Industrial Land Use and Zoning Study

Department of Community Planning, Housing & Development, Arlington County, Virginia
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Housing & Development

Arlington County, Virginia

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Executive Summary

The purpose of the report is threefold: 1) to determine whether the County should continue to provide for industrial uses; and if so, 2) to determine how the County should continue to provide for such uses and to what extent, and 3) to determine whether the County should regulate industrial uses any differently. This report contains the following: a history and background of industrial land use and planning; a discussion of trends affecting industrial development; an assessment of existing industrial conditions; an assessment of specific land use and development issues; an assessment of Arlington’s industrial land use controls compared to other local jurisdictions; and conclusions and recommendations for addressing industrial land use for the future.

This report defines “industrial” as those uses permitted (special exception uses included) in the “CM” Limited Industrial District, “M-1” Light Industrial District, and “M-2” Service Industrial District in the Zoning Ordinance. However, if the uses that are listed in those districts are permitted in other zoning districts, those uses shall not be considered “industrial.” Uses that are considered industrial in this report include warehouses, manufacturing businesses, storage lots (equipment, towing), junkyards, wholesale businesses, distribution plants, building material sales yards. It is important to note that automotive repair businesses, although a rather intensive use on the land, are not considered industrial but service commercial uses.

As the report delves into issues of land use and zoning, it is important to discuss the implications of nonconforming uses and buildings. If uses and buildings become nonconforming due to reclassification of zoning districts or any subsequent change in the regulations of the Zoning Ordinance, the use of buildings and land may continue subject to particular restrictions outlined in the Zoning Ordinance. Generally, restrictions on continued nonconforming uses center around the ability to expand, restore damaged buildings (not more than 75 percent of its value), and vacancy (no more than a continuous vacancy period of one year).

Key Findings

Trends Affecting Industrial Development

- The industrial sector nationwide is generally declining due to a movement from an industrial economy to a service economy and advances in technology.
- Of the current U.S. industrial base, three major locational shifts have evolved: 1) industrial uses are moving abroad where wage scales are more competitive, 2) industrial uses are moving from the north, northeast, and mid-Atlantic areas to the south and west and 3) industrial uses are moving from urban areas to outer suburbs where industrial uses can take advantage of spacious, inexpensive sites, along highway systems, which, in effect, meets today’s industrial standards.
- Based on the high cost of land and rents in Arlington today, it is unlikely that new industrial facilities can be developed at rates that would be competitive in the marketplace.
As a result of these conditions, Arlington's already limited industrial base has continuously decreased since the 1950s. Almost half of the industrial-zoned areas since then have been transformed into high density mixed use developments. Today, industrial-zoned areas contain mostly service commercial uses with a few industrial uses mixed in between.

County projections show that industrial uses will continue to decline to the point of being insignificant by the year 2020.

**Land Use Analysis**

- "Service industry" areas comprise 178 acres or 1 percent of the total land area, industrially-zoned areas comprise 298 acres or 2 percent of the total land area, and there are approximately 39 existing industrial businesses making for a very limited industrial environment compared to other land uses in the County.
- Development plans were submitted for the North Tract and South Tract industrial areas along the Jefferson Davis Corridor for non-industrial development. If the proposal is approved, industrially planned and zoned land will be cut in half leaving the Four Mile Run Drive/Shirlington Road area as the only significant contiguous area planned industrial in the County.
- Two out of three businesses in industrial-zoned areas are service commercial by nature.
- More than 50 percent of all industrial businesses are located in the Four Mile Run Drive/Shirlington Road area.
- Industrial businesses and their surrounding properties are contained in only 13 percent of the total land area zoned industrial.
- Proposed industrial land use in the Metropolitan region consists of approximately 3 percent of the total land area which are generally located in clusters along major highway systems.

**Land Use and Zoning Issues**

- There are seven areas in the County where parcels are zoned industrial but planned for nonindustrial uses on the GLUP. Unless the zoning is changed, these parcels could be redeveloped with "by-right" industrial uses or service commercial uses that could hinder adopted land use goals and objectives for several Arlington neighborhoods.
- Together with changing socio-economic conditions and industrial zoning districts which permit "by-right" service commercial uses with limited regulation, remaining industrially-zoned areas could shift further toward service commercial uses resulting in unplanned development patterns and possible disorderly development.
- In general, the County doesn't need industrial uses anymore to perform successfully. However, because of their value to the County, there are some industrial uses that the County should continue to encourage.
- There are some uses that could possibly be permitted in other nonindustrial zoning districts through special exception processes and/or with performance standards.
• Some parcels in industrial areas may be environmentally contaminated resulting in possible health problems and difficulties for redevelopment.
• More service commercial and industrial uses, in other local jurisdictions, are regulated to a higher degree compared to Arlington County.

Conclusions and Recommendations

Should the County Continue to Provide for Industrial Uses?

Today, with technological advances and an expansive transportation/highway system, industrial uses do not have to be in close proximity to meet the needs of the public. In fact, even if the County had no industrial uses remaining, it could function effectively, relying on other local, regional, or even international jurisdictions to provide for such uses. However, staff believes that some industrial uses continue to add value to the County, such as warehousing, wholesale distribution, auto towing, and research and development. These uses provide citizens and businesses with more convenient access to needed business products and storage services which could result in a reduction in transportation costs and lower delivery and service turnaround times. However, given the amount of land available and competing visions of how that land should be used, it may not be possible to continue to provide for these types of uses in the future.

Staff believes that industrial uses that add value to the County could be further evaluated and accommodated in two ways: 1) by incorporating industrial uses into nonindustrial zoning districts through special exception processes and/or performance standards to mitigate any harmful impacts on adjacent or nearby uses. This report has identified warehousing, wholesale distribution, industrial cleaning, and research and development facilities as uses which could be considered for nonindustrial districts. 2) By conducting further study of the S. Four Mile Run Drive/Shirlington Road area to better define land use goals and objectives which could include, if the County deems appropriate, an area for industrial uses which cannot be accommodated in nonindustrial zoning districts.

Recommendation:

1. It would be convenient for citizens and businesses of the County if some industrial uses could continue. The feasibility of accommodating these uses should be evaluated in two ways:

a. The County should further identify and study industrial uses that can be accommodated in nonindustrial zoning districts to ensure consistency and to ensure that new land uses or products are treated fairly, thus satisfying new or emerging demands of residential and business populations.

b. The County should conduct a S. Four Mile Run Drive/Shirlington Road Study to better define land use goals and objectives which could include an area for the provision of industrial uses, if appropriate. The study
should also include urban design guidelines to help implement these goals

Should the County Regulate Uses Permitted in the Industrial Zoning Districts Any Differently?

To deter unplanned development patterns and to mitigate negative impacts on adjacent land uses, especially in an urban, more dense setting, the County should explore amendments to the Zoning Ordinance that would strengthen the County's control over uses permitted in the industrial zoning districts. Additional controls for these uses are important for the following reasons: 1) Arlington's industrial zoning districts permit "C-2" service commercial uses and most industrial uses by-right (less regulations), as a result the industrial-zoned areas are becoming more and more a mishmash of disorganized, muddled uses negatively impacting adjacent businesses and nearby residential and business communities with increased traffic, parking, noise, and potential environmental hazards and 2) whereas Arlington is a much denser community compared to the outer suburbs (where densities are generally lower, even in their industrial developments due to lower maximum floor area ratios and higher percentages of open space requirements), land uses are closer together (as well as in the industrial areas), making it much more imperative that high impact land uses be effectively regulated to mitigate negative impacts.

Recommendations:

1. The County should explore and consider amendments to the Zoning Ordinance that would strengthen the County's control over uses permitted, including, in all industrial zoning districts, allowing "C-2" uses by-right, subject to the regulations outlined in the "C-2" Districts, and applying the special exception process to all industrial uses; and deleting some obsolete industrial uses that are currently permitted.

2. The County should consider discontinuing the "M-2" district and rezone "M-2" parcels to more appropriate classifications.

3. The County should further identify and study industrial uses that can be accommodated in nonindustrial zoning districts to ensure consistency and to ensure that new land uses or products are treated fairly, thus satisfying new or emerging demands of residential and business populations.

4. The County should, in response to any changes to industrial zoning districts, determine legal boundaries and potential impacts on other zoning districts.

What about any Miscellaneous Parcels Planned and Zoned Industrial and Those GLUP and Zoning Map Inconsistencies?

Since the North and South Tract industrial areas along the Jefferson Davis Corridor are currently being studied in response to a proposal for nonindustrial development. It is
recommended that the other industrially-planned areas along the Jefferson Davis Corridor, such as the Costco site and miscellaneous parcels along S. Glebe Road/Route 1, be studied and reconsidered to nonindustrial uses. These sites along the Jefferson Davis Corridor should be reevaluated in conjunction with future studies and planning processes. The results of these studies and plans should be reflected in a more comprehensive plan or vision for the entire Jefferson Davis Corridor.

In order to deter any future by-right industrial or service commercial development from occurring in areas zoned industrial but designated nonindustrial on the GLUP, the County should explore further study of these parcels to be consistent with their GLUP designations. Areas zoned industrial but designated on the GLUP for nonindustrial uses include the following: East Falls Church Area, Ballston Area, North Quincy Street/I-66 Area, George Washington Memorial Parkway Right-of-Way Area, Crystal Square Area, South Eads Street and Airport Road Area, and Arlington County Trade Center.

**Recommendations:**

1. *The County should reevaluate parcels along the Jefferson Davis Corridor currently planned “Service Industry” in conjunction with existing and future development proposals and future studies and planning processes.*

2. *The County should explore further study of areas zoned industrial but planned for nonindustrial development on the GLUP.*
Part I: Introduction

Based on its historical development, neither Arlington County, nor any part of the Washington Metropolitan Area, developed a significant base of industrial land use as compared to cities like port-based Baltimore or Pittsburgh. At the turn of the century, Arlington's limited industrial environment included only a few pockets of industrial sites, generally located along railways constructed in the 1800s and early 1900s. These uses included warehouses, brick manufacturing plants, lumber yards, and grist mills. Many of these uses either supported railroad enterprises or needed the railways to transport products and materials to and from them. Although still very limited in number, industrial uses in the County steadily increased in the first half of the century, hitting their peak in the 1950s. It was common to find warehouses, lumber yards, and batching plants along the Jefferson Davis Corridor, Pentagon City, Rosslyn, Four Mile Run Drive/Shirlington Road, East Falls Church, Cherrydale, and Ballston.

Between the 1960s and today, Arlington has experienced a dramatic decrease in its already limited amount of industrial land use. Older industrial areas, such as Rosslyn and the Jefferson Davis Corridor, have been transformed into office, retail, hotel, and residential developments as a result of a combination of changing economic and social trends and local land use replanning efforts. Today, only a few industrial uses remain in the County, located in areas such as Four Mile Run Drive/Shirlington Road, the so-called “North Tract” (area north of Crystal City), and East Falls Church.

Changing economic and social conditions mean that industrial uses may not be cost-effective to develop in Arlington anymore. For example, trends show that today's industrial developments require spacious sites and locate along highways in outer suburbs, where a large amount of land is cheap and readily available. Arlington, however, has high real estate values and great space constraints, which increases development costs and decrease profit margins.

In addition to a limited industrial environment, current County zoning district regulations such as the “CM” Limited Industrial District, “M-1” Light Industrial District, and the “M-2” Service Industrial District permit service commercial uses, such as auto body repair shops, auto rental lots, and printing companies, by-right. These uses dominate the remaining industrial areas, as they are more cost-effective to develop and appear to meeting a public demand. Since service commercial uses in industrial areas can be developed by-right, the County's control over their development is limited.

Considering the limited amount of industrial land use, the purpose of the report is threefold: 1) to determine whether the County should continue to provide for industrial uses, and if so, 2) to determine how the County should continue to provide for such uses and to what extent, and 3) to determine whether the County should regulate industrial uses any differently than it currently does. This report contains the following: a history and background of industrial land use and planning; a discussion of trends affecting industrial development; an assessment of existing industrial conditions; an assessment of specific land use and development issues; an assessment of Arlington's industrial land use controls...
compared to other local jurisdictions; and conclusions and recommendations for addressing industrial land use for the future.

Since there could be many definitions of “industrial use,” it is important for this report to define the terms “industrial use,” “traditional industrial use,” “industrial site,” “industrial property” or “industrial development.” This report defines the above terms as those uses permitted (special exception uses included) in the “CM” Limited Industrial District, “M-1” Light Industrial District, and “M-2” Service Industrial District in the Zoning Ordinance. However, if the uses that are listed in those districts are permitted in other zoning districts, those uses shall not be considered “industrial.” The report also defines “industrial” as uses that are only owned and operated by the private sector as opposed to public sector ownership of uses that may be construed as “industrial,” such as the sewage treatment plant on S. Glebe Road or the County Trades Center on S. Arlington Mill Drive in Arlington County. Uses that are considered industrial in this report include warehouses, manufacturing businesses, storage lots (equipment, towing), junkyards, wholesale businesses, distribution plants, building material sales yards. It is important to note that automotive repair businesses, although a rather intensive use on the land, are not considered industrial.

