Analysis of industrial land in Pasco County, recent and emerging trends, supply and demand for industrial land, and strategies to preserve industrial land for future generations

Prepared for Pasco County by the Tampa Bay Regional Planning Council
Mettler Toledo – Pasco County’s first project to be included in an Employment Center MPUD at Northpoint in Odessa. [Image Source: The Laker/Lutz News]
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ECONOMIC DEVELOPMENT DISTRICT & ECONOMIC ANALYSIS PROGRAM

Since 1999, the Tampa Bay Regional Planning Council (TBRPC) has been producing economic impact studies for a variety of public and private sector clients. Using the most powerful analytical tools, including IMPLAN and REMI PI+, the Council’s Economic Analysis Program has produced hundreds of reports covering topics such as job creation, land use, natural resources, and energy, as well as a variety of public policy questions.

As the U.S. Economic Development Administration’s designated Economic Development District for the Tampa Bay area, TBRPC supports a wide range of local economic development efforts.

TBRPC is assisting Tampa Bay area communities with short and impactful studies that support economic recovery with funding from the Federal Coronavirus, Aid, Relief, and Economic Security (CARES) Act of 2020. TBRPC’s decision support and technical assistance includes economic impact analysis using REMI PI+ economic modeling software and project visioning using geographic information systems (GIS) mapping, three-dimensional (3D) modeling, and video animation.

EAP 22/2 May 2022

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TABLE OF CONTENTS

1. Executive Summary .................................................................................................................................................................................................................................................................................................................................................. 7
  1.1 About the Tampa Bay Regional Planning Council ........................................................................................................................................................................................................................................... 9
  1.2 TBRPC CARES Act Technical Assistance .................................................................................................................................................................................................................................................. 10
  1.3 About This Study ............................................................................................................................................................................................................................................................................................................. 10

2. Background and Overview of Pasco County Industrial Land .................................................................................................................................................................................................................................................................................................................................................................................. 12
  2.1 The Importance of Target Industry Jobs ........................................................................................................................................................................................................................................................................................................... 14
  2.2 Defining Terms: What is Industrial Land? ........................................................................................................................................................................................................................................................................................................... 17
  2.3 Recent Market Trends in Housing and Industrial Stock ........................................................................................................................................................................................................................................................................................................... 18
  2.4 Recent Comprehensive Plan Amendments ........................................................................................................................................................................................................................................................................................................... 20
  2.5 Industrial Land Constraints ............................................................................................................................................................................................................................................................................................................. 21

3. Ensuring an Adequate Supply of Industrial Land through 2050 .................................................................................................................................................................................................................................................................................................................................................................................. 24
  3.1 Supply of Industrial Land ............................................................................................................................................................................................................................................................................................................. 25
  3.2 Demand: How Much Industrial Land Does the County Need? ........................................................................................................................................................................................................................................................................................................... 29
  3.3 Long-Run Implications of Trend Versus Alternative Land Use Decisions ........................................................................................................................................................................................................................................................................................................... 34

4. Land Use Impacts of Emerging Demographic and Technological Trends .................................................................................................................................................................................................................................................................................................................................................................................. 37
  4.1 The Vanishing Storefront: E-commerce and the Changing Logistics Landscape ........................................................................................................................................................................................................................................................................................................... 37
  4.2 Working Overtime: Aging, Remote Work, and Automation ........................................................................................................................................................................................................................................................................................................... 41
  4.3 Down the Demographic Ladder: Aging, Housing Transitions, and Live/Work Housing ........................................................................................................................................................................................................................................................................................................... 43
  4.4 Summary: Changing Site Requirements, Land Use Patterns and Hybrid Industrial Zones ........................................................................................................................................................................................................................................................................................................... 45
5. Policy Considerations and Best Practices .......................................................................................................................................................................................... 47
  5.1 Existing Regulatory Framework ......................................................................................................................................................................................... 47
  5.2 Case Studies ........................................................................................................................................................................................................ 51

6. An Industrial Land Strategy for Pasco: A Summary and Recommended Actions .......................................................................................................................... 57
  6.1 Recommended Strategy Actions .................................................................................................................................................................................. 59
  6.2 Tentative Suitability Analysis .................................................................................................................................................................................. 61

Appendix 1: Economic Impact Methodologies ................................................................................................................................................................. 63
Appendix 2: Geographic Information Systems (GIS) Methodologies ............................................................................................................................... 66
Appendix 3: Suitability Areas of Interest Maps ......................................................................................................................................................... 74
Appendix 4: Current Economic Development Tools ................................................................................................................................................. 85
Figures

Figure 1: TBRPC’s Industrial Land Strategy Research Process ................................................................. 11
Figure 2: Land Use Decisions About the Next Acre of Land Result in Trade-Offs Between Preferred Economic Impacts ......................................................... 15
Figure 3: Pasco County Single-Family Sale Prices Nearing US Price ......................................................... 18
Figure 4: Decline in Industrial and Office Vacancy Rates in Pasco County, 2010-2021 ............................................................ 19
Figure 5: Decline in Overall Industrial Vacancy Rates, 2010-2021 ............................................................. 19
Figure 6: Pasco County Employment Center (EC) and Industrial-Light (IL) Future Land Uses ........................................................... 21
Figure 7: Size (Acres) Distribution of all EC and IL Designated Buildable Parcels is Skewed .................. 22
Figure 8: Available and Developable Parcels in EC and IL ........................................................................... 27
Figure 9: Jobs-Balanced Counties Average Shorter Commutes than Jobs-Poor or Jobs-Rich Counties ............................................................... 31
Figure 10: What are Job Years? .................................................................................................................. 35
Figure 11: Gains in Jobs by Wage Category, Current JER and Jobs-Balanced ................................................... 36
Figure 12: Industry Sectors by Potential for Automation ............................................................................. 41
Figure 13: Portland Industrial Sanctuary .................................................................................................. 51
Figure 14: City of Jacksonville Industrial Preservation Zones ........................................................................ 53
Figure 15: Pinellas Countywide Plan Strategy Map ...................................................................................... 54
Figure 16: Factors Influencing Industrial Land Retention and Conversion .................................................. 56
Figure 17: EC/IL Expansion Area of Interest (AOI) in Pasco County .......................................................... 62
Figure 18: REMI PI+ Model Equation Five-Block Structure ...................................................................... 65
Figure 20: AOI 1, Countyline Rd and SR 41 .............................................................................................. 75
Figure 21: AOI 2, Greenfield at CR 42 ...................................................................................................... 76
Figure 22: AOI 3, SR 52 and Suncoast Parkway .......................................................................................... 77
Figure 23: AOI 4, SR 54 and Suncoast ..................................................................................................... 78
Figure 24: AOI 5, Wesley Chapel and I-75 ................................................................................................ 79
Figure 25: AOI 6, SR 52 and I-75 ............................................................................................................ 80
Figure 26: AOI 7, Horseshoe Lake .......................................................................................................... 81
Figure 27: AOI 8, US 98 ......................................................................................................................... 82
Figure 28: AOI 9, Zephyrhills ................................................................................................................. 83
Tables

Table 1: Direct Jobs Produce Multiplier Effects of Indirect Jobs and Indirect Land Use Impacts ................................................................. 16
Table 2: Industrial Land Uses Occupy a Small Portion of Unincorporated Pasco County ................................................................................. 17
Table 3: Recent Future Land Use Amendments Affecting Industrial Land (2019-2021) ................................................................................. 20
Table 4: Inventory of Buildable and Available EC and IL Industrial Lands in Pasco County ........................................................................... 27
Table 5: Inventory of Large Available and Developable Sites in Pasco is Limited ......................................................................................... 29
Table 6: How Many Jobs Does Pasco County Need to Become Jobs-Balanced (JER 1.0) by 2050 ........................................................................ 33
Table 7: Large Site Available Absorption Capacity for Target Industry Jobs In Pasco County May Be Insufficient ............................................. 34
Table 8: 2022-2050 Cumulative Total Impacts for Each Scenario on All Jobs, Income, Taxes and Housing Prices over Baseline ............ 36
Table 9: Assumptions about Future Market Demand for Housing, Office, and Industrial Uses ........................................................................... 46
Table 10: Pasco County Comprehensive Plan - Overview of Selected Plan Categories .................................................................................. 48
Table 11: Pasco County Comprehensive Plan – Relevant Goals, Objectives, and Policies .................................................................................. 49
Table 12: Buildable and Vacant Industrial/Employment Center (IL and EC) Lands for Pasco County Unincorporated ........................................ 68
Table 13: Total Lands for the Municipalities within Pasco County .................................................................................................................. 71
Table 14: Buildable Lands for the Municipalities within Pasco County ............................................................................................................. 72
Table 15: Buildable and Available Lands for the Municipalities within Pasco County ..................................................................................... 72
1. Executive Summary

Facing development pressures from the fastest growing housing prices in the Tampa Bay region, a recent wave of comprehensive plan amendments to clear the way for more residential development in Pasco County has raised concerns about the County’s supply of industrial land. In June 2021, those concerns spilled over into public debate over the development of the Central Pasco Employment Village, where landowners sought to develop residential uses on a portion of 2,400 acres of Employment Center designated land south of SR 52, while economic development advocates argued for a jobs-first approach. Even though a compromise was eventually reached, any loss of target industry development capacity can result in lost opportunities for high wage jobs.

Moreover, industrial to residential land conversion is compounding the existing jobs-housing imbalance in Pasco County. With the longest commutes in the six county Tampa Bay region (32 minutes versus a regional average of 27.6 minutes per day), the loss of industrial land in Pasco County has both short-term costs to drivers and to long-term economic growth in the County. Weighed against the short-term job creation benefits of building homes, each acre of industrial land that is converted to residential uses costs the County is equivalent to a net loss of about $2.1 million in personal income through 2050.

A strategy to help the County retain enough industrial land to sustain future jobs benefits from having a clear understanding of how many jobs the County needs over the coming decades, especially with the County’s high population growth. Knowing how many jobs the County should plan for, therefore, will be helpful in allocating enough land to provide those jobs. One potential goal for this strategy is that the County plan for enough land for one job per employed resident. As a commuter community, Pasco falls short of this goal but progress toward attaining it can raise today’s personal income, improve equity, spark increased investment in the County, and bring down commuting costs.

While the allocation of land to meet economic goals is not by itself sufficient, it is a necessary first step. Working with Pasco County staff, the Tampa Bay Regional Planning Council (TBRPC) focused on the leading edge of job creation, the availability of land for target industries in the Future Land Use designations of Employment Center (EC) and Industrial-Light (IL). With multiplier effects creating indirect jobs, increasing the share of target industry jobs in the Pasco economy will help the County provide enough jobs to County residents over the long term. TBRPC conducted an analysis of both the job creating capacity of the County’s industrial land and of projects within Planned Developments to scope the need for additional EC and IL designated land. Additional EC and IL provides more ground to reach a related goal, to raise the percentage of all target industry jobs from one in ten jobs to one in four jobs, which is the same level of those target jobs in Hillsborough and Pinellas counties.

Overall, TBRPC found that the existing inventory of land designated as EC and IL is sufficient on a gross acreage comparison basis to meet future job needs. However, the availability of appropriately sized sites usually required to support target industries in corporate business and industrial parks is limited. Given changing industry needs and potential site-specific obstacles to development, developer choices and market trends, TBRPC identified several potential Areas of Interest where the County may initiate Future Land Use amendments to add more EC and IL designated land in

a more compact land use pattern. Those areas are consistent with the needs of industrial activity and close to existing industrial areas and follow existing truck routes and freight rail lines. Clustering future EC and IL where those designations already exist will help to alleviate potential conflicts with residential uses when those uses are close to industrial activity and supports sharing infrastructure development costs. Those Areas of Interest are tentative, but with further development by the County those areas can become part of an industrial sanctuary that protects the industrial land base of the County.

The principal existing conditions of Pasco County industrial land are:

- With more than 8,300 acres of developable land suited for target industry growth, Pasco County does have significant space for job growth; however
- The Pattern of EC and IL Future Land Uses is both scattered across the County and highly fragmented, with half of buildable parcels under 4 acres; but
- Prevailing industrial site development norms and tailwind trends in logistics sustain industry demand for larger sites; and
- While a significant share of future job growth may be absorbed in projects that could be developed on small parcels, the availability of large EC and IL parcels for corporate business and industrial parks for long-term job growth is limited; consequently,

TBRPC recommends that the County consider:

- Setting a job growth goal through 2050 to balance future target industry serving land use decisions against the other land use needs of the public. The goal should be directed at improving the jobs-employed residents ratio and the share of target industry jobs within County jobs, adding about 150,000 jobs, of which 1 out of every 4 jobs should be in target industry jobs;
- Adopting land use policies that accommodate job growth goals, protecting EC and IL land by:
  - Establishing an industrial land sanctuary to maintain an available land inventory of at least 2,000 acres of parcels greater than 50 acres;
  - Assessing the need for a new flex land use designation for corporate business parks and compatible light industrial uses, along with supporting zoning that requires a minimum 50-acre lot size;
  - Consolidating fragmented parcels through land assembly; and facilitate redesignations away from EC and IL when those parcels are not viable for supporting target industry growth; and
  - Encouraging redevelopment of the extensive inventory of obsolete office and industrial sites through targeted incentives
1.1 About the Tampa Bay Regional Planning Council

Established as Florida’s first regional planning council in 1962, the Tampa Bay Regional Planning Council (TBRPC) provides a forum to foster communication, coordination, and collaboration among its member governments. Serving six counties (Citrus, Hernando, Hillsborough County, Manatee, Pasco, and Pinellas) and twenty-one municipalities therein, the Council provides a wide range of services, including:

- Economic Modeling and Analysis
- Economic Development District
- Visualization and 3D Design
- Community Visioning and Planning
- Spatial Growth Modeling
- Hurricane and Hazard Preparedness Planning
- The Official Disaster Planning Guide
- GIS Mapping Services
- LEPC: Hazardous Materials
- Technical Assistance to Local Governments
- Agency on Bay Management
- Bay Soundings Quarterly Environmental Journal

As one of the first Regional Economic Models (REMI) users in Florida, TBRPC has been providing economic analysis services to government agencies, non-profits, and the private sector. Since 1999, TBRPC has conducted over 400 economic impact studies, covering topics such as transportation, environmental and natural resources management, land use decisions, business investment incentives, taxation, sports and other events and festivals. Many of these reports are available from the TBRPC website, tbrpc.org/eap.
1.2 TBRPC CARES Act Technical Assistance

The US Economic Development Administration has provided a grant under the 2020 Coronavirus Aid, Relief, and Economic Security Act (CARES Act), to the Tampa Bay Regional Planning Council (TBRPC) to provide economic recovery technical assistance to the Council’s regional partners. Through 2020 and into 2022, TBRPC has called for projects from partner agencies seeking technical assistance on economic development and for COVID-19 recovery in particular.

As of September 2021, TBRPC has completed studies for the City of New Port Richey on the Rivergate Master Plan; an aviation cluster study for the City of Zephyrhills; a study of small business patterns for Pinellas County; a recovery plan for Manatee County; and a study on redevelopment along Highway US 19 in Pasco County. TBRPC intends to complete projects throughout the Tampa Bay Area under this program by July 2022.

1.3 About This Study

At the request of the Pasco County Office of Economic Growth and the County Planning and Development Department, the Tampa Bay Regional Planning Council has prepared this study of industrial land use trends in Pasco County, and an analysis of potential strategies for the County to implement to reserve enough industrial land to support future job growth in the County. The study was funded in part by Penny for Pasco funds and by an in-kind contribution from CARES Act funds awarded to Tampa Bay Regional Planning Council under an Economic Development Administration grant program.

The future job growth potential of Pasco County may diminish if future land use amendments redesignate industrial land to non-employment uses. While job growth is potentially unlimited, suitable land for those jobs is limited. How much future growth is diminished is an open-ended question about a limited resource, especially as new residential uses crowd-out potential job growth in desirable locations. As such, setting planning horizons and benchmarks can offer guidance on how much of a limited resource is required within a given timeframe.

The purpose of this study is to:

- Assess the economic and fiscal impacts of the potential loss of industrial land in Pasco County
- Identify the potential need for additional industrial land in Pasco County
- Develop Policy Recommendations for Pasco County
- Prepare a Suitability Analysis of land that may be redesignated as Industrial Land

Figure 1 depicts the main components of the study. Data Analysis collects all the data—economic and demographic forecasts, real estate data, Geographic Information Systems (GIS) derived data combining underlying geographical, regulatory, and economic datasets to produce new data sources. Those data sources are then deployed in an analysis of land use supply and demand for employment uses. Combined with policy analysis involving case studies and other research, TBRPC has prepared the following industrial land strategy for Pasco County.
Figure 1: TBRPC’s Industrial Land Strategy Research Process

- **Problem Definition**
  - Industrial Land Conversion Limits Future Job Growth

- **Data Analysis**
  - Baseline Forecasts, Job Density, Redfin and CoStar Real Estate Data, Planning and Property Data, Basic Environmental Constraints

- **Land Demand Analysis**
  - Calibrating Simulations and Suitability Analysis, 25 Year Land Reserve Estimate

- **Suitability Analysis (GIS)**
  - Overlay Boundaries, Suitable Properties, Maps

- **Long-Run Impacts Analysis**
  - Economic and Fiscal Simulations, Emerging Trends

- **Policy Analysis**
  - Case Studies, Media Reports, Consultant Studies and Research Policies

- **Industrial Land Strategy**
  - Goals, Objectives, Policies
2. Background and Overview of Pasco County Industrial Land

Driven by high population growth and escalating land values, a recent wave of privately initiated Future Land Use Comprehensive Plan amendments has raised concerns about the supply of Pasco County’s limited industrial land. With less land for manufacturing, research and other target industries, the County’s ability to provide high paying jobs to existing and future residents will be constrained enough that more County residents will have to commute to jobs in other Tampa Bay area communities than do today. Presently, 71 percent of County employed residents work outside of Pasco County, most of whom work in Hillsborough, with smaller numbers in Pinellas and Orange Counties. Future housing development at the expense of land for jobs will only make out-commuting worse.

