in proximity to transit; the transfer of development rights to preserve existing housing.

- *Tax Abatements:* Take advantage of statutory authority granted by the state to local governments to abate property taxes for housing that serves households with incomes below 60% MFI.
- *Land Gains/speculation Tax:* Land incorporated into the Urban Growth Boundary will become more valuable by virtue of its development potential. Levying a land gain tax concurrent with UGB expansion could allow recapture of some of the land gain to fund affordable housing options.

Regional Funding:

- *Employer sponsored housing:* Large employers provide no or low cost loans to employees to purchase homes close to employment.
- *Real Estate Transfer Tax (or document recording fee):* A small fee levied region-wide on real estate transactions (with exemptions for lower-cost housing) or document recording fees could become a permanent and regionally controlled source of funding to meet regional housing needs.

Conclusion

Complete communities do not just happen. An equitable regional distribution of housing for people of all income levels does not just happen. If we are ever to achieve these objectives, it will only be as the result of careful and long-range planning. If the Metro Council votes to expand the UGB they should ensure that strong housing regulations and policies are already in place. Land values will escalate once land is brought into the UGB. The only way a fraction of the increase in land value can be recaptured to ensure housing affordability is if regulations are adopted concurrent with UGB expansion.

The Damascus Area Community Design Workshop provided an opportunity for people of varied backgrounds and interests to come together to design a complete community. In doing so, they articulated a vision of an inclusive community for all income levels. As they found, zoning flexibility could encourage free-market mechanisms to address some of the housing needs. What they also found was that policy makers must make intentional decisions to support other regulations and programs, including new funding programs. The creation of complete communities will require the implementation of a wide variety of housing diversification tools, not just one or two. It is our hope that this document will encourage an increased commitment to fulfilling the goal of creating complete communities, which all variety of residents of the region can call home.

Damascus Community Design Workshop

Numeric Targets

Community Information Details

	Community Input	
Gross site area	13,800	acres
Site preservation	4,200	acres
Site density	4.5	units per acre
Dwelling Density	2.5	people per unit

	Community Output	
Net Community Size	9,600	net acres
Community Density	11.25	people per acre
Community Dwellings	43,200	dwelling units
Community Population	108,000	total people

Community Numeric Summary

Community Footprint	**13,652 acres**	**98.9%**
Community Open Space	**5,598 acres**	**40.6%**
Site preservation	4,200 acres	30.4%
Recreation	918 acres	6.7%
Agriculture	480 acres	3.5%
Community Development	**8,054 acres**	**58.4%**
Institution	511 acres	3.7%
Commercial	469 acres	3.4%
Residential	5,216 acres	37.8%
Infrastructure	1,859 acres	13.5%

Recreation

					Recreation	**918 acres**
Active Recreation	4.0	acres per	1000	population		432 acres
Passive Recreation	4.5	acres per	1000	population		486 acres

Agriculture

					Agriculture	**480 acres**
Urban Agriculture	5.0%	of net site area				480 acres

Institution

						Institution	**511 acres**
Elementary School	1.0	facility per	4,000	population	27	facilities	
	16,000	sq. ft. per	1	facility	432,000	sq. ft.	
	4.0	acres per	1	facility			108 acres
Middle School	1.0	facility per	12,000	population	9	facilities	
	50,000	sq. ft. per	1	facility	450,000	sq. ft.	
	14.0	acres per	1	facility			126 acres

High School	1.0	facility per	25,000	population	4	facilities		
	125,000	sq. ft. per	1	facility	500,000	sq. ft.		
	32.0	acres per	1	facility			128	acres
Child Care	1.0	facility per	1,000	population	108	facilities		
	2,500	sq. ft. per	1	facility	270,000	sq. ft.		
	0.2	acres per	1	facility			22	acres
Community Center	1.0	facility per	25,000	population	4	facilities		
	36,000	sq. ft. per	1	facility	144,000	sq. ft.		
	2.5	acres per	1	facility			10	acres
Health Care Center	1.0	facility per	10,000	population	11	facilities		
	6,000	sq. ft. per	1	facility	66,000	sq. ft.		
	0.5	acres per	1	facility			6	acres
Medical Center	1.0	facility per	100,000	population	1	facilities		
	100,000	sq. ft. per	1	facility	100,000	sq. ft.		
	20.0	acres per	1	facility			20	acres
Police / Fire Station	1.0	facility per	100,000	population	1	facilities		
	100,000	sq. ft. per	1	facility	100,000	sq. ft.		
	8.0	acres per	1	facility			8	acres
Police / Fire Hall	1.0	facility per	20,000	population	5	facilities		
	6,000	sq. ft. per	1	facility	30,000	sq. ft.		
	0.5	acres per	1	facility			3	acres
Church / Chapel	1.0	facility per	2,000	population	54	facilities		
	20,000	sq. ft. per	1	facility	1,080,000	sq. ft.		
	1.5	acres per	1	facility			81	acres
Institution Total					**3,172,000**	**sq. ft.**	**511**	**acres**

Commercial

					Commercial		**469**	**acres**
Commercial	30,000	sq. ft. per	1,000	population	3,240,000	sq. ft.		
	60%	coverage					124	acres
Industrial	32,200	sq. ft. per	1,000	population	3,477,600	sq. ft.		
	40%	coverage					200	acres
Industrial / Office	13,500	sq. ft. per	1,000	population	1,458,000	sq. ft.		
	30%	coverage					112	acres
Live / Work	13,500	sq. ft. per	1,000	population	1,458,000	sq. ft.		
	100%	coverage					33	acres

Commercial Total					**9,633,600**	**sq. ft.**	**469 acres**

Residential

					Residential		**5,216 acres**
Rural Lot Single	1	dwelling units	1	acre			
	3.0%	of community			1,296	dwelling units	1,296 acres
Large Lot Single	4	dwelling units	1	acre			
	13.0%	of community			5,616	dwelling units	1,404 acres
Small Lot Single	8	dwelling units	1	acre			
	14.0%	of community			6,048	dwelling units	756 acres
Single Home + Flat	8	dwelling units	1	acre			
	20.0%	of community			8,640	dwelling units	1,080 acres
Duplex Home	16	dwelling units	1	acre			
	10.0%	of community			4,320	dwelling units	270 acres
Attached Single	20	dwelling units	1	acre			
	10.0%	of community			4,320	dwelling units	216 acres
Stack Townhouse	40	dwelling units	1	acre			
	10.0%	of community			4,320	dwelling units	108 acres
Low Rise Apartment	50	dwelling units	1	acre			
	10.0%	of community			4,320	dwelling units	86 acres
Mixed Use Housing	35	dwelling units	1	acre			
	10.0%	of community			4,320	dwelling units	0 acres
Residential Total	**100.0%**	**of community**			**43,200**	**dwelling units**	**5,216 acres**

Infrastructure

					Infrastructure		**1859 acres**
Community Roads	30%	of developed	6,196	acres			1859 acres

DAMASCUS COMMUNITY DESIGN WORKSHOP DESIGN PACKAGE

Prepared for:
Coalition for a Livable Future
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Portland, OR

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GOAL AND OBJECTIVES

GOAL

The greater Damascus Area Community Design Workshop is an effort to create a regional model for the potential urban growth boundary expansion area that is environmentally sound, that provides a variety of housing and job choices for current and future residents, and fairly distributes the benefits and burdens of development among current and future residents of all incomes and backgrounds. This effort involves residents of the local area and region with a variety of interests and perspectives.