According to the American Planning Association’s *A Survey of Zoning Definitions*, industrial uses may fall into two categories: heavy and light. A heavy industrial land use is a use engaged in the basic processing and manufacturing of materials or products predominantly from extracted or raw materials, or a use engaged in storage of, or manufacturing processes using flammable or explosive materials, or storage or manufacturing processes that potentially involve hazardous or commonly recognized offensive conditions. A light industrial land use is a use engaged in the manufacture, predominantly from previously prepared materials, of finished products or parts, including processing, fabrication, assembly treatment, packaging, incidental storage, sales, and distribution of such projects, but excluding basic industrial processing (see Appendix A: Other Definitions of “Industrial”).

Finally, as the report delves into issues of land use and zoning, it is also important, up front, to discuss the implications of nonconforming uses and buildings. If uses and buildings become nonconforming due to reclassification of zoning districts or any subsequent change in the regulations of the Zoning Ordinance, the use of buildings and land may continue subject to particular restrictions outlined in the Zoning Ordinance. Generally, restrictions on continued nonconforming uses center around the ability to expand, restore damaged buildings (not more than 75 percent of its value), and vacancy (no more than a continuous vacancy period of one year). Full regulations on this matter can be found in Appendix B: Section 35. Nonconforming Buildings and Uses from the Zoning Ordinance.
Part II. History of Industrial Land Use and Planning

Settlement in the area now known as Arlington began in the mid 1700s (between 1742 and 1801, modern Arlington was within the boundaries of Fairfax County). Although the area was, at first, primarily agricultural, other existing industries supported the farming economy. Manufacturing in general throughout Virginia was discouraged or forbidden by England. Nevertheless, there were some establishments created to satisfy trade. Most important were the tobacco warehouses. One warehouse was established in the area known as Arlington on the land of Thomas Lee at the Falls of the “Patowmack,” located at the mouth of Pimmit Run in the Chain Bridge area. This was the beginning of what was to become the area’s first industrial complex. A grist mill, brewery, and other enterprises were also installed there toward the end of the 18th century. Other mills in this area were located along Four Mile Run near Doctor’s Branch, Long Branch, and Lubber Run.

During the 19th century, industrial uses such as brick making became popular in this area (in 1801 the area now known as Arlington was separated from Virginia and used as part of a new site for the Federal District of Columbia – the Virginia portion was retroceded in 1846 and renamed Alexandria County until 1920, when Arlington County was established). James Roach had clay pits and kilns on his land bordering on Columbia Turnpike near the Alexandria and Washington Turnpike.

Other industrial development in the 19th century emerged as a result of the construction of bridges, turnpikes, railroads, and canals. Railroad construction did not begin until nearly mid-century. The first railroad company ran from St. Asaph’s Junction (near present Custis Ave. and Route 1 in the City of Alexandria) through a portion of modern Arlington County along Four Mile Run to East Falls Church. Other lines started to emerge along the present-day Jefferson Davis Corridor, Washington Boulevard, Fairfax Drive, I-66, and Old Dominion Drive. These railways at various times carried both freight and passengers. Industrial sites containing warehouses, brick making plants, and lumber yards started to appear in Rosslyn, the Jefferson Davis Corridor, the Four Mile Run Drive/Shirlington Road area, East Falls Church, Cherrydale, and Ballston. Many of these uses either supported railroad enterprises or needed the railways to transport products and materials to and from near/far destinations. Potomac Yards, along the Jefferson Davis Corridor located in Arlington County and the City of Alexandria, became the largest railroad yard on the East Coast and remained so until recent redevelopment to retail uses. (see Map 1: Abstract of Industrial Zoning Districts and Railroad Lines).

After the turn of the century, Arlington County had much open area and many farms, but it was evolving from a strictly rural area to a suburban community. There was one hydroelectric plant in the County, but it did not supply Arlington with power. Located near Chain Bridge, it used the water of Pimmit Run to generate electricity for street lights on Canal Road to Georgetown. Also at the turn of the century, construction of electric railways encouraged the development of small villages like Cherrydale, Fort Myer
Map 1: Abstract of Industrial Zoning Districts and Railroad Lines

1943 - Industrial Districts
circa 1930 - Railroad Lines *

Total Area = 530 acres

1999 - Industrial Districts
and Railroad Lines

Total Area = 298 acres

*Map depicts freight railways. NOTE: Some of these railways also included passenger trains.
Heights, Rosemont, Ballston, and Clarendon. Highways and transportation systems were improved and expanded.

The first community planning efforts began in Arlington County as residential and commercial development intensified following World War I. In 1927, the Arlington County Board adopted an ordinance providing for limited control of land use by allowing plats to be recorded only upon the approval of the Directing Engineer. A Zoning Ordinance, implemented by a Zoning Administrator, was adopted in 1930 to encourage orderly development and prevent conflicting uses on land within the County. The designated zones generally reflected the existing land uses at that time. According to the 1930 Zoning Plan, the light and heavy industrial zones were located along the Jefferson Davis Corridor, Four Mile Run, Rosslyn, and various other sites. In terms of the types of businesses and industry at this time, a study conducted by the Engineering Extension Division of Virginia Polytechnic Institute in 1930, stated that the overwhelming majority of business establishments in Arlington were of the service variety with some firms associated with the construction industry, brick or concrete block making, lumber, etc. The limited industrial development in Arlington also reflected industrial development in general throughout the Washington Metropolitan Area. Population in the area started to increase at a time when trends in industries were changing. In addition, Washington, D.C. wasn’t located along a major waterway where many industries flourished. Thus, the Washington area never developed industrial bases like other cities, such as port-based Baltimore or Pittsburgh.

Even with the adoption of new zoning ordinances in the 1930s, 1940s, and 1950s, the concept of the light and heavy industrial zoning districts remained virtually unchanged in Arlington County. The language of these zoning districts resembled many of the model zoning ordinances which were drawn up at the time the first Arlington Zoning Ordinance was adopted. The only significant change was a change in name from light and heavy to “CM” Limited Industrial, “M-1” Light Industrial, and “M-2” Service Industrial soon after the adoption of the 1930 Zoning Plan. Depending on the district, uses permitted include asphalt batching plants, concrete batching plants, other manufacturing, and warehousing.

In the next thirty years, after the 1950s, Arlington experienced a boom in population, development, and redevelopment. As a response, the Arlington County Board adopted the first General Land Use Plan (GLUP) on August 12, 1961. This GLUP was the primary policy guide for the future development of the County. The Plan established the overall character, extent and location of various land uses throughout the County. Areas designated “Industrial” on the first GLUP were along the Jefferson Davis Highway, 15th Street South, and Four Mile Run Drive in Shirlington. These designated areas generally, but not always, coincided with areas that were zoned industrial. The “Industry” designation provided for wholesale, storage, and manufacturing uses.

By the time planning for Metrorail began in the late 1960s, older industrial areas, such as Rosslyn and the Jefferson Davis Corridor, were being transformed from warehouses to high density urban office environments. The transformation of industrial land to other
uses was a result of changing social and economic trends, market demand for alternative land uses, and an effort to replan industrial areas for future mixed use developments around Metrorail stations (see Exhibit 1: Rosslyn Before and After).

In 1973, the "Service Industry" land use designation replaced the "Industrial" land use designation on the GLUP of Arlington County. According to a 1974 report, *Inventory and Analysis of the "M-1" and "M-2" Districts and Proposed Zoning Ordinance Amendments*, the Service Industry land use concept was created to provide for appropriate supportive industrial uses in a County whose predominant land uses are residential, office, and hotel. As in the previous "Industrial" designation, the "Service Industry" designation generally provided for wholesale, storage, and light manufacturing uses. This 1974 report also prompted the County Board to amend the industrial zoning districts by eliminating some outdated uses, moving a few by-right uses to special exception, and establishing a maximum floor area ratio of 1.5 (as there had not been one before).

In the late 1970s and early 1980s the population and development boom continued. More of the older industrial areas were transformed into office, apartment, commercial, and mixed use developments. Currently, at the turn of the Millenium, Arlington is thoroughly urban and part of the core of the Washington Metropolitan Area. Industrial enterprises that require substantial land, like lumber yards, building material manufacturing, and supply houses, gradually have been crowded out of the County. Land values have risen rapidly so that increased densities are necessary for enterprises to be economically viable. Currently, only a few industrial areas and approximately 39 industrial businesses remain in the County. A majority of the remaining industrial uses are warehouses, storage lots, and a few light manufacturing plants. Most of the industrial uses in designated industrial areas and zoning districts have changed into uses that are more service commercial in nature, such as auto body shops, autobody repair shops, retail establishments, and offices.
Part III: Trends Affecting Industrial Development

Key Findings:

- The industrial sector nationwide is generally declining due to a movement from an industrial economy to a service economy and advances in technology.
- Of the current U.S. industrial base, three major locational shifts have evolved: 1) industrial uses are moving abroad where wage scales are more competitive, 2) industrial uses are moving from the north, northeast, and mid-atlantic areas to the south and west and 3) industrial uses are moving from urban areas to outer suburbs where industrial uses can take advantage of spacious, inexpensive sites, along highway systems, which, in effect, meets today’s industrial standards.
- Based on the high cost of land and rents in Arlington today, it is unlikely that new industrial facilities can be developed at rates that would be competitive in the marketplace.
- As a result of these conditions, Arlington’s already limited industrial base has continuously decreased since the 1950s. Almost half of the industrial-zoned areas since then have been transformed into high density mixed use developments. Today, industrial-zoned areas contain mostly service commercial uses with a few industrial uses mixed in between.
- County projections show that industrial uses will continue to decline to the point of being insignificant by the year 2020.

Arlington County, nor the entire Washington Metropolitan Area, have been significant contributors to industrial output compared to cities like port-based Baltimore or Pittsburgh. However, even with its limited industrial environment, Arlington appears to be evolving in company with the broader scale of change occurring throughout society. This section identifies particular trends that play a role in contributing to the transformation of industrial uses. These trends affect the shape and location of employment which subsequently impact local land use.

Trends

Ongoing Movement Toward a Service Society

Probably the most important ongoing structural change in the American economy is the movement towards a service society and a corresponding decline in manufacturing. More people are now employed in service occupations and industries than in any other sector of the economy. This trend has existed for decades. Ninety percent of the new jobs added to the economy in the 1970s were in the service and trade sectors, nearly half in just four industries (health, business services, finance, and eating and drinking places). This trend continued through the 1980s, which witnessed the shifting of another six percent of employment from the goods-producing to the service-producing sector.¹

Advances in Technology

Technological innovations have influenced or changed the nature of industrial development. Years ago, it was common to see immense factories with billowing smoke stacks, containing hundreds of workers on countless production lines, manufacturing a variety of goods. These factories often produced undesirable and sometimes hazardous by-products. Today, through advances in technology and science, like computer automation, those same goods may now be manufactured in smaller facilities producing more goods but less undesirable by-products, thus saving irreplaceable natural resources. Industrial development is being restructured to operate more effectively and efficiently and lessen its impact and enhance its attractiveness to both employees and communities. Likewise, there have been significant technological advances in modes of transportation, transportation networks, materials handling, and communications. Because of these advances, industrial uses may not have to be in close proximity to their consumers. Therefore, it is easier for industrial uses to locate in a variety of areas where there is cheap land and competitive wages. In addition, because the way these uses are functioning today, they may be considered nonindustrial which, in effect, reduces the number of industrial related activities.

Shifting Patterns of Industrial Locations

Industrial location has shown three broad national trends. These trends have strong implications for industrial development and land use.

First, the United States has become enmeshed in a global system. A crucial factor in this internationalization of the economy is the exportation of American jobs and companies overseas. Many industries, such as the textile industry, have lost jobs in the U.S. mostly because American wage scales are uncompetitive in world markets. This phenomenon leads to worker dislocations and numerous and disruptive plant closings, thus ultimately affecting industrial land use back home.

Second, trends show employment and production moving away from the older and heavily urbanized areas of New England, Middle Atlantic, and Great Lakes states toward areas in the South and West. Regional shifts of employers and economic activities within the United States contribute to new patterns of work and employment, a process that has had severe consequences for many older industrial cities.

Third, there appears to be a strong shift toward nonmetropolitan areas as a location for new industrial facilities. Specific attractions include lower taxes, additional space to expand, lower land values, skilled labor force, high employee productivity, moderate living costs and wage scales, relaxed lifestyles for employees, and cooperative attitudes on the part of local government. To these specific attractions must be added the growing difficulty of doing business in metropolitan centers, many of which are beset by congestion, escalating costs (see High Cost of Land and the Economics of Development in Arlington, below), deteriorating physical environments, environmental contamination, and unskilled labor. Improved transportation networks also have contributed to the
geographic dispersion of industrial activity. Modern highways now make it possible for nonmetropolitan area residents to live and work in uncrowded rural locations while having access to the attractions of nearby metropolitan areas.²

Chart 1 shows a comparison of industrial establishments in the Metropolitan Area over a 15-year period.³ This chart demonstrates that more urban areas like the District of Columbia, Alexandria, and Arlington have shown a decrease in industrial-related activity, while larger, less urban areas like Fairfax County and Montgomery County have shown an increase in industrial activity.