While elevated levels of out-commuting to neighboring counties is typical of suburban and rural counties on the periphery of large urban areas, such as the Tampa Bay metropolitan area, Pasco’s 20 percent population growth between 2010 and 2020 means the significant growth in vehicle trips, travel times and spillover effects on non-work trips will accelerate. Moreover, congestion impacts employers, exacting productivity losses due to unpredictable working hours and increased delivery costs. For workers, increased congestion squeezes pocketbooks with more money spent on gasoline for longer trips. Increased transportation costs means that the income that could have been spent in Pasco County on household spending will be lost. Together, increased congestion in Pasco County means less income circulating within the County economy and ultimately, lost jobs or lost opportunities to create them.

Over the long run, the loss of future jobs yields spillover effects that means less future capital investment, slowing job growth in employment sectors that are dependent upon jobs in manufacturing and professional services, from businesses in the supply chain to workers in industries dependent upon household expenditures, as well as lost construction jobs. There are also indirect impacts from increased congestion, such as repair and maintenance of roads, and the need for new investment in capacity as well as alternatives such as transit.

While Pasco County cannot control what happens in other counties, policymakers can influence decisions taken in the marketplace with the strategic deployment of policies to attract new jobs and to preserve enough industrial land through land use planning in Pasco County. Fundamentally, land use designations allocate the potential for new jobs. Decisions about land use, however, must consider more than just the overall supply of land. From a land use planning perspective, industrial land in Pasco County faces a triple constraint:

- **Spatial**: industrial land is scattered and highly fragmented, with many small and isolated parcels or irregularly shaped parcels that are not conducive to development
- **Compatibility**: compatibility issues with residential use limit where industrial and other target industry jobs may be developed

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• **Obsolescence:** more than half of developed industrial and office property is more than 32 years old, and a third is more than 40 years old. Obsolescent property is more than a disadvantage in the marketplace, by remaining in place, obsolescent property crowds out the opportunity to build newer structures closer to existing urban areas and diminishes the County’s attractiveness as a home for new business location.

Those constraints are not independent. Instead, increased future land use redesignations and rezonings to residential accelerate the fragmentation of land use patterns within the County, giving rise to a patchwork of residential, commercial, and industrial uses that may produce and intensify conflict between residents and businesses. Those conflicts arise because the lights, noise, and other industrial emissions can become nuisances for area residents. Breaking up industrial zones for other purposes through the comprehensive planning amendment process also complicates the potential for future land assembly for larger industrial parcels and their respective uses, and consequently, limits the potential agglomeration economies that can support industry clusters when industrial districts specialize in related products and benefit from firm co-location. Incompatible uses may also give rise to conflicts between slow moving trucks and normal passenger traffic.

There are also indirect impacts of industrial conversion on existing industrial uses, such as when landowners raise their sale and lease rate prices based on a perception that land is marketable for residential, commercial, or other non-industrial uses, while market forces drive up property values above a cost feasible level for typical industrial users. In this way, real estate speculation prices out industrial tenants and discourages investment that would otherwise be attracted to less costly locations with good access to large labor and consumer markets. Industrial landowners may hold industrial zoned land without investing in industrial operations—with the expectation that more lucrative land uses would be allowed in the future. Finally, discontinuing regular use of industrial property in anticipation of redevelopment accelerates the obsolescence of existing structures and perpetuates the cycle of disinvestment.

Preserving enough industrial land has also been complicated by recent state legislation (for example, SB 962, Bradley) allowing developers to develop affordable housing, commercial or industrial land regardless of zoning or a comprehensive plan if 10 percent of the housing units included in the project are used for affordable housing. At the time of this writing, the bill is enrolled and is waiting for the Governor’s signature. While allowing more affordable housing units is important, encouraging a mix of uses may discourage investment in incompatible target industries, undermining Pasco County’s job growth potential.

Overall, the importance of retaining industrial land for future job growth derives from the obligation of local governments to provide for the general welfare of their residents and to broaden the tax base. Consequently, the purpose of land use planning is to look beyond the short-term expediencies of cyclical and speculative markets to assure that Pasco County is always able to take advantage of future job producing opportunities. While the County’s land use decision making is supported by the regulatory environment of comprehensive planning and economic development activities, a focused strategy for retaining enough industrial land, identifying best practices, strengthening existing protections, and establishing a decision-making criterion for land use conversions will help retain enough land for future job growth. This report comprises that strategy.
2.1 The Importance of Target Industry Jobs

When industrial land is converted to non-employment related uses job growth cannot occur on that land. Industrial jobs—manufacturing and logistics jobs—are highly sought after because they pay well and exhibit high multiplier effects, the rate at which one job creates new jobs through the supply chain, with industrial jobs creating jobs up and downstream the supply chain and through household spending in indirect jobs. For example, if you manufacture cars, you are buying and creating jobs in firms that manufacture windows, airbags, tires, and so on. Employees then go home and spend their salaries on household goods and services, broadening the range of job impacts. The more those jobs are located in Pasco, the higher the multiplier effect.

One way to think of the trade-off decisions facing Pasco County is to consider what the economic impacts are of selecting different land uses on an acre of land. If, for example, a Light Industrial Future Land Use (FLU) designated area is developed with manufacturing uses, as in Figure 2, a firm engaged in pharmaceutical preparations manufacturing might employ 15 workers per acre. That firm would then indirectly create—through supply chain purchases and the household spending of its employees—another 18.5 jobs in Pasco, paying total wages of $2.0 million dollars. On the other hand, that same acre serving a variety of retailers with a total employment of 41 workers, will pay about $1.5 million in wages once all indirect jobs are included in the total wage bill.

Those impacts are contrasted with the impacts of the roughly six housing units that can be built on an acre, using the Countywide average. In this example, one household’s worker works in Pasco County, while three householders work in Tampa. Consistent with Countywide conditions, there are more retirees (two homes) than jobs in Pasco (one home). Those retirees spend money in the economy through fixed income transfers, such as social security and retirement benefits. Leaving aside single-family homes as a place of employment for householders, single-family residential uses do generate indirect jobs through household spending on gardening, cleaners, and other household maintenance and repair services.

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**AN INDUSTRIAL LAND STRATEGY FOR PASCO COUNTY**

**Figure 2: Land Use Decisions About the Next Acre of Land Result in Trade-Offs Between Preferred Economic Impacts**

<table>
<thead>
<tr>
<th>Description</th>
<th>Jobs</th>
<th>Property tax</th>
<th>Total taxes</th>
<th>Direct and Indirect Jobs</th>
<th>Paying</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six Single-Family Homes</td>
<td>1 in Pasco</td>
<td>$9,400</td>
<td>$11,000</td>
<td>1.7 (indirect)</td>
<td>$65k</td>
</tr>
<tr>
<td></td>
<td>2 on fixed income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 in Tampa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upscale strip retail</td>
<td></td>
<td>$83,500</td>
<td>$140,650</td>
<td>50.5</td>
<td>$1.5M</td>
</tr>
<tr>
<td>Pharmaceutical Preparations</td>
<td></td>
<td>$93,700</td>
<td>$157,900</td>
<td>33.5</td>
<td>$2.0M</td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Systems Design</td>
<td></td>
<td>$19,830</td>
<td>$33,430</td>
<td>65.5</td>
<td>$3.0M</td>
</tr>
<tr>
<td>Tenant in an office building</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: TBRPC analysis of Pasco Property Appraiser Data; IMPLAN, 2022. *Includes sales and other taxes, special assessments, motor vehicle and license fees.
Another perspective on the economic impacts of land use decisions is focused on long-run impacts. While planners often portray land use decisions as steps toward the fulfillment of a plan, such as any comprehensive plan with a horizon of summary buildouts of housing, infrastructure, jobs and environmental protection, elected officials encounter those decisions in a different context. Most often, elected officials must make decisions about one property or group of properties at a time. As such, decisions about the next acre of land looks different when taking the future of that acre into account.

Such decisions, “on the margin,” consider the trade-offs between one kind of use and others. As an example, let us say that an acre of land can be developed with six single-family homes (the average residential density in the County), or it can be developed with some mix of target industries. On the one hand, selling a property generates value for the landowner, and it generates jobs when construction occurs in building the homes. The decision to develop single-family residential uses is also relatively low risk, given current market conditions. Table 1 uses the same employment assumptions in our example of various target industries weighed against those single-family homes to demonstrate the relationship between jobs and the resulting change in land use—just as direct jobs create indirect jobs, indirect jobs consume space, sustaining existing uses or stimulating new real estate investment.

Table 1: Direct Jobs Produce Multiplier Effects of Indirect Jobs and Indirect Land Use Impacts

<table>
<thead>
<tr>
<th>Of Use/ In Example FLU Designation</th>
<th>Direct Jobs</th>
<th>Indirect Jobs*</th>
<th>Total Jobs</th>
<th>Direct Use of Land (Acres)</th>
<th>Indirect Use of Land (Acres)*</th>
<th>Total Acreage Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Systems (EC)</td>
<td>50</td>
<td>15.5</td>
<td>65.5</td>
<td>1</td>
<td>0.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Retail (PD)</td>
<td>41</td>
<td>9.5</td>
<td>50.5</td>
<td>1</td>
<td>0.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Pharma Prep. Manufacturing (IL)</td>
<td>15</td>
<td>18.5</td>
<td>33.5</td>
<td>1</td>
<td>0.8</td>
<td>1.8</td>
</tr>
<tr>
<td>6 DUs/Single-Family (RES-6)</td>
<td>0</td>
<td>1.2</td>
<td>1.2</td>
<td>1</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Source: IMPLAN, 2022. *Indirect impacts may occur anywhere in Pasco County, depending on spending and investment decisions.

As potentially irreversible decisions, economic impact analysis compares the net impacts of land use decisions across time, reducing the cumulative impacts of those decisions to one economic benchmark. TBRPC calculated the net impacts—the losses of an acre of potential target industry jobs and its indirect impacts on the County economy against the short-term gains of housing construction by redesignating a vacant acre of industrial land to residential use. Results of a personal income cash flow analysis shows that each acre of industrial land that is redesignated to residential purposes is the equivalent of a loss of $2.1 million in personal income to the County through 2050.4

4 Net impacts are calculated by subtracting the cumulative present value benefits of housing construction from the cumulative present value of costs of the counterfactual loss of personal income from target industry jobs in the 100 Acre loss scenario in Section 3.3 of this Strategy. Financial discounting is used to estimate the expected present-value costs and benefits, with future benefits discounted at a rate of 10 percent to account for investor risk.
2.2 Defining Terms: What is Industrial Land?

For the purposes of this study, industrial land refers to land uses that support the development of Pasco’s target industries.\(^5\) Split between manufacturing, logistics and various research and development activities, the County’s target industries are highly suited to industrial and business parks. Consequently, TBRPC has focused its analysis on the real estate pressures on the future land use designations Employment Center (EC) and Light Industrial (IL) which are compatible with business and industrial park development.\(^6\) Another industrial designation, Industrial-Heavy (IH) supports uses which may have objectionable aesthetics or are incompatible with office development, is not a direct subject of this study. Together, IL and EC land use designations account for 2.1 percent of unincorporated county future land uses, and IH and commercial uses (AT, COM, OFF) make up about 6 percent of all the unincorporated land within the County.

Table 2: Industrial Land Uses Occupy a Small Portion of Unincorporated Pasco County

<table>
<thead>
<tr>
<th>Future Land Use</th>
<th>Acres</th>
<th>Share of Land (%)</th>
<th>Future Land Use</th>
<th>Acres</th>
<th>Share of Land (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG</td>
<td>32,008</td>
<td>6.8</td>
<td>P/SP</td>
<td>3,156</td>
<td>0.7</td>
</tr>
<tr>
<td>AG/R</td>
<td>49,063</td>
<td>9.4</td>
<td>PD</td>
<td>26,703</td>
<td>7.5</td>
</tr>
<tr>
<td>AT</td>
<td>469</td>
<td>0.1</td>
<td>R/OS</td>
<td>3,372</td>
<td>0.7</td>
</tr>
<tr>
<td>C/L</td>
<td>1,700</td>
<td>0.4</td>
<td>RES-1</td>
<td>68,398</td>
<td>14.4</td>
</tr>
<tr>
<td>COM</td>
<td>991</td>
<td>0.2</td>
<td>RES-12</td>
<td>1,258</td>
<td>0.3</td>
</tr>
<tr>
<td>CON</td>
<td>101,798</td>
<td>21.6</td>
<td>RES-24</td>
<td>596</td>
<td>0.1</td>
</tr>
<tr>
<td>EC</td>
<td>5,728</td>
<td>1.2</td>
<td>RES-3</td>
<td>78,105</td>
<td>15.9</td>
</tr>
<tr>
<td>GH</td>
<td>1,627</td>
<td>0.3</td>
<td>RES-6</td>
<td>46,705</td>
<td>9.5</td>
</tr>
<tr>
<td>IH</td>
<td>1,620</td>
<td>0.3</td>
<td>RES-9</td>
<td>19,090</td>
<td>4.0</td>
</tr>
<tr>
<td>IL</td>
<td>4,436</td>
<td>0.9</td>
<td>ROR</td>
<td>13,081</td>
<td>2.7</td>
</tr>
<tr>
<td>MU</td>
<td>3,473</td>
<td>0.7</td>
<td>TC</td>
<td>261</td>
<td>0.0</td>
</tr>
<tr>
<td>NPC</td>
<td>994</td>
<td>0.2</td>
<td>VMU</td>
<td>4,293</td>
<td>0.9</td>
</tr>
<tr>
<td>NT</td>
<td>4,889</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OFF</td>
<td>46</td>
<td>0.0</td>
<td>TOTALS</td>
<td>473,861</td>
<td>100.0</td>
</tr>
</tbody>
</table>


---

\(^5\)While some target industries are focused on value added agriculture, most target industries are suitable to business and industrial parks. These are: Medical/Biomedical/Life Sciences (Biotechnology, Medical Devices/Equipment, Medical Simulation & Training, Pharmaceuticals); Information/Finance/Business Technology (Financial Services, IT Services Media & Design, Programming/Systems Design & Data Services, Research & Engineering); Aviation/Aerospace; Satellite Telecommunications; Space Research and Technology; Defense and Security (Security Technology, Security & Intelligence Consulting); High-Technology/Electronics/Instruments/Manufacturing (Computer & Software Systems Design & Integration, Digital Media, Manufacturing), Optics/Photonics. pascocountyfl.net/1178/Targeted-Industry-Sectors.

\(^6\)Future Land Use Element Appendix, 2025 Pasco County Future Land Use Element. (FLUE, 2-208) and (FLUE, 2-269).
2.3 Recent Market Trends in Housing and Industrial Stock

According to the Case-Shiller US National Home Price Index, annual gains in housing prices in the United States have increased since the onset of COVID-19 in March 2020 faster—more than 20 percent—than at any time since the beginning of the Index, in 1988.7 Moved by pent-up housing demand, supply chain disruptions in lumber and other construction materials, demand for additional space for home offices, as well as federal monetary policy and investor speculation, housing prices are pushing the boundaries of homeowner affordability.8

In the Tampa Bay region, gains in single-family median sale prices have outpaced the average increase in housing price gains in the US. Year over year, Pasco County single-family home sale prices gained faster than the US average and the average gains of Hillsborough and Pinellas since 2017. In 2022, Pasco’s percentage gain in sales price was 30.1 percent. Viewed from Days on Market, median days on market in Pasco County dropped from a five year high of 51 days (Feb. 2020) to a five year low of 6 days (June 2021). As of March 2022, a single-family home in Pasco County was on the market for 9 days.9

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7 S&P Dow Jones Indices LLC, S&P/Case-Shiller U.S. National Home Price Index [CSUSHPIA], retrieved from FRED, Federal Reserve Bank of St. Louis; fred.stlouisfed.org/series/CSUSHPIA, February 4, 2022
8 The National Price-to-Income ratio rose to 4.4 in 2020, the highest it has been since 2006. The State of the Nation’s Housing, 2021. Joint Center for Housing Studies of Harvard University
Trends in Office and Industrial Space

Pasco County currently contains about 13.8 million square feet of industrial space. As across the Tampa Bay region, logistics facilities account for the largest proportion of local rentable built area (82.4%), and these properties contain around 11.4 million square feet. The local inventory pool is rounded out by 1.7 million square feet of specialized space and 750,000 square feet of flex space.¹⁰

Industrial rents grew by 8.2 percent since the beginning of 2021, exceeding the 4.4 percent average annual change over the past decade. Industrial rents in Pasco County average $8.50/SF, which is consistent with the Tampa Bay average. Logistics rents, which at $8.20/SF, are consistent with the regional average for that market. Figure 4 depicts long-run declines in vacancy rates for industrial uses. While the reasons for persistent vacancies in some types of industrial use are outside the scope of this study, the age of much of that inventory is relatively high and may not meet market needs.

