TRANSIT ORIENTED DEVELOPMENT

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I. Introduction:

Transit-oriented development is a strategy of community planning and development that orients mixed-use commercial and residential zoning all while trying to achieve a walkable neighborhood.\(^1\) Neighborhoods are located around public transportation. The overall goal of transit-oriented development (TOD) is to prioritize land use; while encouraging and facilitating people to use public transportation.\(^2\) TOD planning involves medium to high-density buildings around public transportation, which helps combat the problem of sprawl.\(^3\) Although there is no consensus on what constitutes TOD, generally TOD is thought of as a strategy of planning that allows residents to live and walk within a high-density area that is usually within a ten-minute walk and about a mile away from a public transportation stop.\(^4\) TOD can involve the construction or redevelopment of buildings whose design and location facilitate transit use.\(^5\) One of the main purposes of TOD is to provide communities with alternative means of transportation, rather than just relying on automobile dependency.\(^6\) With less automobile dependency

\(^1\) Reconnecting America, What is TOD, (2016), http://reconnectingamerica.org/what-we-do/what-is-tod
\(^2\) Id; See also, Matthew G. Jewitt, NOTE: ENCOURAGING TRANSPORTATION-ORIENTED DEVELOPMENT IN THE UNITED STATES: A CASE FOR UTILIZING "EARNED-AS-OF-LOCATION" CREDITS TO PROMOTE STRATEGIC ECONOMIC DEVELOPMENT, 57 Wm. & Mary L. Rev. 1949, 1953-54, (2016).
\(^4\) See, Reconnecting America supra note 1; See also, Transit Oriented Development Institute, (2016), http://www.tod.org
\(^5\) Id.
\(^6\) Jewitt, supra note 2 at 1954.
citizens of a TOD community are able to live lower-stress lives because they no longer have to rely solely on automobiles for mobility.\textsuperscript{7} Another main component of TOD communities is the ability of pedestrians to walk many places, cutting out carbon emissions altogether.\textsuperscript{8} With less reliance on cars communities have less traffic congestion and people are able to travel more freely throughout the community.\textsuperscript{9}

This paper will help illustrate the following points: (1) how transit-oriented development will help solve many issues facing communities today, (2) the lack of effective legislation regarding transit-oriented development, (3) how other communities have approached implementing a transit-oriented development system, and (4) practical issues that policy makers will face when they try to implement a system of transit-oriented development. A proposed model ordinance is attached.

Finally, this paper and the ordinance that follows, will track the thesis that as U.S. cities and communities begin to rethink their growth, transit-oriented development will play a substantial part in: containing urban sprawl; cutting down on greenhouse emissions; reduce residents reliance on automobiles for mobility; creating a more equitable community, all while having a positive influence on public health and the overall quality of life of the residents.\textsuperscript{10}

\textsuperscript{7} Transit Oriented Development Institute, supra note 4.
\textsuperscript{8} Id.
\textsuperscript{9} Id.
II. Problems Facing Communities:

An increase in population has lead to a number of problems. However, TOD will be effective in reducing these problems. Some of these problems are: sprawl; greenhouse emissions; no or inadequate public transportation; affordable housing; and poor public health. By implementing a policy decision-making attitude towards TOD, communities, big or small, will be able to reduce, if not eliminate, the negative impacts of all these problems. The following section of this paper will layout each of these problems, while ultimately showing how a system of TOD planning will have a positive influence on all the problems.

A. Sprawl:

Most people view sprawl as a “big city” problem. However, urban sprawl not only has negative impacts on urban settings, but also has similar impacts on smaller communities and towns. Urban sprawl can be defined in a variety ways, but the overall concept is that urban sprawl is the uncontrolled expansion of urban areas into neighboring areas, usually in an unsustainable way. Since World War II, American cities have grown decentralized resulting in lower density use of land while continuing to spread out over a larger area. As cities and communities have continuously spread out land has become increasingly scarce and use of land has become increasingly inefficient. One of the most troubling facts about sprawl is the rate at which it is currently occurring. Most U.S. cities are expanding their area at

11 Michael Batty, Elena Besussi, and Nancy Chin, Traffic, Urban Growth and Suburban Sprawl, (November 2003), https://www.bartlett.ucl.ac.uk/casa/pdf/paper70.pdf
13 Id.
double the rate the population is growing, and some cities continue to expand without any population growth.\textsuperscript{14}

With the increase in sprawl most residents of communities have been forced to solely rely on automobiles for travel.\textsuperscript{15} Sprawl and automobile reliance have a symbiotic effect on one another. As communities and cities sprawl outwards automobiles become one of the only means of transportation for people. Not only must people rely on automobiles for transportation, cities are just not planned for people to get their errands done in one trip.\textsuperscript{16} There is no longer a place where someone can go to get all their errands done, they must make multiple stops all while driving around in their automobile.\textsuperscript{17} Another reason people rely so heavily on their automobiles when sprawl occurs is because there are no pedestrian friendly areas or parking lots where they can park and then walk to all the locations they need to go.\textsuperscript{18}

Not only does sprawl have a negative impact on people’s transportation options, it also has a negative impact on the environment. As sprawl occurs land is lost and in most circumstances is used inefficiently. Some of the negative environmental impacts of sprawl include: loss of environmentally fragile land; greater air pollution; loss of farmland; increased runoff of storm water; increased

\textsuperscript{14} Id.
\textsuperscript{15} Id.
\textsuperscript{17} Id.
\textsuperscript{18} Id.
risk of flooding; ecosystem fragmentation; and decreased aesthetic appeal of landscape.\textsuperscript{19}

Finally, sprawl has a negative impact on taxpayers. In most circumstances sprawl leads to a waste of tax money.\textsuperscript{20} Sprawl makes cities and counties spend money on new water and sewer lines as well as new schools. The estimated costs of sprawl being in the millions of dollars.\textsuperscript{21} Not only does sprawl cost taxpayers money, sprawl also increases taxes on existing residents.\textsuperscript{22}

Sprawl impacts us all because there is only a limited number of land that can be used by everyone in the state, thus, if bigger cities continue to spread out or if smaller communities tend to be spread out there will eventually become a time in the future were there is no longer any land left to use. Although sprawl may look different or have different consequences in bigger cities and smaller communities, sprawl is a major concern to everyone in the state.

