



JOHNSON REID
LAND USE ECONOMICS

MEMORANDUM

DATE: June 30, 2009

TO: Malu Wilkinson, Metro
Joint MTAC / ECAC Committee

CC: CREEC, CAR, NAIOP, PBA, CCBA, SIOR, ICSC, & Davis Wright Tremaine

FROM: Bill Reid, Principal
Johnson Reid, LLC

SUBJECT: Review of Metro's May 2009 Preliminary Urban Growth Report for Employment Land

JOHNSON REID was retained jointly by the above-listed parties ("the Consortium") to provide a review of Metro's May 2009 Preliminary Urban Growth Report on Employment Land ("the UGR"). Specifically, the Consortium has significant concerns about the validity of the following five conclusions expressed on Page 1 of the UGR:

1. *"There is sufficient capacity within the current urban growth boundary to meet the low end of the regional forecasted employment demand in the 5- and 20-year time frames."*
2. *"There is sufficient capacity to meet the high end of industrial demand..."*
3. *"But policy or investment changes must be made to meet the high end of the non-industrial demand."*
4. *There is "...a potential gap in the capacity of the existing UGB to meet unique industry needs."*
5. *"The report illustrates a potential disparity between the location of certain types of land supply and current employment location trends."*

This memorandum is intended as a summary of JOHNSON REID's review of policy and analytical documentation in the UGR and the resulting findings that lead to these five conclusions. We have identified issues of particular concern to the Consortium that we recommend the Consortium focus efforts to further coordinate with Metro to refine, correct, and improve the UGR as appropriate. Johnson Reid notes, however, that the draft large parcel need analysis released on June 24, 2009 also warrants review as its findings are integral to adequate assessment of employment land need in the Portland metro area. JOHNSON REID will provide another memorandum to Metro by July 15, 2009 expressing any concerns about the large parcel need analysis and suggested methodological refinements as necessary. Please note that comments methodology suggestions for large parcel should not be viewed in a vacuum and may add to or refine our own comments in this memorandum.

GENERAL METHODOLOGY COMMENTS

Metro methodology for determining demand and supply for employment land basically comprises the following three-step process:



- i. **What is Forecasted Demand?** - Metropolitan area employment is forecasted exogenously (independent) of regional land supply, location and quality under a high and low growth scenarios along with an implicit middle-point or medium growth scenario.
- ii. **What is Regional Land Supply?** – Assuming various policy preferences as well as refill and floor area ratio (FAR) trends for *currently known* industries, the capacity of the existing supply of land is estimated within the urban growth boundary generally regardless of specific industry needs and locational considerations.
- iii. **Does the Existing Supply of Land Under Metro’s Capacity Assumptions Meet Forecasted Demand?** – Existing capacity is estimated by Metro less forecasted demand for land under each growth scenario.

In the document, Metro clearly indicates the report is meant to shape regional planning discussion and is not meant to be a final, conclusive study of the region’s employment land need.

However, a number of fundamental issues arise in a detailed reading of the report that indicate it quite reasonable to question not only the five critical findings summarized on the first page of this document, but the three-step methodology utilized by Metro as well.

Following are general comments regarding the basic methodology utilized by Metro for reaching its employment land need findings for the planning period through 2030.

1. A Basic Confusion of the Roles of Land Supply and Demand in Economic Growth

Despite a well-documented employment growth forecast for the metro region, in actuality job growth will only materialize if the location, type and quality of buildings and land are available as specifically required by various industry sectors. In other words, growth capacity *starts* with a thorough understanding of the nature of land supply within the UGB as determined by key industries and the regional jurisdictions planning for economic development as required by Statewide Planning Goal 9. For example:

- *Is there sufficient industrial acreage in East Multnomah County proximate to the Port of Portland for targeted sustainable energy industries (wind turbines, etc.) as well as potential alternative fuels vehicle manufacturing as currently being pursued by the Governor’s Office?*
- *Is there sufficient industrial acreage suitable for photovoltaic solar manufacturing in Washington County that is seismically stable, provides adequate water and power capacity, and is proximate to the County’s existing high-tech workforce?*

To the extent that Metro fails to understand these types of employment lands and does not provide for the needs of specific uses, promising industries targeted by State, counties and local governments will not materialize, leading to far greater economic stagnation in the region.

Rather, we find the first questions to reasonably be: How Much and What Types of Employment Growth Does the Current Inventory of Land Indicate Based on the Needs of Existing and Targeted Industries? Does This Meet Regional Needs and Goals? If Not, What Else & How Might It Be Required?

2. The Urban Growth Report is Not Consistent with Statewide Planning Goal 9 – Employment Land

On page 8 of the UGR, it is made clear that the document was:

- “...completed to comply with state statutory requirements in Oregon statewide planning goal 14.”



- Further, “...While Metro is not required to comply with planning goal 9, much of the work completed to analyze employment demand and supply can support the cities and counties in the region that are addressing the requirements of goal 9 in their periodic review work plans.”

Thereafter follows statutory language for both Oregon Goals 14 (“Urbanization”) and 9 (“Economic Development”)..To paraphrase for the uninitiated:

- Goal 14 requires planning jurisdictions to adequately answer the question of whether urbanized development can be reasonably located within the existing UGB and, if not, where it is best situated.
- Goal 9 requires planning jurisdictions to identify the specific economic opportunities to be pursued and match this to the specific inventory of employment land necessary to successfully achieve economic development goals.

Based on our own experience of conducting analyses of both Goals 9 and 14 for various jurisdictions throughout the state, JOHNSON REID is unsure how exactly a Goal 14 analysis can adequately be conducted *without* well-considered, Goal 9-consistent documentation.

In other words, Metro indicates it has answered the question “Can all expected growth reasonably go inside the existing UGB?” But we find it reasonable to question whether “expected growth” is even fundamentally understood from an industry sector and economic development perspective as required by planning Goal 9.

Indeed, the Urban Growth Report acknowledges Metro does not need to comply with planning Goal 9, and Metro staff has indicated that it is not within its purview to take into account individual jurisdictions’ Goal 9 documentation. One can appreciate the difficulty of such a jurisdiction-by-jurisdiction undertaking. But this renders significant aspects of various City and County Goal 9 requirements meaningless and guarantees silence on the following crucial issues among others, and an incomplete portrait of “expected growth” for Goal 14 consistency purposes:

- The nature and characteristics of existing industries with regional presence as well as new or emerging industries targeted for public investment as determined by the local jurisdictions themselves and their State agency partners including Oregon Department of Land Conservation and Development (DLCD) and Oregon Economic & Community Development Department (OECDD), among others.
- The unique land needs of industries targeted by jurisdictions, including size, location, transportation, power, water/wastewater, geological quality, workforce proximity, need for land capacity beyond immediate employment plans (“land banking”), and a host of other qualities.
- Specifically, the ability of the City of Portland’s employment land capacity to physically accommodate Metro’s projections of refill and industry location needs as Portland’s own Goal 9 process is incomplete, but soon coming to a close.
- Specifically, the ability of western Washington County and eastern Multnomah County to adequately pursue PV solar panel manufacturing firms, the only industry currently being recruited with OECDD programmatic resources, as well as wind energy manufacturers and service providers, other alternative energy initiatives, and specifically in the case of western Washington County, bio-pharmaceuticals-related industry.