The goal is to apply design principles for urbanization that respect the unique visual quality and rural history of the area; use land efficiently; protect and restore natural areas and ecological processes important to people, fish and wildlife; preserve clean and natural flow in area streams; improve air quality; protect and create opportunities to grow food; provide for a fair share of the region's new jobs; include ample housing, schools, public infrastructure and facilities and transportation choices in every neighborhood; and preserve and create cultural opportunities throughout the community.

BACKGROUND

The greater Damascus Area Community Design Workshop (Design Workshop) is a response to requirements of a 1995 state law. That law requires the Portland metropolitan regional government, Metro, (http://www.metro-region.org/) to determine whether an expansion of the regional urban growth boundary ("UGB") is required in order to increase the regional supply of housing. State planning criteria identify lands already zoned and used for low-density rural residential or commercial uses, rather than lands zoned and used for farming or forestry, as the first priority for addition to the UGB. (Other state and regional laws, goals and objectives require planning for affordable housing, increasing transportation options, providing land for employment, the protection of natural resources and the efficient and orderly extension of public facilities and services. See e.g. statewide planning goals at (http://www.lcd.state.or.us/goalhtml/goals.html.)

Metro has previously identified portions of the 15,000 acres around the unincorporated communities of Boring and Damascus, at the southeastern portion of the UGB as the most logical location for a regional UGB expansion that reflects state UGB expansion priorities. Various local officials and interests are advocating for a major UGB expansion onto farmland in a high growth area at the western edge of the regional UGB, rather than into the Damascus-Boring area. Metro will decide whether, when and how much to expand the regional UGB during the second half of 2002. It is unlikely that Metro would add more than a few thousand acres at that time, but it may indicate the direction and priority for future expansions.

The design workshop study area around Damascus and Boring is characterized by volcanic buttes and hills with second-growth fir forests. The valleys are dissected by perennial streams that support or help support salmon and trout. Much but not all of the area has been broken up into large-lot rural home sites, interspersed by occasional commercial farming operations, including nurseries. The entire study area has a population of about 5,000 today. The study area includes some lands, which are not designated for UGB expansion because they are blocks of valuable farmland.

The Workshop was organized and sponsored by 1000 Friends of Oregon (http://www.friends.org/) and the Coalition for a Livable Future (http://www.clfuture.org/) as an experiment in turning the state and regional mandates into an opportunity to visualize a new and better kind of urban development in the potential UGB expansion area.

The design workshop addresses two particular obstacles to smarter community development.

1. The absence of fully-conceived, large scale models for new community development that incorporate fair access to homes for people of all incomes as well as environmental stewardship into complete community design; and

2. The preference for "greenfields" (farm and forest lands) as the site of new urban development. This project will demonstrate how complete and fair community design principles can be applied in an area of smaller, fragmented parcels.

One especially important outcome of the design workshop will be to demonstrate urban design strategies that, if implemented, can actually lead to the gradual improvement of salmon-bearing streams and their associated wildlife habitat. Rather than a piecemeal approach to mitigating the natural resource impacts of urban growth boundary expansion, the model will look toward long-term and permanent forms of protection for our natural resources.

The design workshop will provide one of the first large-scale attempts to integrate best practices for 'smart' development that is also grounded in adopted state, regional, and local policies.

The participants in the project will include residents of the study area, residents from communities near to the study area, and experts and stakeholders from the area and from around the metropolitan region. The participants will bring a variety of expertise and experience together for collaboration on the project.

In the first part of the workshop, the participants will refine statements of land use planning policy already adopted by local, regional and state governments and translate them into design principles. These principles will, in turn be used to guide the work of design teams in the development of model designs for urban development in the potential UGB expansion area.

The principles and designs are meant to describe a model for urban development that:

- Uses land efficiently (in order to conserve other farm and forest lands),
- Protects and restores natural areas important to threatened salmon and other fish and wildlife, preserves clean and natural flow in area streams,
- Protects opportunities to grow food, inside and outside the UGB expansion area,
- Provides for a fair share of the region's new jobs,
- Includes ample greenspaces accessible from every neighborhood,
- Provides many choices among types of housing and ways to travel in every neighborhood,
- Preserves and creates cultural opportunities,
- Creates neighborhoods where families of all incomes can choose to live,
- Is fair in the way it distributes the regional burdens (taxes for new roads and other improvements) and benefits (e.g. jobs, parks and schools) of growth.

The results of the project are intended to be useful to local and regional residents, local governments and Metro as they decide whether, when and how to expand the regional UGB.

PROCESS OBJECTIVES

1. To provide an independent, community-based design and planning process to inform UGB expansion deliberations and provide a positive model for growth for other parts of the region, the state, and the west.
2. To illustrate the results of applying community design best practices that satisfy local, regional, state and national policies and laws intended to protect land, water, species at risk and air resources.
3. To ensure the incorporation of local knowledge into design proposals.
4. To use the integrated process of a design workshop to maximize interaction and communication between government, citizens, and community design professionals, and other interested groups.
5. To create opportunities for interchange between Portland area community advocates and design professionals, and their peers from across the west and from other parts of North America.
6. To disseminate the results of the design workshop to as wide as an audience as possible.

DESIGN OBJECTIVES

The following design objectives are derived from existing local and regional, state, and national planning and policy documents. Deriving design objectives from this previously adjudicated policy base insures that the products emerging form the workshop will conform to the public will. We have organized these objectives into four linked categories: transportation, community design, natural systems restoration, and economic development.

TRANSPORTATION

1. Provide transportation choices for residents, including transit, bike, foot, and auto – choices for those who own a car and for those who don't.[1]
2. Integrate land use and transportation design in order to decrease average trip length and vehicle miles traveled.[2]
3. Ensure that job sites, schools, shopping, recreation, have efficient connections to the new communities as well as to the rest of the region.[3]
4. Develop an interconnected local street and pathway system that makes it easy to get around but respects the character, identity and landscape of the Damasus area.
5. Design a regional transportation system that accommodates freight and recreational traffic and that respects the visual/aural quality and ecological integrity of the Damascus area. .[4]
6. Ensure that the transportation system is compatible with and/or strengthens local and regional economic development and other design objectives.

COMMUNITY DESIGN

7. Ensure that every neighborhood includes well-designed, energy efficient homes for people of all income levels, meeting or exceeding Damascus area target for affordable housing. Suggest ways to insure that those communities remain mixed-income over the long term.[5]
8. Preserve, to the maximum extent possible, at least an equal number of housing types and tenures to those presently existing, particularly affordable homes, seeking ways to grow the new community incrementally.
9. Ensure that there is a balance of jobs to housing in the area such that sufficient housing opportunities are available to households of all income levels that have a family member working in the area.[6]
10. Ensure that housing units at each range of cost are integrated into all neighborhoods in the area (to minimize exaggerated concentrations of poverty and wealth).[7]
11. Create designs that lend themselves to ownership and financing strategies that will protect the affordability of the housing created for low and moderate-income people in perpetuity, ensuring that the area will include a full range of housing choices over the long term. Suggest policy tools to insure this.[8]
12. Create complete communities where homes, businesses, industries, schools, public facilities, agricultural and natural areas are designed together to magnify and reinforce community quality, identity, and value.[9]

[1] OHP, Policy 1B (Action 1B.1, 1B.6, 1B.7, 1B.14), Policy 4B (Action 4B.1-6); RFP, 2.11- 2.15; RTP 3.a.b.c, 9.a; UGMFP Title 6, 3.07.620, 630, A.1a, 1b, 2.a. – h.
[2] RFP, 2.6.4, 2.18.2; RTP, 3.a.d.e.
[3] OHP, Policy 1F (Action 1F.3, 1F.5); RFP, 2.18; RTP, 3.d.e, 4.0; SPG # 9.
[4] OHP, Policy 5A (5A.1, 2, 4, 5, 7, 9, 10, 12, 15, 17); RFP, 2.24; SPG #6, #10; RTP, 7.0, 8.0; UGMFP Title 3, Title 6.
[5] SPG #9, #10; RFP, UGMFP Title 1, 3.07.120, Title 7, 3.07.710, 3.07.730.
[6] (UGMFP 3.07.210, RFP 1.3)
[7] (UGMFP 3.07.710; RFP 1.10, CLF principles)
[8] (RFP 1.10)
[9] SPG #5, #6; #9, #10.