B. Reliance on Automobiles:

The phenomena of sprawl has not only impacted land use, it has also made people rely on automobiles as the primary source of transportation.\textsuperscript{23} Decentralization of communities has lead to the impractical use of a transit system, because of how spread out everything has become, leading to automobiles as the

\textsuperscript{22} Id.
\textsuperscript{23} Useful Community Development, \textit{supra} note 16.
only practical/effective mode of transportation for most people.\textsuperscript{24} The amount of time that the average U.S. citizen spends in the car is staggering. Some studies show that the average U.S. citizen spends approximately 443 hours per year in an automobile.\textsuperscript{25} That number is equivalent to one eight hour workday per week for the average citizen.\textsuperscript{26} The relationship between how densely populated an area is and the dependence on automobiles is clearly seen. The more densely populated an area is the less reliance there is on automobiles for transportation.\textsuperscript{27} Another statistic that shows this correlation is shown in the number of people that use public transportation. As density in an area is reduced the number of people that use public transportation also reduces.\textsuperscript{28}

Although these studies were conducted in major cities, such as San Francisco, New York, and Los Angeles,\textsuperscript{29} the same concept can be applied to smaller cities or communities. Similar problems happen when smaller communities decide to expand outward rather than having a more centralized growth plan. People will have to rely on their automobiles for transportation, as it will become the only practical means

\begin{enumerate}
\item Belzer and Autler, \textit{supra} note 12.
\item Belzer and Autler, \textit{supra} note 12.
\item Belzer and Autler, \textit{supra} note 12.
\item Peter Newman and Jeffery Kenworthy, \textit{Urban Design to Reduce Automobile Dependency}, Opolis: An International Journal of Suburban and Metropolitan Studies, Vol. 2, no. 1, 35, 40, (2006). The graph at the top of the page shows the relationship between how densely populated an area is in relationship to how much gasoline is used in that area. The greater the density of people in an area then the less gasoline consumption that is used in that area.
\item \textit{Id.} at 41. The graph at the top of the page shows a definite relationship between urban density and the use of transit. As urban density increases the annual number of transit boardings goes up.
\item \textit{Id.} at 40-1. The graphs showing the relationship between density and gasoline use occurred in the cities of San Francisco and New York respectively. The graph on page 41, showing the relationship between density and transit use, occurred in Los Angeles.
\end{enumerate}
of traveling. A public transit system, no matter how large or small will become ineffective because the amount of land the transit system would have to cover would make it impractical. Most communities in Pennsylvania simply do not have enough residents to make a mass transit system possible. However, even if smaller communities employed a strategy of planning that would centralize certain shopping areas, such as grocery stores and big-box stores, people would only need to make one trip using their automobile and their reliance would be reduced. For certain communities that have enough residents to make a public transportation system practical, even if its over a smaller area for example only in the business area of the community, that would also reduce peoples reliance on automobiles for travel. Finally, for huge cities development of public transportation should be a high priority because the more people that use public transportation the less reliance they have on automobiles for mobility, thus resulting in less traffic throughout the city.

C. Greenhouse Gas Emissions:

Related to public transportation and automobile reliance is the concern of greenhouse gas emissions. The high reliance on automobiles for mobility results in higher levels of carbon emission. The U.S. Environmental Protection Agency released a study in 2014 that showed that around twenty-six percent of total gas emissions came from transportation.\textsuperscript{30} Looking further at those numbers


The pie chart on the right side of the page breaks down the percentage of gas emissions that each economic sector was responsible for back in the year 2014. The
greenhouse gas emissions from transportation mainly come from burning fossil fuel.\textsuperscript{31} Petroleum based fuel, such as gasoline and diesel, account for over ninety percent of the fuel that is used for transportation.\textsuperscript{32} Sixty-one percent of the transportation sector’s emissions come directly from the emissions from personal auto use.\textsuperscript{33} The location of the household has an enormous impact on how much carbon dioxide that household emits. The closer the household is to public transportation the lower the amount of carbon dioxide that household emits.\textsuperscript{34} “A household that lives in a densely populated area does not drive as much or spend as much money on transportation as someone who lives in a sprawling location.”\textsuperscript{35}

With a transit-oriented approach to planning residents would have access to public transportation; cutting down emissions considerably. Rather than each resident having to rely on his or her own automobile to travel he or she could opt to take public transportation.

D. Unaffordable Housing:

\hspace{1cm} total emissions in that year totaled 6,870 million metric tons of carbon dioxide equivalent. Thus, transportation accounted for 1,786.2 million metric tons of emissions back in the year 2014.

\textsuperscript{31} \textit{Id.}


\textsuperscript{34} \textit{Id.} at 9. The graph breaks down a location into a transit zone. The transit zones are separated by how closely they are located to a transit system. If transit is located within a walkable distance carbon emissions are lowest.