Contrary to the Urban Growth Report’s contention, it is our opinion that Metro is subject to conformance with Goal 9, if not the associated rules. At the very least, as with its election to conduct a metro area-wide Goal 5 analysis of environmentally sensitive lands consistent with State requirements, analysis of economic need and documentation of both local and regional economic



development plans as they determine land need quality consistent with State requirements would be preferred.

3. The “New Paradigm” Focus on Building Types Critically Mischaracterizes Industry Land Demand

The UGR adopted what it calls a “New Paradigm” to characterize employment land need and capacity sufficiency within the current urban growth boundary. Specifically, the “New Paradigm” focuses on the built environment that accommodates employment uses, and potential trends in built retail, office, and industrial uses. This differs with past consideration of land need where employment density per acre by broad industry groups was of Metro analytical emphasis. Resulting methodology assessing employment land need for broad employment space types utilizes the following algorithm:

$$\text{Employment Forecast} \times \text{Built Space per Job} / \text{Building Floor Area Ratio} = \text{Land Demand}$$

With a well-documented statistical employment forecast and significant past work to determine average space usage per employed person by different broad uses, Metro focused new analytical resources for this UGR on the issue of floor area ratios as a measure of building foot print and as a barometer of long-term land use efficiency. Specifically, increasing FARs over time are an indicator of more efficient use of land as there is an increase in building footprint relative to parking/impervious surface to serve the building’s economic function. Metro’s efforts, via its consultant team, included a number of focus groups to discuss sector-specific FARs and built environment trends, recent real estate and built environment trends by specific use types, and potential direction for building efficiencies over time by use type.

While all of the above are constructive additions to understanding land usage by regional industry, we point out the following shortcomings of the approach in fully understanding regional employment land need:

- Analytical efforts by Metro’s consulting team on the built environment produced over-emphasis on various real estate trends and potential outlook issues of measurable developed speculative space as measured by CoStar, Inc., a commercial real estate database. Based on our experience, CoStar is an important tool for space and land brokerage, but its databases for office, industrial, and retail uses are not comprehensive and overwhelmingly reflect speculative, or for-lease, space. These spaces are predominantly smaller, more flexible buildings that can meet the needs of a broad range of tenants (in-line retail, flex business park, etc.) with shared parking and provide a skewed picture of built environment factors that Metro then utilizes to inform land need over 20 years and potentially inform 50-year need as well.
- Alternatively, Co-Star is far less complete in its information regarding owner-occupied space characteristics because the latter is built-to-suit and not marketed for occupancy transaction. Such uses frequently do not follow a consistent or flexible pattern due to the unique economic function of the facility (i.e. Intel’s Ronler Acres) and long-term investment requirements of the firm. This is also true for larger owner-occupied commercial and office development, which may require unique freight/merchandise transportation accommodation and security provisions, respectively.
- The report acknowledges absence of analysis of “large industrial lot” demand issues including characteristics, industry specifics, and land banking need among others. Because both existing and emerging industrial clusters, which the UGR credits as major drivers of future economic opportunity, are usually anchored by larger users and their unique, long-term land needs, the absence of large-lot demand is of particular concern. This is underscored with the comment made by a focus group



participant that “For sites of 20+ acres, an increasing need to look outside the metro region” exists (p. 22).

- The report focuses on commercial real estate *space* rents and occupancy, but ignores the importance of the non-residential land market, including recent transaction prices and their signal as to the lack of availability of a diverse array of suitable industrial sites for specific industry needs throughout the metro region.

4. Metro Policy Assumptions and Impact Upon Findings Are Not Clearly Explained

Although a technical appendix of MetroScope model policy assumptions is provided at Metro’s UGR website, key policy details are not clearly spelled out or explained based upon our reading. We seek further explanation and refinement of the following:

- In a February 5 Metro Council work session, it was noted that the Metro Policy Advisory Committee (MPAC) recommended a “tight urban growth boundary” to further shape development and redevelopment patterns within the existing UGB. Early February also roughly times with the near-completion of background document preparation by Metro’s consulting team. When exactly and how did the MPAC policy recommendation of a “tight boundary” shape analysis by the Metro consulting team, as well as analytical findings summarized in the UGR by Metro staff utilizing consultant team findings?
- How does infrastructure cost and reinvestment policy get modeled and affect findings? The technical appendix states that MetroScope models the effect of policy choices and that infrastructure costs are based on national statistics, but it is far from clear how exactly these costs determine specific locations of future economic growth, particularly within the existing UGB.
- What infrastructure costs are assumed to be borne by the private sector and what percent by the public?
- How are different infrastructure costs modeled given different cost realities in different areas? Washington County lands are flatter with significant, existing infrastructure suitable for high-tech industry adjacent and efficiently extended only in part by the public. Does the recent transportation bill that funds widening of Highway 26 to 185th, expansion of interchange capacity at Shute Road and Glencoe Road, and significant additional resources for arterial and other expansion within Washington County change infrastructure policy assumptions and/ or study findings? Are model assumptions and study findings accurate given the funding of the Dundee Bypass given Yamhill County inclusion in the MetroScope model?
- Do national statistics accurately reflect the cost of retrofitting existing infrastructure in core urban areas for dramatic increases in commercial retail and office (re)development intensity predicted by the model?
- How exactly does assumed residential unit subsidy schedule, as expressed in the Second Appendix of the UGR, shape future commercial retail geographic allocation? If infrastructure policy assumptions are sensitive to cost considerations, is it reasonable to assume nearly 90,000 residential units within the current UGB will individually receive up to \$50,000 in direct subsidy, presumably via numerous urban renewal districts throughout the metro region.
- The appendix notes that officials of Metro member counties and the City of Portland reviewed the information, but were the urban renewal districts, frequently even independent of City Council bodies, consulted? Which urban renewal districts would require voter approval for what would most likely amount to significant plan amendments for these subsidy schedules? Is Metro aware ORS 457 will likely be



amended to reduce loss in incremental revenues to affected service providers, thus reducing urban renewal maximum indebtedness over the long term? How does all of this factor into the analysis of commercial retail demand and geographic location over the planning period?

- The appendix notes that candidate urban growth expansion areas modeled largely do not include candidate industrial areas identified by economic stakeholders and western Washington County jurisdictions as most suitable for regional cluster growth, and buildable, cost-effective quality. How does modeling their exclusion differ from results if modeling their consideration for inclusion?

SPECIFIC METHODOLOGY AND FINDINGS COMMENTS - DEMAND

Given the above comments about broad methodological and policy issues that shape the UGR, this section of the document provides a list of questions about specific methodology and policy assumptions that we recommend the Consortium pursue given their economic interests.

Page 28 – SolarWorld in Hillsboro has indicated a commitment to hire 2,000 employees, many before 2015. The Low forecast for the entire metro area indicates 2,700 manufacturing jobs in five years then a loss of 300 to 2,400 new jobs in 20 years. The SolarWorld figure does not include manufacturing ripple effects, or any other manufacturing firms in the seven-county area. In light of the discrepancy, should the employment forecast take into account documented, near-term employment commitments from employers, including emerging clusters?