13. Incorporate recreation, stormwater management, and environmental and cultural education into public spaces.
14. Layer multiple public uses into community spaces and facilities (such as schools).
15. Foster local economic development and community activities that regenerate and support natural systems, strengthen the local economy, enrich neighborhood development patterns, prevent residential displacement, support the regional food system, and ensure access by all community members.
16. Identify, preserve and celebrate local historical, cultural and archeological heritage.
17. Provide an efficient distribution of services throughout the area.
18. Devise regionally fair and realistic funding approaches to providing and maintaining parks, schools, affordable housing, roads and other public facilities.

NATURAL SYSTEMS RESTORATION

19. Identify and ensure that natural areas and fish and wildlife habitat are protected, restored, and enhanced.[10]
20. Support biological diversity by protecting and restoring ecological processes and functions that sustain them.
21. Preserve, create, maintain, and link the publicly owned parks, natural areas, farmland and open spaces that are recreational assets and natural resource treasures.[11]
22. Preserve and restore natural stream systems to achieve clean water, natural flows and healthy watershed function.
23. Conserve a network of natural patches and corridors, and suggest sustainable development and land management strategies for these areas that will support and enhance native fish, wildlife, and plant communities over time.
24. Provide ecological links for habitat and recreation movement both within the Damascus area and between the Damascus area and the wider region.
25. Restrict urban development on all natural hazard areas (for example, earthquake, floodplain, steep slopes and debris flow).[12]
26. Suggest acquisition and long-term maintenance strategies that use an integrated "systems" approach to achieve fairness among landowners.
27. Use the best available science for sustainable development; suggest strategies for environmental monitoring to advance our understanding of best sustainable development practices and adaptive management strategies for the Damascus area and elsewhere.
28. Restore urban forests in developed areas.
29. Protect important views, trees and key cultural heritage resources.
30. Design natural areas to promote environmental education.
31. Promote taking action today to preserve opportunities to meet the above objectives now and into the future.

ECONOMIC DEVELOPMENT

32. Ensure that plans and designs are feasible, marketable, and that public investments and amenities also lead or encourage market development of the type desired by the community.
33. Explore ways of reducing the immediate and life-cycle costs of roads and other infrastructure improvements.
34. Encourage compact growth through appropriate financing strategies, ensuring that this development pattern supports small, local business.
35. Provide the area with its fair share of living wage jobs balanced to affordable housing stock.[13]
36. Encourage a land ownership pattern that maximizes opportunities for small scale and locally owned enterprise, including agriculture.
37. Ensure a range of parcel sizes is available with sufficient transportation access to accommodate a wider range of medium and large employers and job-producing land uses such as business parks and office complexes.
38. Provide the needed infrastructure at sufficient capacities to accommodate a wide range of business types and sizes including roads, sewer, water, natural gas, power, and broadband telecommunications infrastructure.

[10] RFP 2.24.1, 2.24.2, 2.24.3, 3.1, 3.2, 3.5, 4; SPG #5, #6, #14; UGMFP Title 3.
[11] UGMFP Title 5, 3.07.520.
[12] FV P-3, RFP, 4.13-4.18; UGMFP Title 3.
[13] RFP, 1.2, 1.4, 1.5; RTP, 4.0; SPG # 9, #14.

DESIGN BRIEF PRINCIPLES

1 DESIGN COMPLETE COMMUNITIES

Complete communities are self-reliant, inclusive, and stable. Design a complete Damascus area with a fine-grained and diverse mix of housing, jobs, services, schools, parks, community facilities and natural areas – all within walking, biking, or very short driving distance from each other. Design a complete Damascus area so that people of diverse economic, social, and cultural backgrounds can live, work, shop, and play comfortably. Design a complete Damascus area in which involuntary displacement from family and friends is not the inevitable result of decreases in income.

2 PRESERVE PRESENT HOMES. INTRODUCE NEW ONES

Preserving a sense of home for present residents, while providing satisfying, affordable homes in mixed-income communities for future residents, means protecting those elements people cherish while allowing for gradual change. Produce a design vision that respects important view sheds, historical and cultural heritage, and local knowledge. Look to distinctive natural features, visual quality, climate, and existing pattern of residential development in the Damascus area to guide the introduction of new homes, job sites, and stores.

3 PROVIDE A LINKED SYSTEM OF STREETS, PARKWAYS, GREENWAYS, AND SPACES FOR GROWING FOOD

Linked systems, whether they are transportation systems or ecological associations, tend to be more efficient and healthy. Provide the Damascus area with an attractive, interconnected, and barrier-free system of public spaces, parkways, greenways, pathways, and streets that will disperse traffic, accommodate natural storm water and stream flows, lend itself to transportation choice, improve air quality, protect and restore habitat and protect and enhance opportunities to grow food locally.

4 ESTABLISH GREEN INFRASTRUCTURE SYSTEMS TO BOUND, PROTECT AND REINFORCE ALL NEIGHBORHOODS

Green infrastructure integrates natural systems into the structure of a community – to reduce cost, protect stream flows, restore habitat, enhance commercial and residential development, and to make a place a home. Provide a green infrastructure vision for Damascus that protects those areas important to maintaining streams and habitat – including forested and steep slopes, ridgelines, riparian areas, floodplains and large natural areas and wetlands – while bounding and enclosing new and existing communities.

5 SHIFT TO LIGHTER, GREENER, CHEAPER, SMARTER INFRASTRUCTURE

Lighter, greener, cheaper, smarter infrastructure works with the rural landscape not against it, resulting in lower costs and a community more in keeping with its setting. For the Damascus area, this means designing safer and more neighborly “rural style” streets with less pavement and more green, all while insuring that residential areas use land efficiently.

6 BUILD A HEALTHY ECONOMY

A healthy economy makes wealth from the natural and human capital at hand while preserving it for the future. Design places where people of all incomes can work and live in their own community both now and in the future; where people, jobs and goods are close at hand; where movement within the community and through the community are in balance; where both locally owned and branch facilities can thrive; and where both emerging and traditional economic activities can be pursued. Visualize places where economic vitality is unimpeded by inefficient land use or by overextended, expensive and difficult to maintain infrastructure. Design places where development provides a fair return on investment over the short term while protecting value for owners and communities over the long term, maximizing the circulation of dollars within the local and regional economy.

PERFORMANCE TARGETS

1 DESIGN COMPLETE COMMUNITIES

DENSITY, LOCATION AND LAND USE MIX

Designs for the area should include a hierarchy of community configurations that reduce automobile use, focus development around commercial and transit service, protect the open space network, maximize housing choice, and protect land for growing food.