![Chart 1: Metropolitan Area's Industrial-Related Industry Over Time](chart)

**High Cost of Land and the Economics of Development in Arlington**

As mentioned above, the increasing real estate values in urban areas has had a major impact on industrial development. This is no exception for Arlington County. The high cost of land in Arlington, largely due to its central location in the Metropolitan Area, close proximity to Metrorail, scarcity of developable sites, and stable residential neighborhoods, creates an environment where industrial development is not cost effective to develop. According to a recent Deloitte & Touche study, *Location Trends in Technology Industries: Implications for Shirlington*, January 1999, the relatively high cost of land and rents in Arlington, compared to other parts of Northern Virginia, make it unlikely that an industrial facility could be developed at rates that would be competitive in the marketplace (see Appendix C: Executive Summary of the Deloitte & Touche Report, *Location Trends in Technology Industries: Implications for Shirlington*, January,

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³ Data for both charts are from *County Business Patterns*, U.S. Department of Commerce, Economic and Statistics Administration, Bureau of the Census. The comparability of this data over time may be affected by definitional changes in establishments, activity status, and industrial classifications. An establishment is a single physical location at which business is conducted or services or industrial operations are performed.
1999). The study states that the cost of land makes it necessary for developers to pursue higher densities to make a project financially feasible. A multi-story office building or other nonindustrial development has a much greater chance at market success both in terms of overall development costs and meeting the needs of the target market. As a matter of fact, Arlington hasn’t had any new industrial construction for years. New industrial businesses in Arlington usually move into existing structures or vacant lots.

**Local Impact**

As a result of these socio-economic trends, starting in the 1950s when Arlington experienced the height of its industrial activity, the inventory of property zoned industrial has continuously decreased, thus reducing the number of industrial establishments overall. Arlington encouraged this decrease by replanning industrial areas for future redevelopment to other land uses, notably mixed office, retail, and residential development around metrorail stations. Thus, by the late 1970s and early 1980s, almost half of the industrial land in the County was replanned and/or rezoned to districts that permitted office, hotel, residential, and/or commercial development. Based on County records between 1974 and 1984, 10 million square feet, or 230 acres, of industrial-zoned land in the Jefferson Davis Corridor, comprising the Crystal City and Pentagon City Metrorail Stations, was rezoned to other zoning districts. Of that amount, 7.7 million square feet, or 76 percent, was rezoned to Commercial Office Building Districts (“C-O,” “C-O-1.5” and “C-O-2.5”).

Today, because of market conditions and zoning districts which permit service commercial uses by-right (see Section V, By-right Development Patterns), only one out three businesses in industrial-zoned areas is industrial (see Section IV: Land Use Analysis). The other businesses or uses are service commercial in nature. County projections show that industrial employment will continue to decline in these areas to the point of being almost insignificant by the year 2020 (see Chart 2: Industrial Employment Projections)⁴. However, to be fair, there are remnants of an existing market for industrial uses because industrial uses still exist in the County. Although there hasn’t been any new industrial construction in years, the County does occasionally get new industrial uses moving in such as warehouses and storage lots.

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⁴The general number of industrial employees can be determined by assuming that the parking ratio requirement in the Zoning Ordinance is a valid function for employment levels. For warehousing, wholesale, and manufacturing uses, one requirement to determine the number of parking spaces is one parking space for every 1,000 square feet of floor area. Of all the industrial uses in Arlington, there is approximately 400,000 square feet of floor area, thereby, estimating 400 possible industrial employees in 1999. Assuming that the North Tract and South Tracts become redeveloped in response to proposals for nonindustrial development, and due to socio-economic trends which continue to decrease industrial uses and/or replace industrial uses with service commercial uses, almost half of the gross floor areas will be reduced by 2010, thus effecting employment levels which will likely lead to an industrial environment that is almost insignificant by the year 2020.
Chart 2: Industrial Employment Projections

Number of Employees

Year

1999 2010 2020

Employees
Part IV: Land Use Analysis

Key Findings:

- "Service Industry" areas comprise 178 acres or 1 percent of the total land area, industrially-zoned areas comprise 298 acres or 2 percent of the total land area, and there are approximately 39 existing industrial businesses making for a very limited industrial environment compared to other land uses in the County.
- Development plans were submitted for the North Tract and South Tract industrial areas along the Jefferson Davis Corridor for non-industrial development. If the proposal is approved, industrially planned and zoned land will be cut in half leaving the Four Mile Run Drive/Shirlington Road area as the only significant contiguous area planned industrial in the County.
- Two out of three businesses in industrial-zoned areas are service commercial by nature.
- More than 50 percent of Arlington's industrial businesses are located in the Four Mile Run Drive/Shirlington Road area.
- Industrial businesses and their surrounding properties are contained in only 13 percent of the total land area zoned industrial.
- Proposed industrial land use in the Metropolitan region consists of approximately 3 percent of the total land area which is generally located in clusters along major highway systems.

Areas Planned Industrial

Five areas in the County are designated "Service Industry" on the GLUP. They are generally located in the southern and southeastern portions of the County: Four Mile Run Drive/Shirlington Road, S. Glebe Road/Route 1, South Tract, North Tract, and the Costco Site (see Map 2: Existing Areas Planned Industrial). The existing "Service Industry" area comprises 178 acres, or one percent, of the total land area in the County which is extremely small when compared to other existing land uses such as residential (approximately 40 percent of total land area) and commercial trade/services/office (approximately 14 percent of total land area). In December 1998, development plans were submitted for the North Tract and South Tract sites along the Jefferson Davis Corridor for non-industrial development. In addition, the GLUP designation for the Costco site in Pentagon City, which is also planned industrial, will be reevaluated as part of a future Jefferson Davis Corridor planning process. These three sites consist of approximately 105 acres, or more than half the area designated industrial in the County.

Areas Zoned Industrial

Parcels zoned industrial, comprised of the "CM" Limited Industrial District, "M-1" Light Industrial District, and "M-2" Service Industrial District, can generally be found within the areas designated "Service Industry" (see Map 3: Existing Areas Zoned Industrial). However, in several instances these industrial zoning districts lie outside the areas designated "Service Industry" and are planned for nonindustrial uses. These districts are
Map 3: Existing

CM area = 52 acres
M-1 area = 214 acres
M-2 area = 32 acres
Total Area = 298 acres
Potential Development Density (PDD) at 1.5 FAR = 19,471,320 sf
located in East Falls Church, I-66/Quincy Street area, Ballston, near Key Bridge, along Jefferson Davis Highway, and north of Shirlington. Existing areas zoned industrial consist of approximately 298 acres, or two percent, of the total land area in the County. Areas designated “M-1” make up the largest percentage of land zoned industrial – approximately 72 percent. The “CM” designation comprises approximately 17 percent, and the “M-2,” 11 percent. The potential development density of these areas zoned industrial, at the maximum 1.5 FAR, is close to 20 million square feet.

Development in Areas Zoned Industrial

Industrial Businesses

The County has approximately 39 businesses by what can be considered industrial in areas zoned and planned for industrial uses. Development on these sites includes light manufacturing companies, warehousing/wholesale establishments and storage lots (see Exhibit 2: Pictures of Industrial Businesses and Table 1: Industrial Businesses in Industrial-Zoned Areas). Twenty-one businesses in all (or over 50 percent) are of the warehousing/wholesale type of industrial use (see Chart 3: Number of Industrial Businesses by Category). Less than a quarter (or nine businesses) of all the industrial businesses are considered storage lots which include heavy equipment storage and towing businesses. Manufacturing, distribution plants, and building materials sales yards have less than five businesses each. More than 50 percent or 22 of the 39 industrial businesses are located along the Four Mile Run Drive/Shirlington Road area, eight are located along the Jefferson Davis Corridor, seven in East Falls Church area, and two in the Ballston area. Industrial businesses and their surrounding property make up approximately 13 percent of the total land area zoned industrial. Industrial uses generally have a higher impact on the land in terms of pollution, noise, and odor than other land uses in the

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number of Businesses</th>
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<tr>
<td>Warehousing/Wholesale</td>
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<td>Storage Lots</td>
<td>20</td>
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<tr>
<td>Manufacturing</td>
<td>15</td>
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<tr>
<td>Distribution</td>
<td>10</td>
</tr>
<tr>
<td>Bldg. Material Yards</td>
<td>5</td>
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</table>
Exhibit 2: Pictures of Industrial Businesses

Warehouse on Shirlington Road

Concrete Plant on Shirlington Road

Storage Yard and Sheds on Shirlington Road

Warehouse on S. Four Mile Run Drive
<table>
<thead>
<tr>
<th>Business</th>
<th>Address</th>
<th>Use</th>
<th>Zoning</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
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<td>Robert Shreve Fuel</td>
<td>6873 N. Lee Highway</td>
<td>Fuel Distribution/Storage</td>
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<td>Rose Roofing Company</td>
<td>2200 N. Westmoreland St.</td>
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<td>Warehouse</td>
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<td>Towing/Storage</td>
<td>CM</td>
</tr>
<tr>
<td>Al’s Towing &amp; Storage</td>
<td>6820 N. Fairfax Drive</td>
<td>Towing/Storage</td>
<td>CM</td>
</tr>
<tr>
<td>Ayoub Rug Cleaning</td>
<td>6840 N. Fairfax Drive</td>
<td>Rug Cleaning</td>
<td>CM</td>
</tr>
<tr>
<td><strong>South Four Mile Run Drive/South Shirlington Road Area</strong></td>
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<td>Amazon Movers</td>
<td>4160 S. Four Mile Run Dr.</td>
<td>Warehouse/Office</td>
<td>M-1</td>
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<td>Brooks Business Transfer</td>
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<td>Warehouse/Office</td>
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<td>Motorola/Wireless Communications</td>
<td>4064 S. Four Mile Run Dr.</td>
<td>Warehouse</td>
<td>M-1</td>
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<td>Metro Restaurant Equipment</td>
<td>3870 S. Four Mile Run Dr.</td>
<td>Wholesale Rest. Equipment</td>
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<td>Gourmand, Inc.</td>
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<td>DC Party Rental</td>
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<td>Olympic Food Distributors</td>
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<td>Food Distributor/Storage</td>
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<td>Diaper Express</td>
<td>2606 S. Oxford Street</td>
<td>Warehouse</td>
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<tr>
<td>Executive Club Management Co.</td>
<td>2606 S. Oxford Street</td>
<td>Warehouse/Laundry for Hotels</td>
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<tr>
<td>A&amp;S Landscaping</td>
<td>2601 S. Oxford Street</td>
<td>Warehouse/Office</td>
<td>M-1</td>
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<td>Henderson’s Moving Service</td>
<td>2709 S. Oakland Street</td>
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<td>Winston’s Chimney Service</td>
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<td>Arlington Food Assistance Center</td>
<td>2708 S. Nelson Street</td>
<td>Food Distribution/Warehouse</td>
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<tr>
<td>Stuart Dean</td>
<td>2700 S. Nelson Street</td>
<td>Warehouse/Office</td>
<td>M-1</td>
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<tr>
<td>DC Rental</td>
<td>2659 S. Shirlington Road</td>
<td>Warehouse</td>
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<td>Virginia Concrete Company</td>
<td>2651 S. Shirlington Road</td>
<td>Concrete Manufacturing</td>
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<td>ABC Distributors</td>
<td>2633 S. Shirlington Road</td>
<td>Sales Yard/Warehouse</td>
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<td>Parcel Post Annex</td>
<td>2565 S. Shirlington Road</td>
<td>Postal Distribution/Warehouse</td>
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<tr>
<td>World Safari</td>
<td>2563 S. Shirlington Road</td>
<td>Cold Storage/Warehouse</td>
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<td>Imperial Air Freight</td>
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<td>Warehouse</td>
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<td><strong>Ballston Area</strong></td>
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<td>Community Towing Service</td>
<td>4000 5th Road North</td>
<td>Towing/Storage</td>
<td>CM</td>
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<td>System Planning Corporation</td>
<td>1425 N. Quincy Street</td>
<td>Warehouse/Radar Assembly</td>
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<td><strong>Jefferson Davis Corridor Area</strong></td>
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<td>Aireco</td>
<td>3000 S. Eads Street</td>
<td>Refr/Air Wholesale/Warehouse</td>
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<td>Howart Concrete</td>
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<tr>
<td>A-1 Towing</td>
<td>601 S. Ball Street</td>
<td>Towing/Storage</td>
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<td>Granja Contracting</td>
<td>395 Old Jefferson Davis Hwy.</td>
<td>Storage Lot/Contracting</td>
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<tr>
<td>Cardinal Concrete</td>
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<td>Concrete Manufacturing</td>
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<tr>
<td>Frank’s Towing &amp; Storge</td>
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<td>Chapel Valley</td>
<td>450 Old Jefferson Davis Hwy.</td>
<td>Storage Lot/Landscaping</td>
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<tr>
<td>Henry’s Wrecker Service</td>
<td>450-A Old Jefferson Davis Hwy.</td>
<td>Towing/Storage</td>
<td>M-2</td>
</tr>
</tbody>
</table>
County. They also tend to produce an increase in truck traffic and parking and expose an unattractive exterior which often negatively impacts adjacent or nearby land uses including other businesses and residential communities.