\textsuperscript{35} \textit{Id.} at 16.
The average household spends approximately thirty-two percent of expenses on housing and another nineteen percent on transportation. With numbers like these, it is easy to see how transportation and housing are integrally connected. Lower income families spend even a higher percentage of income on transportation. Lower income families can spend up to fifty percent of their income on transportation alone. The American Public Transportation Association estimates that households that use transit instead of automobiles can save up to 9,500 dollars per year. With almost an additional ten thousand dollars households can use that money for a number of other things; including housing.

By adopting a system of transit-oriented development communities will be able to provide affordable housing to their residents because residents will not have to spend as much of their income on transportation expenses. Residents in transit-oriented neighborhoods will be able to take public transportation or walk to their destinations. In either of those scenarios costs related to transportation will be lower than if that neighborhood did not adopt a transit-oriented approach to housing.

E. Public Health:

Public health has become a serious concern within the United States. Public health has been on the decline as less people are walking to get to their destination and more cars have polluted the air. Residents that do not have access to transit do
not get the same amount of physical activity that people that utilize transit do.\textsuperscript{39} Not only does lack of physical activity negatively impact public health; automobile use impacts public health as well. Automobile crashes impact public health and safety by causing injuries to drivers and pedestrians.\textsuperscript{40}

Another public health concern is air pollution. The more automobiles that are on the streets the more polluted the air will be.\textsuperscript{41} Air pollution can lead to more serious asthma and other cardio-pulmonary diseases.\textsuperscript{42} Having an increased presence of automobiles located within a localized area will lead to a low air quality, resulting in a numerous amount of problems for the residents of that area.

A final public health concern is stress. The more automobiles that are on the roads, the more congestion there will be. With more traffic and congestion residents become more stressed because they don’t have other reliable transit options.\textsuperscript{43} A trip that could take twenty minutes without congestion could become a forty-five minute trip. Overall, this leads to negative impacts on people’s quality of life, life satisfaction, and happiness.\textsuperscript{44}

A system of transit-oriented development would alleviate most of these problems. Residents in TOD communities would have access to reliable public transit, reducing the stress many people experience when having to rely on

This study points out that transit users walk an average of more than nineteen minutes per day then non-transit users.  
\textsuperscript{40} Id. at 18.  
\textsuperscript{41} Id.  
\textsuperscript{42} Id.  
\textsuperscript{43} Id.  
\textsuperscript{44} Mineta National Transit Research Consortium, supra note 39 at 19.
inadequate transit. A system of TOD would also lead to people being healthier, as a system of TOD would lead them to walk more places.\textsuperscript{45} Not only would walking positively impact public health, adopting a TOD approach would lead to more biking and transit options.\textsuperscript{46} By adopting a transit-oriented strategy of planning public health benefits would be significantly increased throughout neighborhoods and communities.\textsuperscript{47}

III. \textbf{Why a Revised Ordinance is Needed:}

The first pillar that transit-oriented development is built on is mixed-use zoning.\textsuperscript{48} In order for transit-oriented development to achieve its maximum effectiveness, cities, townships, and boroughs must abolish antiquated zoning laws that only allow for areas to be zone for residential use or commercial use. Transit-oriented development is designed to have residential buildings, office buildings, and shops located with a closely knitted area. If communities want to accomplish this goal zoning laws must be relaxed and mixed-use zoning must be allowed at a much higher rate then it is currently being used. New zoning ordinances must have the

A study done by the Victoria Transport Institute found that New Yorker’s body mass index ratings declined as the density of subway and bus stops increased.
\textsuperscript{46} Id. at 14. Another Victoria Transport Institute study that showed the relationship of TOD and obesity rates in countries. As the percentage of residents in each country that biked, walked, or rode transit increased obesity rates trended downward.
\textsuperscript{47} Id. One example of this is San Bernardino, California and Boston, Massachusetts. San Bernardino is a much more automobile-oriented city, while in contrast, Boston is a transit-oriented city. If San Bernardino would adopt a transit-oriented approach it would “reduce two hundred chronic medical conditions per 1,000 residents, a 16% reduction.” Id.
\textsuperscript{48} Transit Oriented Development, \textit{supra} note 4.
intent to allow for commercial and residential uses within a compact area. Mixed-use zoning areas do not have to be large in scale. In fact, transit-oriented development planning should have walkability in mind. Typical zoning laws would not allow for the overlap of commercial and residential areas, thus, requiring a larger area of land. However, with mixed-use zoning businesses and residential areas are allowed to be located within the same space, creating a walkable environment while preserving the natural landscape. If a TOD approach is going to be taken an overhaul of zoning ordinances is needed.

There are numerous benefits of adopting a transit-oriented approach of development.