- Blend and balance uses in each community to ensure a vibrant community core while keeping people close to what they need. All residential units in all but the lowest density zones (less than 4 DU per acre net) should be within a 5-minute walk (1/4 mile) of commercial services.
- Designs must accommodate a minimum gross residential density of 10 DU per acre in all community nodes and along designated transit corridors. The design types and related density targets (derived from the 2040 Growth Concept, and contained in the RFP) shown in Table 1 can be seen a "kit of parts" for focusing development in a variety of ways, be it in linked nodes, separated nodes, or along high-capacity transit friendly corridors, or a combination of these.[1]

Table 1
Design Types and Density Targets

Design Type	People/acre	DU/ gross acre (2.5 people/DU)
Town Centers Local retail and services, compact development and accessible to transit.	40 – 70 [2]	28
Main Streets Neighborhood serving retail and services, accessible to transit.	20 - 70	8-28
Corridors + Nodes Along good quality transit lines, feature high-quality pedestrian environment, convenient access to transit, and higher densities.	40 - 70	16-28
Employment Areas Various types of employment; some residential with limited commercial uses.	5 - 20 (employees/acre)[3]	
Industrial Areas Primarily industrial activities with limited supporting uses.	9[4]	
Inner Neighborhoods Accessible to jobs and neighborhood businesses.	14-25[5]	5.6 - 10
Outer Neighborhoods Farther away from large employment centers with larger lots and lower densities than inner neighborhoods.	13-15[6]	5.2 - 6
Rural (not included in RFP)	2 - 8	.5 - 3

JOBS

Concentrate jobs and services around mixed-use transit corridors and mixed-use community nodes. Ensure housing choice exists for workers earning "living wages".[7]

CIVIC AND PUBLIC SPACE

Assume approximately 4% of all buildable land for civic uses (library, community center, health centers/hospitals, churches, police, fire, cultural and arts activities etc.),[8] and develop combined civic and public space facilities.

Public facilities and spaces should address the needs of all members of the community, including those of modest means, and be accessible by transit or by foot.

1 2040 GC; RFP.
2 While the Regional Framework Plan provides targets of 40, 39, and 25 people per acre for Town Center, Main Street, and Corridor types, the 2040 GC suggests a possible range of densities, as shown. For the purposes of this charrette, the entire range can be contemplated.
3 UGMFP 3.07.170, "Design Type Density Recommendations."
4 Ibid.
5 The UGMFP "Design Type Density Recommendations" recommend a density of 14 and 13 persons/acre (or 5.6 and 5.2 DU/acre net) for Inner and Outer Neighborhoods, respectively. However, in order to meet area-wide density targets, and using general parameters for neighborhood development outlined in the 2040 GC, this standard is increased to include up to 25 people/acre in inner neighborhoods, and up to 15 people/acre in outer neighborhoods.
6 See above.
7 According to the new Job Gap study, a living wage for a single adult living in Portland Metro area is $10.36/hr and $17.13/hr for a single adult with two children.
8 DCPS.

OPEN SPACE NETWORK

Design a continuous and comprehensive system of parks, natural and environmentally sensitive areas, and greenways that meets multiple needs while providing the space necessary to protect riparian zones, upland wildlife corridors, and other important habitat.[9]

Provide at least 4.5 acres of municipal park space per 1000 persons.[10]
Design all streets, public parks, schoolyards, squares, greenways, urban farms and community gardens as part of the open space network in order to protect, enhance and restore hydrologic and ecological function of the watershed as specified under Principle #4.

SCHOOLS

Schools are to be located away from major transportation corridors railroads, and industrial areas and within 10 minute walking distance (1/2 mile) of 90% of all homes within catchments of approximately 1500 persons (600 DU).[11] School siting and design should reflect other neighborhood design objectives, particularly those that focus on reducing automobile dependence and increasing travel choice.[12]

- Provide access to 8 acres (3.25 ha) of outdoor recreation and education space for all schools.[13] Four acres should be contiguous with the school and be comprised of active sports, play areas and educational gardens.
- Remaining areas can be naturalized and may be part of a stream corridor or riparian connection to linked green space system. Access to open space should be creatively conceived to ensure that ecological, functional, and recreational uses of the site are integrated. (For example, a school ground soccer field could conceivably double as a shallow retention basin for holding water from the 100-year storm). The remaining area allocated for parks should be designed to support community recreation needs/goals.

LOCAL FARMERS MARKETS

Provide space for marketing locally grown food (i.e., farmers markets, co-operative produce stands) in key commercial district(s) and/or neighborhood centers.

HOUSING CHOICE

Integrate land uses, income groups, housing types and tenures and balance the distribution of various types of housing units among other unit-types throughout each community, avoiding homogeneous concentrations of any one unit-type in one area. Designers should suggest alternative zoning, financing and acquisition strategies to ensure this over the long term.

- Provide block and parcel arrangements (and sizes) that ensure a mix of housing types in each neighborhood, and potentially, on each block.
- At least 50% of new residential units are to be attached single-family or multi-family units,[14] all of which should be in pedestrian friendly neighborhoods within a five minute walk (1/4 mile) of commercial services (see Density, Location, and Land Use Mix above).
- Provide housing choices that reduce or eliminate income, class and cultural divisions. For example, attached townhouses provide affordable living for those who cannot afford (or who do not want) a detached home, in a form that can be easily and seamlessly integrated into any residential context. Patterns of housing that maximize homeownership at all density levels are encouraged, and opportunities for synergy between renters and homeowners (such as "mortgage helpers" provided by the inclusion of a rental unit in detached homes) should be maximized.[15]

A portion of all dwelling units should be "affordable" relative to the income distribution and family size of households region-wide.

- At least 30% of all housing should be targeted for households earning between 50% and 100% of the region's median annual income (i.e., individuals earning between $20,000 [such as a full time data enterer, hairdresser, receptionist] and $40,000 [such as a full time computer programmer, corrections officer] and a household of three earning between $25,750 [which might include a full time dental

[9] UGMFP Title 3.
[10] Does not include regional parks.
[11] Clackamas Zoning Ordinance 805: "Public Schools".
[12] In keeping with standards in more pedestrian oriented and transit friendly districts such as the one presumed in this charrette, this formula will result in smaller more frequent schools than are usually provided in suburban and rural areas. Please see "Sizing Things Up: What parents, teachers and students think about large and small high schools," (Public Agenda, 2002, Bill and Melinda Gates Foundation) for more discussion on the implications of large versus small schools.
[13] Up to 3.5 acres of this can be used to fulfill municipal park requirement.
[14] MHR 660-007-0030.
[15] According to the 1990 Census of Housing, of total housing units in the Clackamas County, 28.3% were renter occupied.

assistant with 2 children, or a fast food server and a service station attendant with 1 child] and $51,500 [which might include a full time electrical engineer or health services manager with 2 children or a dental assistant and a maintenance worker with 1 child].

- At least 20% of all housing should be targeted for households earning at or below 50% of the region's median annual income[16] (i.e., individuals earning below $20,000 annually and three-person households earning below $25,750 annually).[17] Half of this target (or 10% of all housing)[18] should be provided for those whose earnings are at or below 30% of the region's median annual income (i.e., individuals whose annual income is below $12,000 and a household of three whose income is below $15,450.[19] In the Damascus area much of this lower category is presently served in manufactured home parks.[20]
- In order to meet affordability objectives, to meet a variety of housing needs, and to support the capacity for home ownership, designers should incorporate options for secondary rental suites.[21] Alternative housing options, such as co-operative and co-housing arrangements, community land trusts, co-operative ownership of mobile home parks should also be considered.