**Service Commercial Businesses and Other Uses**

The County has been experiencing an increase in development in these older industrial areas that are generally more service commercial in nature. In fact, approximately two out of three uses located in industrial zoning districts generally fall into this category. The service commercial businesses, scattered among the industrial businesses, include auto repair shops, auto supply stores, self-storage facilities, printing companies, restaurants, and animal hospitals. The highest number of uses (approximately 35) fall into the auto repair and service category (see Chart 4: Number of Service Commercial Businesses by Category). Sometimes these uses are interpreted as industrial depending on how they’re defined. Although they impose a gritty exterior like so many traditional industrial uses, these uses are generally permitted in the “C-2” Service Commercial Community Business District and therefore not considered “Industrial” according to the definition described in the Introduction (see Exhibit 3: Pictures of Service Commercial Businesses and Table 2: Service Commercial Businesses and Other Uses in Industrial-Zoned Areas). However, they may impose similar industrial impacts.

![Chart 4: Number of Service Commercial Businesses by Category](chart4)

**Regional Perspective**

Proposed industrial land uses in the Washington Region consists of approximately three percent of the total land area and are generally located in clusters along major highway systems (see Map 4: Regional Perspective of Proposed Industrial Land Uses). As with

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5 This data was compiled by the Metropolitan Washington Council of Government (COG) and approved by the Metropolitan Development Policy Committee, July 10, 1996. The data represents proposed industrial
Exhibit 3: Pictures of Service Commercial Businesses

Self-Storage Facility on S. Four Mile Run Drive

Live Theatre on S. Four Mile Run Drive

Auto Parts Store on S. Four Mile Run Drive

Strip Mall on S. Four Mile Run Drive

land uses for the future and not necessarily existing industrial uses. However, it’s important to note that some of these areas do contain existing industrial developments. Since each local jurisdiction may have their own definition or interpretation of industrial land uses, COG generally compiled the data that resembled industrial land use under one category entitled “Low-Density Industrial” and “Medium to High-Density Industrial.” County staff consolidated this information and presents it as just one category called “Industrial.” The percentages of proposed industrial land uses are approximates based upon GIS calculations.
Table 2: Service Commercial Businesses and Other Uses in Industrial-Zoned Areas

<table>
<thead>
<tr>
<th>Business</th>
<th>Address</th>
<th>Use</th>
<th>Zoning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>East Falls Church Area</strong></td>
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<tr>
<td>Don Pool Mercedes</td>
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<td>Auto Repair and Service</td>
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<tr>
<td>Northern Virginia Auto Center</td>
<td>6910 N. Lee Highway</td>
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<tr>
<td>Always There Pet Care</td>
<td>6900 N. Lee Highway</td>
<td>Animal Hospital/Kennel</td>
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<tr>
<td>Suburban Animal Hospital</td>
<td>6879 N. Lee Highway</td>
<td>Animal Hospital</td>
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<tr>
<td>La Cote D’or Café</td>
<td>6876 N. Lee Highway</td>
<td>Restaurant</td>
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<td>Econo Lodge</td>
<td>6800 N. Lee Highway</td>
<td>Hotel</td>
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<td>Virginia Spring &amp; Alignment</td>
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<td>Skaggs Public Safety Uniforms</td>
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<td>Tax Analysts</td>
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<td>Automotive Services</td>
<td>6820 N. Fairfax Drive</td>
<td>Auto Repair and Service</td>
<td>CM</td>
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<tr>
<td>Cars USA</td>
<td>6847 N. Fairfax Drive</td>
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<td>Pager Factory Inc.</td>
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<td>Ethel Beauty Salon</td>
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<td>Beauty Parlor</td>
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<td>H&amp;J Investments</td>
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<td>Repair Shop/TV VCR</td>
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<td>Retail</td>
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<tr>
<td>Shirlington Auto Mart</td>
<td>3800 S. Four Mile Run Dr.</td>
<td>Retail/Service</td>
<td>M-1</td>
</tr>
<tr>
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<td>Auto Repair &amp; Service</td>
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<td>M-1</td>
</tr>
<tr>
<td>International Auto Repair</td>
<td>3800 S. Four Mile Run Dr.</td>
<td>Auto Repair &amp; Service</td>
<td>M-1</td>
</tr>
<tr>
<td>Llanta Usada Used Tires</td>
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<tr>
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<td>Arlington Heating &amp; Air Cond.</td>
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<td>Storage USA</td>
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<td>Serge Franje</td>
<td>2601 S. Oxford Street</td>
<td>Auto Repair &amp; Service</td>
<td>M-1</td>
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<td>Audio Buys</td>
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<td>Automotive Express Used Tires</td>
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<td>Office/Studio for Recordings</td>
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<td>SunStar Tubular Skylights</td>
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<td>Retail/Service</td>
<td>M-1</td>
</tr>
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<td>International Modeling Academy</td>
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<td>Office/Modeling Agency</td>
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<td>2710 S. Nelson Street</td>
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<tr>
<td>Opportunity Place at A-SPAN</td>
<td>2708-B S. Nelson Street</td>
<td>Office/Job Services</td>
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<td>A/V Prod. Studio/Office</td>
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<td>Rosenthal Chevrolet</td>
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<td>Automobile Dealership</td>
<td>M-1</td>
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<tr>
<td>Weenie Beanie</td>
<td>2680 S. Shirlington Road</td>
<td>Restaurant/Take out</td>
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</tr>
<tr>
<td>Design Cuisine</td>
<td>2659 S. Shirlington Road</td>
<td>Catering Services</td>
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<td>Washington Golf Center</td>
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<td>Retail Store</td>
<td>M-1</td>
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<tr>
<td>MacVicor Design &amp; Communications</td>
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<td>Funeral Home</td>
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<td>International Development Bank</td>
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<td>Auto Repair &amp; Service</td>
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</tr>
<tr>
<td>Fine Line Auto Body</td>
<td>2515 S. Shirlington Road</td>
<td>Auto Repair &amp; Service</td>
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**Ballston Area**

<table>
<thead>
<tr>
<th>Business</th>
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<tr>
<td>WMATA Bus Terminal</td>
<td>707 N. Randolph Street</td>
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<tr>
<td>Roy Rogers (Vacant)</td>
<td>607 N. Randolph Street</td>
<td>Restaurant</td>
</tr>
<tr>
<td>American Service Center Body Shop</td>
<td>601 N. Randolph Street</td>
<td>Auto Repair &amp; Service</td>
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<tr>
<td>American Service Center Vehicle Prep</td>
<td>505 N. Randolph Street</td>
<td>Auto Repair &amp; Service</td>
</tr>
<tr>
<td>Tutto Bene</td>
<td>501 N. Randolph Street</td>
<td>Restaurant</td>
</tr>
<tr>
<td>Danny's Auto Body</td>
<td>4027 5th Road North</td>
<td>Auto Repair &amp; Service</td>
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<tr>
<td>Serif Press</td>
<td>4019 5th Road North</td>
<td>Printing</td>
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<tr>
<td>American Service Center</td>
<td>4013 5th Road North</td>
<td>Auto Repair &amp; Service</td>
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<tr>
<td>American Service Center</td>
<td>5855 5th Road North</td>
<td>Auto Repair &amp; Service</td>
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**Jefferson Davis Corridor Area**

<table>
<thead>
<tr>
<th>Business</th>
<th>Address</th>
<th>Category</th>
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<tbody>
<tr>
<td>U.S. Post Office</td>
<td>1720 S. Eads Street</td>
<td>Public Service/Office</td>
</tr>
<tr>
<td>Tokyu's Beauty Salon</td>
<td>2800 S. Eads Street</td>
<td>Beauty Parlor</td>
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<tr>
<td>Rasoi Kabob</td>
<td>2800 S. Eads Street</td>
<td>Restaurant</td>
</tr>
<tr>
<td>Kirby Lithographics</td>
<td>2900 S. Eads Street</td>
<td>Printing</td>
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<tr>
<td>VEPCO</td>
<td>3225 S. Eads Street</td>
<td>Electric Utility Facility</td>
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<tr>
<td>First Choice Auto Body</td>
<td>525 31st Street South</td>
<td>Auto Repair &amp; Service</td>
</tr>
<tr>
<td>WMATA Bus Lot</td>
<td>3301 Glebe Road</td>
<td>Bus Lot</td>
</tr>
<tr>
<td>WMATA</td>
<td>1500 S. Jefferson Davis Hwy</td>
<td>Metro Station</td>
</tr>
<tr>
<td>MWA</td>
<td>2525 S. Jefferson Davis Hwy</td>
<td>Parking Lot</td>
</tr>
<tr>
<td>Dollar Rent-A-Car</td>
<td>2600 S. Jefferson Davis Hwy</td>
<td>Auto Rental Lot</td>
</tr>
<tr>
<td>McDonalds</td>
<td>2620 S. Jefferson Davis Hwy</td>
<td>Restaurant</td>
</tr>
<tr>
<td>Alamo Rental Car</td>
<td>2780 S. Jefferson Davis Hwy</td>
<td>Auto Rental Lot</td>
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<tr>
<td>Thrifty Rental Car</td>
<td>2900 S. Jefferson Davis Hwy</td>
<td>Auto Rental Lot</td>
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<tr>
<td>Heisman Porche-Audi</td>
<td>3100 S. Jefferson Davis Hwy</td>
<td>Auto Dealership/Service</td>
</tr>
<tr>
<td>Heisman BMW</td>
<td>3150 S. Jefferson Davis Hwy</td>
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22
<table>
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<th>Business Name</th>
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<tr>
<td>Blue Top Cab</td>
<td>602 S. Ball Street</td>
<td>Auto Repair and Service</td>
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<tr>
<td>Diplomat Public Parking</td>
<td>605 S. Ball Street</td>
<td>Parking Lot</td>
<td>M-2</td>
</tr>
<tr>
<td>Gateway Auto Body</td>
<td>700 S. Ball Street</td>
<td>Auto Repair and Service</td>
<td>M-2</td>
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<tr>
<td>Clarke St. Playhouse/Shakespeare Co.</td>
<td>601 S. Clarke Street</td>
<td>Indoor Theatre</td>
<td>M-2</td>
</tr>
<tr>
<td>Crystal Motel</td>
<td>901 S. Clarke Street</td>
<td>Motel</td>
<td>M-2</td>
</tr>
<tr>
<td>Unicare Transportation</td>
<td>320 6th Street South</td>
<td>Auto Repair and Service</td>
<td>M-2</td>
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<tr>
<td>Public Storage</td>
<td>399 Old Jefferson Davis Hwy</td>
<td>Self Storage</td>
<td>M-1</td>
</tr>
<tr>
<td>Bargain Buggies Rent-A-Car</td>
<td>400 Old Jefferson Davis Hwy</td>
<td>Auto Rental Lot</td>
<td>M-1</td>
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</table>
Arlington County, proposed industrial land uses in other local jurisdictions are extremely limited when compared to other more predominant land use designations. Although smaller in total land area compared to other local jurisdictions, Alexandria has the highest percentage of planned industrial land use at eight percent (however, census data indicates a decrease in industrial establishments in Alexandria over time). Montgomery County shows the lowest percentage at .04 percent. Much of the proposed industrial areas throughout the region generally fall along major highway systems in the outer suburbs.
Map 4 shows clustered development along major routes such as I-495, I-95, and I-66. Less urban jurisdictions like Loudon County and Prince William County tend to cluster proposed industrial land uses in just one general area. Jurisdictions that developed sooner than Loudon or Prince William, like Prince George’s County, Alexandria, and/or Fairfax County have more of a scattered pattern of proposed industrial development.
Part V: Land Use and Zoning Issues

Key Findings:

- There are seven areas in the County where parcels are zoned industrial but planned for nonindustrial uses on the GLUP. These parcels could be redeveloped with "by-right" industrial uses or service commercial uses that could hinder adopted land use goals and objectives for several Arlington neighborhoods.
- Together with changing socio-economic conditions and industrial zoning districts which permit "by-right" service commercial uses with limited regulation, remaining industrially-zoned areas could shift further toward service commercial uses resulting in unplanned development patterns and possible disorderly development.
- In general, the County doesn't need industrial uses anymore to perform successfully. However, because of their value to the County, there are some industrial uses that the County should continue to encourage.
- There are some industrial uses that could possibly be permitted in other nonindustrial zoning districts through special exception processes and/or with performance standards.
- Some parcels in industrial areas may be environmentally contaminated resulting in possible health problems and difficulties for redevelopment.
- More service commercial and industrial uses, in other local jurisdictions, are regulated to a higher degree compared to Arlington County.