Page 28 – Manufacturing jobs, in the Employment Report, include Computer Electronics (growth projected) and non-Computer Electronics (decline projected). Since solar panel manufacturing is not computer electronics, but is categorized in the silicon-based microprocessor NAICS category, where is the emerging Solar Cluster accounted for in the forecast scenarios? If western Washington County was not considered for reasons of policy assumptions, where will this employment go?

Page 29, Figure 3 – As the chart clearly verifies, significant employment growth, greatly driven by high-tech in Washington County and Multnomah County, occurred between 1984 and 2000. It must also be noted, however, that industrial land availability during the 1980s and 1990s was significantly greater, more diverse, and less expensive than presently. Is it reasonable to assume these key industries can, much less will expand in the region given far less inventory selection for firms that need to plan for rapid expansion with site diversity and flexibility need?

Pp. 33-34 – Estimates of Metro area UGB capture of 7-county employment growth indicate declining share over the past several years and a fixed, 2006 level for future projections. Doesn't a declining capture signal the lack of suitable employment land within the Metro UGB and the increasing movement of that demand to Clark County in particular? Is this a trend Metro should continue to plan, or should workforce and industry use of freeway infrastructure be rethought and reduced?

Page 35 – We would note that all building types in Table 5, based on Metro consultant team work and extensive use of CoStar for built environment trends, are speculative space terms and reflect their skewed supply characteristics compared to owner-occupied and end users, with the exception of Institution use. For example, what categorization would Ronler Acres get? General Industrial? Office?

Page 37+ - In the Economic Trends report conducted by the Metro consulting team, it was reported that the Central & Inner Metro area Subrings lost roughly 25,000 industrial jobs between 2000 and 2006 (Appendix 1, Figure 6). Alternatively, the Outer Ring Subareas (Appendix 1, Figure 7) reported gaining roughly 15,000 jobs during the same period. Starting on Page 37 of the UGR, however, it is found that the Portland metro region will undergo a rather dramatic reversal regarding where industrial jobs can be expected to locate through 2015 and 2030. Despite losing the second-largest number of industrial jobs over the past six years, Inner north and northeast are expected to see over



3 million square feet in industrial space demand through 2015, the second highest total barely behind Outer Westside (Figure 10). Central is expected to see roughly 750,000 square feet of industrial demand through 2015 despite dramatic losses over the previous six years, signaling dramatic changes in industrial sectors and need in the central city area. Through 2030, the reversal is even more dramatic, with Inner North and northeast leading the metro region in industrial employment demand for space (13 million square feet) followed more distantly by Outer Westside at below 10 million square feet of demand. Land inventories, fiscal tools, emerging industries, etc. will not be dramatically different through 2015 than they have been in the last few years. How exactly does Metro explain this rather remarkable, if not improbable, change from trend? Has the City of Portland verified that type of capacity or consistency with their comprehensive planning efforts? We would ask similar questions for other jurisdictions.

Page 37+ - A similar reversal in non-industrial space demand from E.D. Hovee's findings has been allocated to Central and Inner Rings compared to Outer Ring subareas with similarly lacking explanation for economic rationale for the dramatic change from trend. An explanation is warranted. "High" demand for non-industrial appear to be missing from Figures 11 and 13.

Page 43+ - Development trends information greatly relies on CoStar data, which as earlier expressed provides much greater detail and information for speculative space to serve the needs of commercial real estate brokerage services. This information is not at all clear how owner-occupied, end user data is accounted for at all and, therefore, how these findings may skew analysis of future land need accordingly.

Pp. 45-46 - Discussion of FARs is provided and compared for descriptive purposes and a comparison of FAR trend findings by the Metro consultant team is given. Although this information is useful in general description, it falls short of identifying the range of FARs by employment use in affecting *demand*. Greater FAR discussion is given later in the report, but only in support of estimating potential capacity of supply, not characteristics of demand. We further point out that FARs for commercial retail and office are combined and jointly discussed, even though the two broad uses exhibit very different building forms in all parts of the metro area. Depending upon employment density, office can build out completely as high-rise, while new retail in central city usually occupies ground floor/store front in a single story or up to four stories in a regional center such as Pioneer Place. As demonstrated later in this document, retail commercial rarely achieves more than a single story in more suburban settings.

Pp. 45-46 - There is no discussion about the translation of FARs into land demand via the size of the user or tenant in determining building size and resulting relationship to land demand. This crucial link, in terms of demand for parcel size in relationship to building space by firm/user/tenant(s) size is a critical omission as ultimately the supply of land available can only reasonably support demand if all user sizes are accounted. Figure 20 on p. 45 unintentionally illustrates this critical flaw - illustration of FARs varies greatly, but in each example the size of the land parcel is the same. Obviously, parcel size need varies by industry type and user just as FARs do.

SPECIFIC METHODOLOGY AND FINDINGS COMMENTS - SUPPLY

Although it is clear much time and effort has been put into identifying the total inventory of buildable employment land within the current Urban Growth Boundary, the analysis of existing supply capacity has critical flaws that in our opinion require significant additional analysis and explanation.

Specifically, the buildable land supply analysis makes no effort to discuss the size of existing, buildable parcels other than to classify sites "buildable" if, among other things, they are greater than one (1) acre in size. A review by Johnson Reid of all employment parcels included in the published inventory, regardless of parcel ratings as established by Metro, indicates the following:

- Gross Acreage



- i. Median Size – 2.2 acres
 - ii. Mean Size – 4.9 acres
 - iii. Modal Size (most common) – 1.05 acres
- Net Buildable Acreage
 - i. Median Size – 1.8 acres
 - ii. Mean Size – 4.0 acres
 - iii. Modal Size – 0.9 acres

In other words, the vast majority of the employment land inventory – regardless of quality rating - as published is predominantly very small and unsuitable for the vast majority of employment land development types regardless of potential FAR realized on site. In fact, the most common net buildable individual parcel acreage was less than one acre (0.9), throwing the entire grading system of “at least one acre” into question.

Despite the details of FARs and potential refill/infill rates, the critical absence of discussion of parcel sizes and their suitability to accommodate the nature of future growth needs to be remedied. Without such a discussion, it is our own view that the Urban Growth Report fails to address whether or not future employment land demand and need can be met “reasonably” within the existing urban growth boundary.

SPECIFIC METHODOLOGY AND FINDINGS COMMENTS – FLOOR AREA RATIOS

Members of the Consortium have expressed strong concern at the assumed refill rates, as well as some of the Inner Ring FARs utilized for long-term projection purposes. Dennis Yee has graciously worked with Consortium members to seek common ground and refine his analysis if necessary. Reasonable changes to assumed FARs for retail have occurred as a result of coordination between Consortium members and Dennis Yee.

To independently verify FAR assumptions for retail and industrial in particular, JOHNSON REID conducted its own review of CoStar building inventory data for Industrial, Warehouse/Distribution, and Flex building types as well as various categories of retail to ground-truth modeling assumptions utilized by Metro. The following two tables summarize our findings.

Industrial

As comprehensive CoStar data indicate for all of the above submarket areas and general building types, average FARs across the region barely average 0.19. That would indicate that assumed FARs for industrial development of all three categories utilized by Metro are very aggressive. As the data also indicate, FARs that generally exceed 0.3 across all building types barely comprise 2.7% of all industrial, warehouse/distribution, and flex space constructed since 2005. We would, therefore, recommend review and significant reconsideration of assumed FARs based on the CoStar data set also utilized by Metro.