HOUSING CHOICES FOR CITIZENS WITH DISABILITIES OR OTHER SPECIAL CIRCUMSTANCES

Integrate 20 units of special needs housing per thousand residential units (seniors, disabled, youth, mentally handicapped, family crisis victims etc.).

2 PRESERVE PRESENT HOMES; INTRODUCE NEW ONES

SENSE OF PLACE

Build strong identity for Damascus by creating public spaces that build on cultural, historical, archeological tradition and that translate this tradition in way that is accessible to diverse groups. Integrate design elements in appropriate locales (at nodes, where adequate density levels exist, in schools) that support people gathering in public places (e.g. gateways, cultural markers, etc.).

INCREMENTAL GROWTH

Provide strategies for growth to occur over time and in ways that use local infrastructure and resources effectively.[22] Propose ways to ensure jobs and infrastructure are secured concurrent with or before the development of new housing.

Suggest block and parcel models that allow for change to occur slowly and permit land use flexibility.[23] Provide a strategy for organic growth in the community, whereby new and more intensive uses can co-exist for the short term and possibly with the long term with existing uses.

Suggest ownership and financing strategies that will protect the affordability of the housing created for low and moderate-income people in the long term.[24] Incorporate urban design and architectural strategies that enhance permanent affordability and prevent housing displacement for lower income residents.

ENVIRONMENTAL DESIGN

Protect important views, ridgelines, forest blocks, significant trees and sites of ecological significance. Identify, preserve and celebrate local historical, cultural and archeological heritage. [25]

Consideration of slope and vegetation should figure prominently in the placement of buildings and should inform the preservation of important views both into and out of the site. Use topography, landform, historic settlement features to establish boundaries and transition zones between developed areas.

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[16] 20% figure based on regionwide benchmark need of 90,479 units for households 50% MHI and below. (RAHS).
[17] Occupations earning at or just below 50% of the median annual income include cooks, security guards, nursing aides (Sources: City of Portland Bureau of Housing and Community Development, Network, Metro, 1999; Portland-Salem, OR-WA, National Compensation Survey, 2000).
[18] 11.5% of the region's population lives at or below 30% of MHI (median household income). 73% of the total affordable housing need in the region is for homes affordable to people in this income range.
[19] Occupations earning at or below 30% of the median annual income include child monitor, service station attendant, part-time fast food worker (Sources: City of Portland Bureau of Housing and Community Development, Network, Metro, 1999; Portland-Salem, OR-WA, National Compensation Survey, 2000).
[20] Clackamas County has the largest mobile home inventory in the region, comprising 10% of the total housing stock.
[21] UGMFP Title 1; RFP "Affordable Housing," 1.3.6.1.
[22] CCCP Goals
[23] UGMFP Title 1, 3.07.120 "Methods to Increase Calculated Capacity Required for All Cities and Counties."
[24] RFP 1.10 "Urban Design."
[25] RFP 1.7 "Urban/Rural Transition."

3 PROVIDE A LINKED SYSTEM OF STREETS, PARKWAYS, GREENWAYS, AND SPACES FOR GROWING FOOD

TRAVEL CHOICE

Designers should propose measures to increase travel choice. Destinations must be close and convenient before walking and biking can be viable alternative to the car. Participants must produce designs that will connect people with their destinations so that the car is not the only option.[26]

STREETS THAT ALLOW FOR TRAVEL CHOICE

Design a hierarchy of streets and trails that accommodates all types of traffic, including freight, transit, automobile, pedestrian and bicycles. Link land use to transportation to support frequent transit service, to reduce trip length and congestion, and to achieve a target of reducing miles spent driving of at least 20% on average per person embodied in the 2040 Growth Concept.[27]

STREET TYPES

Designers should use the following 2040 Growth Concept street design classification system[28] to guide development in ways that balance all modes of travel and address the function and character of surrounding land uses.

Table 2
Street Classification

Street Type	Description	Compatible Community Design Type
Throughways	Emphasize motor vehicle travel and connect major activity centers, industrial areas and transit facilities.	(includes freeway and limited access highways; therefore doesn't directly reflect adjacent land use).
Boulevards	Serve major centers of urban activity, emphasizing transit, cycling, and walking.	Town Centers; Main Street
Streets	Transit, main street and neighborhood commercial; balance many modes of travel and provide easy pedestrian, bicycle, and public transit.	Town Centers; Main Streets
Roads	Traffic oriented – primarily serves autos.	Industrial Areas; Employment Areas
Local Streets	Complement regional road system; carry primary local traffic.	Inner Neighborhood; Outer neighborhood

LIVABLE STREETS AND PARKWAYS

In recognition of the above street types, design a network of suburban arterials integrated with local streets and commercial pedestrian oriented districts as a major mover of traffic of all kinds.

Design streets as a key component of the public realm. Incorporate alternative street standards (such as a "rural" street section with a soft, permeable shoulder) to reduce cost and reduce impact on the environment. Employ urban design strategies and traffic calming devices to ensure pedestrian safety and prioritize walking and cycling over automobile travel. Refer to Metro's *Creating Livable Streets: Street Design Guidelines for 2040* and *Green Streets: Innovative Solutions for Stormwater and Stream Crossings* for recommended widths and design standards for local streets.

- Design the local street network to accommodate local traffic and ensure that streets intersect at an interval no greater than 530 feet[29]; in higher-density areas (i.e., town centers), street connections can be at intervals of 330 feet.[30]
- Incorporate traffic calming measures to slow car speeds and ensure a safe and comfortable environment for pedestrians and cyclists.
- On all streets, roads and boulevards, accommodate space for large native trees, bikes and walking in the ROW. Accommodate various modes of transit uses within the ROW, both in the short and the long term. In areas of steep terrain, provide sidewalks on at least one side of the street.
- Accommodate the transportation demands generated by new development while connecting them to the larger region.[31]

[26] OHP, Policy 1B (Action 1B.1, 1B.6, 1B.7, 1B.14), Policy 4B (Action 4B.1–6); RFP, 2.11– 2.15; RTP 3.a.b.c, 9.a; UGMFP Title 6, 3.07.620, 630, A.1a, 1b, 2.a-h.; CCTSP, Transit: 2.0; 3.0; 4.0; 5.0; 6.0; 7.0; RTP, Regional Transportation Policies: 5.0; 5.1; 5.2; 16.0; 16.1; 17.0; 17.1;18.0.
[27] 2040 GC.
[28] RTP 11.0 "Regional Street Design."
[29] RTP 12.0 "Local Street System Design Criteria."
[30] UGMFP 3.07.630 "Design Standards for Street Connectivity."
[31] OHP, Policy 1F (Action 1F.3, 1F.5); RFP, 2.18; RTP, 3.d.e, 4.0; SPG # 9; CCTSP, Transit: 3.0; 4.0; 7.0; 14.0.

- Design a variety of bicycle and pedestrian linkages, including multi-modal linkages to and within mixed-use and employment centers.
- Incorporate narrow local street designs. For example, the UGMFP recommends that local streets have a maximum total right-of-way of 46 feet, including pavement widths of no more than 28 feet, and sidewalk widths of at least 5 feet. [32] Streets should also include landscaped buffers that include street trees including fruit and nut bearing plants when appropriate.
- Devise options for combining local and regional transportation capacity objectives with those of creating vibrant, mixed use centers. Seek ways to maintain traffic capacity without resorting necessarily to grade separation and space consuming and expensive limited access freeway interchanges.