The first benefit to adopting a transit-oriented approach is that it will lessen urban sprawl for the big cities as well as sprawl for smaller communities. This will result in less spending of financial resources by these jurisdictions. TOD involves the use of mixed-use zoning rather than typical types of zoning laws. Mixed-use zoning laws reduce the amount of money that communities must spend on infrastructure costs. Smart Growth America released a study about the financial benefits of mixed-use zoning to municipalities, with the results showing that municipalities that use a mixed-use zoning development plan saved on average “thirty-eight

49 Township of East Whiteland, Ord. § 200-32, 5/11/2016; See also, City of Pittsburgh, Ord. § 904, 12-31-03
50 See Borough of Quakertown, Ord. § 314.1, 2/6/2013; See also, Creating a Small Town Character, Montgomery County, http://www.montcopa.org/DocumentCenter/View/4105
51 Id. at 8.
52 Reconnecting America, supra note 1.
percent on costs for construction on roads, sewers, water lines, and other infrastructure.”\textsuperscript{54} Not only will a TOD approach that utilizes mixed-use zoning save municipalities money, it will also result in an increase of tax revenue.\textsuperscript{55} As a community gets denser tax revenues increase per acre than before mixed-use development.\textsuperscript{56}

TOD will also reduce peoples reliance on automobiles. As communities spread out and cover a larger area people must rely on their automobile as the only effective transportation method.\textsuperscript{57} A transit-oriented development approach would resolve this issue because TOD aims to achieve a centralized community that is located within a walkable distance.\textsuperscript{58} Preferably, TOD wants to be focused around a public transit system, however, any development that is built on the concept of walkability is acceptable.\textsuperscript{59} Compact mixed-use and high-density development will allow people to be able to walk to many destinations, rather than rely on their automobile for travel.\textsuperscript{60}

\begin{itemize}
\item \textsuperscript{54} Smart Growth America, Building Better Budgets: A National Examination of the Fiscal Benefits of Smart Growth Development, (May 2013), http://www.smartgrowthamerica.org/documents/building-better-budgets.pdf
\item \textsuperscript{55} University of Delaware, supra note 53.
\item \textsuperscript{56} Id. A study conducted in Raleigh, North Carolina showed that a 6 story mixed-use building generated 110,461 dollars worth of tax revenue, while a 3 story residential and 3 story commercial building only generated 56,155 dollars worth of tax revenue for the city.
\item \textsuperscript{57} Belzar and Autler, supra note 12.
\item \textsuperscript{58} Creating a Small Town Character, supra note 50.
\item \textsuperscript{59} Institute for Transportation & Development Policy, What is TOD?, (2016), https://www.itdp.org/library/standards-and-guides/transit-oriented-development-are-you-on-the-map/what-is-tod/
\item \textsuperscript{60} Id.
\end{itemize}
Another benefit of TOD is an increase in public health. TOD encourages non-motorized transportation, such as walking but also cycling.\textsuperscript{61} By facilitating physical activity, TOD reduces many medical conditions that occur when people are obese.\textsuperscript{62} Not only do people get more physical activity in a transit-oriented community but also air pollution is lessened. A transit-oriented approach wants to lower the amount of cars on the streets, which will lower the amount of air pollution that can have numerous effects on people’s health.\textsuperscript{63} A TOD approach to planning will try to discourage motorized vehicle use by having narrower streets, as well as, reducing the amount of space that people can park.\textsuperscript{64}

Another benefit of TOD is the creation of affordable housing. An average U.S. citizen spends nineteen percent of their income on transportation costs.\textsuperscript{65} Residents in a transit-oriented community can save up to 9,500 dollars per year on transportation costs.\textsuperscript{66} With this extra money residents will be able to spend it on a variety of things; including housing. By adopting a transit-oriented approach to development residents of the community will be able to save a lot of money on transportation costs.

Another benefit of TOD is the environmental impact it will have. TOD wants to conserve natural resources by not building on land. TOD wants to be compact and

\begin{itemize}
\item \textsuperscript{61} Id.
\item \textsuperscript{62} Litman, supra note 45 at 13.
\item \textsuperscript{63} Mineta National Transit Research Consortium, supra note 39.
\item \textsuperscript{64} Institute for Transportation & Development Policy, supra note 59. A goal of TOD is to have the amount of land used for motor vehicle traffic and parking to less than twelve percent of the total land area.
\item \textsuperscript{65} NC State Design, supra note 36.
\item \textsuperscript{66} Id.
\end{itemize}
high density, which will result in less land being destroyed.\textsuperscript{67} TOD will keep the natural aesthetics of the environment. Not only will TOD save land from being destroyed, TOD will considerably cut carbon emissions.\textsuperscript{68} Personal automobile use contributes to sixty-one percent of the total carbon emissions from the transportation sector.\textsuperscript{69} TOD will greatly reduce these emissions because residents will use other non-motorized means of transportation such as walking or biking.\textsuperscript{70}

TOD will have many benefits to a community that chooses to adopt this type of approach. Benefits of TOD include: less sprawl; increased tax revenue per acre; walkability for pedestrians; less motorized vehicle travel; positive impacts on public health related to walking and biking; and lessening greenhouse gas emissions from motorized vehicles.

IV. \textbf{How Other Jurisdictions Have Adopted Transit-Oriented Development:}

This section will look at how other jurisdictions have adopted a transit-oriented approach to planning, while evaluating the effectiveness of each approach.

A. \textit{Minneapolis and Saint Paul:}

The first example of TOD in cities, are the cities of Minneapolis and Saint Paul, respectively. These cities will be talked together because they share such a unique proximity to each other, that one governing body, The Metropolitan Council

\begin{footnotes}
\item[68] Haas, \textit{supra} note 33 at 8.
\item[69] \textit{Id.}
\item[70] Institute for Transportation & Development Policy, \textit{supra} note 59.
\end{footnotes}
(Council), has planning authority over both of them.\textsuperscript{71} The Council was created back in 1967, to ensure that both cities worked together in future regional planning.\textsuperscript{72} Some of the challenges that the region was facing when the Council formed included: failing private septic systems in many suburban communities; the cities privately owned bus company was suffering; rapid population growth that was threatening the natural landscape; and communities could not fund essential services.\textsuperscript{73} The Council was initially met with harsh criticism from the public; however, the Council survived and now is one of the leading forward thinking governmental bodies on sustainable development.\textsuperscript{74}

The Council has been focused on a transit-oriented development approach to planning since 2006, when it released a regionally specific “Guide for Transit-Oriented Development.”\textsuperscript{75} The Council released this guide in “response to changing regional demographics and highway traffic congestion,” as well as, in an effort to


\textsuperscript{72} Id. at 163. The author points out that the two cities used to be “intense rivals but joined together in the mid-1960s in an attempt to secure a major league baseball, football, and hockey teams.” Id. By joining together in an attempt to secure these teams the cities realized that they would have to work together in the future to be able to confront the regional challenges that would lie ahead.