General Land Use Plan and Zoning Map Inconsistencies

There are seven sites in the County that are zoned industrial and contain a variety of existing uses, but are designated on the GLUP for other uses such as office, apartments, or hotels (see Map 5: Areas Planned for Nonindustrial Uses But Zoned Industrial). These land use designations anticipate and encourage the redevelopment to nonindustrial uses in these areas. However, if these parcels are developed with by-right industrial or service commercial uses, it could hinder adopted land use goals and objectives for several Arlington neighborhoods long into the future. Areas zoned industrial but designated on the GLUP for nonindustrial uses include the following:

(1) East Falls Church Area: Industrial zoning districts are located in the western portion of the County along Lee Highway on the City of Falls Church border. These districts are zoned "CM" and "M-1." However, their land use designation on the GLUP is "Low" Office-Apartment-Hotel and a small portion is designated "Public" (for the new fire station). The "Low" Office-Apartment-Hotel designation encourages redevelopment of office and residential uses rather than industrial uses. Currently, seven industrial sites remain in this area, including a fuel distribution company, a towing/storage company, and a ceramic manufacturing business. The majority of uses (or the remaining 11) are
Map 5: Areas Planned for Non-Industrial Uses But Zoned Industrial

1. East Falls Church Area
   Zoned: CM, M-1
   Potential Development Density (PDD) at 1.5 FAR = 945,476 sf
   Planned: Low Office-Apartment-Hotel

2. Ballston Area
   Zoned: CM
   PDD = 717,881 sf
   Planned: Medium Office-Apartment-Hotel
   Medium Residential

3. North Quincy Street-66 Area
   Zoned: CM, M-1
   PDD = 320,846 sf
   Planned: Low Residential

4. George Washington Memorial Parkway Right-of-Way Area
   Zoned: M-2
   PDD = 22,891 sf
   Planned: Public

5. Crystal Square Area
   Zoned: CM, M-2
   PDD = 178,812 sf
   Planned: High-Medium Residential
   High Residential
   High Office-Apartment-Hotel

6. South Eads Street and Airport Road Area
   Zoned: CM
   PDD = 271,275 sf
   Planned: High Residential
   Public

7. Arlington County Trade Center
   Zoned: M-1
   PDD = 2,807,982 sf
   Planned: Government and Community Facilities

Total PDD = 5,064,963 sf

LEGEND:
- Zoned CM- Limited Industrial District
- Zoned M-1 - Light Industrial District
- Zoned M-2 - Service Industrial District
- Street Names
- Streets
- County Line

Map prepared by Mapping Center, DPW.
March 1999

All area measurements are approximates.
generally service commercial uses such as auto repair shops, animal hospitals, and a restaurant. The GLUP designation is intended to encourage rezoning to “C-O-1.0” Commercial Office Building, Hotel, and Apartment, and “C-O-1.5” Commercial Office Building, Hotel, and Apartment which would permit development compatible with nearby residential neighborhoods, and with development planned for Falls Church City across the border. Land use and development trends in the East Falls Church area have been studied by County staff, which led to the current GLUP designations, as well as by an Arlington-Falls Church Ad-Hoc Planning Committee. If these areas are reclassified from industrial to commercial districts, then approximately seven sites may be considered as nonconforming to the new classification. In addition, the County Board approved in January a rezoning and GLUP amendment for the new fire station to be constructed at the old fire station site and an adjacent and vacant industrial site. The site of the new station, comprising 1.4 acres, was rezoned from “M-1” to “S-3A,” and its GLUP designation changed from “Low” Office-Apartment-Hotel to “Public.” The old site of .5 acres was rezoned from “CM” and “M-1” to “C-O-1.5” to be consistent with the “Low” Office-Apartment-Hotel GLUP designation and to provide for future redevelopment potential consistent with goals and plans for East Falls Church.

(2) Ballston Area: This site is located in the central portion of the County. It is generally bounded by Wilson Boulevard to the north, Randolph Street to the west, Pollard Street to the east and 5th Road North to the south. The site is part of the N. Quincy Street Coordinated Mixed-Use District. One industrial use lies on this site, a towing/storage lot on 5th Road North. The remaining uses (approximately 9) on this site can be considered service commercial by nature, such as the WMATA bus terminal, two restaurants, auto body shops, and a printing company. Although the “C-2” district would best reflect existing conditions, the County has replanned this area. As a result of the North Quincy Street
Plan, adopted by the County Board in February 1995, the GLUP was amended for the area west of Quincy Street to "Medium" Office-Apartment-Hotel. The zoning district proposed for this area is "C-O-2.5" Commercial Office Building, Hotel and Apartment Districts. The GLUP also designates the area east of Quincy Street as "Medium" Residential. The zoning districts consistent with these designations are "RA7-16" Apartment Dwelling, "RA6-15" Apartment Dwelling, and "RA-H" Hotel. A rezoning to any of these districts would generally make the uses on most of this site nonconforming.

(3) North Quincy Street/I-66: Located in the central portion of the County and northeast of the Washington and Lee High School, the properties in this area are found at the southeast corner of the intersection of I-66 and N. Quincy Street. This site was originally a major industrial location for Cherrydale that supported the presence of the W&OD Railroad line. In the mid 1980s, a majority of the industrial area was eliminated for the I-66 right-of-way and the remaining parcels were left as industrial. Currently, this site is zoned "M-1," "CM," and "C-O-1.0," while the GLUP designates these areas for "Low" Residential development (1 to 10 units per acre). These districts could be reevaluated. Zoning districts that provide the appropriate density for low residential development include "R-20," "R-10," "R-10T," "R-8," "R-6," and "R-5." This site abuts land zoned "R-5" to the south.

(4) George Washington Memorial Parkway Right-of-Way Area: This parcel is located in the northeastern portion of the County and a quarter of a mile southeast of the Key Bridge along the right-of-way of the George Washington Parkway. The site is situated on the northeast corner of the intersection of N. Oak Street and 22nd Street North. The parcel is a remnant of an industrial site that was operated by the Truland Corporation. Currently, the site is vacant, owned by the National Park Service, and is currently zoned "M-2." According to the GLUP, the area is planned for "Public" uses such as parks, schools, parkways, major unpaved rights-of-way, libraries, and cultural facilities. Adjacent uses include townhouse development. If reevaluated, this site
could be reclassified to "S-3A," which is consistent with the rest of the abutting right-of-way along the Parkway and its GLUP designation and planned uses.

(5) **Crystal Square Area:**
This site is located in the southeastern portion of the County along Jefferson Davis Highway in Crystal City. It is comprised of four separate small parcels located among the high-rise office buildings between 18th Street South and 23rd Street South. Two of the parcels are used for the Crystal City Metro Station as entrances and two parcels are right-of-way for the Jefferson Davis Highway. Historically, much of the area was originally zoned for industrial uses. However, these sites were left as "M-2" when adjoining properties were rezoned for office uses. The planned use for these parcels is a mix of "High" Residential and "High" Office-Apartment-Hotel. The "C-O" Commercial Office Building, Hotel & Multiple-Family could be consistent with the planned uses as well as with abutting zoning districts. Also in this vicinity is a "CM" zoned parcel containing a U.S. Post Office at the northeast corner of 18th Street South and South Eads Street. This area is planned for "High-Medium" Residential development. If reevaluated, the "RA4.8" Multiple Family Residential District could be consistent with the remaining portion of the block (Crystal Towers), and with its GLUP designation.

(6) **South Eads Street and Airport Road:** Located in the southeastern portion of the County, south of Crystal City, this site lies along South Eads Street, Jefferson Davis Highway, and Airport Road (State Route 233 or the exit ramp off Jefferson Davis Highway to Reagan Washington National Airport). The existing uses in this area include an auto rental lot, a fast-food restaurant, and a WMATA parking lot. The site is currently zoned "CM", and planned uses for this site are "Public" and "High" Residential on the GLUP. The "RA-H-3.2" Multiple Family and Hotel District could match the GLUP designation.
If the zoning here is changed, the existing uses such as the fast-food restaurant and the auto rental lot could become nonconforming.

(7) Arlington County Trades Center: This large parcel is located in the southern portion of the County, west of the Shirlington Area and at the southeastern corner of 29th Street South and Arlington Mill Drive. The site is owned by the County and is used as a property and maintenance yard. While zoned “M-1,” the area is designated “Government and Community Facilities” on the GLUP. The “P-S” Public Service District would probably be more applicable for existing and proposed land uses. The “P-S” zoning district permits publicly owned properties with uses of all kinds, including large storage areas and yards. The “P-S” district would also be consistent with the draft Master Plan for the County Trades Center currently underway. In addition, 2.4 acres of the maintenance yard has been proposed for rezoning as part of a proposed amendment to the Shirlington Phased Development Site Plan. To match the rest of Shirlington Village, the applicant for that amendment has proposed a GLUP amendment from “Government and Community Facilities” to “Low” Office-Apartment-Hotel, and a rezoning from “M-1” to “C-O-1.5” Commercial Office Building and Hotel District for this portion.

By-Right Development Patterns

Changing economic and social conditions have led to an environment in Arlington where industrial uses may not be cost-effective to develop anymore. For example, trends show that today’s industrial developments require spacious sites and locate along highways in outer suburbs, where large amounts of land are cheap and readily available. In contrast, Arlington has higher real estate values and greater space constraints, which increase development costs and decreases profit margins. As a result, industrial uses are being replaced with service commercial type uses since the industrial zoning district permit these uses “by-right.” These uses include primarily auto body repair shops and a variety of other uses, such as auto rental lots, office, printing companies, and miscellaneous retail establishments. Because these uses are permitted “by-right” which limits the County’s control over them, these service commercial uses, especially the auto repair and service ones, impose a gritty exterior and have a high impact on the land in terms of increased traffic, parking, and pollution. These uses dominate industrial zoning districts as they are more cost-effective to develop (service commercial uses are flocking to these industrial
areas because they are frequently less expensive than areas that are zoned service commercial on major commercial streets for example), and appear to meet a public demand. If this increase persists, the County may continue to get “by-right” service commercial development in areas designated as “Service Industry.” As a result, the County has less control over where service commercial uses are locating and functioning as a substitute for industrial uses. It is also important to note that service commercial uses in other zoning districts in Arlington, such as the “C-2,” Service Commercial Districts permit many of these higher impact uses, such as the auto repair and services through the special exception process. Thus, the County has more control in mitigating any potential negative impacts in which these types of uses may impose.

**The Need for Industrial Uses**

Based on the continued success of the County, through its triple-A Bond Ratings, stable neighborhoods, and growing office and commercial centers, at the same time occupying an extremely low number of existing industrial uses for a period of time, it is safe to say that if the County had no remaining industrial uses, it would still function effectively relying on other local, regional, and even international jurisdictions for those uses or services. Technological innovations, such as improved modes of transportation, transportation networks, and materials handling, have created an environment where many industrial uses do not have to be in close proximity to their consumers. However, staff believes there are still a few industrial uses that would have some impact on the convenience of living or doing business in Arlington County. These uses include wholesale distribution, warehousing, auto towing/storage, industrial cleaning, and research and development. The value of these uses to Arlington is generally an issue of access which could result in a reduction in transportation costs and lower delivery and service turnaround times for residents and local businesses. A loss of convenient access would not be detrimental to Arlington’s future success. However, it could undermine the value of having a community that offers a balance of convenient services to its residences and business communities which in effect increases the general welfare of the County. It may no: be possible, however, to continue to provide for these uses given the small area of land available and competing visions of how that land should be used. Below is a needs analysis on the different industrial classifications.

**Materials Distribution.** Materials Distribution includes uses such as oil distribution companies or concrete batching plants. Oil for domestic heating is on the wane and concrete can be supplied regionally or through on-site plants at construction sites. In general, material distribution type businesses are region-serving businesses and are not location dependent, therefore, not required to be located in the County. It can be anticipated that at some point in the near future, the underlying value of the land will exceed that of any materials distribution business in the County.

**Construction Storage.** These businesses include heating and plumbing or landscape companies that store equipment outdoors that also have an office and warehouse component. Generally, they are land intensive and may or may not be able to be accommodated in a building. These are region-serving businesses and are generally not
location dependent. Like materials distribution, construction storage is a use not required to be located in the County.

**Warehousing/Storage.** While these services are available regionally, there is demand on the part of Arlington businesses for convenient, off-site records and equipment storage and similar demand for area apartment dwellers. A loss of these types of businesses would have an impact on the convenience of living or doing business in Arlington County.

**Wholesale Distribution.** As with warehousing, these are regional businesses. However, depending on the type of product, an in-town location can be advantageous satisfying local economic development goals and objectives. A loss of these businesses would also have an impact on convenience and access for Arlington businesses and residents.

**Auto Towing and Storage.** Although towing yards are also located outside of the County, it is very inconvenient for persons who have been in accidents or have had vehicles towed for other reasons to travel long distances, especially if alternative locations are not transit accessible. The County should attempt to retain these businesses either in Arlington or in other jurisdictions by interjurisdictional agreements as they add convenience and accessibility to residents and businesses in the County.

**Industrial Cleaning.** This service is available on a regional basis but does offer some convenience for local businesses and residents.

**Research and Development.** These businesses are an important component to the success of Arlington County’s employment centers and to our regional economy. The laboratory and or assembly components of these businesses are generally needed to support the more predominant office use.

**Accommodating Industrial Uses in Nonindustrial Zoning Districts**

Due to technological advances and changing market demands, there are some industrial uses that are not as land intensive as before. These land uses or products, because of their inherited industrial nature, are generally still sometimes considered industrial. However, with additional performance standards and/or with special exception processes, some of these new products could be permitted in nonindustrial zoning districts with little impact on adjacent land uses. Below, is an assessment of whether existing industrial uses could be accommodated into nonindustrial zoning districts.