PARKING

Design teams should suggest parking standards that complement performance objectives to increase travel choice, provide mixed-use opportunities, reduce development costs, and achieve reductions in effective impervious area.

- Provide an average of 1.5 spaces per dwelling unit (either on-site or on the street); provide 0.25 spaces per seniors and special needs units.[33]
- In the case of secondary units (i.e., rental suites), designs should explore alternatives to this one space per unit standard, so that, for example, parking allocation would be based on total unit area (e.g., 1 space per every 1,000 sq. ft. of rented floor area, etc).
- Provide 3 spaces per 1000 square feet of commercial use.[34]
- In mixed-use areas, suggest strategies for shared parking between adjacent uses that have non-competing schedules.[35]
- Minimize the amount of surface area consumed by parking lots. Give preference to on street parking over off street parking (including diagonal parking) for all commercial zones, neighborhood commercial zones in particular. Explore structured parking or parking under buildings.
- Reduce the effective impervious area of parking lots.

GREENWAYS AND TRAILS

Link green systems (including wildlife corridors and/or greenways) into and across urban and rural, human and wildlife communities using regional trails where appropriate. Incorporate bioremediation into greenways and link them to nature trails and riparian zones.[36]

NEIGHBORHOOD AND LARGER-SCALE FOOD AND AGRICULTURAL PRODUCTION

Provide at least 2 acres per 1000 residential units for local food growing opportunities. Identify and protect key agricultural parcels to support community design and local economic development.

4 ESTABLISH GREEN INFRASTRUCTURE SYSTEMS TO BOUND, PROTECT AND REINFORCE ALL NEIGHBORHOODS

STREAM HEALTH AND HABITAT PROTECTION

Use watershed function (i.e., fish and wildlife habitat, flood retention and reduction, open space, water quality, and other attributes of a healthy stream ecology) and structure (i.e., large trees, allowing for the way a stream naturally meanders in its channel, the type of gravel and other stream bottom that supports healthy aquatic life, and similar physical aspects of the stream) as points of departure for design. Designs should seek to restore and work with the inherent capacities and characteristics of the watershed/stream system and should promote taking action today to preserve opportunities to meet green infrastructure goals in the future.

Suggest science based management strategies to establish and maintain green systems.[37]

- Ensure that at least 80 - 90% of all water that falls on developed areas during an average year is absorbed and infiltrated by the soil.
- Ensure that urban development does not encroach on streamside riparian zones.

[32] UGMFP 3.07.630 “Design Standards for Street Connectivity.”
[33] UGMFP requires 1 parking space per for s/f units up to 1.75/unit for a three bedroom multi-family townhouse. Given the "walking distance to services and transit" assumption underlying this charrette, the s/f off street parking standard is suggested for all unit types.
[34] CCTSP; UGMFP 3.07.220 (A) (1) Regional Parking Ratios set minimum commercial parking rates at 4.1/1000 sq. ft. However, this standard has been reduced given the "walking distance to services and transit" assumption underlying this charrette.
[35] RTP 19.1.
[36] UGMFP Title 5, 3.07.520.
[37] CCS “Water Concurrency: Policy Recommendations”; CCCP “Storm Drainage Policies.”

- Integrate passive recreation with streams in ways that protects the resource while delighting the user.
- Ensure recreational trails and other facilities avoid, minimize and mitigate any negative environmental impacts.
- Identify and preserve high infiltration soils and areas; consider street design as part of this objective.

URBAN FORESTRY

Devise an urban forest strategy that provides habitat, mitigates storm water impacts, shades streets, parking lots, and creates visual and ecological connections into surrounding forests. Seek productive ways to incorporate fruit and nut production into urban forests.[38] Restore populations of native and indigenous species such as ponderosa pine, pacific dogwood, Western hemlock, and Oregon white oak throughout designs.

MULTIPLE USE

Maximize the benefits of infrastructure expenditures by incorporating multi-use opportunities, such as recreation, multi-modal transportation, ecological enhancement, and bioremediation functions (i.e., use plants to treat and clean stormwater) into public space and infrastructure in ways that cost less than conventional single function infrastructure.

Use green infrastructure to bound neighborhoods and protect and enhance a sense of place; use ecology, topography and climate as key points of departure in all designs. Design green spaces to delight, educate and inspire.

ACQUISITION AND FINANCING

Suggest strategies to equitably acquire and/or protect green infrastructure and sensitive lands. [39] Suggest strategies to equitably acquire and maintain parks, schools, affordable housing, roads and other public facilities over the long term.

5 SHIFT TO LIGHTER, GREENER, CHEAPER INFRASTRUCTURE

GREEN STREETS

Design streets, parks, and greenways to accommodate continuous and healthy flow of people, fish, wildlife and water.

- Design green streets and parcels to be compatible with stream and watershed system health.[40]
- Ensure that designs maintain and enhance the quality of drinking water throughout the watershed.
- Minimize effective imperviousness (EIA); achieve an effective imperviousness percentage of 15% or less in all developed area. Achieve an EIA of less than 10% throughout all sub watersheds.[41]
- Design streets to minimum width and impermeability standards without compromising safety reducing rather than raising infrastructure costs in the process.[42]
- Using design guidelines from Metro's *Green Streets* publication, NMFS and other applicable sources, ensure that stream crossings are used sparingly (while not unduly compromising equally important interconnectivity standards) and employ low impact stream crossing design), thereby protecting the integrity of riparian management areas, wetlands and flooding areas. Consider one-lane bridges in low traffic areas to reduce riparian impacts.

ALTERNATIVE ENERGY AND LIFE-CYCLE COSTING

Propose ways of reducing energy consumption and the pollution this consumption causes.

- Reduce building energy requirements and maximize the use of renewable energy by anticipating optimal solar orientation for passive and active systems. Anticipate future possibilities such as district heating when configuring blocks and parcels.
- Integrate green building/design techniques into a proportion of new structures so that total energy use is reduced.
- Use utility infrastructure efficiently and consider utility design as part of the community design.
- Explore the use of district-scale heating, water recycling, and sewage treatment in future years.

[38] GN 3.1, 3.2, 5.2; GS VI-13 – VI-23.
[39] RTP - 20.0, Transportation Funding.
[40] GN 5.1, 5.2. GS VI-5, 6.
[41] Center for Watershed Protection,
[42] GS VII.

6 BUILD A HEALTHY ECONOMY

EMPLOYMENT DENSITY

Provide space for a minimum of 43,000 and a maximum of 64,000 jobs.[43]

Designers must determine the most appropriate balance of jobs throughout various sectors to ensure that employment opportunities respond to local need and that they are fairly distributed throughout each community.[44]

- In mixed-use areas, ensure an employment density of 20 people per acre.[45]
- In industrial areas, ensure an employment density of 15 people per acre.[46]
- For retained agricultural areas (i.e., nursery and vineyards), roughly one job per 2.5 acres should be assumed.[47]

Tables 3 through6 provide a snap shot of employment trends and forecasts by industrial sectors for the Portland-Vancouver PMSA, which should be used to determine the appropriate balance between job sites and residential uses. Agricultural uses are not shown in this table but should be considered when computing job totals for the area.