\textsuperscript{73} Id. at 164.

\textsuperscript{74} Id. at 164-65. The author mentions that one of the first major decisions of the Council came out in 1970, a mere three years after its formation, when it vetoed a proposal to make Ham Lake a site for a second major airport, over fears that “the development would cause environmental harm to the 23,000 acre Carlos Avery Wildlife Refuge, the state’s largest wildlife refuge. Id.

\textsuperscript{75} Haigh, supra note 71 at 186-87. In relation to the TOD guide, the Council began a three year Sustainable Communities Initiative, called Corridors of Opportunity in 2011. Id. at 187. Nearly all projects funded by the Corridors of Opportunity have TOD as a central goal. Id.
“maximize its investments in fixed transitways.” However, the Council recognized that TOD can and will vary in style as well as size. In response to this concern the Council recognized that all types of TOD share common elements. These elements included: compact development, a mix of uses, pedestrian orientation, and transportation interfaces.

The Council has helped facilitate a TOD approach that not only includes the big cities of Minneapolis and Saint Paul, but includes surrounding counties as well.

The counties are controlled by a governing agency called The Counties Transit Improvement Board (CTIB). One example of the CTIB facilitating TOD is a shown in certain sales taxes. In 2008, the CTIB began to levy a quarter-cent sales tax and twenty dollar motor vehicle sales tax. Both of these taxes are invested in transit projects by awarding annual capital and operating grants. The Board describes its visions as “a network of interconnected transitways that allows users to move efficiently and safely, while mitigating congestion, enhancing economic development, and improving environmental stability for the region.”

76 Id. at 186.
77 Id. at 187.
78 Metropolitan Council, Guide for Transit-Oriented Development, (2006), http://www.metrocouncil.org/getattachment/7f95e0f4-2909-4d0e-81cb-b19ca205a454/.aspx
79 Haigh, supra note 71 at 188.
80 Id. The CTIB was formed in 2008 and includes five counties: Anoka, Dakota, Hennepin, Ramsey, and Washington.
81 Counties Transit Improvement Board, About, (2016), http://www.mnrides.org/about
82 Id.
83 Id. Although the Board is composed of five counties, CTIB works in close partnership with two other counties that are not on the Board: Carver and Scott counties. Haigh, supra note 71 at 188.
Funding TOD projects is another way counties have influenced TOD in the
region.\textsuperscript{84} Hennepin County created a TOD program in 2003 to support
redevelopment and new construction of infrastructure that enhances transit
usage.\textsuperscript{85} This project gives approximately two million dollars per year to TOD
projects throughout the county.\textsuperscript{86}

These are examples of how counties have embraced the Council’s core
concept of TOD. Cities also play a key role in the region by setting standards and
providing technical assistance to developers, business owner, and community
groups seeking to locate near transit.\textsuperscript{87} One example of cities playing an active role
in TOD is the city of Saint Paul.\textsuperscript{88} Saint Paul, through its 2011 Transit-Oriented
Development Guidebook provides existing and future property owners and
residents with information about how to take part in TOD.\textsuperscript{89} The Guidebook includes
information on many different topics, such as: tips for success\textsuperscript{90}; zoning regulations
and the process for environmental review\textsuperscript{91}; policy guidance\textsuperscript{92}; and design

\textsuperscript{84} Haigh, \textit{supra} note 72 at 189.
\textsuperscript{85} Hennepin County, MN, Transit Oriented Development, (2016),
http://www.hennepin.us/business/work-with-henn-co/transit-oriented-
development (Since the program began, Hennepin County has awarded more than
$24 million dollars to funding for both urban and suburban projects).
\textsuperscript{86} Id. The website includes “examples of past projects” that show how much money
was awarded and what the projects set out to accomplish. \textit{Id.}
\textsuperscript{87} Haigh, \textit{supra} note 71 at 189-90.
\textsuperscript{88} \textit{Id.} at 190.
\textsuperscript{89} Central Corridor Design Center, Saint Paul Transit-Oriented Development
Guidebook for the Central Corridor, (November 2011),
\textsuperscript{90} \textit{Id.} at §§ 1.1-14.
\textsuperscript{91} \textit{Id.}
\textsuperscript{92} \textit{Id.} at §§ 2.1-2.8.
standards to illustrate elements and principles of TOD. The city released the guidebook; the city has also incorporated this guidance into its official land-use.

The Council does an excellent job of partnering with cities and counties while facilitating TOD. The Council identifies the TOD needs of local jurisdictions and tries to help with those needs. The Council has realized that in order for TOD to work it cannot just be each jurisdiction thinking about only their needs. In order for TOD to be effective local governments need to work together to establish a regional TOD policy.