**SUMMARY OF AVERAGE FLOOR AREA RATIOS (FARs)
COSTAR INVENTORY OF INDUSTRIAL BUILDINGS SINCE 1995**

	Developed Acreage	Rentable Area	% of Region	Average FAR
Central				
Industrial	1.38	35,800	0.2%	0.60
Warehouse/Distribution	3.16	83,652	0.4%	0.61
East Multnomah County				
Industrial	33.16	433,028	2.3%	0.30
Warehouse/Distribution	684.50	5,696,489	30.2%	0.19
Flex	14.37	121,070	0.6%	0.19
Inner Clackamas				
Industrial	17.89	281,142	1.5%	0.36
Warehouse/Distribution	171.09	1,796,783	9.5%	0.24
Flex	2.30	32,500	0.2%	0.32
Inner North & East				
Industrial	44.00	239,517	1.3%	0.12
Warehouse/Distribution	187.98	2,463,896	13.1%	0.30
Flex	1.10	40,091	0.2%	0.84
Outer I-5/205				
Industrial	4.54	70,062	0.4%	0.35
Warehouse/Distribution	127.58	1,251,973	6.6%	0.23
Flex	27.34	210,979	1.1%	0.18
Outer Westside				
Industrial	229.58	1,557,769	8.3%	0.16
Warehouse/Distribution	413.20	2,017,025	10.7%	0.11
Flex	305.22	2,533,463	13.4%	0.19
TOTAL				
Industrial	330.55	2,617,318	13.9%	0.18
Warehouse/Distribution	1,587.49	13,309,818	70.6%	0.19
Flex	350.34	2,938,103	15.6%	0.19

SOURCE: CoStar and Johnson Reid LLC

Retail

The figure on the following page provides a similar analysis of retail commercial development inventory since 1995 as documented by the CoStar database. Based on the CoStar data set, a review of FARs suggests that modifications discussed by Consortium members and Dennis Yee were very appropriate.

- Average, metro area-wide FARs for retail commercial built since 1995 is 0.17.
- Only 82.4% of space identified in CoStar has a related entry for land acreage.
- 88.6% of retail inventory constructed since 1995 and reporting acreage has an average FAR of 0.3 or below.
- The Regional Mall category in the CBD, displaying FAR of 13.57 reflects a single building observation.



**SUMMARY OF AVERAGE FLOOR AREA RATIOS (FARs)
COSTAR INVENTORY OF RETAIL BUILDINGS SINCE 1995**

	Developed Acreage	Rentable Area	% of Region	Average FAR
CBD				
Regional Mall	0.16	94,558	0.9%	13.57
Unclassified	2.23	37,163	0.4%	0.38
Unreported Acreage	n/a	308,502	3.0%	n/a
I-5 CORRIDOR				
Community	25.00	207,564	2.0%	0.19
Neighborhood	59.20	244,034	2.4%	0.09
Strip Center	37.44	242,421	2.4%	0.15
Unclassified	76.81	128,816	1.3%	0.04
Unreported Acreage		303,970	3.0%	n/a
LLOYD DISTRICT				
Strip Center	1.11	24,631	0.2%	0.51
Super Regional Center	2.02	62,996	0.6%	0.72
Unclassified	4.20	140,818	1.4%	0.77
Unreported Acreage		97,031	1.0%	
NORTHEAST				
Community	116.45	1,043,173	10.3%	0.21
Neighborhood	92.91	243,524	2.4%	0.06
Power Center	17.84	337,000	3.3%	0.43
Regional Center	71.84	322,506	3.2%	0.10
Strip Center	10.61	83,606	0.8%	0.18
Unclassified	52.76	583,508	5.8%	0.25
Unreported Acreage		353,111	3.5%	
NORTHWEST				
Strip Center	0.85	47,308	0.5%	1.28
Unclassified	1.04	14,200	0.1%	0.31
Unreported Acreage		28,200	0.3%	
SOUTHEAST				
Community	56.48	750,266	7.4%	0.30
Neighborhood	79.93	403,352	4.0%	0.12
Power Center	57.24	145,430	1.4%	0.06
Regional Center	42.00	477,000	4.7%	0.26
Strip Center	8.28	123,789	1.2%	0.34
Unclassified	24.29	221,938	2.2%	0.21
Unreported Acreage		130,014	1.3%	
SOUTHWEST				
Community	99.42	454,921	4.5%	0.11
Neighborhood	7.76	88,357	0.9%	0.26
Strip Center	7.45	87,949	0.9%	0.27
General	8.65	101,942	1.0%	0.27
Unreported Acreage		118,767	1.2%	
WESTSIDE				
Community	100.29	619,116	6.1%	0.14
Neighborhood	17.42	286,323	2.8%	0.38
Power Center	25.38	235,679	2.3%	0.21
Strip Center	1.75	21,600	0.2%	0.28
Unclassified	54.04	485,407	4.8%	0.21
Unreported Acreage		445,083	4.4%	
TOTAL	n/a	10,145,573	100.0%	n/a
Reported Acreage	1,162.84	8,360,895	82.4%	0.17

SOURCE: CoStar and Johnson Reid LLC



Office

Based on reviews of CoStar data for Retail and Industrial space built since 1995, JOHNSON REID concludes that Office FARs as utilized by Metro for projecting demand and supply capacity through 2030 should similarly be revisited upon the suspicion that FAR assumptions in the UGR are very aggressive.

FAR Conclusions

Despite the above findings upon inspection of CoStar databases for industrial and retail space throughout the Portland metro area, we also caution consistent with earlier in this document that CoStar data is not comprehensive, can be inaccurate, and overemphasizes speculative space versus owner-occupied space. For instance, FARs below 0.15 for retail built since 1995 may be in error as land prices have made it cost inhibitive to develop at such low efficiency. Still, it is clear that among data points recorded by CoStar, FARs across different retail and industrial types exhibit lower levels than assumed by Metro based on consultant findings.

Additional input and feedback, as well as alternative Metroscope scenario modeling has been requested by the Consortium, and is in our opinion appropriate given the nature of identified issues and concerns expressed in this memorandum.

SPECIFIC METHODOLOGY AND FINDINGS COMMENTS – REFILL & INFILL

The refill rate utilized in the UGR appears to be based merely on "professional expertise", with no apparent technical analysis supporting the assumptions used. As a significant share of future industrial and non-industrial capacity is accounted for by "refill", determination of these ratios should be quantitatively supported. It is the understanding of JOHNSON REID that the Consortium would happily discuss an alternate methodology for refill/infill assumptions after a better understanding or explanation of how the Metro consultant team determined current rates.

While we recognize that redevelopment is likely to occur throughout the planning period, we are less certain that the redevelopment will yield a net increase in employment capacity. For redevelopment, a substantive increase in capacity would need to be assumed if substantive demand was to be met by redevelopment, such as a single story building with a 0.25 FAR being replaced with a four story building with a 0.50 FAR. Even in this case, the net increase would be only the 0.25 FAR differential.

- As an example, Metro's redevelopment and subsequent occupancy of the Sears Building yielded a net loss in both square footage and employment relative to the previous use. If marginal land development patterns are expected to change substantively, acceptable parking ratios and achievable lease rates will need to rise as well.