Demand for office space has surged in Pasco County since January 2020. Vacancies hit an 18 year low in the 2nd quarter of 2021, with rent growth at 3.7 percent, more than the Tampa and National markets and double the County’s historical average. Accordingly, vacancies are low—5.9 percent—although vacancies are significantly higher for 4- and 5-star spaces, at twice or more the vacancy rate of all office classes.

2.4 Recent Comprehensive Plan Amendments

Landowner interest in redesignating industrial land to non-industrial or residential uses has grown in recent years. Table 3 identifies some recent Comprehensive Plan amendments affecting the supply of industrial land in the unincorporated county.

Table 3: Recent Future Land Use Amendments Affecting Industrial Land (2019-2021)

<table>
<thead>
<tr>
<th>Name</th>
<th>Last Date</th>
<th>Acres</th>
<th>From</th>
<th>To</th>
<th>Net Acre Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Arthur</td>
<td>January 2019</td>
<td>25.4</td>
<td>IL</td>
<td>PD</td>
<td>See Footnote</td>
</tr>
<tr>
<td>Vincent Academy</td>
<td>March 2019</td>
<td>52.8</td>
<td>IL</td>
<td>P/SP</td>
<td>-52.8</td>
</tr>
<tr>
<td>Mango Hills</td>
<td>March 2020</td>
<td>4.7</td>
<td>IL</td>
<td>RES-12</td>
<td>-4.7</td>
</tr>
<tr>
<td>JDR</td>
<td>March 2020</td>
<td>10.2</td>
<td>ROR</td>
<td>IL</td>
<td>10.2</td>
</tr>
<tr>
<td>Duke Land Exchange 1</td>
<td>July 2020</td>
<td>13.7</td>
<td>I-H</td>
<td>R/OS</td>
<td>-13.7</td>
</tr>
<tr>
<td>I-75/Blanton</td>
<td>December 2020</td>
<td>38.4</td>
<td>EC</td>
<td>COM</td>
<td>-38.4</td>
</tr>
<tr>
<td>I-75/Blanton</td>
<td>December 2020</td>
<td>74.4</td>
<td>Various</td>
<td>IL</td>
<td>74.4</td>
</tr>
<tr>
<td>Trinity Corporate Center</td>
<td>February 2021</td>
<td>65.0</td>
<td>IL</td>
<td>PD</td>
<td>See Footnote</td>
</tr>
<tr>
<td>Hay Road</td>
<td>September 2021</td>
<td>15.0</td>
<td>IL</td>
<td>RES-24]</td>
<td>See Footnote</td>
</tr>
</tbody>
</table>

Source: TBRPC analysis of Small and Large Scale Comp Plan Amendments | Pasco County, FL - Official Website (civicplus.com), accessed December 27, 2021

While losses of IL have been replaced with new IL or similar development potential in Planned Development (PD), 38 acres of the County’s total remaining total vacant EC were redesignated to COM (Commercial). With so little land impacting so much at stake, TBRPC analyzed the existing supply of industrial land and estimated future demand for that land to identify future land use needs.

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11 While Project Arthur redesignated IL land, developers added 23 million square feet of office/commercial through the project. Trinity brings a previous land use decision into comprehensive plan conformity. Hay Road property is unbuildable as it is a Class I wetland.
2.5 Industrial Land Constraints

With more than 740 square miles under its jurisdiction, unincorporated Pasco County has a lot of land. However, comprehensive plans and zoning ordinances constrain which specific land uses can be developed on every parcel of land, consistent with general planning principles, geographic and spatial limitations. Comprehensive plans allocate broad categories of land uses—residential versus industrial, the Future Land Use, while zoning districts fit specified types of development and development specifications to minimize conflicts between nearby land uses. Generally, industrial land faces three structural constraints that limit future job growth in Pasco County in addition to market trends.

First, the supply of industrial lands is scattered and fragmented. There is little light industrial and employment center land as a share of all land uses (2.1%) and about a quarter of the developable land is developed. At a landscape scale, industrial land is scattered across the unincorporated county (Figure 6), with little consistent pattern of industrial development, and there are very few large clusters of industrially designated land, with half of all parcels four acres or smaller and half of all twenty acre or less sites under two acres (Figure 7). Moreover, many parcels have irregular boundaries, meaning that industrial land uses are fragmented and possibly non-viable at the parcel scale.

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12 Developed refers to parcels with one or more buildings on it. Parcels with paved surfaces or passive improved uses are not counted.

13 Pasco County Appraiser data. For the set of parcels 20 acres and below, the median parcel size is 2 acres.
Second, compatibility issues limit where industrial land can go. Due to the locational demands of manufacturers, distributors, some locations are more desirable than others: proximity to highways, customers, and the supply chain; truck accessibility and truck parking and those constraints place absolute physical limits on what land can be industrial. Moreover, those locational priorities are further limited by the compatibility issues that arise with residential uses. Noise, vibrations, and smells are difficult nuisances to mitigate. When residential land uses abut industrial land, traffic
engineers must design intersections with trade-offs between pedestrian crossing length and curb radii.\textsuperscript{14} Industrial development must include buffers to alleviate potential clashes with other land uses while truck routes and bicycle lanes exacerbate risks.

Third, the supply of office space is in older, less desirable, buildings.\textsuperscript{15} About half of the existing office building space are 30 years old (a third is 40 years and older),\textsuperscript{15} making their sites less desirable to potential investment.


\textsuperscript{15} TBRPC analysis of CoStar data, 2022.
3. Ensuring an Adequate Supply of Industrial Land through 2050

Tampa Bay Regional Planning Council (TBRPC) analyzed the current supply of industrial land—both Future Land Uses of Industrial-Light (IL) and Employment Center (EC), development constraints, and various “demand” conditions—how much land would be required under different future employment forecasts, to identify the future need for industrial land as the County economy grows. In other words, how much industrial land (IL and EC) does Pasco County need to become jobs-balanced?

Answering that question depends upon a better understanding of how many target industry jobs does Pasco County need to sustain enough employment to grow the County economy. Pasco County’s economy is diverse and growing, with jobs in every employment sector—from agriculture, tourism, commercial shopping, research, and development to manufacturing, with the largest County employment clusters in Health Care and Social Assistance (18.3%) and Retail Trade (18.2%). Manufacturing accounts for about 2.5 percent of County employment with another 5 percent in goods movement (warehousing, wholesale, and trucking). While job growth has been strong in recent years, average industry wages lag those of Hillsborough and Pinellas Counties.

Moreover, while there are about 263,000 employed residents, there are only about 187,000 jobs in Pasco County, with many of those held by residents of other counties. Consequently, there is both a general shortage and there is a mismatch of jobs in Pasco when 71 percent of Pasco residents commute to Hillsborough and Pinellas Counties every day for jobs.16 Mismatch means that even if a County has as many jobs as employed residents, commuting still may be high because those County jobs do not match the skills or salary needs of employed residents.

While there is no universal consensus on how many jobs a community should have, leveling up the ratio of jobs to employed residents to 1:1 expands economic opportunity within the community and lowers commute distances and costs, as explained in this section. Moreover, TBRPC estimates that raising the percentage of target industry jobs within Pasco County from 10 percent to the same percentage (25%) of those jobs in Hillsborough and Pinellas Counties will alleviate the match issues facing Pasco’s labor force, as average wages will increase and attract County-based workers.

TBRPC first analyzed several “what if” questions involving the loss or gain of target industry jobs under different land use scenarios. In brief, the analysis addresses how much land is needed to support enough jobs to reach a 1:1 ratio between jobs and employed residents by 2050, the implications of not reaching “jobs balance” and an account of how much land is needed versus how much EC and IL land that is both vacant and buildable within the unincorporated county that can absorb the target industry share of those jobs. Since those decisions have long term implications, TBRPC also considers the potential economic impacts of alternative land use mixes of residential and industrial.

A “build-out” analysis of industrial land, however, is not straightforward. Target industry jobs can also be developed in Planned Developments and Mixed-Use districts where the spectrum of allowed uses and intensities makes calculating employment build-outs difficult compared to the simple math of multiplying the acres in fixed building envelope proportions by expected employment densities in “Euclidean” single-use districts.

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16 Summary of Employment, Demographics, and Commuting Patterns for Pasco County, Florida. Florida Department of Economic Opportunity, May 2021.
Of course, the relationship between industry and employee density per square foot or acre is not tightly coupled; instead, the needs for employee space will vary greatly by industry and production methods, logistics, and work schedules. Public Right-of-Way easements and environmental constraints also place limits on the building envelope. In Pasco County, Category 1 wetlands and the 25-foot upland area are protected. As such, the developable area is defined not only by setbacks, but by conservation areas, the upland buffer, and the wetland line. This section addresses the key assumptions TBRPC made in analyzing the supply of industrial land, with more technical detail in Appendix 2.

3.1 Supply of Industrial Land

TBRPC’s analysis of the supply of industrial land required two steps, performed primarily in Geographic Information Systems (GIS) and a spreadsheet model. Those two steps are:

1. Inventory Industrial Land
2. Calculate Acreage of Buildable and Available Land
3. Assess Minimum Critical Thresholds for Industrial and Business Parks

3.1.1 Inventory Industrial Land

The first step determines the acreage of lands that are potentially available for industrial uses. This step is complicated by the fact that there is industrial land in the unincorporated county and in the cities of Pasco County, with their own industrial future land use designations. Since TBRPC’s analysis is focused on the major land use decisions facing unincorporated Pasco County, TBRPC focused on unincorporated future land use designations, and not current zoning, as future land use governs the allowed zoning districts.

Since the underlying allowed uses under municipal zoning codes are not necessarily the same for industrial land uses, TBRPC used Property Assessor data for the municipalities, selecting properties whose use code was industrial. For county land uses allowing mixed uses, and therefore an uncertain mix of industrial versus other uses, TBRPC coordinated with County staff to obtain employment build-out estimates for those uses. Those estimates also included agricultural land that fell within the boundaries of Pasco’s Ready Sites program, located in six sites across the County.

3.1.2 Calculate Acreage of Buildable and Available Land

TBRPC downloaded data from the Pasco County Property Appraiser’s parcel files and used Appraiser codes, sorting property records, classifying data by vacant and developed land, appending Future Land Use designations in the unincorporated County or Property Appraiser Use codes to identify

17 www.pascocountyfl.net/3236/Permitting-Near-Wetlands
industrial uses in the municipalities, while excluding the developed share of those parcels from the analysis. While this approach captures much of the existing conditions in Pasco, some portion of the property may be already developed with other and sometimes nonconforming uses which results in an improved designation that may result in different interpretations of the same data sets and consequently different build-out estimates. Moreover, there may be natural features or rights-of-way that constrain development that can be mitigated or conveyed, respectively, but are not treated as such in this analysis.

Like the problems facing the identification of industrial land, identifying what land is vacant or simply available is complicated. Sometimes, vacant land is misidentified in property appraiser databases, misclassifying land with unpaved parking lots, outside storage, or staging areas for vehicles as vacant when they are clearly in some ancillary but active use. Then choices must be made about how to classify certain uses, such as grazing land. Using GIS, TBRPC conducted a constraint analysis on EC and IL properties to identify areas of land that restrict development and to assess the availability (vacancy) of industrial lands. Agricultural land is also identified in the tables when it falls within an EC or IL Future Land Use, as those properties may eventually be rezoned to accommodate target industry jobs. Selected parcels were then overlaid with GIS layers of general Category I wetlands and 25-foot upland buffers, conservation land, and transportation right-of-way. Because industrial uses often require a lot of space, including undeveloped areas for staging, truck movements and other activities, TBRPC used uniform minimum lot sizes for industrial zones of 15,000 square feet as a cutoff to be buildable. If environmental constraints reduced the buildable area below 15,000 square feet, the lot was deemed unbuildable. Since wetland delineation only takes place at the time of development, TBRPC’s analysis is general and the actual building envelope of each industrial parcel will vary by jurisdiction and use.18

Detailed in Table 4, TBRPC tabulated the industrial buildable area of the County by future land use designations (EC and IL) as well as the estimate of buildable acres of target industries derived from Pasco staff analysis in a category called Master Planned Unit Development for Target Industries (MPUD Potential Target Industry Capacity). The total site availability for target industry jobs with the appropriate land use designation is 8,347 acres, as shown in the Table and highlighted by a grey box. As Table 4 indicates, there is additional existing capacity that can be utilized within the County. While the additional buildable area within City boundaries is relatively small, that additional capacity is noted in the Appendices.

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18 Category I wetlands are typically either part of, or are connected to, a lake, pond, river, creek, or the Gulf of Mexico, or are a swamp or marsh that is 100 acres or larger. For Category I wetlands, the buildable area will be the parcel area, minus the wetland, defined by the wetland line, minus the 25’ upland buffer, minus the zoning setbacks.
Table 4: Inventory of Buildable and Available EC and IL Industrial Lands in Pasco County

<table>
<thead>
<tr>
<th>Developable and Available</th>
<th>Acres</th>
<th>Square Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unincorporated County</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IL</td>
<td>1,840</td>
<td>80,136,002</td>
</tr>
<tr>
<td>EC</td>
<td>4,666</td>
<td>203,238,206</td>
</tr>
<tr>
<td>EC/IL Sub-Total</td>
<td>6,506</td>
<td>283,374,208</td>
</tr>
<tr>
<td>MPUD Potential Target</td>
<td>1,841</td>
<td>80,206,821</td>
</tr>
<tr>
<td>Total EC/IL and MPUD Target</td>
<td>8,347</td>
<td>363,581,029</td>
</tr>
</tbody>
</table>

Source: TBRPC analysis of Pasco Future Land Use map, Pasco County Property Appraiser data; Pasco County staff. TBRPC also calculated build-out potential in municipal industrial areas, and those estimates are identified in the Appendices.

Figure 8: Available and Developable Parcels in EC and IL
3.1.3 Assess Minimum Critical Thresholds for Industrial and Business Parks

While Pasco County’s inventory of available EC and IL exceeds 8,300 acres in aggregate, the target industries the County is interested in attracting typically flourish on large sites, developed as industrial or corporate business parks, in contrast with the small parcel size of those land uses in the County. Designed with clusters of buildings often in the same architectural vernacular, business parks function as a unified development with common driveways, common parking and signage, and landscaping. Meshing open space, circulation with public spaces such as plazas, furniture, continuous sidewalks or ancillary commercial uses, lighting, requirements of storage areas as well as site amenities, business parks require more land than the sites used by standalone office buildings housing a few tenants. Just as a half-built bridge has no buyers, corporate or industry park developers will not develop land under a certain size; demand for industrial land is lumpy.

Moreover, there is great variation in the scale and scope of industrial and business parks. Employment ranges 30 to 37,000 employees (mean: 2,740 employees) working in industrial parks ranging from 6 acres to 6,800 acres (mean: 552 acres) in the United States. Site selectors differ in their opinions of minimal park sizes, from 15 to 50 acres, and from 10 acre lots within an 80-to-200-acre park footprint.

Regulatory frameworks tend to acknowledge the specific requirements of business parks with minimum Business Park zoning district sizes varying between 25 to 100 acres with more urban areas allowing 5-acre parks. The largest rural industrial park in the United States is MidAmerica Industrial Park, near Tulsa (OK) at 9,000 acres. Example zoning ordinances from Olathe County (KS) Business Park zoning requires a minimum size of 25 acres while Norwich (CT) require a minimum of 50 contiguous acres. In Pasco County, I-1 zoning requires minimums of 20,000 square feet, and I-2 zoning requires 40,000 square feet.

However, the average (median) parcel size of EC and IL land in Pasco County is 2 acres. While those parcels might be buildable from the perspective of a single office building, Pasco’s ability to attract target industries in business parks is limited given the scarcity of available sites as most parcels do not reach the critical minimal thresholds for development, beginning at 15 acres and going up. Table 5 compares the total aggregate acreage of all EC and IL land, to the number and total acreage of parcels that are, successively, 15 or more acres, 25 or more acres, and those that are 50 or more acres in size.

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20 Link, Albert N. “University-Related Research Parks.” Issues in Science and Technology 20, no. 1 (Fall 2003).
22 siteselection.com/issues/2010/nov/SAS-Top-Locations.cfm
24 norwichct.org/DocumentCenter/View/2213/Draft-Zoning-Regulations?bidId=
Table 5: Inventory of Large Available and Developable Sites in Pasco is Limited

<table>
<thead>
<tr>
<th>How Much of EC and IL Land is</th>
<th>Jobs converted into Acres</th>
<th>Future Land Use Acres Existing EC/IL Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Available EC and IL Acreage</td>
<td>8,347 Aggregated Acres</td>
</tr>
<tr>
<td>In Small-Medium Size (15 Acre+) Parcels</td>
<td>47 sites</td>
<td>858 Ac.</td>
</tr>
<tr>
<td>In Medium Size (25 Acre+) Parcels</td>
<td>13 sites</td>
<td>569 Ac.</td>
</tr>
<tr>
<td>In Medium Size (50 Acre+) Parcels</td>
<td>8 sites</td>
<td>476 Ac.</td>
</tr>
</tbody>
</table>

Source: TBRPC Analysis, 2022.

3.2 Demand: How Much Industrial Land Does the County Need?

Because Pasco County is one of Florida’s fastest growing counties—growing 23 percent since the 2010 Census, compared to the state’s 16 percent growth—job growth must grow even faster for the County to not lose ground in developing its economy or face growing fiscal pressures to keep pace with transportation investment. Between 2010-2020, Pasco County gained jobs faster (30%) and saw stronger increases in employed residents (29%) than population growth (23%).25 While that comparison is encouraging, the scarcity of industrial land, and the possibility of even more industrial land conversions to non-employment uses, means that the County may lose ground in job growth potential.