B. Chicago:

The next city that will be examined is Chicago. Unlike Minneapolis and Saint Paul, Chicago has only recently adopted a more transit-oriented development approach. Chicago’s first TOD Ordinance introduced by the Mayor in 2013 and passed by the zoning committee the same year. Prior to 2013, Chicago’s zoning code did not promote development around transit stations. Although this

93 Id. at §§ 3.1-3.23.
94 Haigh, supra note 71 at 190.
95 Id.
ordinance was a good start to TOD in Chicago, it was not nearly strong enough to have a real impact. However, the Mayor introduced another TOD ordinance in 2015 that would facilitate TOD even more. This ordinance was passed on September 24, 2015. Under the new ordinance, the distance where dense development can be built will more than double. Along with that positive impact, the new ordinance will also virtually eliminate minimum parking requirements within these districts. Getting rid of the minimum parking requirements will free up more land that can be used for high-density development or not developed at all and used as parks. Chicago’s mayor believes that this new TOD ordinance will generate more than four hundred million in economic activity and one hundred million in tax revenue for the city. Chicago is a great example of a city that has just recently adopted a TOD approach to city zoning and planning and has made great strides in accomplishing the goal of TOD.

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99 Id. Before the zoning committee voted on the ordinance, the ordinance was changed to make it harder to construct buildings with lower volumes of car parking than was originally intended.
100 City of Chicago, supra note 98.
102 Steven Vance, StreeBlogs Chicago, New TOD Ordinance Will Bring Parking-Lite Development to More of Chicago, (September 15, 2016), http://chi.streetsblog.org/2015/09/28/new-tod-ordinance-will-bring-parking-lite-development-to-more-of-chicago (The new ordinance expands the TOD district around a station from 600 feet to 1,320 feet. Also under the new ordinance, a special district zone is created that is designed to preserve the walkable character of TOD. That special zoning designation is expanded to 2,640 feet from a transit station).
103 Id. In general Chicago buildings are required to provide a 1:1 ratio of parking spaces to residential units. The 2013 ordinance changed that by requiring a 1:2 ratio if the building was within 600 feet of a Metra or “L” station. Under the new ordinance if land is zoned under a certain category then any building within 1,320 feet of a station is freed from parking minimums altogether.
104 City of Chicago, supra note 98.
the 2013 ordinance, realized it was having positive impacts on the communities that were zoned for TOD and two years later doubled the size of TOD districts. By eliminating parking requirements in TOD districts Chicago has created communities around transit stations that are going to be developed densely and walkable for pedestrians.

V. **Key Policy Issues:**

This section will discuss key issues that municipalities are going to face when trying to implement a system of TOD. This section will conclude with proposals on how a municipality or county can pay for a TOD approach.

When planning to draft a TOD ordinance one of the first things that policy makers should have in mind is how big their municipality or jurisdiction is. TOD at its core is a planning strategy to promote using public transit. However, TOD can still be an effective planning strategy in jurisdictions that are not big enough for transit because TOD also wants to promote walkability. Smaller jurisdictions can zone smaller areas of land to be used as TOD so that pedestrians can walk many places rather than drive to each location.

Another thing that policy makers must keep in mind is the use of mixed-use zoning. TOD will work best if mixed-use zoning regulations because it will promote walkability. Mixed-use zoning helps create compact development, thus allowing residents to be able to walk many places. Not only does mixed-use zoning promote compact development, it has been shown to increase tax revenues.\(^{105}\)

\(^{105}\) University of Delaware, *supra* note 53.
A final thing policy makers must keep in mind is TOD will work best if there is communication between jurisdictions. The example of Minneapolis and Saint Paul above shows all TOD can accomplish if cities work together with each other as well as with counties. Jurisdictions must support and help each other so that TOD can have its greatest possible effect on the region those cities; towns, counties, and boroughs are located in.

A. Roadblocks:

Like everything in life, TOD will face roadblocks. One roadblock TOD could face is that TOD needs to attract riders to use transit. Another barrier involves the use of mixed zoning. Zoning changes or restrictions are usually unpopular with the community. Some jurisdictions may have to rewrite their zoning laws in order to incorporate mixed-zoning or they may not have mixed-use zoning laws to begin with. However, if the key policy issues discussed above are kept in mind while trying to implement a system of TOD these barriers should become only minor issues.

Paying for TOD will likely be the biggest roadblock a jurisdiction will face. However, there could be many ways of paying for a system of TOD. One technique was discussed above. By implementing a tax, jurisdictions could use the revenue generated from the tax to pay for TOD or give grants to companies or business that

107 Id.
108 Counties Transit Improvement Board, supra note 81.
will implement TOD by using that money. Another way to pay for TOD could be giving local business incentives, such as tax breaks, to implement TOD.

V. **Conclusion:**

TOD is a strategic planning system to facilitate walkability, compact development, high-density development, and use of transit systems. TOD can address many problems facing jurisdictions today and if implemented correctly can be valuable planning tool in the future. Some of these problems include: affordable housing, greenhouse gas emissions, reliance on automobiles, and city sprawl. TOD will greatly reduce all these problems communities are facing, while allowing for sustainable development. If a community embraces the notion of TOD and uses it as a tool for current and future development, that community will become a better place for residents to live.
An ordinance of __________ Municipality, __________ County, Pennsylvania, creating procedures for implementing transit oriented development.