**Materials Distribution.** Manufacturing and or the distribution of bulk products such as concrete or fuel oil are uses that pose serious impacts on the land. Due to increased parking, noise, truck traffic, and potential environmental concerns, these uses, even through a special exception process with additional performance standards, should not be encouraged outside of industrial zoning districts.
Construction Storage. Like Materials Distribution, storage of equipment or material out of doors pose high impacts upon the land. These types of uses should only be accommodated in industrial zoning districts.

Warehousing/Storage. Self-service storage facilities, a relatively new product originating from traditional industrial warehousing, were only permitted in industrial-zoned areas in Arlington. Just recently, the Zoning Ordinance was amended to allow, through the special exception process, self-storage facilities in the “C-TH” Commercial Town House District, a nonindustrial zoning district. It was determined that the self-service storage use, with additional County control to mitigate impacts on adjacent areas, could be effectively incorporated with other commercial uses in the “C-TH” Districts as they are of the same character and impose similar impacts. As with the self-service storage facilities, other warehousing businesses, producing similar impacts, including industrial warehousing, could also be accommodated in other commercial zoning districts with effective controls for development.

Wholesale Distribution. These types of uses include commercial bakeries and commercial catering establishments, and/or similar type uses, primarily contain a distribution component, but also warehousing and retail components. Some local jurisdictions permit these uses through special exception processes in nonindustrial districts depending on the percentage of the total floor area dedicated to the warehouse component. Given the modest scale and similar intensity as service commercial uses, these wholesale distribution businesses could be accommodated in service commercial areas in the County through special exception with additional performance standards for the more intensive components.

Auto Towing and Storage. Due to the nature of this use, there are potential environmental consequences such as oil seepage of disabled vehicles and increases in traffic and noise levels. Because of its level of intensity, this type of use would not be well suited in any other zoning district in the County. It is a use that should be located in a district for similar type of land intensive uses. To help mitigate negative impacts, auto towing and storage uses could be housed in parking structures.

Industrial Cleaning. Laundry and cleaning businesses are permitted by right in both “C-2” districts and industrial districts. The major difference is that chemical dyes may be used on products in businesses that are only located in industrial districts. Provisions could be made in the zoning ordinance to allow businesses that use dye to locate in service commercial areas of the County in conjunction with a special exception and additional performance standards to mitigate any negative impacts. This type of business could locate in multi-use buildings.

Research and Development. Research and development (R&D) facilities, which frequently have assembly or laboratory testing or warehousing components, considered industrial by nature, are another use that could be permitted in commercial office areas in the County, provided that the area dedicated to the assembly and testing does not exceed
25 percent of the total floor area of the building. Percentages over 25 percent could be allowed through a special exception process.

It would be beneficial to the County if it studied these industrial uses further to determine whether they could be permitted in nonindustrial zoning districts in order to ensure consistency and to ensure that new land uses or products are treated fairly (not just allowed in industrial zoning districts). Thus, by examining these uses further, the County could permit a broader list of uses in particular zoning districts which helps satisfy new or emerging demands of the residential and business populations.

Environmental Impacts

It is anticipated that some of the parcels in these industrial areas have some level of environmental contamination given their past and current uses. A Phase I assessment of the industrial areas has not been performed, but County staff did undertake a review to determine what hazards might exist along the Four Mile Run Drive industrial area. The review substantiated the possibility of environmental contamination based on the assumption that several sites have received permits for hazardous materials as well as sites reporting gas/oil spills and the removal of tanks and hazardous wastes. As a result, there could be possible health-related problems stemming from these sites as well as difficulties for redevelopment.

Arlington’s Industrial Zoning Districts and Comparison to Other Jurisdictions

Summary of Arlington’s Industrial Zoning Districts

The general purpose of the “CM,” “M-1,” and “M-2” industrial zoning districts is to provide for land uses of an industrial nature and meet the objectives of the “Service Industry” land use designation (see Appendix D: “CM,” “M-1,” and “M-2” Industrial Zoning Districts). The “CM” Limited Industrial District intent is to provide for light manufacturing, wholesale business, and distribution centers and other uses inappropriate to residential or service business areas. The district permits uses in commercial zoning districts (“C-2”) which generally provide for an expanded range of commercial development with limited County control. Dwellings are prohibited except for one unit for a caretaker or resident manager serving a storage or warehouse complex. There are no permitted uses that fall under a special exception or conditional use process. The ratio of the gross floor area of all structures erected on a “CM” district site to the total area of the site shall not exceed a total of 1.5 to 1. No building shall be erected to exceed forty-five (45) feet (per the “C-2”). The “CM” district requires ten (10) percent of the site area to be landscaped open space. This district makes up approximately 17 percent of all the land area zoned industrial.

The “M-1” Light Industrial District intent is to provide for more intense uses than the “CM” district, such as railroad lines and related activities; publicly-operated facilities for the process, treatment, or reduction of refuse material or water-carried waste; and
towing/storage lots. Concrete batching is the only use permitted through a special exception or conditional use process. The ratio of the gross floor area of all structures erected on an “M-1” district site to the total area of the site can not exceed 1.5 to 1, which is the same FAR as the “CM” district. The height limit is seventy-five (75) feet (per the “C-3” General Commercial zoning district). The “M-1” district is the most widely used industrial district as it consists of the majority of all land zoned industrial -- approximately 72 percent. There are three existing businesses that would require the “M-1” district: three concrete batching plants, one in Shirlington and two in the North Tract. Other uses permitted in the “M-1” district are either permitted in other zoning districts (i.e., water treatment plants in “S-3A” Special District, used for public facilities) or are uses that require large amounts of space and are generally not economically feasible to develop in Arlington.

The “M-2” Service Industrial District permits the most intense industrial land uses. This district also permits uses allowed in the other two industrial districts. The “M-2” district is similar to the “M-1” district except that it allows heavy industrial uses such as concrete-producing plants as “by-right” permitted uses and permits conditional uses such as asphalt-producing plants and junkyards. Since these uses involve the manufacturing of raw materials, they can be considered “heavy industrial.” They impose extreme impacts on the land and adjacent uses. As with the “M-1” and “CM” districts, the “M-2” district requires the ratio of the gross floor area of all structures erected to the total area of the site shall not exceed a total of 1.5 to 1 and no building shall be erected to exceed seventy-five (75) feet. These districts make up approximately 11 percent of all the land area zoned industrial. Currently, the only use that would require the “M-2” district is concrete batching plants. However, concrete batching plants could be moved under an “M-1” district, making them nonconforming. Thus, making the “M-2” district extraneous.

Comparison to Other Local Jurisdictions

What Arlington County and other local jurisdictions have in common is an array of industrial zoning districts, from low impact to high impact. As one moves across the spectrum, each zoning district starts to build on top of the other. In other words, an industrial district permits uses pertinent to that district as well permits the lower impact uses allowed in the district before it (also known as cumulative zoning). Each district along the spectrum provides a list of uses permitted as well as uses permitted through a special exception process. What’s generally different between Arlington and other local jurisdictions is where uses generally fall within the array of industrial zoning districts and whether they be permitted by-right or through special exception.

Fairfax County’s Medium Intensity Industrial District is quite similar to Arlington’s “CM” or “M-1” industrial districts in terms of character and impact of the uses permitted. However, a major difference is how Arlington and Fairfax County treat service commercial type uses in these districts. Arlington permits all “C-2” uses by-right in its industrial districts. Fairfax County generally permits a number of service commercial uses by-right such as financial institutions, private schools, and offices, but, due to their special impacts, permits a number of service commercial uses under special exception
such as car washes, drive-in banks, eating establishments, hotels/motels, plant nurseries, retail sales establishments, service stations, theatres, and vehicle sales establishments. In fact, vehicle repair establishments (a popular by-right use in Arlington’s industrial zoning districts) are first permitted through special exception in the General Industrial District, which is 6th out of seven across the spectrum of industrial zoning districts. Alexandria conducts itself in a similar fashion. For example, it lists a variety of service commercial uses by-right but also, for example, lists business offices, auto rental lots, convenience stores, general auto repair, and restaurants as special exception uses. The District of Columbia permits service commercial uses by-right in their industrial districts. However, a number of service commercial uses, such as motorcycle sales and repair, laundry or drycleaning establishments, and repair garages are subject to additional standards to mitigate impacts.

Industrial uses, as with service commercial uses, are also more widely distributed between permitted uses and special exception uses in other jurisdictions. Whereas Arlington generally permits industrial uses by-right, except for concrete batching as special exception in the “M-1” district and asphalt batching and junkyards as special exceptions in the “M-2” district, other local jurisdictions provide a broader list of industrial uses under their special exception process. For example, Alexandria, in its Industrial zone, lists fuel yards, vehicle towing lots, and freight distribution centers as uses permitted under special exception. In Fairfax County’s Light Intensity Industrial District, similar to Arlington’s “CM” District, miniwarehouses and wholesale trade establishments are also uses permitted under special exception. The differences between jurisdictions most likely reflect that jurisdiction’s judgement in terms of similar character and impact with regard to specific land uses.

Also, Arlington’s industrial zoning districts clearly permit a few uses that other jurisdictions do not such as poultry- or rabbit-killing retail businesses and blacksmith shops (except for Montgomery County). These uses are probably outdated and were more relevant at the time when the zoning ordinance was first written in 1930. Just as other jurisdictions do, these uses, if needed, could be implied towards an overall general description of uses that share similar activities.

Another difference between other local jurisdictions and Arlington includes the maximum floor area ratio and percentage of open space required. It appears the at the maximum floor area ratio is generally lower and the percentage of open space is higher in suburban communities like Fairfax County and Montgomery County compared to more urban areas like Arlington and Alexandria. Also, other local jurisdictions, such as the District of Columbia, have established overlay districts which contain additional requirements such as setbacks, environmental standards, landscaping, and other design regulations. The overlay districts are used to provide additional assurance to mitigate negative impacts on site and on adjacent areas.
Part VI: Conclusions and Recommendations

Should the County Continue to Provide for Industrial Uses?

Today, with technological advances and an expansive transportation/highway system, industrial uses do not have to be in close proximity to meet the needs of the public. In fact, even if the County had no industrial uses remaining, it could function effectively, relying on other local, regional, or even international jurisdictions to provide for such uses. However, staff believes that some industrial uses continue to add value to the County, such as warehousing, wholesale distribution, auto towing, and research and development. These uses provide citizens and businesses with more convenient access to needed business products and storage services which could result in a reduction in transportation costs and lower delivery and service turnaround times. However, given the amount of land available and competing visions of how that land should be used, it may not be possible to continue to provide for these types of uses in the future.

Staff believes that industrial uses that add value to the County could be further evaluated and accommodated in two ways: 1) by incorporating industrial uses into nonindustrial zoning districts through special exception processes and/or performance standards to mitigate any harmful impacts on adjacent or nearby uses. This report has identified warehousing, wholesale distribution, industrial cleaning, and research and development facilities as uses which could be considered for nonindustrial districts. By allowing these uses in other zoning districts, it would ensure that new land uses or products are treated fairly, thus providing additional access and satisfaction to changing market demands of residential and business populations. 2) By conducting further study of the S. Four Mile Run Drive/Shirlington Road area to better define land use goals and objectives which could include, if the County deems appropriate, an area for industrial uses which cannot be accommodated in nonindustrial zoning districts. It makes sense that the Four Mile Run Drive/Shirlington Road area be the place to accommodate these types of uses for three main reasons: 1) it will be the last significant contiguous area planned for industrial uses (as the other significant areas, the North and South Tracts are being reevaluated based on recent proposals to nonindustrial uses), 2) approximately 50 percent of all the County’s existing industrial business are already located there, and 3) it is an effective location for industrial uses in terms of transportation for it is close to a major highway system (I-395) (trends show that industrial areas need to be in close proximity to major highways in order to move products more efficiently).

Recommendation:

1. It would be convenient for citizens and businesses of the County if some industrial uses could continue. The feasibility of accommodating these uses should be evaluated in two ways:

   a. The County should further identify and study industrial uses that can be accommodated in nonindustrial zoning districts to ensure consistency and to ensure that new land uses or products are treated
fairly, thus satisfying new or emerging demands of residential and business populations.

b. The County should conduct a S. Four Mile Run Drive/Shirlington Road Study to better define land use goals and objectives which could include an area for the provision of industrial uses, if appropriate. The study should also include urban design guidelines to help implement these goals.

Should the County Regulate Uses Permitted in the Industrial Zoning Districts Any Differently?

To deter unplanned development patterns and to mitigate negative impacts on adjacent land uses, especially in an urban, more dense setting, the County should explore amendments to the Zoning Ordinance that would strengthen the County’s control over uses permitted in the industrial zoning districts. Additional controls for these uses are important for the following reasons: 1) Arlington’s industrial zoning districts permit “C-2” service commercial uses and most industrial uses by-right (less regulations), as a result the industrial-zoned areas are becoming more and more a mishmash of disorganized, muddled uses negatively impacting adjacent businesses and nearby residential and business communities with increased traffic, parking, noise, and potential environmental hazards and 2) whereas Arlington is a much denser community compared to the outer suburbs (where densities are generally lower, even in their industrial developments due to lower maximum floor area ratios and higher percentages of open space requirements), land uses are closer together (as well as in the industrial areas), making it much more imperative that high impact land uses be effectively regulated to mitigate negative impacts.