While the supply of industrial land for target industries does not guarantee that those jobs will come to Pasco County, without the availability of land, those jobs cannot come to Pasco County. However, allocating enough industrial land without crowding out other important land uses in a community is dependent upon community preferences for future job growth. That allocation decision is likely to yield the best results when those preferences are grounded in reasonable expectations of growth.

Since the 1980s, planners have tried to identify benchmarks for the supply of housing to match job growth in many large metropolitan areas.26 While the focus on jobs-housing balance was designed to ensure a supply of workforce housing for areas with high job growth, similar measures, such as the ratio of jobs to employed residents can be useful for benchmarking the supply of employment supportive land uses to support fast growing residential development in rural-suburban communities, like Pasco County.

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25 REMI PI+, v. 2.5.
3.2.1 The Jobs for Employed Residents Criterion and Target Industry Jobs

As a suburban community next to large urban centers, it is not surprising that most County employed residents are commuting to Hillsborough and Pinellas counties. As Pasco’s population grows, however, lagging job growth means that proprietor income that could be earned in the County is lost to other communities, as are many of the indirect jobs that could have been created in Pasco County but are instead created closer to the firms where Pasco residents work. Moreover, increased commuter-driven congestion on highways imposes costs on all drivers and on Pasco County businesses in lost income and revenue. In other words, while out-commuting provides higher average wages to residents, there are tangible costs to physical infrastructure, and intangible but real costs to businesses and the County’s future growth potential.

Since there is a close relationship between out-commuting and congestion, a conceptual job growth target, or criterion, that ties together the need to address congestion, the importance of the target industry jobs, and the relationship of those jobs to evaluating how much industrial land is needed, can be instrumental in advancing County land use planning goals.

Planners have long used jobs-housing balance in a prescriptive sense—if a community supports some quantity of jobs, then how many housing units must be built to ensure the regional transportation system is not overwhelmed by in-commuters. While the ideal ratio of jobs to housing units has varied from state to state and over time and the spatial scale of the community, research findings have found that gains in the jobs-housing balance where job gains occur when the ratio is less than 1.2 or when housing gains occur when the ratio is greater than 2.8 tend to reduce commute distance, and therefore the losses incurred by drivers who must drive further to pay for their own homes decrease. According to that research, increasing a jobs-housing ratio in job-poor communities, such as Pasco County, from below 1.0 to 1.2 will show significant decreases in commuting. Adding housing in a jobs-rich community (greater than 2.8) tends to reduce commute distances while there is little change to none in-between those points. Of course, results will vary with systemwide transportation efficiency and personal decisions as two-worker households balance different job locations, job turnover and family activities.

However, housing is really a proxy for the location of workers and not an entirely appropriate one in this study, as Pasco is home to many retired residents while across the country labor force participation has been in decline since 2000 and is expected to drop to pre-1970 levels by 2050. This means that the presence of a house does not mean the presence of a worker or two. Instead, the salient relationship is the ratio of jobs to employed residents, as it is employed residents who commute.

In 2020, Pasco County’s Jobs-Employed Residents (JER) ratio was 0.71, meaning for every 100 employed residents there were 71 jobs in Pasco County. As a result of that imbalance, job matching between skills and opportunities in other communities, 70 percent of Pasco workers commuted out of county to work, contributing to the longest average commutes in the Tampa Bay region.
Reversing that outflow is a challenge that is currently being addressed by the County’s economic development efforts and business investment. Since the challenge of reducing out-commuting is so large, TBRPC proposes a criterion to guide County policymaking on land use decisions impacting job creation, to improve the Jobs-Employed Residents (JER) ratio from 0.71 now to a jobs-balance of 1.0 by 2050.\(^{30}\)

Figure 9: Jobs-Balanced Counties Average Shorter Commutes than Jobs-Poor or Jobs-Rich Counties

![Graph showing the relationship between Jobs-Employed Residents Ratio and Average Commute Time.](image)

Source: TBRPC analysis of U.S. Census Bureau, Mean Commuting Time for Workers (5-year estimate) in Pasco County, FL [B080ACS012101], retrieved from FRED, Federal Reserve Bank of St. Louis; fred.stlouisfed.org/series/B080ACS012101, other selected Counties; March 24, 2022. REMI 2.5

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\(^{30}\) While research has shown that even though jobs-housing balance does reduce commute trips and overall vehicle miles traveled, that balance does not imply that each county resident has a job in the county. Within a metropolitan area, there are too many additional factors, such as a dual income households, job “mismatch” where residents do not have the skills or work in occupations most needed by businesses in their county, as well as job mobility, where workers switch jobs more frequently than they move residences.\(^{30}\) Instead, it is important to note that while jobs-housing balance is not sufficient to meet all of the demands for employed residents, the availability of the land those jobs are based upon are necessary preconditions.
Figure 9 depicts the relationship between the average commute time reported by workers driving alone and the Job-Employed Ratio of selected Florida counties using American Community Survey Census and Bureau of Labor Statistics data for 2019. Overall, the data show that there is an inverse relationship between commuting times and jobs-employment ratios, where commute times increase as the job-employed resident ratio falls in “jobs-poor” counties, and commute times rise again as that ratio increases beyond 1.1, as in-commuters contribute to rising commute times in “jobs-rich” counties. Generally, the lowest average commute times are in counties with a “jobs-balanced” ratio of 1.0. While this finding differs from Peng (1997), the analysis does show how jobs-balance can set planning horizons for land use and for reducing the unavoidable gains in average commute times.

More than Jobs-Balanced: Leveraging Industrial Land to Increase Average Wages

Increasing Pasco County’s JER ratio to 1.0 (to Jobs-Balanced) does not fully leverage how EC and IL land can impact the Pasco County economy. With generally higher wages than most other industries, developed EC and IL land can also change the balance of high wage to medium wage jobs in the County. Since the share of employment in target industries in Pasco County is about 10.7 percent of all jobs, TBRPC also assumed that the proportion of target industry jobs of all jobs was increased to 25 percent by 2050 as part of the Improved Jobs-Employed Residents criterion, which is the same share those target industries have of total employment in Hillsborough and Pinellas.

Table 6 provides quantitative support for the number of total jobs and target industry jobs by 2050, first to maintain the existing Jobs-Employed Residents ratio and then to reach Jobs-Balanced on EC and IL designated land, consistent with the two ratios explained in the previous section. The forecasted population growth is sourced from REMI PI+'s forecast for Pasco County and tracks closely the University of Florida’s BEBR high population forecast, both of which are reliable forecasts. In the Improved JER scenario, the Jobs Employed Residents ratio is slowly improved, consistent with a greater supply of industrial and other employment supporting land, to a JER of 1.0, Jobs-Balanced, or a job available for every working Pasco County resident. The changes that need to occur to support Jobs-Balanced are identified as “(policy)” in Table 6.
Table 6: How Many Jobs Does Pasco County Need to Become Jobs-Balanced (JER 1.0) by 2050

<table>
<thead>
<tr>
<th>REMI Baseline PI+ Forecast</th>
<th>2025</th>
<th>2035</th>
<th>2045</th>
<th>2050</th>
<th>2025-2050 Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (forecasted)</td>
<td>639,446</td>
<td>762,163</td>
<td>859,324</td>
<td>886,250</td>
<td>246,804</td>
</tr>
<tr>
<td>Jobs in Pasco County (forecasted)</td>
<td>209,435</td>
<td>220,794</td>
<td>231,168</td>
<td>240,992</td>
<td>51,273</td>
</tr>
<tr>
<td>Jobs held by Pasco Residents (forecasted)</td>
<td>295,953</td>
<td>328,140</td>
<td>357,175</td>
<td>372,899</td>
<td>76,946</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Jobs-Balanced and Target Industry Jobs</th>
<th>Proportionate Job Increase to Jobs: Employed Residents Ratio to 1.0 with Target Jobs 25% of Total Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Required Jobs Under Jobs-Balanced (policy)</td>
<td>216,045</td>
</tr>
<tr>
<td>Jobs-Balanced Target Industry Jobs (policy)</td>
<td>23,222</td>
</tr>
<tr>
<td>JER Ratio (policy)</td>
<td>0.73</td>
</tr>
</tbody>
</table>

Source: TBRPC analysis using REMI 2.5, 2022.

3.2.2 Employment Density Assumptions and Land Supply and Demand Balance

Calculating how much land is needed by the Pasco economy for jobs requires several steps separate from the analysis of existing vacant industrial land. First, because this study is focused on EC and IL future land uses, and those designations are most consistent with the County’s target industries, TBRPC elected to treat EC and IL as land to be developed with target industry jobs exclusively. Of course, target industries can go into other existing land uses, but using EC and IL as a benchmark for future target industry growth while jobs in other industries are directed to suitable sites in other designations makes the analysis more tractable.

As such, the next stage in the analysis is to calculate how many jobs are typically developed in each future land use, a statistic called employment density. TBRPC first developed a GIS of Quarterly Employment and Covered Wages data geocoded to parcels from 2019 and then calculated gross employment density per developed acre. TBRPC then compared the resulting employment densities (about 19 jobs in EC and 14.4 jobs in IL per gross acre) with a previous study conducted for Mobility 2045, the County’s transportation plan, along with various planning standards to cross check assumptions. Employment densities in both TBRPC’s analysis and the study conducted for Mobility 2045 were similar enough to establish confidence in the supply of land needed for a build-out of employment in each industrial future land use.

31 See this reference for Clark Co., WA, clark.wa.gov/sites/default/files/dept/files/community-planning/Buildable%20Lands/2.%20Employment%20Density%20memo.pdf and for Oregon, scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/26252/CRohan_ExitProj_Final.pdf?sequence=1&isAllowed=y
Table 7 reiterates the aggregate and large site inventory of EC and IL land in the County, and the increment in acres TBRPC has identified as necessary to support increasing the Jobs-Balanced scenario. In each row, the same demand for land is compared to the supply. In this case, TBRPC’s analysis is that there is adequate land for future job growth with all acreage aggregated together, assuming future growth will occur on small sites with standalone buildings. On the other hand, if that growth were intended for business or industrial parks above a certain site size, then Table 7 indicates there are significant deficits in the supply of those larger parcels if the County adopts a Jobs-Balanced Goal (JER 1.0).

### Table 7: Large Site Available Absorption Capacity for Target Industry Jobs In Pasco County May Be Insufficient

<table>
<thead>
<tr>
<th>How Much of EC and IL Land</th>
<th>Jobs converted into Acres</th>
<th>Future Land Use Acres Existing</th>
<th>Acres Demand</th>
<th>Surplus/(Deficit) if all Target Industry Jobs were absorbed in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of all Buildable and Available EC and IL</td>
<td>8,347 Aggregated Acres</td>
<td>3,417</td>
<td>+4,930</td>
<td></td>
</tr>
<tr>
<td>In Medium-Small Size (15 Acre+) Parks</td>
<td>47 sites</td>
<td>858 Acres</td>
<td>3,417</td>
<td>(2,559)</td>
</tr>
<tr>
<td>In Medium Size (25 Acre+) Parks</td>
<td>13 sites</td>
<td>569 Acres</td>
<td>3,417</td>
<td>(2,848)</td>
</tr>
<tr>
<td>In Medium-Large Size (50 Acre+) Parks</td>
<td>8 sites</td>
<td>476 Acres</td>
<td>3,417</td>
<td>(2,941)</td>
</tr>
</tbody>
</table>

Source: TBRPC Analysis, 2022.

Therefore, this table only provides general summary guidance on the need for land—how much land is precisely allocated to target industry uses between small parcels and large office parks over the long run cannot be estimated with a high level of confidence and TBRPC recommends additional capacity to account for the timing of development, developer specifications, market conditions, and site constraints; as well as other land use needs.

### 3.3 Long-Run Implications of Trend Versus Alternative Land Use Decisions

Since a property’s zoning or future land use does not change simply because a property is underdeveloped or its uses are longer economically viable, decisions about land use have long term and even irreversible implications both for the property in question and for the surrounding land uses. This is also true when selected land uses succeed in the marketplace and influence decisions about surrounding properties. For commercial and industrial land uses, the more land used for similar land uses may give rise to economies of scale—businesses that depend upon each other come to account for a larger share of their marketplace and retain more of the money circulating through their industry. Over time, changes in land use are shaped by and actively shape demographic changes, attracting new residents or commuters to thriving businesses, or driving them away when investment lags. As such, the decisions that elected officials make about land uses may benefit from tools that support thinking through the consequences of near-term choices.
With competing demands from residents, landowners, the broader public and the public interest, decision makers are faced with sorting through a lot of information from multiple sources. Planners and economists use computer models to help simulate the effects of alternative decisions on the economy and on fiscal impacts to provide support for decisions about public policy issues. Simulations of possible decisions or irreversible events, called scenarios, frame that information by organizing the questions decision makers ask in terms of “what if” one scenario occurs versus another scenario. Scenarios are not predictions; they simplify existing conditions down to the most essential parts of a problem, allowing decision makers to reveal the connection between a policy choice and an outcome. More complicated scenarios, engaged through computerized economic models, support a broad array of questions, and provide responses in comparable economic output tables to help policy makers weigh one choice against others. Using the REMI PI+ economic model’s baseline projection of future Pasco County growth, TBRPC produced three scenarios that consider the long-term impacts of decisions about industrial land. The projected forecasts are reported as differences from the cumulative differences in economic indicators from an underlying baseline forecast through 2050. Those three scenarios are outlined below:

1. **Loss of 100 Acres**
   One hundred acres of the County’s remaining EC and IL land acreage in Pasco County is redesignated to residential uses, losing the potential target industry employment but allowing further residential construction. This scenario is consistent with further residential rezoning needs at the expense of industrial land. Of the three scenarios, this is the only scenario that is directly related to the supply of land.

2. **Current JER (Maintaining the 2020 Pasco Jobs-Employment Ratio through 2050)**
   In this scenario the County’s 2020 jobs to employed residents ratio is maintained over the baseline, which represents a slight retention of target jobs. There are no specific assumptions about land use needs but the scenario adds about 5,500 target industry jobs over the next 28 years.

3. **Jobs-Balanced (JER ratio of 1.0 by 2050)**
   Pasco County maximizes industrial land development to fully employ all Pasco County residents involved in Target Industries (as defined by Pasco County Economic Development.), adding another 39,214 target industry jobs over the next 28 years.

TBRPC analyzed the economic impact of these three scenarios. Because the REMI PI+ model incorporates General Equilibrium principles into its forecasts, cumulative impacts of both earlier time periods as well as interaction effects with other Counties, the results are robust.

Results are provided in Table 8 for each scenario across four cumulative categories: cumulative job-years, total personal income, County property tax revenue, local sales tax revenue; and the percent difference between the baseline housing price estimate for 2050 and each scenario.
Table 8: 2022-2050 Cumulative Total Impacts for Each Scenario on All Jobs, Income, Taxes and Housing Prices over Baseline

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Job-Years</th>
<th>Personal Income (Millions of Fixed 2022 $)</th>
<th>Property Tax Revenue (Millions of Fixed 2022 $)</th>
<th>Local Sales Tax Revenue (Millions of Fixed 2022 $)</th>
<th>2050 Relative Housing Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change over Baseline</td>
<td>Units</td>
<td>%</td>
<td>Units</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Loss of 100 Acres</td>
<td>-14,512</td>
<td>-0.2</td>
<td>-930.9</td>
<td>-0.1</td>
<td>-1.3</td>
</tr>
<tr>
<td>Current JER</td>
<td>+44,937</td>
<td>+0.6</td>
<td>+3,032.0</td>
<td>+0.2</td>
<td>+2.5</td>
</tr>
<tr>
<td>Jobs-Balanced</td>
<td>+505,718</td>
<td>+7.3</td>
<td>+32,723.7</td>
<td>+2.5</td>
<td>+4.4</td>
</tr>
</tbody>
</table>

Source: TBRPC analysis using REMI PI+ 2.5, 2022. Since wages are only a portion of total county personal income, the scenario percent impact on baselines will differ between job-years and personal income.

In Table 8, the Loss of 100 Acres scenario results in 14,512 fewer job-years created in Pasco County than between 2022 and 2050 than might be expected with all of Pasco’s economic assets. Personal income underperforms the baseline forecast by 0.1 percent, relative housing prices would be 1.3 percent lower and overall property tax revenues would drop by 0.2 percent. In contrast, a growth scenario (Jobs-Balanced) results in 2.5 percent higher income and local sales tax revenue, and a 4.4 percent increase in total property taxes. All that success, however, is tempered by a 6 percent average increase in housing prices as Pasco becomes more like Hillsborough and Pinellas Counties.

Figure 11 contrasts the gains in jobs by low, medium, and high wage categories in Current JER and Jobs-Balanced. By increasing the share of target industry jobs of all jobs, high wage jobs increase, while medium wage jobs nearly double the number of jobs in Current JER. This is because high wage jobs exert a high multiplier impact on the economy, creating proportionately more medium wages compared to the Current JER ratio.

Source: TBRPC analysis using REMI PI+, v. 2.5
4. Land Use Impacts of Emerging Demographic and Technological Trends

Demand for various land uses—how much space, what mix of uses, how the space is used—follows changes in market demand, demographic changes, and technological innovation. In this section, TBRPC reviews the literature on the impacts of e-commerce, automation, remote work, and aging on office, industrial, and residential built forms to identify potential emerging changes in future land use patterns.