WHEREAS, transit oriented development involves strategic planning that allows residents to live and walk within a high-density area that is usually within a ten-minute walk and about a mile away from a public transportation stop; and

WHEREAS, an integral function of transit oriented development is to provide communities with alternative means of transportation rather than just relying on automobile dependency; and

WHEREAS, transit oriented development is better served in a regional area; and

WHEREAS, transit oriented development initially focused on light-rail transit primarily and excluded other potential sources of transportation, transit oriented development is now forced to examine other modes of transportation, particularly biking, buses, and walking; and

WHEREAS, successful transit oriented developments incorporate mixed-use, walkable, location-efficient developments that balance the need for sufficient density to support convenient transit service with the scale of the adjacent community; and

WHEREAS, transit oriented development improves all aspects of city life including economic development, quality of life, social equity, public health, and ecological sustainability.

AND NOW THEREFORE, be it ORDAINED and ENACTED by the Board of Commissioners of the Municipality of __________ and is hereby ORDAINED and ENACTED by the Authority of the same as follows:

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110 Id.
111 Id.
SECTION 1. **Short title.**

This ordinance shall be known and cited as the Transit Oriented Development District Ordinance of ______________ Municipality, Pennsylvania.

SECTION 2. **Authority.**

This chapter is enacted and ordained under the grant of powers by the General Assembly of the Commonwealth of Pennsylvania through the Pennsylvania Municipalities Planning Code, Act 247 of 1968, as reenacted and amended.

SECTION 3. **Definitions**

The following words and phrases when used in this ordinance shall have the meanings given to them in this section unless the context clearly indicates otherwise:

1) **Accessway.** A formalized path, walkway, or other physical connection that allows pedestrians to directly reach destinations.

2) **Articulation.** The visible expression of architectural or landscape elements through form, structure, or materials that “break up” the scale of buildings and spaces to achieve a “human scale.”

3) **Bulk retail use or bulk sales.** A retail or wholesale facility that serves the general public, selling primarily institutional sized or multi-pack products in bulk quantities.

4) **Commercial parking facility.** A parking structure or a surface parking lot operated for profit that has parking spaces that are not accessory to a primary use. This term does not include a park-and-ride lot.

5) **Compact development.** The planning concept of using site design and urban design techniques to decrease the amount of land needed to develop a given amount of land use. In the case of transit oriented development, this is done with the goal of improving transit access.

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113 TOD Ordinance, City of Phoenix, Arizona (2016).
6) Density. The number of dwelling units divided by the gross area.

7) Department. Municipality Department of Community & Economic Development (or equivalent).

8) Drive-through facility. Facilities only allowing transactions for goods or services without exiting a motor vehicle. This type of facility does not provide for any walk-in service.

9) Fast food establishment. A food service business that offers relatively immediate services of semi-prepared or prepared foods for take-out or in-house consumption in disposable containers and serving walk-in and/or drive-through customers.

10) Light-rail. A fixed guideway transit system.

11) Liner retail. A retail building adjacent to a street and serving pedestrian traffic. It is located at the front of a larger retail site that may also contain large format or large scale retail uses.

12) Mixed-use. Development contained within a single-parcel (horizontally or vertically) or adjacent parcels that contain different uses that are complementary to each other and provide activity throughout the day.

13) Parking structure. A parking garage located above ground or underground consisting of one or more levels, not surface parking.

14) Park-and-ride lot. A parking structure or surface parking lot intended primarily for use by persons riding transit or carpooling, and that is owned or operated either by a transit agency or by another entity with the concurrence of the transit agency.
15) Parking, off-street. Marked or unmarked parking located within a parcel and outside a private or public right-of-way.

16) Parking, on-street. Marked or unmarked parking located within a private or public right-of-way and outside of a parcel.

17) Pedestrian. A person who walks, sits, stands, or uses a wheelchair in public spaces.

18) Pedestrian-oriented design. The design of communities, neighborhoods, streetscapes, sites, and buildings that emphasizes pedestrian access, comfort, and visual interest. Transit oriented design is a particular type of pedestrian-oriented design that includes design and intensity of land use to support transit in addition to pedestrians.

19) Pedestrian-oriented street. A street where adjacent uses generate and encourage foot traffic.

20) Pedestrian way. A linear space or an area where the primary users are pedestrians and that may also accommodate bicyclists.

21) Setback. The required minimum distance between the building line and the related front, side or rear lot line over which no part of any building may extend, except as otherwise provided.

22) Shared parking. Parking that is utilized by two or more uses taking into account the variable peak demand times of each use; the uses can be located on more than one parcel.

23) Station area. The core area of the transit oriented development closest to the transit platform, usually within 500 feet of the platform.
24) Transit oriented development. Catering to the pedestrian by developing an appealing mix of businesses, residences, and public areas in clusters around transit stations.

25) Transit oriented development district. Area within a municipality designated by the Department as ripe for transit oriented development.

26) Transit platform. A designated transit loading and waiting area as assigned by the public transit agency.

27) Transit station. The area including the platform which supports transit usage and that is owned by the transit authority.

28) Visual permeability. The ability of vertical surfaces to allow viewers to see through to the other side.

29) Walking radius. The distance beyond a central point from which a person is willing to walk.

SECTION 4. Applicability.

The requirements of this ordinance shall apply to parcels of land situated within a designated transit oriented development district.

SECTION 5. Prohibited Uses.

The following uses are prohibited in a transit oriented development district unless the use already requires a special use permit:

(1) Automobile and other motorized vehicle dealer, reseller, repair, leasing, or service station, including oil and lubrication service, tire and muffler installation and service, body shop, or other motor vehicle service; but excluding a retail or wholesale outlet selling motor vehicle parts and accessories without provision for on-site installation.

(2) Boat dealer, reseller, repair, and leasing.
(3) Bulk retail and wholesale use including building material, food and beverage sale, and restaurant supplier.