Table 3
Employment trends and growth rates for Portland – Vancouver PMSA 1990 – 2020

	Employment			Annual Growth Rate	
	1990	**1998**	**2020**	**1990-1998**	**1998-2020**
Construction/Mining	50,176	76,559	102,980	5.4%	1.4%
Manufacturing	130,893	150,225	190,665	1.7%	1.1%
Transportation, communication and public utilities	47,502	61,718	80,537	3.3%	1.2%
Wholesale Trade	61,183	80,097	101,948	3.4%	1.1%
Retail Trade	150,254	188677	268,862	2.9%	1.6%
Finance, Insurance and Real Estate	72,063	88,846	127,151	2.7%	1.6%
Services	263,906	366,729	601,074	4.2%	2.3%
Government/Other	118,947	137,248	174,187	1.8%	1.1%
Total Employment	**89,4924**	**1,150,098**	**1,647,403**	**3.2%**	**1.6%**

(Source: Metro Data Resource Center, in "Regional Industrial Land Study, Portland – Vancouver Area," 1999)

Table 4
Land use and employment distribution. (agriculture jobs not shown)

2040 Growth Concept		Damascus Concept Planning Study	
Land use type	**& of total buildable area**	**Land use type**	**% of total jobs**
Industrial	10 – 14%	**Industrial**	22%
Mixed-use [48]	24-30%	**Light Industrial/Office**	45%
Commercial[49]	1%	**Office**	18%
		Retail	6%

Table 5
Existing Employment Densities (by job type) in the Greater Portland Area, 1998.

	Industrial Employment	**Occupied Sq. Ft.**	**Occupied Sq. Ft./Employee**
Warehouse/Distribution[50]	99,298	98,624,832	993
General Industrial	137,867	58,091,465	421
Tech Flex	67,052	33,190,317	495
Total/Average	**304,217**	**189,906,614**	**624**

(Source: Regional Industrial Land Study, p.30.)

[43] Assumes minimum 1 job and maximum 1.5 jobs per household.
[44] Leading job growth in the industrial manufacturing sector over the past few years are machinery, electronics and electronic equipment manufacturing. Leading employment sectors in non-manufacturing are construction; retail trade, especially eating and drinking establishments; and health and business services. Temporary help and software/data processing services have been among the most rapidly growing business service sectors. (Source: Otak Inc., "The Regional Industrial Lands Supply Study: Portland – Vancouver Area", 1999, p. 12).
[45] 2040 GC; UGMFP 3.07.170 "Design Type Density Recommendations."
[46] UGMFP 3.07.170 "Design Type Density Recommendations" indicates a target of 9 persons/acre. A slightly higher industrial employment density is suggested (approx. 11 jobs/acre) by the Damascus Concept Planning Study. (DCPS, Table 4, Land Use – Major Findings/Conclusions) while the Industrial Lands Study suggests an industrial employment density of roughly 13.25 employees per acre, based on a projected need of 1732 acres of industrial land in Clackamas County, see Table 6 of this brief.
[47] Don King, manager, Okanagan vineyard, personal correspondence, May 13, 2002.
[48] Assumes commercial and service/office are aggregated under the category of "mixed-use".
[49] It is assumed that a lion's share of commercial development will be provided in mixed-use arrangements; however, there will still exist the need to accommodate a small percentage of dedicated commercial/office space, taking into consideration integration into the surrounding context (as per 2040 plan assumptions).
[50] Land dedicated to warehouse uses should not exceed numbers indicated in the Damascus Concept Planning Study or the Clackamas Industrial Land Supply Update.

Table 6
Projected Employment Densities (jobs/net acre) for Clackamas County by job type (2000 – 2020)

	Warehouse/ Distribution	General Industrial	Tech/Flex	Non-industrial	Total
Employees	9,090	9,051	4819		22,960
Area (sq. ft.)	10,637,253	5,295,921	2,306,959		18,240,133
Acres	740	405	241	346	1732
Total jobs per acre (22,960/1,732)					**13.25**

(Source: Regional Industrial Land Study (Table 13: Additional industrial Workers by Building Type, 2000 – 2020; Table 18: Additional Square Feet of Building Space Required for PMSA, 2000 – 2020; and Table 21: Expected Industrial land Absorption (in net acres), PMSA, 2000 – 2020).

EMPLOYMENT LOCATION

Establish a relationship between employment centers, services and residences in order to reduce trip length and reduce VMT by 20% - 40%.[51]

- Designers should seek ways of increasing the viability of transit by maximizing the amount of industrial office, office, and retail uses in mixed-use developments.
- Locate industrial uses such that they are accessible to homes by means other than the car.
- Locate mixed-use neighborhood commercial centers within a quarter-mile radius of at 90% of all residences.

BUILDING AND PARCEL DESIGN/CONFIGURATION

Suggest building and parcel types that accommodate a range of industries, including a balance between large-scale industrial manufacturing, distribution, and warehouse uses; campus/high-tech research and development (still integrated with community design but in defined locations), smaller light industrial/office sites; and space within office and mixed-use developments.[52] At least 3 sites should be over 50 acres in size to provide maximum flexibility.

Suggest ways of blending live/work into residential areas and mixed-use areas as a way of providing a portion of workshop/office jobs and as a way of supporting home-based work.

Industrial jobs play an important role within the local and regional economy. Accordingly, designs should suggest strategies for protecting industrial land from being converted to commercially zoned land.[53]

As the majority of jobs will be served in light industrial and mixed-use centers, emphasis should be on providing high quality, pedestrian-oriented and enriching spaces in these areas.

Designs should address and resolve the relationship between different work arrangements and residential uses. For example, designs should reveal the character of neighborhoods that include home-based work options and commercial mixed use centers. Similarly, they should show the relationships between combinations of commercial, industrial and residential uses.

Encourage land ownership and development patterns that maximize opportunities for small scale and locally owned enterprise, including agriculture.

- Locate and suggest building, parcel and block types to accommodate employment activity in ways that foster economies of scale and local business opportunities (including live work).
- Suggest block and parcel configurations that allow a wide variety of small-scale, local industrial uses and incubator business types. In some cases this could be accomplished, for example, within a second story component of mixed-use buildings.
- Provide for various types of small-scale business/office space within housing units as a means of increasing complexity and economic sustainability of the community. The inclusion of a “choice of use” zoning within neighborhoods could be one way of achieving this.
- Commercial building floor plates in excess of 60,000 sq. ft. are prohibited in mixed-use, industrial, and employment areas.[54]

[51] 2040 GC is predicated on reaching a target of 20% VMT reduction. However, research shows that an up to 40% reduction can be realized with sufficient residential and employment densities, integrated land uses, and interconnected street systems.
[52] 2040 GC; DCPS p.16. The Regional Industrial Lands Supply forecasts that increased demand in Industrial lands will require approximately 6310 net buildable acres of industrial-zoned land regionwide. It also indicates that sufficient industrial zoned land exists within the PMSA to meet this need, but the majority may not yet be fully served by infrastructure. At a more local level, the targeted industrial land needs target for Clackamas County is 2,600 acres (which includes 1732 acres plus an additional amount of land to provide a “market factor” that allows for an adequate distribution of parcel size and locational attributes). Given the shortage of Tier A lands (i.e., readily developable without major constraints) within the county, approximately 40% of land required to fill the target is located within Urban Reserve areas. (Source:Otak inc., “Clackamas County industrial Land Supply Update,” 2000, pp 1-2).
[53] CILSU “Recommended Next Steps.” p. 28.
[54] UGMFP Title 4, 3.07.420.

AGRICULTURE

Protect and develop opportunities for agriculture at a variety of scales.[55] Develop land use typologies that accommodate various scales of food production (i.e., backyard garden; community garden; nursery; vineyards; croplands if appropriate).

[55] RFP 3.07.420 "Rural Reserves and Green Corridors."