Many of those changes are being driven by an epic demographic transition underway as Baby Boomers retire. By 2030, all surviving Baby Boomers will have reached retirement age, with consequences for both the labor market and for housing demand. With a population of 571,000, 129,000 residents (23%) are over the age of 65, slightly higher than the state average (21%), Pasco County’s labor participation rate of 62.5 percent in 2000 is expected to fall to 56 percent in Pasco by 2050.

Pasco employers will face the same challenges in finding the labor force to fill jobs as many did during the COVID-19 pandemic and the ongoing economic recovery: do they raise wages to attract workers, will they invest in automation, or simply hire workers in other countries for remote work? How much of a firm’s productive floorspace is split between workers under the same roof, between workers and machines and software, and between those workers and others working remotely? Firm decisions on different combinations of those labor and capital inputs are likely to continue influencing building design and the built environment in the 21st century.

Technological innovation and changing consumer behavior are also altering the landscape, as retail and services take on a larger share of total consumer activity. While online consumers interact with servers located anywhere in the world, their purchases initiate a chain reaction of freight movements across a widespread landscape of suburban development that has become known as logistics sprawl. As noted in Section 2 of this report, more than 80 percent of the built industrial space of Pasco County is logistics oriented. The future is here.

4.1 The Vanishing Storefront: E-commerce and the Changing Logistics Landscape

Distribution Centers are becoming larger and more specialized in their delivery of services due to the growing influence of e-commerce. Despite e-commerce’s small share of all US retail sales (13.2% in 2021), it is a tailwind accelerating trends in the physical footprint of logistics in industrial areas throughout the world. E-commerce is also changing the kinds of jobs created by retail industry, reducing customer-facing jobs, and increasing jobs in specialized occupations, such as logistics expertise, or robotics. Amazon’s future sortation center in the Eagle Industrial Park is an example of the next generation of logistical support to e-commerce, with fully robotic sorting, in addition to 500 jobs, many of which will specialize in robotics management.

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32 Peaking at 67.3 percent in 2000, the US labor force participation rate has fallen every year as the Baby Boomer generation ages into retirement, reaching 61.9 percent at the end of 2021.
33 REMI PI+, V. 2.5
For land use planners, E-commerce is facilitating the decline of shopping centers, putting more delivery trucks on the road, and changing logistical space and organization. At the scale of the urban landscape, freight movement and warehousing type development has come to be known as “logistics sprawl.”

While innovation in distribution is perhaps the most visible of e-commerce’s physical footprint, cloud technologies and especially the Internet of Things (IoT), are shaping the business operations of all of retail, warehousing and distribution. As the share of e-commerce of all retail purchases has increased, so has the demand for more distribution space at the expense of retail storefront space. Some experts argue that e-commerce has flipped the role of storefront and warehouses, driving a shift from retail chains when density and market saturation fostered new store openings while distribution centers supported that expansion, to a model where distribution centers are retail anchors and storefronts are increasingly obsolete.

As an example of this flipped role, Prologis, a logistics real estate company, estimates that traditional retail operations with $1 billion in sales requires 2.5 million square feet of retail space, and 325,000 square feet of logistics space, while a $1 billion e-commerce operation requires no retail space but 1 million square feet of logistics operations. In some case, retail operational functions are absorbed into new logistical and integrated manufacturing models, such as customization; blurring the distinction between retail and production. With Just-in-Time production, inventory space is diminished, logistics operations take a larger share of the building, and inventory is more mobile. Storefronts may become facades for showrooms, while customer interaction and point-of-sale moves online. As retailers give way to remote shopping, there may be cascading effects on how “legacy” storefront retail continues to operate. All these innovations have contributed to the increased complexity of logistics, giving rise to new building types and freight movement patterns.

Since larger volumes of smaller shipments increase demand for inventory space, retailers are relying more on distribution centers, which transit goods, and fulfillment centers, which holds inventory prior to final shipment, and sortation centers, which organize shipments by postal areas so that packages can delivered by postal or package service. Together, logistics buildings will not only drive demand for larger building footprints and more truck bays, as well as internal improvements such as increasing maximum ceiling heights with mezzanine floors. These changes are likely to prompt developers to seek decreased coverage ratios, as truck parking needs expand. Moreover, larger building footprints will drive demand for larger parcels at lower costs.

At the landscape level, logistics suburbanization is restructuring distribution into hierarchies. Near-urban areas, located within 20 miles of major cities, handle fast-moving high-cost and time sensitive products such as mobile phones and groceries, while operations 75 miles away tend to be

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39 These terms are often interchangeable and vary by business model. TBRPC’s use of the terms here are illustrative.
“big-box” distributors handling slower moving, lower-cost and time insensitive products such as furniture and discount apparel. Moreover, inventory practices within the “box” continue to change, as wholesale mixing centers need larger footprints to keep more inventory types on hand, while retailers are partitioning their warehouses to accommodate multiple operations, including wholesale, retail and e-commerce needs. Access to ground sortation hubs (FedEx, UPS, and Postal Service) and their dedicated lines are also key locational drivers.

E-commerce has also changed how businesses scale up operations as they grow. Starting with multitenant leasing spaces and leading to outsourcing to logistics specialists where shared equipment can cut overhead costs while meeting expansion needs. Eventually, businesses may need dedicated distribution facilities, and ultimately to distributed fulfillment—such as deployed by Amazon. Given its high concentration of logistics-oriented uses, Pasco County can support a variety of logistics models.

E-commerce also yields transportation impacts. With expanding home deliveries, last-mile delivery trips are increasing, albeit with some substitution for retail trips, resulting in a changing mix of passenger versus delivery vehicles on the roads and in neighborhoods. For developers, that means less justification for peak demand parking spaces per square foot of retail. In some urban areas, retail spaces may be converted into niche fulfillment spaces, further reducing parking space requirements.

**Emerging Industries in Florida**

Over time, the mix of industries within the Pasco County economy have changed and will continue to change. Office and industrial space needs will evolve as that industry mix changes. According to CareerSource Pasco Hernando, the medium-term outlook (2021-2029) favors strong increases in jobs in Management of Companies (48% increase in jobs), Professional and Technical Services (35% increase in jobs), and Information (21% increase in jobs) among office type settings; and moderate increases in Manufacturing and Logistics oriented jobs.

Since Management of Companies and Enterprises consist of firms engaged in a variety of management activities, such as holding securities in other businesses, as well as corporate offices, the office space needs of those firms will vary by use. However, according to Bureau of Labor Statistics data, this industry sector increased use of telework more than any other industries—except for finance and insurance, and educational services, by continuing operations through telework for 54 percent of all establishments, representing 89 percent of all employees in the sector.

While many of those firms are returning to the workplace, the ability of businesses in Pasco’s single fastest growing industry sector to sustain a telework environment will have several implications for office use in the County. On the one hand, businesses relying on a telework schedule may choose to transition to smaller office spaces and may seek smaller parking requirements at the time of development. Beyond the demand for office

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42 IBID.
43 IBID
space, there are implications for the working environment—if employees are no longer required to be in the office, then employers can expand their job recruitment to anywhere in the world, giving preference to the most skilled at the least cost.

**Summary and Potential Land Use Impacts:**

- Distribution center locational demands driven by support function in low-density high-connectivity areas shifts to regional anchors, increasing retail chain obsolescence
  - Less retail storefront, more logistics space
- Distribution centers are growing in size and diversifying in roles/service they provide
- Larger buildings sustain demand for larger parcels at urban fringe costs, industrial land demand is also related to how land is used
- Suppliers will continue to be focused on lean inventories, keeping goods “on the move”
- Increased demand for cross-docking and more truck bays, more space for truck parking
- Increased demand for shared logistics space, with retailers partitioning internal space into functional or cross-functional areas
- Planners should consider whether the existing inventory of warehouse buildings can accommodate businesses as they scale up operations
- Decline in demand for space for obsolete industries, opportunity to observe and redesignate land accordingly. Obsolete sites should become priorities for the County to redevelop
- Industrial land, truck routing and freight rail nexus more important than ever
4.2 Working Overtime: Aging, Remote Work, and Automation

COVID-19’s impacts on the US economy were devastating, and both the pandemic and the ensuing and troubled economic recovery revealed that the economy depends upon the availability and relative cost of the labor force. In this case, the pandemic portended the vulnerability of the economy to labor force scarcity as the Baby Boomer generation retires out of the workforce. While an aging workforce itself is likely to have a negligible effect on total productivity, automation is likely to influence the complexity of surviving jobs. As result, automation has eliminated and will continue to eliminate many job categories but is opening the way to new occupations.45

Automation and Machine Learning

Since the Industrial Revolution there have been fears that automation will replace workers and “technological unemployment” will make the labor force increasingly redundant. Those concerns are important as technological advances and automation yield displacement effects—the loss of jobs moving older and less retrainable workers out of the labor force.46 Employers in Pasco County may have to decide between automation, raising wages and relying more on the growing share of the population that is engaged in part-time work as retirement age residents stay healthier over time. For skilled part time workers, the growing influence of platforms offers the opportunity for workers to be employed in co-working spaces or by working from home environments.

Moreover, some economists have found that the increasing reliance on robots in industry may have far-reaching consequences as robotics have more far-ranging capabilities to displace workers.47 In a 2020 study, economists found each new robot reduces employment in the United States by 3.3 jobs. Focusing on commuting zones in metropolitan areas, the study found that there are larger

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47 mitsloan.mit.edu/ideas-made-to-matter/a-new-study-measures-actual-impact-robots-jobs-its-significant
local effects from where each additional robot added to industry eliminates six jobs—directly and indirectly—through displacement. While most robots are currently employed in automotive manufacturing, electronics, plastics, and chemical manufacturing also use robotics. Displacement is not limited to manufacturing, as many blue-collar jobs in routine manual,48 construction, repair, assembly, operators, inspectors, and similar occupations are also at risk.49

With a labor force that struggles to keep pace with a brisk economy, and the ensuing gain in labor costs, it is feasible that automation will continue to spread as costs for automation fall, resulting in fewer workers per facility in the United States. While the level of robotization in Florida is relatively low,50 declining adoption costs across robotics will make automation more attractive in certain industries. Machine learning may also replace some occupations, especially those that involve a lot of monitoring and routine problem solving.51

With robotization, space needs may not necessarily impact building footprints, but may shift space devoted to employees, such as parking space requirements, bathroom, and other breakroom requirements in favor of space to accommodate the infrastructure to maintain machines and retain flexibility on production scale and rapid customization of products. As Amazon’s recent announcement of the Robotic Sortation Center in Pasco County shows, however, automation may also generate jobs in a half-million square foot facility that will support both robots and amenities for workers.52 Since space needs for humans versus machines will vary by industry, there is not a consensus in the literature on how automation will necessarily impact space planning needs.

Remote Work

Remote work is work that where the distance between colleagues and workplaces is spanned by the Internet. For workers, this means that employment with a local business can be conducted from home or another suitable wired place. It also means that Pasco businesses can maintain a workforce anywhere in the world, just as any business in the world can employ Pasco residents. Prior to COVID-19, only one in 30 employers allowed for remote work.53

As many employers found through the widespread shutdowns of workplaces as the result of COVID-19, remote work is likely to remain a feature of the workplace. According to a recent survey by Mercer, 94 percent of employers say that productivity has remained the same (67%) or improved (27%) with remote work.54 “Looking ahead, 73 percent said they expect a quarter or more of their workforce to continue working remotely post-pandemic. And one in three expect half or more of their employees to do so.”

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48 The Impact of Robots on the U.S. Labor Market | St. Louis Fed (stlouisfed.org)
50 Acemoglu and Restrepo. 2020.
51 Examples include engineering technicians, plant operators, and bookkeepers. brookings.edu/research/what-jobs-are-affected-by-ai-better-paid-better-educated-workers-face-the-most-exposure/
52 lakerutzned.com/ln/2022/02/98174/
53 90% of employers say working remotely hasn't hurt productivity - CNN. cnn.com/2020/08/27/success/work-from-home-employer-plans-for-more-flexible-policies/index.html
54 IBID
Working from Home, or From Anywhere

For the self-employed, services can be provided from home on a business-to-customer scale or from various e-commerce platforms which offer work on a piecemeal basis. Not all jobs can migrate to the Web but both those that can migrate to the Web and that does that will continue to shape future demand for professional office space. For professions that can migrate, some mix of telecommuting and office work are potential features of office space demand. That may mean that developers may want to offer less parking spaces, and leasable space may shrink as workers rotate shifts in the office and out of the office as needed for face-to-face collaboration. Moreover, for many businesses, open floor plans for collaborative spaces may shrink demand for cubicles or individual offices.

Co-working spaces, where workers or small businesses rent office space from companies on a flexible basis, create a space that serves the office needs of workers but without the risks involved in a typical three-to-five-year commercial lease. Co-working can offer both office style amenities for small entrepreneurs and businesses until they can grow to occupy larger spaces.

For land use planning purposes, remote work may decrease demand for professional office rentable building area per employee and increased pressure from developers for fewer parking spaces for office development. On the other hand, the increasing participation of healthy retired Americans in part-time work, may mean that retirement impacts on the labor force may be softened along with increased interest in co-working spaces.

Summary and Potential Land Use Impacts:

- Some occupations will disappear or fold into related occupations, on-the-job training education uses are complementary to industrial uses
- Increased demand for co-working and flexible office layouts, increased need for home office space
- Decrease in office floorspace/employee, more interactive environments, some 24-hour operations for remote workers
- Space requirements for manufacturing may increase to accommodate both labor and machines

4.3 Down the Demographic Ladder: Aging, Housing Transitions, and Live/Work Housing

As the American population ages household sizes decrease. Born between 1946 and 1964, the Baby Boomer generation of 73 million people is the second largest generation in American history. Demographic changes—the magnitude of population growth as well as household characteristics drive the demand for the total acreage of land converted to residential uses, the average lot size, its overall density, and the average size of the home. While most homeowners prefer to age in place, migrants to Florida often prefer to downsize, following a national trend toward smaller

homes. According to the US quarterly Census of Housing Starts and Completions, the size of single-family homes has dropped from 2,687 square feet in 2015 to 2,265 square feet in 2020 (-15.7%), after decades of growing housing sizes.56

There are several reasons why new homeowners may choose to downsize. First, as families progress through a ‘demographic ladder’—they marry, have children, and eventually may become empty nesters with fewer resources available to manage the same home they raised their families in, they may choose to relocate to a smaller home. With traditionally cheap housing in Florida—compared to many places in the Northeast, for example, downsizing also provided recently retired migrants with cash on the equity of their former home to finance household spending. With smaller costs per square foot in Florida, migrants often chose to buy larger homes with the expectation of a more active retirement, while still taking advantage of the relative cheaper costs of living in the Sunshine State. A more important reason for smaller homes, however, is the overall cost of housing which has increased significantly in recent years.

Will aging and price shrink demand for large lots in Paco’s future? According to County Property Assessor data, single-family lot sizes have shrunk considerably while average living area has grown significantly since 1970. Overall, this trend is consistent with a transition from a rural development pattern to a suburban pattern under growth management, and increasing single-family home sizes on smaller parcels, as the costs of air conditioning have fallen, and overall household wealth has grown. Since 2015, however, average home sizes have only shrunk 1.6 percent, a tenth of the rate of the national average decline.

There is not enough justification for TBRPC to project a significant level of widespread downsizing in the immediate future due to the demographic ladder, while recognizing that the impacts of the Baby Boomer generational shift to retirement may not yet be fully manifest. Instead, the most salient factor influencing house sizes is likely to be sale prices driven by demand for housing. A countervailing trend, however, may be an increased demand for home office space.

**Summary and Potential Land Use Impacts:**

- Downsizing appears to be a minor phenomenon; the cost of housing is a more likely factor in shrinking housing footprints
- Increased demand for home offices may raise premium on additional bedrooms/office space
- Potential need for transitional spaces, such as live/work design with courtyards and other public spaces to foster home grown target industry jobs

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4.4 Summary: Changing Site Requirements, Land Use Patterns and Hybrid Industrial Zones

COVID-19 has forced the business world to incorporate telecommuting into business practices, alongside investment in automation and machine learning. For businesses reliant on low skill, repetitive labor, automation has become more attractive, and adoption costs are dropping. For businesses, whose products are both repetitive and algorithmic, machine learning or artificial intelligence investments may replace labor. While many businesses are not yet prepared to adopt those advanced technologies, innovation will filter through, yet still rely on labor. However, telecommuting has lock-in qualities—once the labor force becomes accustomed to it, its convenience will be a feature of their job search. Some changes may cancel out countervailing trends—the availability of remote workers may offset the need for automation. Considered together with the more far-ranging impacts of e-commerce, Table 9 summarizes the research literature on housing, office and industrial space needs to assess any changes to modeling assumptions in the Long-Range Implications section.

Hybrid Industrial Zones

Deindustrialization, new distribution strategies, and the intensification of customization of products and packaging, are changing the needs of industrial districts. For many cities, mostly the large and older industrial cities, the decline of traditional industrial uses has clashed with policy imperatives to develop new residential opportunities. Residential encroachment into industrial areas and gentrification has accelerated declining industrial use. Several large cities have tried to square the circle of these competing demands by introducing hybrid zones that mesh the needs of residents and industrial use.