If we are to assume substantive levels of redevelopment of existing buildings, a significant level of assumed price escalation again will likely be necessary. Older buildings retain economic value for an extended period of time, making redevelopment less likely. Downtown Portland, with among the highest achievable lease rates in the area, retains an extensive mix of old Class C/Rehab space (over 3.5 million square feet). In areas with lower achievable lease rates, the likelihood for redevelopment will be generally lower.

The retail assumptions appear unrealistically high, with retail having little ability to change the basic configuration of single story space and surface parking under current rent levels. While retail redevelops at a rapid pace, our experience is that this redevelopment typically does not reflect a net increase in leasable area. It is more associated with a change in tenant and center configuration to reflect ever changing tenant types and needs. Structured parking for retail has only occurred in very limited instances without public subsidy.



Finally, we would further point out that much of the “low hanging fruit” redevelopment opportunities in various parts of the metro area have undergone some redevelopment or infill activity. With many of those sites seeing new investment and value, it is far from clear how quickly and how many redevelopment opportunities with higher cost and viability issues will occur over the next twenty years. We would note that certainly over the next ten years, availability and terms of redevelopment project financing will be very different from the past ten years given profound changes in the financial sector. The upshot will likely be fewer financing options and greater perceived risk of redevelopment projects. We also note that unlike the Residential UGR, there are no assumptions whatsoever about how urban renewal districts throughout the Portland metro area will fund infrastructure, parcel assembly, remediation, provide matching funds, etc. to enable employment-related redevelopment and infill over the next twenty years.

In summary, the refill rates used represent a very substantive level of assumed capacity, and derivation of these rates should be more quantitatively based.

SPECIFIC METHODOLOGY AND FINDINGS COMMENTS – RECONCILIATION (DEMAND & SUPPLY)

After review of the UGR, it is clear that Metro staff and the Metro consultant team have put significant effort into refinement of its methodologies since the 2002 Urban Growth Report. JOHNSON REID and the Consortium recognize and applaud many improvements and a significant increase in modeling sophistication.

However, in light of all of the comments and concerns about policy assumptions, methodology assumptions and other factors listed in this review, JOHNSON REID is highly skeptical of the reconciliation conclusion that existing supply capacity, via Greenfield, brownfield redevelopment, increasing FARs, refill, etc. is sufficient for future employment land demand.

Accordingly, all findings and conclusions in this section are drawn with incomplete and likely inaccurate information. We would encourage Metro to further coordinate with the Consortium regarding all of the above comments made in this document to ensure an accurate analysis of regional employment land need and supply.

1. *“There is sufficient capacity within the current urban growth boundary to meet the low end of the regional forecasted employment demand in the 5- and 20-year time frames.”*

As expressed above, significant policy questions as well as methodological omissions, errors, and opportunities for refinement render Conclusion 1 premature at best.

2. *“There is sufficient capacity to meet the high end of industrial demand...”*

Similarly, concerns expressed in this review document indicate Conclusion 2 also premature at best. More accurately, Conclusion 2 is false as the UGR admits that large lot demand analysis has been omitted and only recently has a draft study been released after preliminary UGR publication.

3. *“But policy or investment changes must be made to meet the high end of the non-industrial demand.”*

We find merit in this statement, though at a policy level we find that the picture is incomplete without consideration of urban growth boundary expansion alternative(s) to fully understand this conclusion. Analytically, the picture is incomplete as large lot need analysis and its implications have not been included in this preliminary document

4. *There is “...a potential gap in the capacity of the existing UGB to meet unique industry needs.”*

We also find merit in this statement, but the conclusion is incomplete without largely lot analysis, alternative boundary expansion policy scenarios, and opportunity to clarify, revise and correct issues raised in this document



5. *"The report illustrates a potential disparity between the location of certain types of land supply and current employment location trends."*

Our findings indicate a similar opinion of Conclusion 5 as for Conclusion 3 and Conclusion 4.



JOHNSON REID
LAND USE ECONOMICS

MEMORANDUM

DATE: July 13, 2009

TO: Malu Wilkinson, Metro
Joint MTAC / ECAC Committee

CC: CREEC, CAR, NAIOP, PBA, CCBA, SIOR, ICSC, & Davis Wright Tremaine

FROM: Bill Reid, Principal
JOHNSON REID, LLC

SUBJECT: Review of Metro's June 2009 Large Lot/Large Employer Analysis Addendum to the Preliminary Urban Growth Report for Employment Land

JOHNSON REID was retained jointly by the above-listed parties ("the Consortium") to provide a review of Metro's June 2009 Preliminary Large Lot/Large Employer Analysis ("large lot analysis") in supplement to the May 2009 Employment Urban Growth Report. The large lot analysis is intended to remedy omitted consideration of large-parcel employment land demand and supply in the May 2009 Preliminary Urban Growth Report.

This memorandum is intended as a summary of JOHNSON REID's review of analytical documentation in the large-lot analysis and resulting findings. In general, we find the large parcel employment land demand analysis to be a welcome remedy to a critical omission in the Preliminary UGR. However, broadly speaking we also find significant shortfalls in this preliminary analysis due to:

1. Extremely narrow definition of large parcel demand solely from "large employers"; and
2. Complete silence on the basic suitability of individual large parcel supply for the uses required through 2030, i.e. location, configuration, infrastructure, brown-field/constraints, industry clustering, and other factors except for sheer parcel size.

Before detailed treatment of the above concerns, we would note that all comments about demand estimation methodology for all industries, building types, and assumptions that were provided by JOHNSON REID for the Preliminary UGR are valid and applicable to methodology in the large-lot analysis. Accordingly, any UGR analysis refinements to demand analysis would have parallel revision implications for this large-lot analysis.

This memorandum is organized into three sections:

1. SUMMARY OF METRO LARGE LOT FINDINGS
2. DETAILED CRITICAL EVALUATION OF STUDY METHODOLOGY
3. EMPLOYMENT DEVELOPMENT FORM APPENDIX

SUMMARY OF METRO LARGE LOT FINDINGS

In the executive summary of the document, the Metro large-lot analysis finds the following:



- Not all large employers use large parcels of land (25 acres or bigger); 66% of large parcel users are “home-grown” and existing employers “should not be forgotten amongst efforts to attract new employers.”
- Large parcel users “accounted for about eight percent of employment in the UGB in 2006,” commonly assemble tax lots for larger sites, and hold land for future business expansion.
- Large parcel demand under the High growth scenario (UGR employment forecast) is estimated as follows:

High-Growth Large Parcel Demand (Metro, June 2009)

Lot size (acres)	Ware./	Tech		Office	Retail	Institution	Total
	Dist.	Gen. Ind.	Flex				
25 to 50	11	4	2	1	0	5	23
50 to 100	3	1	1	0	0	7	12
100 plus	2	0	0	0	0	0	2

- Large parcel demand under the Low growth scenario (UGR employment forecast) is estimated as follows:

Low-Growth Large Parcel Demand (Metro, June 2009)

Lot size (acres)	Ware./	Tech		Office	Retail	Institution	Total
	Dist.	Gen. Ind.	Flex				
25 to 50	5	0	1	1	0	4	11
50 to 100	3	0	1	0	0	6	10
100 plus	2	0	0	0	0	0	2

- Comparison of the above demand tables and supply analysis summarized in the UGR indicate the following demand/supply reconciliation by Metro staff assuming no tax lot assembly:

Large Lot Demand & Supply Comparison with No Tax Lot Assembly (Metro, June 2009)

Lot size (acres)	Lots		Lot Demand	
	Available		High Growth	Low Growth
25 to 50		36	22	11
50 to 100		7	13	10
100 plus		1	2	2

- Metro concludes that without tax lot assembly for larger employers, there appears to be sufficient land within the UGB to accommodate all demand for 25 to 50-acre sites through 2030, but a “potential deficit” may exist for tax lots over 50 acres in size.
- Alternatively, assuming tax lot assembly potential, comparison of the above demand tables and supply analysis summarized in the UGR indicate the following demand/supply reconciliation by Metro staff:

Large Lot Demand & Supply Comparison with Tax Lot Assembly (Metro, June 2009)

Lot size (acres)	Lots		Lot Demand	
	Available		High Growth	Low Growth
25 to 50		26	22	11
50 to 100		10	13	10
100 plus		2	2	2



- Metro staff concludes that with tax parcel assembly, the current UGB has sufficient inventory in large parcels (25+ acres) to meet all demand through 2030 *except* for potential “high growth” demand for parcels between 50 acres and 100 acres in size.

As indicated in the introduction to this memorandum, it is the conclusion of JOHNSON REID that analysis of large parcel demand is significantly incomplete, supply analysis continues to be flawed consistent with our 6/30/09 review of the Preliminary UGR, and related findings and conclusions about large-lot demand are flawed as well. The following section provides a more thorough treatment of our concerns with Metro’s large-lot analysis and resulting conclusions.

DETAILED CRITICAL EVALUATION OF STUDY METHODOLOGY

The following summarizes JOHNSON REID’s primary concerns with the large-lot analysis, in sequence with the document’s organization.

1. Questionable Definition of “Large Employers” Driving Large-Lot Demand

Beginning on Page 6 of the analysis, Metro defines “large employer” and conducts rather detailed analysis of firms that would qualify as large employers based on a minimum 20-acre-equivalent employment level for various building types and space utilization per employee. For example, “Flex” large employers must have at least 600 employees or more based on a methodology qualitatively described in the report.

It is our recommendation that Metro should provide the rationale and methodology that form the basis for the definition of “large employer”:

- Why was “large employer” not defined by sector, industry or even cluster? It is not clear that building space definitions provided (e.g., flex, general industrial) correspond meaningfully to individual employers because of important industry differences as well as the ability for firms to use a mix of building types; for example, a typical high-tech firm can use flex space, general industrial or, in some cases, office space.
- Calculations themselves are questionable. For instance, to qualify as a large employer, a flex-space concern has to have at least 600 employees, according to the Metro analysis. Based on comments by Alwin Turiel, City of Hillsboro Long-Range Planning Supervisor, at the June 24, 2009 Joint MTAC/ECAC workshop, Hillsboro/ Washington County high-tech flex employers utilize an average of 1,000 square feet or more per employee because of extensive capital equipment usage. JOHNSON REID would then calculate a large “flex” or tech employer having as few as 200 employees as follows:

20 Gross Acre Parcel * 0.75 Gross to Net Factor = 15 Net Acres

15 Net Acres * 0.3 FAR * 43,560 square feet = 196,020 square foot building size

196,020 square feet / 1,000 sq. ft. per tech flex job = 196 flex jobs

This difference in “large” flex employer from the 600-employee definition inexplicably cited in large-lot analysis Table 5 should be reconciled as there will be far more firms in the 200-job to 599-employee size range that will undoubtedly add to the demand analysis for 20+ acre parcels.

- Either Metro staff should re-evaluate and possibly revise its definition of “large employers” for other use types based on the potential flaw demonstrated for tech/flex above, or at least describe the methodology used for these employment sectors in sufficient detail.
- Large “Office” employers are not defined at all because 20 acres is cited by Metro as having far more employees than meaningful to estimate. Therefore, office/office campus parcel



demand is either not estimated or dramatically understated, necessarily rendering the analysis of large-parcel need incomplete.

- Unfortunately, the large retail employer analysis misses the mark as retail is largely based on multi-tenant or multi-establishment centers which combine concerns of various, total employment sizes. We can think of no single retail employer that remotely approaches 700 full-time employees in a single retail building format without some kind of accessory headquarter/administration and/or manufacturing functions. Accordingly, the definition of large retail parcel demand in terms of a non-existent, minimum retail employer size of 700 jobs unreasonably leads to no demand for retail parcels of 25 acres or more in the analysis. Again, shopping centers 25 acres or larger have been excluded entirely due to the parcel demand methodology relying on single-employer definition.
- Finally, we would note that the 20-acre, minimum employer size does not necessarily factor in the lower effective FARs in high-tech and other expanding industries due to land banking activity for cost-effective employment expansion over time. Again, to cite the tech-flex example above, if a 25% land banking factor is added based on observed firm behavior, only 15 of the parcel's 20 acres are committed for a development footprint resulting in a minimum firm size of 147 employees (75% * 196 flex jobs). Additional discussion of land banking is reserved for later in this document.

2. Troubling Comparison of “Home-grown” and New Large Firms for Policy Implications

Beginning on Page 8 of the large-lot analysis, a description of the 89 identified large employers within the UGB occurs. In addition to a summary of large employers by likely building type, there is surprisingly detailed analysis regarding the history of large employers in the region, specifically the year of company founding. Although interesting, JOHNSON REID interprets this historical analysis, specifically identifying the ratio of “home-grown” large employers to non-native firms, as somewhat subtle implication that recruitment of new firms is either not necessary or is of less importance in terms of large-parcel land provision. This is a highly troubling implication, whether subtle or not, from an economic development and land use perspective.

- “Local Industry Only” or even “primarily” flies directly in the face of local, regional and state-wide economic development interests and efforts. Whether out-of-state investment origin (i.e. Intel), or international investment (i.e. port cargo facilities, Vestas, and SolarWorld), these are important investments for the region and the State and it is at best inappropriate and at worst counter-productive to balance against the importance of “home-grown” firms.
- “Home-grown” firms frequently owe their origin and expansion to external investment, rendering the comparison not useful. As a primary example, the Institute for Metropolitan Studies at Portland State University has produced or funded extensive research into the business and economic relationships between high-tech anchor firm Intel and its profound, fundamental role in shaping the workforce, business networks and investment mechanisms that have enabled large “home-grown” firms to exist and thrive, along with Tektronix, such as FEI, TriQuint, Merix, Mentor Graphics, not to mention numerous other firms of various sizes. Therefore, to de-emphasize external investment relative to home-grown industry is to deny the frequently ultimate driver of opportunity for home-grown firms to be established and thrive.

3. Large-Parcel Demand Driven Solely by Large Employers

Beginning on Page 10 of the large-lot analysis, Metro staff identifies existing large-lot users and sets the stage for demand assumptions for large parcels based on known large lot users and large lot/parcel assemblies.