(4) Car wash facility.

(5) Cemetery.

(6) Cold storage plant.

(7) Drive-in business.

(8) Funeral home and mortuary.

(9) Gas station and gas station accessory use such as mini-mart, convenience food and sundries sale.

(10) Golf course including miniature golf course.

(11) Junk yard and motor vehicle wrecking yard.

(12) Kennel, excluding those accessory to a veterinary clinic.

(13) Manufactured home sale.

(14) Nursery or greenhouse.

(15) RV park or mobile home park and campground.

(16) Solid waste transfer station.

(17) Towing service.

(18) Truck stop and use related to trucking; excluding loading and unloading for permitted commercial use.

(19) Warehouse, mini-warehouse, storage facility, and mini storage facility.

SECTION 6. Uses Requiring Conditional Use or Special Use Permit\textsuperscript{114}.

For property within the transit oriented development district, the following uses are considered uses that are conditional and that require use permits:

\textsuperscript{114} TOD Ordinance, City of Austin, TX (2016).
(1) Drive-through facility.
(2) Fast-food establishment.
(3) Grocery store with building footprints over 50,000 square feet.
(4) Light industrial facility.
(5) Liquor, retail sales and package retail sales.
(6) Outdoor recreational use.
(7) Parking, accessory to a permitted use, that exceeds automobile parking maximum regulations as outlined by the Department.
(8) Parking facility (commercial) or principal use parking (structured or surface).
(9) Post office.
(10) Sports facility with over 10,000 seats.

SECTION 7. Non-Conforming Uses

Uses prohibited in the transit oriented development district which existed legally prior to the effective date of the ordinance and became non-conforming due to the newly established district may expand on the same or adjacent parcel if the prohibited use parcel if all of the following are met:
(1) Was owned or leased prior to effective date of the ordinance.
(2) Will be further developed under the conditions and development standards of the transit oriented development district.
(3) Will engage in use permitted by underlying zoning laws.


A landowner seeking to develop land situated in a transit oriented development district must file an application with the Department. This application filing will acknowledge the land developer’s covenant to adhere to the provisions set forth in this ordinance.

\[115\] Id.
SECTION 9. Development Standards For Permitted Uses\textsuperscript{116}.

For the purpose of Subsections 1 and 2, distances shall be measured from the entrance to the station platform to the parcel line.

a) Setbacks and Build-to Lines.

Setbacks and build-to lines for non-residential and mixed uses. The standards in Table 1 shall apply to new non-residential and mixed-use development with the transit oriented development district.

Table 1: Non-Residential and Mixed-Use Setbacks and Build-To Lines

<table>
<thead>
<tr>
<th>DISTANCE FROM STATION</th>
<th>MAX. BUILDING SETBACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 1,000 FEET</td>
<td>6 FEET</td>
</tr>
<tr>
<td>1,000 – 2,000 FEET</td>
<td>12 FEET</td>
</tr>
</tbody>
</table>

Where ground level retail uses are present, setback may be increased up to 12 feet for outdoor seating, patio dining, or retail sales by securing a use permit in accordance with provisions of Section 7 above.

b) Large scale retail commercial.

i. Large scale retail commercial stores in excess of 80,000 square feet shall not front the street with parking lots. Instead, “liner” buildings shall be required and shall front onto pedestrian oriented streets, and shall follow setback and build-to regulations as outlined within Section 10 of this ordinance.

ii. Setbacks and build-to lines for non-residential and mixed-uses of this ordinance. Liner buildings should be a minimum depth of 30-feet.

iii. The portion of the building fronting onto a transit station, a transit street or a major pedestrian accessway shall follow building design regulations as set forth by the Department.

\textsuperscript{116} TOD Ordinance, City of Phoenix, AZ (2016).
iv. Large scale retail commercial stores shall be lined with pedestrian-oriented retail frontages along a transit street, pedestrian accessways or sidewalks, to allow more pedestrian-friendly uses to line accessways.

SECTION 10. Parking Regulations

(1) Automobile parking requirements per floor area. For a new development within the transit oriented development district, the number of required parking spaces (on-street and off-street) shall be based upon the Municipality of ________ as required by existing zoning ordinances.

(2) On-street parking. For new development occurring within the transit oriented development district, on-street parking shall count towards the parking requirements for uses on the lot set forth within the regulations of this district.

(3) Bicycle parking. Convenient bicycle facilities shall be provided within the transit oriented development district at 1 space per 2,000 square feet of tenant leasable floor area.

(4) Off-street parking. Off-street parking shall be located to the rear and/or interior of a lot such that its visibility from a street shall be minimized. At-grade, above-ground or below-ground parking structures shall be permitted.

SECTION 11. Street and Sidewalk Regulations.

Sidewalks within the transit oriented development district shall have a minimum 6-foot unobstructed width from any obstruction, including light poles, parking meters, other street furniture, landscaping or fences.

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117 TOD Ordinance, City of Chicago, IL (2015).
SECTION 12. Severability.

The provisions of this ordinance shall be severable, and if any of its provisions shall be held to be unconstitutional, the validity of any of the remaining provisions of this ordinance shall not be affected. It is hereby declared as the legislative intention that this act would have been adopted had such unconstitutional provision not been included therein.

SECTION 13. Repeals.

All ordinances or parts of ordinances inconsistent with this Ordinance are hereby repealed insofar as they may be inconsistent herewith.

SECTION 14. Effective date.

This ordinance shall take effect in 60 days.