While hybrid industrial zones have existed in those larger cities for a decade or more, depending on how they are defined, their evolution has converged on excluding most residential uses, and even only allowing live/work with more than 50 percent of floorspace devoted to work. Light industrial uses must predominate but allowing for a limited range of heavy industrial uses, “specifically beverage manufacturing, fabrication of iron or steel, and other similar uses as long as they are not generating environmental nuisances.”

Live/work offers residents a commute to work in the same building they live in. These types of development often make use of courtyards and other spaces to interact and work in a more office-like setting. Developers have also recognized that repurposing old urban industrial buildings for live/work has been a good investment. In Pasco County, the County Comprehensive Plan does encourage live/work in the South Market area. Live/work may also be appropriate to allow under the Transit Center Overlay.

For Pasco County, the opportunities of a hybrid industrial district may lie in helping developers overcome the limitations of existing development regulations while recognizing that industry itself is evolving, especially away from the most polluting practices associated with heavy industry.

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Improvements in sensor technology and “circular economy” concepts are merging. A potential future step for Pasco County is to assess the degree to which heavy industry uses are as nuisance generating as they once were and consider allowing those uses in new hybrid industrial zones so that the transition between traditionally heavy and now “clean” industries and the more community friendly light industrial uses becomes more seamless. Such an assessment could support code revisions to industrial districts, such as I-1 and I-2, to help lower barriers to growing target industry employment.

Table 9: Assumptions about Future Market Demand for Housing, Office, and Industrial Uses

<table>
<thead>
<tr>
<th>Market</th>
<th>Effect on Building Size</th>
<th>Effect on Parcel Size</th>
<th>Effect on Unit Demand</th>
<th>Locational/Other Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family Housing</td>
<td>Marginal levels of demographic-ladder downsizing, some demand for more space as remote work opportunities grow and home office needs expand</td>
<td>Trend to smaller if higher prices persist</td>
<td>Increase with population growth</td>
<td></td>
</tr>
<tr>
<td>Office Space</td>
<td>Less SF/Employee as there is more open plan space, more remote work.</td>
<td>Unknown; however coworking and hybrid (remote and physical presence) offices may require less parking than traditional offices</td>
<td>Increases from overall employment growth, potential growth in coworking space to accommodate new business formation; existing stock is old</td>
<td>“Edge cities” with 5 million SF of office space near interchanges + amenities. Some industries may downsize as machine learning displaces some workers</td>
</tr>
<tr>
<td>Light Industrial Space (R&amp;D, Manufacturing)</td>
<td>Larger buildings; More specialized labor, more room for equipment, less room for employee amenities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Up to 100,000 SF, ceiling 14-24 ft)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warehouses, Fulfillment and Distribution Centers</td>
<td>Larger footprints in warehouse operations for sorting and mixing. Wider aisles; minimum 30 feet clear heights in order to stack higher; cross-dock facilities and more truck bays.</td>
<td>E-commerce fulfillment Larger footprints with more parking, due to higher employment densities for specialized occupations. May be offset by 24 hour operations.</td>
<td>Existing stock is old and may not meet recent requirements, such as multitenant structures. Some structures can be reused for refilling delivery orders “on the go” Vacant retail space in urban areas may serve niche or rapid fulfillment needs</td>
<td>Lean inventories balanced by high frequency small truck trips</td>
</tr>
<tr>
<td>(100,000 to 1 Million plus SF)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Various (see footnotes in this section). TBRPC literature review.

59 Prediction and Monitoring of Air Pollution Using Internet of Things (IoT) Jiyal, Sarita; Saini, Rakesh Kumar;2020 Sixth International Conference on Parallel, Distributed and Grid Computing (PDGC), Parallel, Distributed and Grid Computing (PDGC), 2020 Sixth International Conference on 2020, pp. 57-60
60 City of Jacksonville Industrial Land Use Study. April 2006.; *IBID.
5. Policy Considerations and Best Practices

Pasco County’s current regulatory framework addresses the County’s needs for industrial land and provides support in retaining those lands for industrial development. While this framework has served to accommodate Pasco’s industrial employment uses to date, the recent wave of comprehensive plan amendments suggests that more must be done to preserve and even expand land that can be used for target industry jobs. In this chapter, TBRPC reviews the existing County regulatory framework to support a more action-oriented and measurable industrial land preservation strategy, as set forth in Chapter 6.

5.1 Existing Regulatory Framework

Pasco County’s 2025 Comprehensive Plan Future Land Use Element and Map defines the locations and ranges of potentially permissible land uses, the ranges of permitted densities and/or intensities of uses, and other data necessary to comply with minimum State requirements. These land use classifications, establish the parameters within which each local government plan must operate. Table 10 denotes the land use classifications in which employment and industrial uses are prioritized.

While a full range of industrial uses can be accommodated in one or more of these categories, a particular proposed use may or may not be allowed in the plan category in which it is proposed to be located. For example, the Employment Center (EC) and Industrial-Light (IL) categories both allow office and warehouse/distribution type uses. On the other hand, retail and public uses are permitted in the EC category but not in the IL category, and research/corporate parks are permitted in the IL category, but not in the EC category.
<table>
<thead>
<tr>
<th>FLUM Category</th>
<th>Intent</th>
<th>Permitted Uses</th>
<th>Intensity and Density</th>
</tr>
</thead>
</table>
| Employment Center (EC)  | To locate higher-intensity target-business uses in compact locations along major roadways and intersections to reduce development pressure in other areas of the County, thereby reducing road congestion and other community impacts associated with sprawl development. | The general range of permitted uses includes corporate business park or targeted primary businesses or industrial uses, multi-family uses, and support commercial/office uses. | 3.0 FAR  
32 du/acre  
25% minimum commercial supporting uses |
| Industrial – Light (IL) | To recognize areas suitable for light-industrial uses or for other uses without objectionable, aesthetic impact and without adverse noise, smoke, dust, vibration, or glare impacts. | Office, light industry, research/corporate parks, and warehouses/distribution. | 0.50 FAR – Industrial Uses  
0.27 FAR – Retail/Commercial Support Uses  
0.50 FAR – Hotels/Motels  
0.00 du/acre |
| Industrial Heavy (IH)   | To recognize areas suited for development of all industrial uses which may have objectionable aesthetics or be associated with adverse noise, smoke, dust, or vibration impacts. | Light industry, heavy industry, mining, ports, and warehouse/distribution. | 0.27 FAR – Retail/Commercial Support Uses  
0.50 FAR – Hotels/Motels  
0.00 du/acre |

Source: Pasco County 2025 Comprehensive Plan
Table 11 identifies policies within the Comprehensive Plan’s Future Land Use (FLU) and Economic Development (ED) elements that are relevant to target industry employment and industrial land designation and retention.

Table 11: Pasco County Comprehensive Plan – Relevant Goals, Objectives, and Policies

**Policy FLU 1.4.7: Limits on Industrial Uses Adjacent to Residential Areas**
Pasco County shall ensure that future Comprehensive Plan amendments to industrial uses adjacent to residential land use categories and/or residentially zoned properties shall be light industrial uses only to protect residences from the adverse impacts of smoke, fumes, vibrations, light, glare, odors, and noise. Access which is limited only to local residential roadways shall be considered unacceptable for heavy industrial uses, notwithstanding applicable access management requirements.

**Policy FLU 1.8.10: Preservation of Capacity for Employment-Generating Uses**
The County shall, through the development review process, ensure that adequate land and transportation capacity is available for present and future high-paying, employment-generating land uses, such as office, industrial, employment center uses.

**Goal FLU 9: Urban Concentration Area**
An Urban Concentration Area which will be the focal point of development in Pasco County creating a live, work, play environment to attract high-quality development. Per FLU 9.1.1, the County’s West and South Market Areas comprise the Urban Concentration Area.

**Objective FLU 9.1: Development Location**
The proportion of overall Pasco County development occurring in the Urban Concentration Area shall be as follows:
- New Residential Development 50 percent
- New Commercial Development 60 percent
- New Office Development 65 percent
- New Industrial Development 65 percent

**Policy ED 1.4.1: Preservation of Key Employment Locations**
Pasco County shall prioritize the land use planning of sites having high visibility and close access to the Suncoast Parkway, I-75, and U.S. 301 for development as employment uses, including target businesses, office development, and industrial development, and shall recognize this priority during the review of plan amendments, rezoning requests, site plan approvals, and permitting processes.

**Policy ED 1.4.4: Limitation on The Conversion of Important Employment Locations**
Pasco County shall recognize the high priority of retaining employment-generating land uses in appropriate and compatible locations within the County and shall recognize this priority during the review of plan amendments, rezoning requests, site plan reviews, and permitting.
processes that involve the conversion of EC (Employment Center) Future Land Use and/or IH (Industrial - Heavy) and IL (Industrial - Light) Future Land Use Classifications to a different use.

**Policy ED 1.4.7: Expedited Permitting**
Pasco County shall employ the use of an expedited review and permitting procedure or other internal processes that may be necessary to assist in site review, permitting, concurrency, inspection of primary targeted businesses, and the expansion/relocation of existing primary targeted businesses.

**Policy ED 1.6.2: Preservation of Capacity for Employment Generating Uses**
Pasco County shall, through the development review process, ensure that adequate land and transportation capacity is available for present and future high-paying, employment-generating land uses, such as office, industrial, and employment center uses.

Source: Pasco County 2025 Comprehensive Plan

**Summary**

While Pasco County’s Comprehensive Plan states the intention to preserve industrial land acreage in accordance with market demand, there is very little policy outlining the methodology with which the County would accomplish this goal. While policy language can provide a precedent for how to manage industrial acreage, a more definitive strategy could provide a clearer picture of the real land use needs throughout unincorporated Pasco County.

The continued conversion of industrial to other land uses suggests that a strategy that both identifies specific industrial land capacity goals and a dynamic metric, or criterion, to assist county officials in communicating where the County is in meeting its target industry and overall job creation goals may be useful. The Jobs for Employed Resident (JER) Ratio, as detailed in Section 3.2.1, is a criterion that both signals progress toward job creation and may have substantive impacts on congestion. The recommended Industrial Land Strategy, described in Chapter 6, utilizes the JER ratio in its implementation.

While this Strategy is primarily concerned with the County’s Future Land Uses and available land for future job growth, TBRPC notes that much of the underlying zoning in EC and IL is comprised of EC-MPUD, instead of Euclidean districts. In TBRPC staff’s experience the prevalence of Planned Developments in Pasco County is unusual and suggests that developers may find some of the development requirements—for example, the 25 percent set aside for commercial supporting uses in EC, burdensome. Planned Developments themselves require significant additional work and add 3-4 months to project development.
5.2 Case Studies

Many jurisdictions have been challenged to address industrial land redesignation and supply constraints. To inform this study’s recommendations, case studies are included profiling industrial policies in Portland, Jacksonville, and Pinellas County. Although the communities differ, the issues are similar and the solutions those jurisdictions have implemented can serve as references for Pasco County officials.

1. **Portland, Oregon**

Like Pasco County, Portland Oregon has an industrial base that is vulnerable to pressure for redevelopment to nonindustrial uses. In response, Portland created a first-of-its-kind “Industrial Sanctuary” comprehensive plan policy in 2001 to preserve and protect industrial lands for long-term use. The policy is stated, in part, in Comprehensive Plan Policy 2.14: “Provide industrial sanctuaries. Encourage the growth of industrial activities in the city by preserving land primarily for manufacturing purposes.”

While industrial sanctuaries as a planning concept are referred to by various names in different jurisdictions, the overarching intention is to exclude or limit commercial and/or residential uses from industrial areas as so to remove nonindustrial conversion pressure from them. The goal is to ensure that industrial uses are not forced out of their current locations by nonindustrial uses that can pay more for land or introduce residents who would complain about the real or perceived negative effects of industry.

Portland has six “employment” zones, of which three are specifically industrial oriented and make up the greater industrial sanctuary for the city:

1. **General Industrial 1 (IG1)** – These areas have smaller lots and a grid block pattern. Sites have high building coverages and buildings which are usually close to the street. IG1 areas tend to be the City’s older industrial areas.

2. **General Industrial 2 (IG2)** – These areas have larger lots and irregular or large block pattern. The areas are less developed with sites having

![Figure 13: Portland Industrial Sanctuary](image-url)
medium and low building coverages and buildings set back from the street.

3. Heavy Industrial (IH) – This zone provides areas where all kinds of industries may locate, including those not desirable in other zones due to their objectionable impacts or appearance. Development standards are the minimum necessary to assure safe, functional, efficient, and environmentally sound development.

The three other employment zones allow for business and commercial uses to support a wide range of services and employment opportunities. These are:

1. General Employment 1 (EG1) - These areas have smaller lots and a grid block pattern.
2. General Employment 2 (EG2) - These areas have larger lots and an irregular or large block pattern.
3. Central Employment (EX) – This is a mixed use zone for center-city areas that have predominantly industrial type development. The intent of the zone is to allow industrial, business, and service uses that need a central location. Residential uses are allowed but are not intended to predominate or set development standards.

In terms of use restrictions, the industrial sanctuary is more stringent, restricting new retail and non-industrial supportive office development, prohibiting most institutional uses, and disallowing residential uses. While the industrial sanctuary rules limit non-industrial uses, the sanctuary loosens development restrictions for industrial uses, designating no height or floor area ratio restrictions for industrial redevelopment. Additionally, the industrial sanctuary establishes “Freight Districts,” providing requirements on street widths and capacity to accommodate truck movement throughout the districts.

To address modern trends in industrial uses, “Employment Opportunity Subarea” overlay zones within the industrial sanctuary permit industrial office space that can support “creative service” businesses such as Internet sales, software design/production, web page design and production, advertising, and video production. This strategy suggests that some types of businesses with both industrial and office characteristics may be more compatible with industrial uses rather than traditional office uses, recognizing that offices with manufacturing or production components have different spatial and economic needs than traditional office uses. Portland chose to encourage such offices in near-downtown industrial zones because these areas contain many older manufacturing structures no longer appropriate for new industrial uses.

2. Jacksonville, Florida

Development pressures in the City of Jacksonville have led to increased comprehensive plan amendments requesting the conversion of industrially designated lands to other uses. Like Portland, Jacksonville’s response to this issue makes use of the industrial sanctuary concept; however, with a variation to accommodate mixed use developments with buffer requirements when deemed necessary.

The Future Land Use Element of the City of Jacksonville 2030 Comprehensive Plan states that “in order to maximize the economic potential of industrial development, and to minimize the adverse impacts on other types of land uses, it is necessary to identify geographic areas suitable for various types of industry based on such factors as the labor force, accessibility to specific modes of transportation, need for expansion, and amenity
factors for the labor force." This policy is implemented through the creation of two industrial preservation overlay zones, delineated on Map L-23 (Figure 14) as the Industrial Sanctuary Overlay Zone and the Area of Situational Compatibility Overlay Zone.

In this context, industrial sanctuaries consist predominately of industrial uses and zoning districts that are strategically located for future expansion and economic development. The purpose of the overlay is to protect and preserve the area from premature fragmentation by intrusive residential and commercial uses and promoting the expansion of industrial uses within the area. Unless there is an adopted neighborhood plan or study recommending the contrary, industrial sanctuary lands cannot be converted to non-industrial land uses. In comparison, Areas of Situational Compatibility may be suitable for industrial uses under certain circumstances. Most notably, the conversion of industrial lands within these areas can only be permitted for construction of mixed-use development consistent with the requirements for job creation. This policy ensures that any conversion of industrial lands result in mixed use developments that can support the city’s industrial base, such as target industry business/office parks.

In addition, buffer requirements are used to discourage conversions of industrial lands and to maintain sufficient buffers between compatible and incompatible land use. The buffer areas may consist of rights-of-ways, passive recreation, underground utilities, off-street parking spaces and parking garages, stormwater retention, landscaping, visual screening, wetlands, and other conservation lands. In Industrial Sanctuaries, proposed commercial developments are subject to buffers of 50 feet for standard commercial areas and 100 feet for commercial-office mixed areas. Residential uses, depending on their density, can be permitted if more stringent buffers are maintained. For example, a 300-foot buffer for single family residential development or a 200-foot buffer for multifamily developments. In Areas of Situational Compatibility, the buffer requirements are less stringent. For example, 100 feet buffers are required for single family residential developments and 50 feet buffers for multifamily developments.

Source: City of Jacksonville, Florida
3. Pinellas County, Florida

Pinellas County is a densely populated county with limited available land for new development countywide. Target employment lands are vital components to attracting and retaining target employers, and historically, pressure has been placed on these lands to convert to other uses. Unlike Portland and Jacksonville, Pinellas County has developed an approach to preserving its target employment lands that does not utilize industrial sanctuaries but instead relies on a comprehensive suitability/conversion criterion.

Pinellas County has three land use classifications directly related to industrial and employment uses: Employment (E), Industrial General (IG), and Target Employment Center (TEC). Each classification identifies permitted primary and secondary uses that support target industries and broaden the range of employment opportunities, locational characteristics, and development standards, many of which are common and overlap across land use classifications. The general distinction between these classifications is that E prioritizes light manufacturing and office spaces, as well as a range of residential uses in appropriate amounts and configurations that support employers but do not compete with them; whereas IG prioritizes heavier industrial uses and only permits accessory residential dwellings. The third land use classification, TEC, is an overlay classification that applies a 100 percent floor area ratio (FAR) bonus to increase the intensity of manufacturing, office, and research/development uses within the underlying plan categories.