An effective strategy to strengthen the County’s control is to allow “C-2” uses by-right, subject to the regulations outlined in the “C-2” Districts, and applying the special exception process to all industrial uses. By doing this, the County would have more control over the way higher impact uses are functioning and appearing in a densely developed area. In addition, some lower impact service commercial uses are permitted by-right, at the same time higher impact commercial and industrial uses must be subject to a special exception process. The rules that apply to the “C-2” Service Commercial District appear to work well. Other local jurisdictions, including Fairfax County, Alexandria, and to some extent, the District of Columbia, apply these similar rules as they recognize that industrial uses and many service commercial uses have comparable character and impact and thus, should be regulated similarly. These changes to the Zoning Ordinance would also help prevent negative impacts throughout the County, especially in areas where parcels are zoned industrial but planned for nonindustrial uses, such as East Falls Church, Ballston, and the I-66/Quincy Street site, where new by-right industrial and service commercial uses could continue to hinder adopted land use goals in several Arlington neighborhoods long into the future.
Also, Arlington’s industrial zoning districts clearly permit a few uses in which other jurisdictions do not such as poultry- or rabbit-killing retail businesses and blacksmith shops. These uses are probably outdated and were more relevant at the time when the zoning ordinance was first written in 1930. It is recommended that these uses be deleted as they are obsolete in this day and age. It is also recommended that materials distribution and construction storage uses be reconsidered as they are not desirable in the County as they are more regional-serving businesses and are generally not location dependent. Currently there are approximately six existing businesses under these categories.

There are other mechanisms to regulate or further regulate industrial uses such as establishing overlay districts. Overlay districts, containing additional requirements such as setbacks, landscaping, and urban design standards could be established for particular industrial-zoned areas that require added levels of protection. However, it is recommended that those options, at this time, be considered at a later date. The proposed changes in this report to the industrial zoning districts should provide the necessary processes to mitigate negative impacts. But, an overlay district could be an option for the Four Mile Run Drive/Shirlington Road area or any other industrially-zoned area. Those decisions should be determined in the course of any future study of those particular areas. In addition, rezoning land to other zoning districts is another option the County could consider. However, historically speaking, the County Board rarely rezones privately-owned land unless the County receives a property owner’s request to rezone it.

It is the staff’s opinion, however, that if any rezonings do occur, the priority should be applied to parcels zoned “M-2.” In fact, the County should consider discontinuing this district altogether. Currently, the “M-2” district only makes up 32 acres or 11 percent of all the land zoned industrial in the County. The only use that would require the “M-2” district to be conforming is a concrete batching plant located in the North Tract area (this area contains the majority of “M-2” in the County – approximately 30 acres). This area will most likely be redeveloped to nonindustrial uses, thus, making the “M-2” district extraneous in the County. Any remaining parcels zoned “M-2” (seven small parcels making up approximately two acres) should be rezoned to more appropriate classifications.

In addition to exploring amendments to the Zoning Ordinance, the County should conduct further study on industrial uses that can be accommodated in nonindustrial zoning districts with little impact on adjacent uses. This report has identified warehousing, wholesale distribution, industrial cleaning, and reasearch and development facilities as uses which could be considered for nonindustrial districts. By allowing these uses in other zoning districts, it would ensure that new land uses or products are treated fairly, thus providing additional access and satisfaction to changing market demands of residential and business populations.

As industrial areas are being reevaluated and existing industrial land use controls are being reconsidered, the impacts on other nonindustrial zoning districts should be reviewed. No singular zoning district works in a vacuum. When a modification in one
zoning district takes place, that change may have implications for other zoning districts. As a result, other zoning districts should be reviewed to ensure that final recommended changes to any zoning district are harmonious with all other districts in the zoning ordinance. Zoning districts which could be affected by changes to the industrial districts are the “C-2” and “C-3” districts. In addition, the County must consider the legal implications if it chooses to amend the Zoning Ordinance. For example, to what extent can the County modify the general rules and permissible uses of existing zoning districts.

**Recommendations:**

1. **The County should explore and consider amendments to the Zoning Ordinance that would strengthen the County’s control over uses permitted, including, in all industrial zoning districts, allowing “C-2” uses by-right, subject to the regulations outlined in the “C-2” Districts, and applying the special exception process to all industrial uses; and deleting some obsolete industrial uses that are currently permitted.**

2. **The County should consider discontinuing the “M-2” district and rezone “M-2” parcels to more appropriate classifications.**

3. **The County should further identify and study industrial uses that can be accommodated in nonindustrial zoning districts to ensure consistency and to ensure that new land uses or products are treated fairly, thus satisfying new or emerging demands of residential and business populations.**

4. **The County should, in response to any changes to industrial zoning districts, determine legal boundaries and potential impacts on other zoning districts.**

What about any Miscellaneous Parcels Planned and Zoned Industrial and Those GLUP and Zoning Map Inconsistencies?

Since the North and South Tract industrial areas along the Jefferson Davis Corridor are currently being studied in response to a proposal for nonindustrial development. It is recommended that the other industrially-planned areas along the Jefferson Davis Corridor, such as the Costco site and miscellaneous parcels along S. Glebe Road/Route 1, be studied and reconsidered to nonindustrial uses. These sites along the Jefferson Davis Corridor should be reevaluated in conjunction with future studies and planning processes. The results of these studies and plans should be reflected in a more comprehensive plan or vision for the entire Jefferson Davis Corridor.

In order to deter any future by-right industrial or service commercial development, occurring in areas zoned industrial but designated nonindustrial on the GLUP, the County should explore further study of these parcels to be consistent with their GLUP designations. Areas zoned industrial but designated on the GLUP for nonindustrial uses include the following: East Falls Church Area, Ballston Area, North Quincy Street/I-66 Area, George Washington Memorial Parkway Right-of-Way Area, Crystal Square Area,
South Eads Street and Airport Road Area, and Arlington County Trade Center. It is the County’s intent that the current nonindustrial land use designations are established to encourage redevelopment to nonindustrial uses in these areas. However, industrial and service commercial uses may be developed “by-right” which could hinder adopted land use goals and objective for several Arlington neighborhoods long into the future. If the underlying industrial zoning is not changed, proposed amendments to the industrial zoning districts, recommended in this report, could help mitigate negative impacts. Further evaluation of these areas could include prioritizing areas for study (i.e., selecting the I-66/Quincy Street site as the first study area due to its close proximity and potential impacts to surrounding low density residential development); conducting workshops in neighborhoods; assessing areas for possible rezonings and determining legal implications; developing staff reports; and presenting recommendations at public hearings.

**Recommendations:**

1. The County should reevaluate parcels along the Jefferson Davis Corridor currently planned “Service Industry” in conjunction with existing and future development proposals and future studies and planning processes.

2. The County should explore further study of areas zoned industrial but planned for nonindustrial development on the GLUP.
Appendix A

Other Definitions of “Industrial”

Industrial Property: Land and/or improvements that can be adapted for industrial use; a combination of land, improvements, and machinery integrated into a functioning unit to assemble, process, and manufacture products from raw materials or fabricated parts, factories that render service, e.g., laundries, dry cleaners, storage warehouses, or produce natural resources, e.g., oil wells.


Industrial Property: Land which is improved with a structure and equipped with machinery for the purpose of assembling, processing, and manufacturing finished or partially finished products from raw materials or fabricated parts, or for rendering certain kind of services, such as laundries, dry cleaners, warehouses, etc.; generally classified into heavy industry and light industry.


Industrial Property: A combination of land, improvements, machinery which has been adjusted, synchronized, and perfected into a functioning unit intended for the assembling, processing, and manufacture of finished, or partially finished products from raw materials or fabricated parts, such as factories; and, a similar combination intended for rendering certain kinds of services, such as laundries, dry cleaners, storage warehouses, and for the production of natural resources, such as oil wells.

Classification of Industrial Property: A common differentiation of industrial property, particularly in zoning practice, is that between “heavy” and “light” industry. Heavy industry connotes large structures belching forth smoke and fumes and housing processes involving vast amounts of bulky raw materials and end products. The steel, chemical, refining, and smelting industries are examples of heavy industry. These are often located near large bodies of water, taking advantage of a plentiful water supply and cheap waterborne transportation. Properties of this type generally involve special-use structures designed for a specific process and of little utility for any other purpose.

Light industry is made up of the residue of industrial property, and may include loft buildings, old multi-story mill type factory structures, modern one-story manufacturing plants, large and small warehousing structures, truck terminals, and many other properties.
Vacant land suitable for industry, railroad property, waterfront property, dock or lighterage real estate, and the industrial park, are sometimes placed in separate categories. These can, however, usually be classified either as heavy or light industry.

Industrial use may also be classified as continuous or interruptible. The continuous type industries include processes that run 24 hours a day, 7 days a week, and cannot be discontinued without considerable expense, such as the steel and refining industries. The interruptible type is one that is ordinarily not run around the clock throughout a 7-day week, and can be discontinued at any time without "shut down" expense.

Process is a term sometimes applied to a class of industry manufacturing one or more nonmetallic products by a continuous flow of method and through use of specially designed machinery and equipment, such as oil refining and certain branches of the chemical industry.

[NOTE: The Urban Land Institute (ULI) and the National Association of Industrial and Office Properties (NAIOP) were contacted for their definitions of industrial property. At the moment, ULI and NAIOP have not developed official definitions of this term. However, each organization referred staff to the above sources.]
Appendix B

Section 35. Nonconforming Buildings and Uses
A. Nonconforming Buildings.

1. Maintenance Permitted: Nonconforming buildings or structures may be maintained, except as otherwise provided in this section.

2. Repairs—Alterations: Repairs and alterations may be made to a nonconforming building or structure; provided, that no structural alteration shall be made except those required by law or ordinance.

3. Additions—Enlargements—Moving:
   a. A nonconforming building or structure shall not be added to or enlarged in any manner unless such building or structure, including such additions and enlargements, is made to conform to all the regulations of the district in which it is located.
   b. A building or structure which does not comply with the height or area regulations shall not be added to or enlarged in any manner unless such addition or enlargement conforms to all the regulations of the district in which it is located; provided, that the total aggregate floor area included in all such separate additions and enlargements does not exceed fifty (50) percent of the floor area contained in said building or structure, at the time this ordinance became effective.
   c. A building or structure lacking sufficient automobile parking space in connection therewith as required in Section 33 may be altered or enlarged, provided additional automobile parking space is supplied to meet the requirements of Section 33.
   d. Nonconforming building or structure shall be moved in whole or in part to any other location on the lot unless every portion of such building or structure is made to conform to all the regulations of the district in which it is located.

4. Restoration of Damaged Building: A nonconforming building or structure which is damaged or partially destroyed by fire, flood, wind, earthquake or other calamity or act of God or the public enemy, to the extent of not more than seventy-five (75) percent of its value, exclusive of foundations at that time, may be restored and the occupancy or use of such building, structure or part thereof, which existed at the time of such partial destruction, may be continued or resumed, provided the total cost of such restoration does not exceed seventy-five (75) percent of the value, exclusive of foundations of the building or structure, at the time of such damage and that such restoration is started within a period of one (1) year and is diligently prosecuted to completion. In the event such damage or destruction exceeds seventy-five (75) percent of the value exclusive of foundations of such nonconforming building or structure, no repairs or reconstruction shall be made unless every portion of such building or structure is made to conform to all regulations for new buildings in the district in which it is located.

5. One-year Vacancy: A nonconforming building, structure or portion thereof, which is or hereafter becomes vacant and remains unoccupied for a continuous period of one (1) year, shall not thereafter be occupied except by a use which conforms to the use regulations of the district in which it is located.

6. Removal: In all “R” Districts, every nonconforming building or structure which was designed, arranged or intended for a use permitted only in the “C,” “CM” and “M” Districts but not in the “R” Districts, shall be completely removed, or altered and converted to a conforming building, structure and use when such buildings or structures have reached, or may hereafter reach, the ages hereinafter specified, computed from the date the building permit therefor was issued; in the case of buildings defined in the County Building Code 6/ as Type 1, forty (40) years; Types II and
III, thirty (30) years; and Types IV and V, twenty (20) years; provided, however, that this regulation shall not become operative until ten (10) years from the effective date of this ordinance.

B. Nonconforming Use of Buildings.

1. Continuation and Change of Use: Except as otherwise provided in this section:
   a. The nonconforming use of a building or structure, existing at the time this ordinance became effective, may be continued;
   b. The use of a nonconforming building or structure may be changed to a use of the same or more restricted classification, but where the use of a nonconforming building or structure is hereafter changed to a use of a more restricted classification, it shall not thereafter be changed to a use of a less restricted classification; and
   c. A vacant nonconforming building or structure may be occupied by a use for which the building or structure was designed or intended if so occupied within a period of one (1) year after the effective date of this ordinance, and the use of a nonconforming building or structure which becomes vacant after the effective date of this ordinance, may also be occupied by a use for which the building or structure was designed or intended if so occupied within a period of one (1) year after the building becomes vacant.