NUMERIC TARGETS

APPROXIMATE SITE AREA	**Acres**
Workshop Site Area Within the Damascus Concept Planning Study Area	4,300
Workshop Site Area Outside of the Damascus Concept Planning Study Area	11,000
Total Workshop Site Area	**15,300**
Total Developable Area [1]	**10,800**

RESIDENTIAL POPULATION	**Minimum**	**Maximum**
Total Proposed Population [2]	108,000	162,000
Total Proposed Dwelling Units [3]	43,200	64,800
Net Residential Density [4, 5]	6	10
Gross Residential Density (DU/acre) [6]	4	6
People per gross acre	10	15

RESIDENTIAL PARKING [7]	1 space per dwelling unit.
PARKS, OPEN SPACE, GREENWAYS	8.5 acres/1000 people 8.5 acres divided as appropriate between active recreation sites provided both at the neighborhood (including school/park sites and the community scale, and naturalized areas). Naturalized areas can be part of neighborhood greenways or constructed naturalized marshes and/or streamways.
PUBLIC TRANSIT [8]	Bus service within five minute walking distance (1/4mile) of 90% of all homes. High-capacity transit service connecting major employment centers (located within 3/4 mile [15 min. walk] of 90% of all homes).

	Low Target	**High Target**
JOBS [9]	43,000	64,000

COMMERCIAL	
Commercial Space [10]	30,000 sq. ft./1,000 population
Commercial Parking Standard [11]	750 sq. ft. or 70 sq. mtr. (3 spaces) per 1000 sq. ft. retail. On street, enclosed, or off street parking.

INDUSTRIAL & INDUSTRIAL/OFFICE	
Industrial Space [12]	32,200sq. ft./1000 population
Industrial/Office Space [13]	27,000 sq. ft./1000 population. Assume a proportion (50%) of light-industry/office space is served within mixed-use arrangements, which could include live-work units.

PUBLIC BUILDINGS	
Schools [14]	One elementary school for a maximum 500 pupils within a catchment of approx. 1500 residents (600 DU); one high school for a maximum of 800 students within a catchment area of approx. 3000 residents (1200 DU). Access to min. 5 acres of outdoor recreation space. (Note that active recreation space may be used towards total open space requirement of 8.5 acres/1000 population). On-street or off-street parking for 25 cars for elementary schools, and 0.2 on street or off street spaces times # of students + staff for high schools with on street parking solutions encouraged.[14]

Child Care Facilities/preschools [15]	Approx. 2,560 sq. ft. interior space and 4,800 sq. ft. exterior play space per 1,000 dwelling units.
Community Centers and Libraries [16]	One 36,000 sq. ft. facility per 25,000 persons.
Hospitals/Community Health Care Facilities [17]	One health care facility per 5,000 to 20,000 persons (average one per 10,000 persons). Access to be provided from major transit street.
Fire/Police [18]	One each at 11,000 sq. meters per 40,000 persons.
Municipal Hall/Public offices [19]	Approx. 1,000 sq. ft. per 1,200 persons.
Churches/multi-faith centers [20]	One 20,000 sq. ft. church per 2,000 persons. On street or off street parking for 60 cars. Parking can be shared with non-competing uses.

1 The total buildable land = gross minus areas identified as environmentally sensitive (including wetlands, streams, floodplains, slopes in excess 20%). **Note:** net developable land area will fluctuate based on road and natural resource/park design solutions and decisions about street right-of-way width.

2 Assumes 2.5 people per dwelling unit.

3 Total dwelling units was derived by dividing the gross residential density by total buildable area inclusive of roads, public utilities, neighborhood school/parks sites, etc.

4 The 2040 Growth Concept establishes a target average net residential density of 10 DU/acre. Recognizing the need to accommodate lower density housing at "rural densities", designers should plan for a maximum of 7% housing at the low density (.5 to 2 du/acre).

6 Assumes development area inclusive of roads, utilities, public parks, schools, etc.

7 UGMFP Regional Parking standards requires 1 space per s/f residential unit, with this standard increasing to 1.75 for 3 bedroom multi-family units. Given the 'walking distance' to transit and shops objectives of this charrette, 1 is the standard for all residential units. Parking standards usually assume this parking is off street.

8 Regional transportation policy is aimed at achieving transit service within 1/4 mile of most homes and businesses.

9 Minimum assumes 1 job/household; maximum assumes 1.5/household.

10 Assume the majority of commercial is in areas with a mixture of uses within easy walking distance. Mixed use may be vertical mixed use, or mixed uses horizontally on the same or adjacent blocks.

11 UGMFP 3.07.220 (A) (1) regional parking standards requires 4.1 parking spaces/1000 sq. ft.; however, this standard has been reduced given the 'walking distance to transit and services' assumption of this workshop.

12 This figure is generated as follows: assume min. one job per household and 2.5 persons/household. The number of jobs for the entire district should be 400 jobs per 1,000. Assume approx. 23% of jobs are in industrial manufacturing/light industry. .23% X 400 = 92 jobs. 92 jobs X average 300 sq. ft. per job = 32,000.

13 45% (approx. proportion of total jobs in this sector) of 400 workers/1000 population = 181 persons @ average 300 Sq. ft. per person = 54,000 sq. ft./1000 population. Assuming approx. half of this would be provided in mixed-use commercial uses, the total is 54,000/2 = 27,000 sq. ft. office space in mixed use commercial areas.

14 Clackamas Zoning Ordinance 805: Public Schools requires a minimum 5 acres for school sites.

15 Sustainable Urban Landscapes: The Surrey Design Charrette

16 There are a total of 56 public libraries regionwide, translating into about 1 facility per 24,000 persons.

17 Clackamas Zoning Ordinance subsection 809.01.There are a total of 119 health care facilities (including hospitals and clinics) regionwide, translating into about 1 per 10,500 persons.

18 There are a total of 27 fire departments (police is aggregated into municipal halls) regionwide, translating into 1 per approx. 47,000 population.

19 There are a total of 45 municipal halls regionwide (including Police).

20 There are approximately 1250 churches in metro region, translating into 1 church per 1,000 people. This ratio is modified to 1/2000 people based on surrey ratio and the current ratio in metro. Parking standard source: Clackamas Zoning Ordinance subsection 804.01.

REFERENCES

The design package was guided by the following local and regional policy and planning documents.

2040 GC
2040 Growth Concept*
CCC
Clackamas Complete Communities**
CCCP
Clackamas County Comprehensive Plan *
CCS
Clackamas Concurrency Study**
CCHNM
Clackamas County Housing Needs and Market Analysis
CILSU
Clackamas Industrial Land Supply Update**
CLF
Coalition for a Livable Future Mission and Objectives
CTSP
Clackamas TSP / STIP / DLCD Div. 12
DCPS
Damascus Concept Planning Study ** (approved as final product of TGM strategy)
FV
Future Vision Commission Report: Metro **
GN
Green Neighborhoods **
GS
Green Streets **
HNA
Housing Needs Analysis: 1997, Metro
MG
Metropolitan Greenspaces, A Master Plan Study: Metro
OHP
Oregon Highway Plan*
RAHS
Regional Affordable Housing Strategy: Metro*
RFP
Regional Framework Plan: Metro*
RILS
Regional Industrial Land Study: Portland-Vancouver**
RTP
Regional Transportation Plan*
SPG
Statewide Planning Goals*
UGMFP
Urban Growth Management Functional Plan*

Adopted
* Legally binding
** Not legally binding