The Countywide Plan, created by Forward Pinellas with input from the 25 local governments within Pinellas County, establishes general rules for land uses and includes a Countywide Plan Map designating where certain types of development can occur within the county. Local governments are required to maintain future land use plans and maps that are consistent with the Countywide Plan. The Pinellas Countywide Plan Strategy Map (Figure 15) directs higher-density redevelopment into a network of transit-oriented centers and corridors, preserving land needed to support employment and limiting growth in areas vulnerable to coastal flooding. In Pinellas County, development rights may be transferred from areas designated for preservation or natural resource management to other locations throughout the County. To support industrial land preservation, the development rights of

Figure 15: Pinellas Countywide Plan Strategy Map

Source: Forward Pinellas Countywide Plan
natural preservation areas can transfer to lands more suitable for employment generating uses, for example, to appropriate activity centers and transportation corridors identified on the Countywide Plan Strategy Map.

Plan Pinellas, Pinellas County’s 2022 Comprehensive Plan draft update, requires a variety of factors be taken consideration in requests for land conversion, including potential site and locational advantages, how the property fits into the broader transportation and infrastructure system, whether it is included within previous plans, what unique features may affect the property, and how the proposed development may impact the local economy through the number and types of jobs and wages that will be created. Future Land Use Strategy 4.1.2.1, included below, will guide staff when making recommendations to approve or deny planning application requests:

- **Site Characteristics:** the size, configuration, and physical characteristics of the site, including potential for expansion or consolidation with adjoining properties, in relationship to its potential utility to support employment opportunities.

- **Locational Characteristics:** the location of the property in relationship to adjoining similarly classified property, its compatibility with adjoining and nearby uses and plan classifications that would be similar to or serve the site, and any adjoining residential or incompatible use or plan category.

- **Transportation and Infrastructure Features:** the location of the property in relationship to arterial and major highways, public transit, airport, and rail access, as well as other infrastructure and service facilities, including water, sewer, stormwater, solid waste, and parking, and their respective capacities.

- **Unique Features:** whether the property is now, or is proposed to be, used for unique and high-priority functions such as water-dependent, working waterfront, runway access, and transit-oriented uses.

- **Contribution to the Economy:** the number and type of jobs, and corresponding wage scale(s), to be provided within the proposed plan designations as compared to those now provided, or potentially available, within the existing plan category.

- **Redevelopment Plans:** whether the property is included as part of a special area plan or other community plan that has evaluated and addressed the effect on the number and type of jobs and wage scale of persons to be employed in the redevelopment area proposed to be reclassified;

- **Related Comprehensive Plan Policies:** whether the amendment furthers key policies of the comprehensive planning process, consistent with the County’s Comprehensive Plan, to enhance the manufacturing, high-tech and targeted industry employment base.
Summary

The case studies provided illustrate a variety of approaches to industrial land preservation:

1. In Portland, the industrial sanctuary presents a clear strategy for the protection and expansion of industrial uses, restricting non-industrial uses and loosening development restrictions for height and floor area ratio for within sanctuary zones.

2. In Jacksonville, a similar approach is taken with a variation to accommodate hybrid live-work developments, where the conversion of industrial lands within “Areas of Situational Compatibility” can only be permitted for construction of mixed use development consistent with the requirements for job creation, and residential development is permitted with appropriate buffers to maintain compatibility between uses.

3. In Pinellas, a densely populate and largely built-out county, mixed use development is common across industrial zones, intensity bonuses and transfer of development rights are used to incentivize industrial uses and accommodate more jobs on less lands, and land use decisions are made in alignment with a Future Transit Investment Corridor framework.

Overall, in every community, the decision of where and how to preserve or convert industrial lands must balance criteria related to many factors, both from a local and county-wide perspective. In Pasco County, competition for residential uses, rather than spatial limitations, is driving the present need for industrial land preservation. Residential development is less time-intensive and risky when compared to the coordination needed to maintain investment interests during land assembly. There is a diversity of needs for employment generating lands throughout Pasco County, and some areas are more suitable than others. Pasco County should consider a variety of factors (Figure 16) in decision making and apply one, or a combination, of the strategies outlined in Chapter 6 where most applicable.

Figure 16: Factors Influencing Industrial Land Retention and Conversion

<table>
<thead>
<tr>
<th>Economy</th>
<th>Transportation</th>
<th>Adequacy of supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clusters of existing developed EC and IL</td>
<td>Proximity to distribution centers, existing truck routes, proximity to multimodal commuter options</td>
<td>Low vacancy rates for industrial buildings</td>
</tr>
<tr>
<td>Non-viable parcels due to size, shape, or isolation</td>
<td>Proximity to transit, but not major truck route</td>
<td>High vacancy rates for industrial in obsolete buildings</td>
</tr>
<tr>
<td>Brownfield site, remediation infeasible</td>
<td>Environmental nuisances</td>
<td></td>
</tr>
</tbody>
</table>
6. An Industrial Land Strategy for Pasco: A Summary and Recommended Actions

Economic growth in average wages, total gain in wages, the County’s total value of produced goods and services, and many other factors do not depend upon any one land use decision. Market conditions, entrepreneurship and public sector investment will drive the Pasco economy and job creation while the availability of land for those jobs extends the range of possibilities for future economic growth. Pasco County can improve average wages, provide enough jobs for working residents, and even reduce commuting distances relative to metropolitan average commuting distances, with overall employment gains and a higher share of target jobs in the economy by refining its existing policies and adopting specific and realistic goalposts.

By setting aside enough land for target industries to grow, the high employment multipliers of those industries will help to create new jobs throughout Pasco County in all the most important industry sectors. In addition to those jobs created by the background spending activity of households and businesses, new target industry jobs will help to close the employment gap to reach a job per employed resident goal. In other words, setting aside enough land for target industries is a necessary condition to increase overall employment.

Of course, land allocated to industrial use is highly dependent on locational factors—to intermodal facilities, to industry specific needs, such as connections to high voltage service between substations for steel mills, or access to potable water in the case of food processing. Access to labor, in highly skilled jobs, or to markets through large distribution centers can place minimum parcel size thresholds and determine locational priorities which can further limit where any target industry may locate. At the same time, fences are not always enough to make good neighbors of abutting incompatible uses, such as single-family homes and any industry nuisances. As identified in this Strategy, there are relatively few adequately sized EC or IL parcels for large scale target industry development in the right places.

In the preceding analysis, TBRPC identified the following issues:

- With more than 8,300 acres of developable land suited for target industry growth, Pasco County does have significant space for job growth; however
- Trends driving innovation in logistics are tailwinds propelling industry demand for larger sites; and
- the Pattern of EC and IL Future Land Uses is both scattered across the County and highly fragmented, with half of buildable parcels under 1.5 acres; suggesting that
- While a significant share of future job growth may be absorbed in projects developed on relatively small parcels, the availability of large parcels for corporate business or industrial parks for long-term job growth may not be sufficient to support job growth goals;

Achieving the specific goals of one job per employed resident with one of every six jobs in a target industry is both reasonable and can be partly facilitated through land use policy.62 As this strategy is focused on the land use components of these proposed Goals, the following strategies are

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62 One in four jobs in both Hillsborough County and Pinellas County fall into the industries Pasco County has identified as target industries. REMI 2.5.
focused on using the Future Land Use designations of Employment Center (EC) and Industrial-Light (IL) as tools to expand target industry employment. Accordingly, the Goals and Policies in this section consist of recommendations for increasing and preserving the County’s inventory of land suitable for target industry jobs.

Areas of Interest

Areas of Interest (AOIs) delineate areas that are appropriate for further analysis as potential future industrial sanctuary overlay zones in Pasco County. TBRPC has selected those areas within the County that follow major truck routes and freight rail lines and that are proximate to existing clusters of industrial land—IH, IL, or EC. Non-industrial uses within those Industrial Sanctuary areas would continue as conforming uses as allowed under their existing zoning; a future Industrial Sanctuary overlay would impose conditions on any proposed redesignation to or expansion of non-industrial uses. TBRPC does not suggest that all the land within the AOIs become part of an industrial sanctuary; instead TBRPC recommends that the County consider these areas as a starting point.

From Findings to Actions

TBRPC recommends that Pasco County explore the means to
  • Align the supply of industrial land with the land use needs associated with achieving a balance of jobs to employed residents
  • Adopt land development regulations that consider the spatial needs of target industries; with fine tuning of County regulations, Pasco County may cut development costs and timeframes by 3-to-5 months\(^6\)3
  • Increase the availability of large sites through land use amendments and consolidation of clustered smaller parcels of EC and IL, or support redesignation of smaller isolated parcels

TBRPC has developed a recommended Goal, Objectives, and Strategies, as described in Section 6.1, to advance County action on those findings.

\(^6\)3 Per discussions with County staff. Dependence upon the process for planned unit development for target industry projects extends the entitlement process phase of development. Flexible zoning and land use with clear standards lower transaction costs for developers.
6.1 Recommended Strategy Actions

**GOAL**: MAINTAIN ENOUGH INDUSTRIAL LAND TO SUPPORT A JOBS TO EMPLOYED RESIDENTS RATIO OF 1:1, WITH ONE OF EVERY FOUR JOBS IN A TARGET INDUSTRY

**Objective 6.1**: Adopt a No Net Loss of Target Industry Supporting Land Strategy

- **Strategy 6.1.1**: Adopt a No Net Loss of Target Industry Absorption Capacity resolution to formalize No Net Loss as County policy
- **Strategy 6.1.2**: Provide an annual update to the Board of County Commissioners on the remaining inventory of EC and IL designated land

**Objective 6.2**: Establish an Industrial Sanctuary Overlay Zone for designated areas on the County’s Future Land Use Map

- **Strategy 6.2.1**: Identify clusters of EC and IL properties that can support the development of office parks and industrial parks and include them in an Industrial Sanctuary Overlay Zone. The purpose of the Industrial Sanctuary Overlay Zone shall be to preserve the Future Land Use designations of land currently designated as EC or IL and to maintain the combined total of available EC and IL acreage through County or property owner initiated comprehensive plan amendments. The Overlay Zone boundaries will be based on centerline buffers of established truck routes or rail corridors with existing concentrations of EC and IL land, as shown in the Areas of Interest in the Suitability Analysis in this report, to identify and protect potential sites for future EC and IL

- **Strategy 6.2.2**: Limit Conversions of EC and IL designated land within the Overlay Zone, stipulating that:
  1. Any requests to redesignate 10 acres or more of EC and IL land must be to Mixed Use, allowing IL or EC permitted uses and for those non-employment uses to comprise no more than half of the buildable area and exclude all single-family residential
  2. Eliminate small scale amendment process for existing IL or EC FLUs

**Objective 6.3**: Consolidate Isolated and Undevelopable Industrial Parcels or Redesignate to Other Uses in the Public Interest

- **Strategy 6.3.1**: Support landowner requests to redesignate IL or EC parcels that are isolated by more than a mile distance from other IL or EC parcels or that are non-viable as target industry uses due to size, adjacent incompatible uses such as residential uses and places of public assembly, or environmental constraints

- **Strategy 6.3.2**: Assemble adjacent small IL and EC parcels into larger sites, to be marketed as potentially viable industrial land
Objective 6.4: Amend Regulations to Incentivize Future Target Industry Development Throughout the Unincorporated County

Strategy 6.4.1: Review and redesign existing policies that may be obstacles to future target industry job creation

1. Evaluate broadening permitted uses in mixed-use/commercial districts to promote target industry job growth and process permit applications through administrative rather than legislative means, such as plan amendments
2. Offer increased FAR (50 to 100 percent) to target industry developers within the Overlay Zone
3. Amend Pasco County Land Development Code Section 522.8, EC-MPUD standards to eliminate minimum requirements for support commercial/office uses
4. Amend Future Land Use Strategy 10.3: Transit Center Overlay to allow work/live Mixed-Use projects
5. Assess the potential for a flex industrial Future Land Use designation and corresponding zoning district, that is between IL/I-1 and IH/I-2 in intensity of allowed uses, that can be more accommodating to corporate business parks or qualified target industries, with a minimum of 50-acre sites
6. Assess the potential for development rights to be transferred from flood hazardous areas and areas designated for preservation or natural resource management to other locations more suitable for employment generating uses throughout the County

Objective 6.5: Incentivize Redevelopment of Declining Industrial Sites

Strategy 6.5.1: Adopt a Redevelopment Incentive Program

1. Identify potential redevelopment sites using GIS analysis of underutilized properties, focusing on sites that can be assembled into redevelopment opportunities
2. Consider incentives such as permit and fee grants, assistance with identifying contaminated sites, building demolition assistance, exterior and interior building improvement matching grant program funded by tax increment financing or other County sources. Sites that have a Brownfield Site Redevelopment Agreement with the Department of Environmental Protection may qualify for job creation incentives.

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64 Hillsborough County a redevelopment incentive program. Some details are here: hillsboroughcounty.org/library/hillsborough/media-center/documents/economic-development/targeted-redevelopment-area-maps/redevelopment-faq.pdf
65 flgov.com/financial-incentives/
6.2 Tentative Suitability Analysis

Complex spatial problems, such as land use decisions, typically involve a large set of feasible alternatives and multiple, conflicting, and incommensurate evaluation criteria. Increasingly, decisions involving multiple criteria are analyzed using layered perspectives of physical, economic, and demographic considerations within a Geographic Information Systems (GIS). Professional practice calls this a Suitability Analysis.

TBRPC has produced a tentative suitability analysis of “Areas of Interest” (AOI) in four different areas of Pasco County that could support future land use amendments from a non-conservation Future Land Use designation to either EC or IL, or to a new designation. For this report, TBRPC has selected just two major criteria for weighing the location of these Areas of Interest, proximity to existing clusters of IL and EC, and along an established truck route or freight rail corridor, along which a thousand-foot buffer has been generated along the centerline of each applicable centerline. Figure 17 depicts the location of each Area of Interest, and Appendix 3 contains detailed maps of each Area of Interest.

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Figure 17: EC/IL Expansion Area of Interest (AOI) in Pasco County
Appendix 1: Economic Impact Methodologies

7a.1. Definitions and Methodology

Definitions

**Pasco County Target Industries:** Pasco County Economic Development Council (Pasco EDC) recognizes six sectors as Target Industries, which forms the focus of this study’s employment impacts. These industries include:

1. Advanced Manufacturing
2. Aerospace, Aviation, & Defense
3. Business & Professional Services
4. High Technology
5. Life Sciences & Medical Technology
6. Logistics and Distribution

This list of industries informed a narrowing down of focus into certain NAICS codes in the REMI Model. These industries are sometimes presented collectively in the following results section as ‘Target Industries.’

**Jobs-Employed Resident Ratio (JER ratio):** The JER ratio represents the number of employed residents of a county as compared to the number of jobs in the geographic area of the county. A ratio of less than one indicates that residents are net out-commuters, while a ratio of higher than one indicates that there are in-commuters supporting a region’s total employment level. This serves as a useful measure of the robustness of an area’s economy compared to its population level.

**Job-years:** The REMI model produces employment levels in terms of job-years, rather than individuals employed. A job-year is one person being employed at a position for one-year. This is usually equivalent to employment but can obscure minute employment details. For example, one person employed in a particular industry for ten years would appear in the results the same as ten different individuals working in that same industry for one-year periods.

**Low, Middle, and High Wage Jobs:** All industries in each simulation have a reported average annual wage rate which was used to classify each of them. Low-wage jobs are defined by employees in that industry receiving less than two-thirds of Pasco County’s average annual wage. High-wage jobs are defined as earning in the top one-third of incomes. Middle-wage jobs are those whose average annual wages fall between these two categories.
Methodology

Staff collected population, employment, land use, wage, and other relevant economic and demographic information on Pasco County. Using this data, staff performed several transformations and calculations to prepare the scenarios for entry into the modeling software.

First, staff determined industrial land acreage to create the impacts for residential unit construction in the rezoning scenario. Secondly, staff calculated employment impacts based on the Jobs-Employment (JER) ratio as it stands, as it would be if Pasco County maintained its 2020 JER levels and if it were to reach a ratio of one by 2050. Finally, staff distributed these impacts over time following expected growth rates to reach targets, and construction impacts were combined with the employment impacts for the first two scenarios.

Additionally, the ‘Professional, scientific, and technical services’ industry’s share of employment was separated out to perform an upwards adjustment on average wages. It is a broad industry that represents about 47 percent of all Target Industry employment in Pasco County, but the industry’s REMI default average annual wage was noticeably lower than expected. The wage rate was lower than the average median wage rate for the County, likely lowered by lower wage administrative staff being grouped in with high wage technical staff. Given the threshold for QTI is minimum 115 percent (115%) of the average wage staff adjusted this industry as an input. In the REMI model, staff adjusted the industry such that jobs added in future years would be paid the State of Florida’s average annual wage for professional, scientific, and technical service jobs.

These employment and construction impacts for each scenario served as Policy Variables in TBRPC’s REMI PI+ Model of the Tampa Bay region. Taking these direct impacts, the modeling software produced impacts in the form of differences from the baseline Pasco County projection to 2060. Staff presents the REMI result data in curated tables and created charts and figures below. REMI models are widely used economic impact software and are a common aspect of economic impact studies in the State of Florida. See Figure 18 for a general equation structure of REMI PI+. Fiscal impacts were generated through the REMI PI+ model by adjusting optimal and actual capital stock for property tax impacts, and by applying results from percentage changes to consumer spending and fitting those results to a regression model that predicts sales tax impacts. Those impacts were cross-checked with IMPLAN to refine estimates.
Figure 18: REMI PI+ Model Equation Five-Block Structure
Appendix 2: Geographic Information Systems (GIS) Methodologies

Constraint Analysis

**GIS Methodology for Unincorporated Pasco County:**

1. Where are the planned lands for industrial uses?
   a. Erase incorporated areas from the County boundary to create a layer for unincorporated Pasco County.
   b. Add Parcel Data from the Property Appraiser (PA) to utilize parcel boundaries and metadata from the PA.
   c. Add Future Land Use Map (FLUM) land use categories layer, noting the distribution of EC, IL, and IH designated lands.
      i. Calculate total acres of EC, IL, and IH designated areas.