Accordingly, future demand for large parcels or assembly of parcels in the remainder of the analysis is driven solely by large employers as defined by Metro, which as noted above it significantly under-



counts. Whether or not one accepts the definition of “large employer” based on a minimum 20-acre size and related assumptions, the large-lot analysis is rendered seriously incomplete without consideration of multi-user / multi-tenant land use such as office, industrial and tech-flex business parks and retail commercial centers of various sizes, all frequently greater than 20 acres in size. Not only are land use efficiencies gained with various park and commercial center development in terms of parking, multi-purpose trips, transit potential and development costs, but multi-user configurations are integral to the economic viability of the vast majority of small businesses that could not take on owner-occupied real estate risk in addition to operational risks. This fact is not only the foundation of commercial real estate but industrial organization in general.

JOHNSON REID would recommend significant reconsideration of large-parcel need to include multi-tenant / multi-user needs. As an initial recommendation, the final section of this report is an appendix of various office, industrial, retail and institutional development forms and typical site/parcel acreages that our firm has recommended to western Washington County jurisdictions during their economic opportunities’ analysis process, as well as experience from other jurisdictions statewide involved in periodic Goal 9 compliance. We would further recommend that Consortium members also continue to provide input on industry-specific standards and regional project examples to assist Metro in its analytical efforts.

Second, we echo our UGR concern about Metro’s UGB employment capture rate of 75% - 80% for the seven-county metropolitan area:

- Does this reflect a Metro policy of forgoing 25% of potential employment opportunity for the region?
- Accordingly, does this also not reflect a policy choice to encourage a full 25% of future employment opportunity to adversely affect the growth of the UGBs of neighboring cities, e.g., Newberg, Sandy and North Plains, outside of the purview of Metro?

4. Previously-Documented Land Banking and Market Choice Factors Altogether Unconsidered

Over the past fifteen years, a considerable amount of effort has been put into economic and planning analysis of the unique nature of large employment parcel demand and supply, particularly regarding:

- “Land banking,” or purchase of land capacity beyond immediate need to ensure future business expansion ability; and
- Market choice, or market factor, the inventory of land that is available and transacted, intended for improvement investment but may or may not realize development.

The resulting body of research created in these efforts has captured not only the key assets and challenges of the area’s industrial land inventory but has established an important history of discourse regarding these issues. Below is a non-exhaustive list of reports related to these subjects particularly relevant to this memorandum:

Hobson Johnson & Associates, 2040 Means Business: Industrial Market Working Paper, November 1996

Port of Portland, Regional Industrial Land Study, Phase 1, December 1999

OTAK, Regional Industrial Land Study, Phase 2, October 2001

Portland State University, Regional Industrial Land Study, Phase 3, 2002

Metro, 2002-2022 Urban Growth Report: An Employment Land Need Analysis, August 2002

Johnson Gardner, Aggregate Industrial Land Needs, December 2002

E.D. Hovee & Company, Greater Portland Metropolitan Employment Land Study, June 2004



Land Banking

Although discussed by Metro as a potential policy implication, land banking by firms that expect to expand over the long-term in the metropolitan area is a crucial assumption to include in any large-parcel demand analysis. While holding land vacant for potential future development may be viewed as objectionable from a planning theory perspective, retaining the capacity to “expand in place” is an integral part of industrial land provision and business location decision-making, especially in a region that has a traditionally tight land supply. To ignore, underplay or forbid such an important business ingredient is both to increase key facility input costs as well as reduce certainty and confidence in business expansion planning dramatically.

In our review of industry FARs utilized in the preliminary UGR, it was indicated that Westside/suburban industrial FARs were as low as 0.19 compared to the assumed 0.3 FAR. This discrepancy is greatly explained by land purchase and banking patterns by technology-related industry and others that seek to guarantee/ensure predictability and flexibility for future expansion and may serve as a model example of land banking rates that can be assumed for land demand. We invite Metro to review the methodology used in the *2040 Means Business: Industrial Market Working Paper* as a potential model for estimating land banking within industrial land demand. Below is a summary of the discussion regarding land banking from previous work:

- High-tech firms in the area have demonstrated a propensity for “land banking”, or purchasing property in excess of their anticipated immediate term needs in order to assure on-site expansion potential.
- The 2040 Means Business Industrial Working Paper sampled 18 owner/user occupied buildings, totaling 8,460,328 square feet of space on 1,505 acres of land. The average coverage ratio for these users was only 12.9%, reflecting the impact of land banking for potential future expansion on land consumption.
- Without this land banking/expansion capability, owner/users may be hesitant to locate in this region for several reasons. First, they hold the land for future expansion, frequently expand rapidly when the decision is made, and do not want to be faced with the inefficiencies of multiple locations in the future. Second, they often desire a campus environment with major landscaping and open space, frequently either for aesthetics, employee benefit, or very frequently for facility security reasons.
- Operational characteristics of high-tech employers also contribute to a relatively high propensity to land bank in the industry. The cost of holding industrial land is more than offset by the benefit of being able to plan future expansion predictably and rapidly. Also, such firms frequently prefer to purchase land for later expansion at lower initial holding cost due to frequently, unpredictably expensive, innovation-driven capital investment needs.

Market Choice / Transaction Demand

A factor of demand must be included that reflects transaction demand need for healthy commercial real estate market activity. Not all land available will be developed over a twenty-year period, but may be purchased or optioned by interests that intend to develop. Absence of such supply provides fewer choices for business to purchase and expand, whether home-grown or external investment, which in turn tends to drive up the cost of employment land, creating disincentive to economic development. Under-provision of retail land, for instance, can put price pressure on industrial land that will frequently have freeway/transportation access and visibility upon which retail also depends, undermining the policy to preserve industrial land for industrial development.

The importance of the market factor was first raised in the *2040 Means Business Industrial Market Working Paper* and then was further elaborated and quantified in Phase 2 of the



Regional Industrial Land Study. Below is a summary of the discussion regarding the market factor from previous work.

- An efficient land market requires a range of site options during any particular period. Typically, local jurisdictions and metropolitan regions provide 50 to 300 percent more industrial land than the forecasted demand for a 20-year planning period. Although it is not used locally, such a market factor is sound economic policy as it reflects the fact that demand numbers driven purely by projected absorption will consistently understate the need for available and developable land.
- The sale of land is not equivalent to the net absorption, that is, the use of that land, and, for this reason, transaction volume will typically exceed net absorption. Nonetheless, the level of transaction activity speaks to the need for an adequate supply to allow the market to function properly. Both end-user firms and speculative developers purchase land in advance of their intended use of the property.
- Market pricing and availability of industrial land is a function of the land supply available in the market during any discrete period. As a result, simplistic ledger-style planning models that compare aggregate demand to aggregate supply do not adequately replicate the actual function of the land market.

5. Concern About Conversion of Industrial Land to Non-Industrial Uses: Lack of Empirical Evidence

The large-lot analysis poses an interesting policy question regarding assurances for industrial land to be used for job-generating industrial purposes “to protect public investments” in Metro’s own phrasing. Here, though not expressed, public investment is likely in infrastructure. The implicit concern is that industrial land has been or is being used for non-industrial purposes.

Although there has been extensive discussion of this issue over the past several years, including Metro’s expansion of its Title 4 design types to include Regionally-Significant Industrial Areas (RSIAs), we are unaware of any robust body of evidence that industrial land conversion has occurred on any significant scale, particularly in the Portland metropolitan area. To this end, we would invite Metro to review the 2004 Department of Land Conservation and Development (DLCD) report, *Promoting Prosperity: Protecting Prime Industrial Land for Job Growth*.