2. Expansion Prohibited—Discontinuance: A nonconforming use of a conforming building or structure (i.e., commercial use in a dwelling, etc.) shall not be expanded or extended into any other portion of such conforming building or structure, nor changed except to a conforming use. If such a nonconforming use or portion thereof is discontinued or changed to a conforming use, any future use of such building, structure or portion thereof shall be in conformity with the regulations of the district in which such building or structure is located; provided, however, that all nonconforming uses of conforming buildings or structures shall be discontinued not later than three (3) years from the effective date of this ordinance, provided, further, however, that the board of zoning appeals may grant a variance from the strict application of this section.

C. Nonconforming Use of Land.

1. Continuation of Use: The nonconforming use of land (where no main building is involved), existing at the time this ordinance became effective, may be continued for a period of not more than three (3) years therefrom, provided:
   a. That no such nonconforming use of land shall in any way be expanded or extended either on the same or adjoining property.
   b. That no such nonconforming use of land or any portion thereof is discontinued or changed, [and if so, that] any future use of such land shall be in conformity with the provisions of this ordinance.
   c. That any sign, billboard, commercial advertising structure or statuary, which is lawfully existing and maintained at the time this ordinance became effective, may be continued although such use does not conform with the provisions hereof; provided, however, that no structural alterations are made thereto; and provided, further, that all such nonconforming signs, billboards, commercial advertising structures and statuary, and their supporting members shall be completely removed from the premises not later than three (3) years from the effective date of this ordinance.

D. Nonconforming Due To Reclassification.

The foregoing provisions of this section shall also apply to buildings, structures, land or uses which hereafter become nonconforming due to any reclassification of districts under this ordinance or any
subsequent change in the regulations of this ordinance; provided, however, that where a period of years is specified in this section for the removal of nonconforming buildings, structures or uses, said period shall be computed from the date of such reclassification or change.
Appendix C

Executive Summary of the Deloitte & Touche Report,
Executive Summary

The purpose of this project was to assess whether the Shirlington area of Arlington County can be positioned as an attractive location for high technology target industries. This assessment required two lines of study. First, the type of technology companies that provide a good fit with Arlington County and the Shirlington area were identified. Second, the sites and buildings demanded by the identified industries were defined and evaluated in terms of their feasibility for Shirlington.

Based on the factors described below, Deloitte & Touche believes Shirlington has the potential to meet the needs of select high tech sectors, if a series of challenges primarily related to site development can be successfully addressed.

Key findings include:

- Arlington is a high tech center by any definition of the term. 36% of employment is in high tech industries, a figure above the Northern Virginia average. Specifically, the high tech service sector has a strong presence in Arlington, especially:
  - engineering services
  - computer programming
  - computer related services, and
  - research firms

The distribution of high tech firms in Shirlington is consistent with these patterns, though at much smaller numbers, indicating these targets are appropriate to Shirlington as well as to the rest of the County.

- Arlington attracts firms in these sectors, because it meets their basic operational needs, including:
  - access to a skilled workforce
  - access to local and national customers
  - availability of business amenities and services
  - an appropriate image, and
  - availability of a suitable facilities

However, Arlington’s relatively high BPOL tax on business services, such as computer programming, can negatively affect location decisions and was cited by some companies as a problem.

- Shirlington also meets many of these criteria. Shirlington’s location is a positive factor for both employee commutes and ability to travel to client sites because of its access to I-395 and National Airport, and the fact that it is near the District and Arlington’s commercial corridors. The Village at Shirlington also provides a positive image and services, such as restaurants, that increase the area’s attractiveness. The
high tech companies already operating in Shirlington highly praise the area on all these counts.

➢ Shirlington’s main drawbacks are:

➢ the lack of suitable sites for development, and
➢ a weak image in the marketplace as a technology location

➢ Redevelopment of Shirlington’s Four Mile Run Drive has been proposed as a way to address the lack of suitable sites, but the following problems deter such activity:

➢ existing industrial uses that are incompatible with the image most technology firms strive to convey
➢ potential environmental problems
➢ the narrow size of the parcels, and
➢ numerous small parcels that would need to be consolidated

Other sites in the Shirlington area appear to have greater potential than Four Mile Run, including the Rosenthal Automotive site.

➢ The identified high tech sectors primarily need office space. They generally do not need industrial or flex space. However, an office building that offers flexibility in terms of ability to reconfigure the work space and ability to adapt to future telecommunications standards would be attractive.

➢ Real estate market factors also support development of an office building. Recent transactions demonstrate that land is expensive in Shirlington relative to other Northern Virginia jurisdictions with which Arlington competes for high tech business. These high land prices make development of multi-story office buildings the most attractive option. Flex/industrial space cannot be developed at prevailing market rents without heavy subsidies. Development of an office facility specifically geared toward the needs of high tech industry may help position Shirlington in this market, as well as provide the necessary level of return to a developer.
Appendix D

CM, M-1, and M-2
Industrial Zoning Districts
SECTION 28. “CM” LIMITED INDUSTRIAL DISTRICTS

The intent of this classification is to provide areas for light manufacturing, wholesale businesses and distribution centers and other uses inappropriate to residential or service business areas.
(6-25-77)

The following regulations shall apply in all “CM” Districts:

A. Uses Permitted.

1. All uses as permitted in “C-2” Districts, except that:
   a. Public parking areas shall be as permitted and regulated in “C-2” Districts; and
   b. Dwellings are prohibited, except as specified in subsection B.1.

2. Uses to be conducted wholly within a completely enclosed building except for on-site parking of delivery vehicles which are incidental thereto:
   a. The manufacture, compounding, processing, packaging or treatment of such products as bakery goods, candy, cosmetics, dairy products, drugs, perfumes, pharmaceuticals, perfumed toilet soap, toiletries and food products, except fish and meat products, sauerkraut, vinegar, yeast, and the rendering or refining of fats and oils.
   b. The manufacture, compounding, assembling or treatment of articles or merchandise from the following previously prepared materials: bone, cellophane, canvas, cloth, cork, feathers, felt, fiber, fur, glass, hair, horn, leather, paper, plastics, precious or semiprecious metals or stones, shell, textile, tobacco, wood (excluding planning mill) yarns and paint not employing a boiling process.
   c. The manufacture of pottery and figurines or other similar ceramic products, using only previously pulverized clay, and kilns fired only by electricity or gas.
   d. The manufacture and maintenance of electric and neon signs, billboards, commercial advertising structures, light sheet metal products, including heating and ventilating ducts and equipment, cornices, eaves and the like.
   e. Manufacture of musical instruments, toys, novelties and rubber and metal stamps.
   f. Automobile assembling, painting, upholstering, rebuilding, reconditioning, body and fender works, truck repairing or overhauling, tire retreading or recapping, battery manufacturing and the like.
   g. Stone monument works employing not more than five (5) persons.
   h. Blacksmith shop and machine shop, excluding punch presses over twenty (20) tons rate capacity, drop hammers and automatic screw machines.
   i. Foundry casting lightweight nonferrous metal not causing noxious fumes, noise or odors.
   j. Laundry, cleaning and dyeing works, and carpet and rug cleaning.
   k. Distribution plants, parcel delivery, ice and cold storage plant, bottling plant, and food commissary or catering establishments.
   l. Wholesale business, storage buildings and warehouses.
   m. Assembly of electrical appliances, electronic instruments and devices, radios and phonographs, including electroplating the manufacture of small parts only, such as coils, condensers, transformers, crystal holders and the like.
   n. Laboratories; experimental, photo or motion picture, film or testing.
3. Uses to be conducted wholly within a completely enclosed building or within an area enclosed on all sides with a solid wall or uniformly painted board fence, not less than six (6) feet in height:
   a. Building material sales yard, including the sales of rock, sand, gravel and the like, as incidental part of the main business, but excluding concrete mixing.
   b. Contractor's equipment storage yard or plant, or rental of equipment commonly used by contractors.
   c. Retail lumber yard, including only incidental mill work.
   d. Feed and fuel yard.
   e. Draying, freighting or trucking yard or terminal.
   f. Public utility service yard or electrical receiving or transforming station.
   g. Small boat building, except shipbuilding.
   h. Carpenter or cabinet shop.
   i. Sheet metal shops.
   j. Towing services and motor vehicle storage lots.

4. Uses to be conducted in areas that are developed as required in Section 33 and where any incidental repair of vehicles shall be conducted only within enclosed structures:
   a. Motor vehicle dealership, sales or rental lot.

5. Other uses which, in the judgment or the zoning administrator, are of the same general character as those listed in this subsection and will not be detrimental to the district in which located.

6. Uses customarily incidental to any of the above uses and accessory buildings when located on the same lot.

7. Conditional uses: The following use may also be permitted subject to securing a use permit as provided for in Section 36, subsection G.:
   a. Outdoor cafes temporarily enclosed for up to ten (10) months per year. In considering applications for use permits to enclose cafes, the county board may require on- or off-site parking to be provided for the cafe up to the rate required for restaurant use.

  [b. Reserved.]

(6-25-77; Ord. No. 84-37, 11-17-84; Ord. No. 86-30, 6-1-87; Ord. No. 92-35, 8-8-92; Ord. No. 94-20, 7-9-94)

B. Use Regulations.

1. One (1) dwelling unit for a caretaker or resident manager serving a storage or warehouse complex within the district may be permitted, provided that such dwelling unit is developed as an integral part of the storage or warehouse complex on the site and that the complex contains a minimum of thirty-five thousand (35,000) square feet of gross floor area.

(Ord. No. 84-37, 11-17-84)

C. Area Requirements.

   1. Lot Area: Same as specified for "C-2" Districts.

(Ord. No. 84-37, 11-17-84)

D. Bulk Regulations.

   1. Height Limit: Same as specified for "C-2" Districts.
2. *Floor Area Requirements.* The ratio of the gross floor area of all structures erected on a "CM" District site to the total area of the site shall not exceed a total of 1.5 to 1.  
(6-25-77; Ord. No. 84-37, 11-17-84)

E. *Landscaping.*

Ten (10) percent of total site area is required to be landscaped open space in accordance with the requirements of Section 32A, Landscaping.  
(6-25-77; Ord. No. 84-37, 11-17-84)

F. *Additional Regulations.*

1. For supplemental regulations, see Section 31.
2. Bulk, coverage and placement requirements as regulated in Section 32.
3. Automobile parking space to be provided as required in Section 33.
4. Loading space to be provided as required in Section 33.
5. Signs as regulated in Section 34.  
(Ord. No. 84-37, 11-17-84)
SECTION 29. "M-1" LIGHT INDUSTRIAL DISTRICTS

The following regulations shall apply in all "M-1" Districts:*

A. Uses Permitted.

1. All uses as permitted in "CM" Districts within or without a building or an enclosed area, except that:
   a. Public parking areas shall be as permitted and regulated in "CM" Districts; and
   b. Dwellings are prohibited, except as permitted in "CM" Districts.

2. Railroad lines and related accessory activities.

3. Publicly operated facilities for the processing, treatment, or reduction of refuse material or water-carried waste.

4. Motor vehicle storage lots and towing services, provided:
   a. That such area is located and developed as required in Section 33; and
   b. That any incidental repair of automobiles or trailers shall be conducted and confined wholly within a building.

5. Conditional uses: The following uses may also be permitted subject to securing a use permit as provided for in Section 36, subsection G.
   a. Concrete batching operations and related accessory activities.

6. Uses customarily incidental to any of the above uses and accessory buildings when located on the same lot.

7. Automobile parking space to be provided as required in Section 33.

8. Loading space to be provided as required in Section 33.

(1-5-80; Ord. No. 84-37, 11-17-84; Ord. No. 92-35, 8-8-92)

B. Height Limit.

Same as specified in "C-3" Districts.

C. Floor Area Requirements.

The ratio of the gross floor area of all structures erected on an "M-1" site to the total area of the site shall not exceed a total of 1.5 to 1.

(7-13-74)

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*Note—For supplemental regulations, see Section 31.
SECTION 30. "M-2" SERVICE INDUSTRIAL DISTRICTS

The following regulations shall apply in all "M-2" Districts:*

A. Uses Permitted.

1. All uses as permitted in "M-1" Districts, except that:
   a. Public parking areas shall be as permitted and regulated in "M-1" Districts; and
   b. Hotels are prohibited.

2. Concrete batching and related accessory activities.

3. Conditional uses: The following uses may also be permitted subject to securing a use permit as provided for in Section 36, subsection G.
   a. Junkyard, subject to the following conditions:
      (1) No junkyard shall be located within two hundred twenty-five (225) feet of an arterial highway.
      (2) All junkyards shall be located on lots containing not less than twenty-five thousand (25,000) square feet.
      (3) All junkyards shall be surrounded by a wall seven (7) feet high or of such additional height as needed to provide suitable screening of the operation with due regard to topography.
      (4) No material shall be reduced by fire, except when reduced in an approved incinerator.
   b. Asphalt batching and related accessory activities.

4. Uses customarily incidental to any of the above uses and accessory buildings when located on the same lot.

5. Automobile parking space to be provided as required in Section 33.

6. Loading space to be provided as required in Section 33.
(Ord. No. 92-35, 8-8-92)

B. Height Limit.

Same as specified in "C-3" Districts.

C. Floor Area Requirements.

The ratio of the total floor area of all structures erected on a "M-2", site to the total area of the site shall not exceed a total of 1.5 to 1.
(7-13-74)

*Note—For supplemental regulations, see Section 31.