<table>
<thead>
<tr>
<th>FLUM Category for County</th>
<th>Permitted Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment Center (EC)</td>
<td>The general range of permitted uses includes retail, office, service, light industrial, warehouse/distribution, and public. No minimum land area restrictions apply.</td>
</tr>
<tr>
<td>Industrial – Light (IL)</td>
<td>Office, light industry, research/corporate parks, and warehouses/distribution.</td>
</tr>
<tr>
<td>Industrial – Heavy (IH)</td>
<td>Light industry, heavy industry, mining, ports, and warehouse/distribution. Other retail/commercial support uses such as restaurants, banks, dry cleaners, and service stations. Day-care centers and hotels/motels are not permitted in IH (Industrial - Heavy). Other retail/commercial support uses shall be limited to fifteen (15) percent of the net project acreage.</td>
</tr>
</tbody>
</table>
2. Of those lands, are there any environmental constraints?
   a. Add environmental constraint layers:

<table>
<thead>
<tr>
<th>Layers</th>
<th>Data Source</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right-of-Ways</td>
<td>Pasco County GIS</td>
<td>Transportation Right-of-Ways</td>
</tr>
<tr>
<td>Conservation Lands</td>
<td>Pasco FLUM</td>
<td>Open space, passive nature parks, selected agricultural activities, accessory structures.</td>
</tr>
<tr>
<td>Category 1 Wetlands \ buffered by 25'</td>
<td>Pasco FLUM/ SWFWMD</td>
<td>The wetlands designation on the land cover and designation maps published by the Southwest Florida Water Management District and the wetland/lake overlay on the Future Land Use Map (Map 2-5, Wetlands [Southwest Florida Water Management District]) shall serve as a conceptual indicator of rivers, bays, lakes, wetlands, and estuarine marshes. The precise delineation of these areas shall be determined through site-specific studies and field determinations during the development review process.</td>
</tr>
<tr>
<td>Coastal High Hazard Area</td>
<td>Pasco County GIS</td>
<td>The area below the elevation of a Category 1 storm surge line as established by a Sea, Lakes, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model</td>
</tr>
<tr>
<td>Parcels less than 15k square feet in size</td>
<td>Pasco County Property Appraiser</td>
<td>&lt;15k square feet indicate the parcel may be too small to develop</td>
</tr>
</tbody>
</table>

   b. Merge environmental constraint layers into one layer.
   c. Erase resulting layer from the Pasco unincorporated area layer.
   d. Intersect resulting layer with the FLUM designations layer.
   e. Result = new layer of environmentally unconstrained lands aka “buildable” by FLUM category.
      i. Calculate total acres of buildable lands for EC, IL, and IH designated areas.
3. Of what is buildable, what is available (aka vacant)?

Property Appraisal Vacancy (as of February 8, 2022):
   a. Select vacant lands by attributes (prop use = vacant commercial, vacant industrial, agricultural).
   b. Create new layer with selection.
   c. Intersect new layer with the buildable lands layer from step 2E.
   d. Result = new layer of environmentally unconstrained aka “buildable” lands by FLUM category that are also vacant aka “available.”
      i. Calculate total acres of buildable and available lands for EC, IL, and IH designated areas.

Table 12: Buildable and Vacant Industrial/Employment Center (IL and EC) Lands for Pasco County Unincorporated

<table>
<thead>
<tr>
<th>Pasco County Unincorporated</th>
<th>Total Lands (Results of Part 1)</th>
<th>Buildable Lands (Results of Part 2)</th>
<th>Buildable and Available Lands (Results of Part 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acres</td>
<td>Square Feet</td>
<td>Acres</td>
</tr>
<tr>
<td>FLUM Categories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial-Light</td>
<td>4,369</td>
<td>190,291,860</td>
<td>3,590</td>
</tr>
<tr>
<td>Employment Center</td>
<td>5,683</td>
<td>247,542,768</td>
<td>5,196</td>
</tr>
<tr>
<td>Total</td>
<td>11,656</td>
<td>507,722,292</td>
<td>9,884</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Lands within EC or IL</td>
<td>4,581</td>
<td>199,560,432</td>
<td>4,255</td>
</tr>
<tr>
<td>AG FLUM within Ready Sites</td>
<td>1,802</td>
<td>78,507,181</td>
<td>1,792</td>
</tr>
<tr>
<td>Total of Existing EC/IL and Ready Sites</td>
<td>18,039</td>
<td>785,789,905</td>
<td>15,931</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tentatively Suitable Agriculture Inventory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
GIS Methodology for Municipalities:

The process above was repeated a slight variation to calculate the results for the municipal areas. To apply a consistent methodology across all municipalities, the Property Appraiser use codes were analyzed instead of each municipality’s FLUM data.

1. Where are the planned lands for industrial uses?
   a. Select incorporated areas from the County boundary to create layers for each municipality in Pasco County.
   b. Add Parcel Data from the Property Appraiser to utilize parcel boundaries and metadata from the PA.
   c. Aggregate the PA land use codes to create simple categories of industrial and commercial land use codes for each municipality, noting the distribution of such lands.
      i. Calculate total acres of industrial and commercial designated areas by municipality.

   \[
   \text{Aggregate of Land Use Codes} \\
   \begin{array}{|c|} 
   \hline
   \text{Industrial} & \text{Includes} \\
   \hline
   \text{Wholesaler, Light Manufacturing, Heavy Manufacturing, Lumber Yard/Mill, Mineral Processing,} \\
   \text{Warehouse/Distribution Term, Open Storage, Vacant Industrial} \\
   \hline
   \text{Commercial} & \text{Includes} \\
   \hline
   \text{Stores, Store/Off/Res, Dept Store, Supermarket, Shopping Center Regional, Shopping Center Community,} \\
   \text{Restaurant, Rest Drive-In, Service Shops, Serv Stations, Auto Sales, Pkg Lot (Comm), Florist, Drive-In Theater,} \\
   \text{Theater, Night Clubs, Bowling Alley, Tourist Attraction, Motel, Vacant Commercial} \\
   \hline
   \end{array}
   \]

2. Of those lands, are there any environmental constraints?
   a. Add environmental constraint layers (as defined previously).
   b. Merge environmental constraint layers into one layer.
   c. Erase resulting layer from the municipality boundary layers.
   d. Intersect resulting layers with the PA land use codes.
   e. Result = new layers of environmentally unconstrained lands aka “buildable” by PA land use code.
      ii. Calculate total acres of buildable lands for industrial and commercial land use code aggregate areas by municipality.

Now we know what is buildable, but we still need to know if it is available.
4. Of what is buildable, what is available (aka vacant)?

Property Appraisal Vacancy (as of February 8, 2022):
   a. Select vacant lands by attributes (prop use = vacant 0000, vacant commercial, vacant industrial).
   b. Create new layer with selection.
   c. Intersect new layer with the buildable lands layers from step 2E.
   d. Result = new layer of environmentally unconstrained aka “buildable” lands by industrial and commercial land use code aggregate areas that are also vacant aka “available.”
      i. Calculate total acres of buildable and available lands for industrial and commercial land use code aggregate areas by municipality.
### Table 13: Total Lands for the Municipalities within Pasco County

<table>
<thead>
<tr>
<th>Property Appraiser Land Use Codes (Aggregated)</th>
<th>Total Lands (Results of Part 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Commercial</td>
</tr>
<tr>
<td></td>
<td>Acres</td>
</tr>
<tr>
<td>Town of Saint Leo</td>
<td>105</td>
</tr>
<tr>
<td>Zephyrhills</td>
<td>528</td>
</tr>
<tr>
<td>San Antonio</td>
<td>30</td>
</tr>
<tr>
<td>Port Richey</td>
<td>158</td>
</tr>
<tr>
<td>New Port Richey</td>
<td>196</td>
</tr>
<tr>
<td>Dade City</td>
<td>318</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,334</td>
</tr>
</tbody>
</table>
Table 14: Buildable Lands for the Municipalities within Pasco County

<table>
<thead>
<tr>
<th>Property Appraiser Land Use Codes (Aggregated)</th>
<th>Buildable Lands (Results of Part 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Commercial</td>
</tr>
<tr>
<td>Municipality</td>
<td>Acres</td>
</tr>
<tr>
<td>Town of Saint Leo</td>
<td>104</td>
</tr>
<tr>
<td>Zephyrhills</td>
<td>458</td>
</tr>
<tr>
<td>San Antonio</td>
<td>26</td>
</tr>
<tr>
<td>Port Richey</td>
<td>63</td>
</tr>
<tr>
<td>New Port Richey</td>
<td>77</td>
</tr>
<tr>
<td>Dade City</td>
<td>291</td>
</tr>
<tr>
<td>Total</td>
<td>1,019</td>
</tr>
</tbody>
</table>

Table 15: Buildable and Available Lands for the Municipalities within Pasco County

<table>
<thead>
<tr>
<th>Property Appraiser Land Use Codes (Aggregated)</th>
<th>Buildable and Available Lands (Results of Part 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Commercial</td>
</tr>
<tr>
<td>Municipality</td>
<td>Acres</td>
</tr>
<tr>
<td>Town of Saint Leo</td>
<td>53</td>
</tr>
<tr>
<td>Zephyrhills</td>
<td>109</td>
</tr>
<tr>
<td>San Antonio</td>
<td>11</td>
</tr>
</tbody>
</table>
## An Industrial Land Strategy for Pasco County

<table>
<thead>
<tr>
<th></th>
<th>4</th>
<th>167,238</th>
<th>0</th>
<th>18,040</th>
<th>-</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Richey</td>
<td>22</td>
<td>967,432</td>
<td>2</td>
<td>76,410</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>New Port Richey</td>
<td>127</td>
<td>5,530,539</td>
<td>1</td>
<td>41,639</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dade City</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>326</td>
<td>14,197,317</td>
<td>71</td>
<td>3,094,096</td>
<td>165</td>
<td>7,195,175</td>
</tr>
</tbody>
</table>
Appendix 3: Suitability Areas of Interest Maps

TBRPC identified four highly generalized areas in Pasco County that may warrant further study to consolidate existing EC or IL, or to add either. In this section, each Area of Interest (AOI) is identified and shown in the accompanying maps.

Figure 19: Areas of Interest (AOI) Map Key
Figure 19: AOI 1, Countyline Rd and SR 41
Figure 20: AOI 2, Greenfield at CR 42
Figure 21: AOI 3, SR 52 and Suncoast Parkway
Figure 22: AOI 4, SR 54 and Suncoast
Figure 23: AOI 5, Wesley Chapel and I-75
Figure 24: AOI 6, SR 52 and I-75
Figure 25: AOI 7, Horseshoe Lake
Figure 26: AOI 8, US 98
Figure 27: AOI 9, Zephyrhills
Figure 29: AOI 10, Mud Lake
Appendix 4: Current Economic Development Tools

The State of Florida and Pasco County offer several economic development incentives to encourage the relocation, expansion, and retention of qualified businesses. A brief description of these programs is outlined in this section to provide a more complete understanding of the kinds of financial tools that can be brought to bear and where there may be gaps or opportunities for additional techniques, as described in Chapter 6.

State of Florida Targeted Industry Incentives

1. Qualified Defense and Space Contractor Tax Refund (QDSC)

Pre-approved applicants creating or retaining defense, homeland security, and space business industry jobs in Florida may receive tax refunds of $3,000 per net new Florida full-time equivalent job created or retained; $6,000 in an Enterprise Zone or rural county. For businesses paying 150 percent of the average annual wage, add $1,000 per job; for businesses paying 200 percent of the average annual salary, add $2,000 per job.

2. Capital Investment Tax Credit (CITC)

The Capital Investment Tax Credit is used to attract and grow capital-intensive industries in Florida. It is an annual credit, provided for up to twenty years, against the corporate income tax. Eligible projects are those in designated high-impact portions of the following sectors: clean energy, biomedical technology, financial services, information technology, silicon technology, transportation equipment manufacturing, or be a corporate headquarters facility. Projects must also create a minimum of 100 jobs and invest at least $25 million in eligible capital costs.

3. High Impact Performance Incentive Grant (HIPI)

The High Impact Performance Incentive is a negotiated grant used to attract and grow major high impact facilities in Florida. Grants are provided to pre-approved applicants in certain high-impact sectors designated by the Governor’s Office of Tourism, Trade and Economic Development (OTTED). In order to participate in the program, the project must: operate within designated high-impact portions of the following sectors-- clean energy, corporate headquarters, financial services, life sciences, semiconductors, and transportation equipment manufacturing; create at least 50 new full-time equivalent jobs (if a R&D facility, create at least 25 new full-time equivalent jobs) in Florida in a three-year period; and make a cumulative investment in the state of at least $50 million (if a R&D facility, make a cumulative investment of at least $25 million) in a three-year period. Once recommended by Enterprise Florida, Inc. (EFI) and approved by OTTED, the high impact business is awarded 50 percent of the eligible grant upon commencement of operations and the balance of the awarded grant once full employment and capital investment goals are met.
Pasco County Incentives

1. **Job Creation Incentive (JCI) Funding Program**

   Pasco County’s Job Creation Incentive Funding Program supports businesses interested to relocate or expand within the County by offering direct cash payments. To be eligible, the County requires that a business either be a Qualified Target Industry firm, or a Primary Target Industry firm, or both. A Qualified Target Industry encompasses businesses serving a multi-state or international market that creates jobs with wages greater than the annual average wage of Pasco County. A Primary Target Industry must sell at least 51 percent of its products or services outside of Pasco County, while paying its employees at least 115 percent of the Pasco County average annual wage. The project must result in a minimum of 10 new, full-time, jobs (W-2) in Pasco County within one year of the project completion. This award can be used in addition to any qualifying State program.

2. **Ready Sites and Shells Building Loan Program**

   Additionally, the County has entered into agreements with private developers to preemptively develop sites and structures in their Ready Sites and Shells Building Loan Program. This program exists to make land ready-to-use faster for businesses hoping to move into the area.

3. **Penny for Pasco**

   In 2012, Pasco County residents approved a $0.01 sales tax increase with a portion earmarked specifically for economic development programs. Estimated to generate $56 million over 10 years, monies can be used for business park development, infrastructure, permitting, speculative building construction, and land assembly.

4. **Ad Valorem/Tangible Tax Reimbursement**

   The Board of County Commissioners has recently extended the Ad Valorem and Tangible Tax Reimbursement periods for certain qualified economic development projects.
5. **Transportation Mobility Impact Fee Waiver**

If the business creates jobs with wages at even higher levels, than the incentive increases per-job at certain thresholds. The 2021 average personal income per Capita for Pasco County is $40,248\(^67\). Pasco County waives Mobility Fees (previously referred to as Impact Fees) that are usually charged to new development to cover off-site infrastructure and transportation costs.

6. **Streamlined Governmental Review and Approvals**

Pasco County will streamline governmental review and approval of building permits for new construction of office and industrial buildings. Incentives include Rapid Response Team, expedited permitting and processing, and building permit fee waivers.

7. **Community Contribution Tax Credit Program**

The Community Contribution Tax Credit Program provides a financial incentive (up to 50 percent tax credit or sales tax refund) to encourage Florida businesses to make donations toward community development and housing projects for low-income persons. Businesses located anywhere in Florida that make donations to approved community development projects may receive a tax credit of up to 50 percent of the value of the donation. Businesses may take the credit on Florida corporate income tax, insurance premium tax or as a refund against sales tax (for businesses registered to collect and remit sales taxes with the Department of Revenue).

8. **Pasco County Opportunity Zones**

Opportunity Zones provide a tax incentive for investors to re-invest their unrealized capital gains into dedicated Opportunity Zones located in Pasco County. Qualified Opportunity Zone Funds, which consist of funds generated by investor capital gains, are available to fund development within the County’s Opportunity Zones.

**Workforce Training Programs**

1. **Quick Response Training (QRT) Program**

Quick Response Training\(^68\), driven by employer needs and in partnership with a state educational facility is a grant program offered by the County to facilitate necessary training for business expansion.

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\(^{67}\) Enterprise Florida, State of Florida Incentives Average Wage Requirements

\(^{68}\) careersourceflorida.com/business-services/training-grants/
2. **Incumbent Worker Training (IWT) Program**

   Incumbent Worker Training is a grant program for workforce training for Florida businesses that have been established for at least one year with a focus on providing grants to target industries and distressed areas.

3. **Employed Worker Training (EWT) Program**

   The Employed Worker Training program provides grants to businesses operating in Florida for at least one year, to provide customized training. Up to half of the eligible training costs can be reimbursed through this County program.

4. **Veterans Florida Business Training Grant**

   The Veterans Florida Business Training Grant is available to Florida businesses seeking to train and hire military veterans. The program helps businesses meet workforce demands in a competitive environment by facilitating access to training and education in high-demand fields for veterans through matching training grants up to $8,000 per veteran employee trained.

5. **Penny for Pasco Workforce Training Grant**

   The 2012 Penny for Pasco sales tax referendum allocates a portion of those funds to provide workforce training.