The report identified only five jurisdictions within Oregon that experienced industrial land conversion to other uses between 1986 and 2004. Of those five, only two of the conversions were considered by DLCD to be detrimental to industrial land supply. Moreover, the report documents Metro’s input that not only was conversion over-estimated but at times can be beneficial, particularly when due to accommodating the rapidly-changing industrial work place.

While Metro’s concern that admitting too much industrial land into the UGB may create pressure for that industrial land to convert to retail or institutional use is understandable, we would recommend greater documentation of the issue beyond anecdote for purposes of a better informed discussion of large-lot industrial land need concerns.

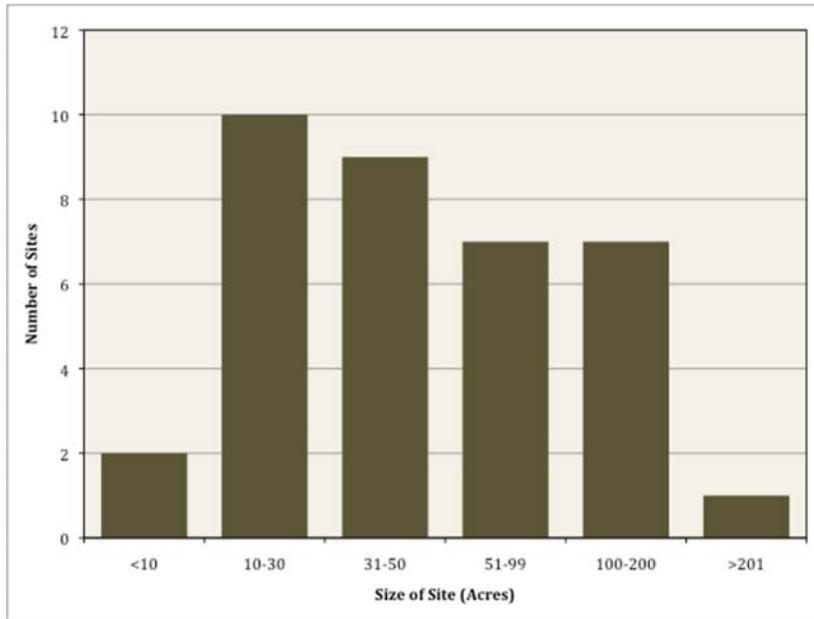
6. Municipal, Regional, & State Economic Development Policies & Aspirations Not Considered

The Metro analysis provides no discussion of economic development aspirations, targeted industry need and unique large-site quality information reflective of regional economic development agents such as the Port of Portland, Regional Economic Partners and private economic development interests or Metro’s 28 constituent local jurisdictions that are required by State law to implement Goal 9 strategies in their comprehensive plans. This is of particular concern, given considerable effort and resource expenditure by the various jurisdictions and stakeholders on targeted business recruitment efforts upon which targeted, large employer and industry cluster attraction particularly depends.



To illustrate the potential demand for large employment sites throughout the Portland metro area, a JOHNSON REID memorandum is attached to this review document describing specific industry recruitment land demand and related, specific land quality needs of those employers. The information is a summary of industry “leads” pursued by the Oregon Department of Business Development (“OBDD” formerly “OECD”) over the past nine months in partnership with various city, county, and other economic development partners. Although confidential in nature and generally summarized for this document, parcel size and quality among the 36 firms seeking Pacific Northwest locations in the nine-month period indicated the following parcel size characteristics:

FIGURE 1: DISTRIBUTION OF SITE SIZE REQUIREMENTS



Source: OBDD and Johnson Reid LLC

As is demonstrated, the vast majority of firms seeking opportunities to locate or expand in the Portland metropolitan area, required parcels greater than 30 acres in size; and this was over only a nine-month period and during the worst recession since the Great Depression of the 1930s. Over 20% (eight) are seeking parcels over 100 acres in size. Although we do not assert that the Portland metro area can and will recruit all potential leads successfully, the information about firms seeking a potential location here indicates that not only do local, regional and State economic development efforts matter, but that they should be quantified and modeled formally as part of potential long-term land need given such evidence. The reader is invited to review the attached memorandum for additional information about the range of industries and users and specific infrastructure, labor, and site quality needs.

Accordingly, based on all preceding comments about Metro’s large-lot demand methodology, we point out that such demand estimates by parcel size and building space type as expressed on Page 18 of the large-lot analysis report, as well as cited in the first section of this memorandum, are incomplete and potentially under-estimate large lot need significantly over the next twenty years.

7. Large Parcel Supply Analysis Ignores All Supply Factors but Parcel Size and Adjacent Assembly

Beginning on Page 19, an analysis of sites of 25 acres or more is conducted to identify potential supply to accommodate estimated large-parcel demand. We would first note that all critical shortcomings of the industrial supply analysis that JOHNSON REID discussed in its Preliminary UGR review have similar implications for supply analysis in this analysis.



Perhaps even more fundamentally, however, we point out that 25+ acre supply indicated in this large-lot analysis and related assembly potential is analyzed from a parcel supply size perspective with only very basic consideration of several critical factors. In other words, according to this analysis, if a 25+ acre parcel exists somewhere in the metro region, no matter its physical suitability including site orientation, configuration, location, zoning compatibility and existing infrastructure; proximity to suppliers, customers and like companies (industrial cluster); brown-field/redevelopment constraints; owner intention; and/or expense or financial tools necessary for assembly, the parcel still is considered suitable for meeting large-parcel need.

In our view, this implausibly and critically over-simplifies the large-lot supply issue and falls short of being a reasonable basis to discuss large-lot parcel supply for demand/need reconciliation. A significant revision to this supply methodology to more seriously reflect large user suitability is paramount to understand the true regional need for employment land of all types.

8. Demand and Supply Reconciliation Flawed

Accordingly, though much analytical effort by Metro staff in the document is obvious, we would be remiss not to conclude formally that the supply and demand reconciliation of large sites is flawed and requires significant revision, based on all methodological concerns raised.

We would further ask the following:

- Who is responsible for land assembly of constrained sites and by what means is this financed?
- Similarly, who is responsible for brown-field remediation and by what means is this financed? How does that affect the plausibility of various refill/infill assumptions? Metro staff is invited to review the 2004 *Brownfield/Greenfield Development Cost Comparison Study* co-funded by Metro, PDC, Port of Portland and City of Portland to identify critical financial and physical constraints for key sectors and end users' ability to utilize remediated brown-field sites altogether.
- Metro staff also is invited to review both *Employment Opportunity Sites Portfolio(s)* from 2004, commissioned by the Portland Development Commission, that identify in great detail the specific physical and financial constraint considerations for the majority of key redevelopment/infill sites throughout the City of Portland. We would further note that redevelopment will have higher perceived financial risk from a lending perspective and will require greater cost of borrowing, potentially rendering opportunities identified in that document as infeasible.
- How does the allocation of urban renewal subsidies in the Residential Urban Growth Report to residential infill, rather than support of economic development, constrain or render refill/infill assumptions inoperative?
- Finally, how does this and future large-lot demand analysis relate to or affect existing employment land findings? Large-lot users frequently anchor clusters and create ripple effects that then create demand for various other employment types including retail commercial indirectly via employed household spending. Does this and revised analysis change existing UGR findings in total?