

# **Tax Increment Financing (TIF) for Brownfield Redevelopment**

Report Prepared by:

Ryerson University M.Pl Students

Ismail Alimovski

Zack Bradley

Darrin Cohen

Taranjeet Grewal

Hayley Oleksiak

Vanessa Opassinis

Josh Papernick

2019 Studio Project

December 3, 2019

Client: Canadian Brownfields Network  
represented by Melissa Walker (Kilmer Group) & Meggen Janes (Waterfront Toronto)

Faculty Advisor: Dr. Christopher De Sousa

# Table of Contents

<b>Executive Summary</b>	<b>2</b>
<b>Introduction</b>	<b>5</b>
<b>Study Approach</b>	<b>6</b>
Policy and Literature Review	6
Market-based TIF: The State of Michigan	9
Stakeholder Interviews	10
Pro Forma Model	14
Pro Forma Analysis	14
<b>Next Steps</b>	<b>17</b>
Phase One: Education and Awareness and Building Support for TIF	17
Phase Two: Pilot Project	22
<b>Conclusion</b>	<b>23</b>
<b>Appendices</b>	<b>24</b>
Appendix A: History of Brownfields	24
Appendix B: Existing Tools	25
Appendix C: Existing Municipal Brownfield Incentive Programs	26
Appendix D: Excerpt from State of Michigan Brownfield Redevelopment Financing Act	27
Appendix E: Sample of an Interview Question Template	28
Appendix F: Pro Forma Information and Assumptions	30
<b>References</b>	<b>34</b>

# Executive Summary

The Canadian Brownfields Network (CBN) engaged Ryerson University's graduate planning students (the Project Team) to develop a Tax Increment Financing (TIF) approach for brownfield development in Ontario. Specifically, CBN was interested in a market-based model for TIF similar to the model used in Michigan. The Project Team looked closely at how TIF is legislated and operationalized in Michigan as a potential model for Ontario.

Between September and November 2019, the Project Team engaged with public and private stakeholders to determine how TIF can be implemented and what the regulations could resemble. The Project Team conducted over 20 interviews with members of staff from the Province of Ontario, municipalities across Canada, and brownfield practitioners from Ontario including: private developers, quasi-government agencies, and financial lenders. In addition to these interviews, the Project Team conducted an analysis of existing academic literature, as well as policy and regulatory frameworks, for brownfield redevelopment and the use of TIF in Canada and the United States.

This research revealed three important findings that shaped the final recommendations:

- 1) First, there is a low level of understanding of TIF among developers and municipalities. The Government of Ontario passed the *Tax Increment Financing Act* in 2006 after receiving requests from municipalities for innovative infrastructure financing tools. However, regulations were never put in place in part due to concerns from the Ministry of Finance and the Ministry of Education regarding the potential loss of revenue. In addition, according to a provincial official:

When the Act was created, the Ontario government did not want to provide...blanket permission for TIFs across the province out of a concern for municipal finance. The size and capacity of municipalities varies considerably across the province and the government at the time was worried that it might negatively impact municipalities. Instead, the province decided that it would introduce [Tax Increment Equivalency Grants] while leaving open the possibility of TIFs in the future and only develop regulation on a case-by-case basis as requested by municipalities. When the TIF Act was created, I was also told that there was uncertainty and mixed reviews of how it has worked coming out of the US. While I think it has worked well in places, I also think there have been considerable drawbacks.

A senior official with the Ministry of Finance at the time legislation was tabled echoed this concern. According to this person, the reluctance is “deeply rooted in the psyche of taxation models” in Ontario and Canada. This view was consistent at the municipal level. The City of Toronto’s Chief Financial Officer recommended against the use of TIF for the Etobicoke Centre Secondary Plan because it would “decrease the total potential new assessment growth that is added to the tax base each year” (City of Toronto, 2002). Further research found most civil servants, especially those who work in finance departments, are opposed to the use of TIF. This could be attributed to Canada’s conservative approach to banking and taxation practices, as well as a low level of understanding of how TIF works in other jurisdictions.

- 2) The second finding was stakeholders are either unsure or opposed to the notion of a market-based TIF similar to the style used in Michigan. A market-based model relies on financial institutions to provide an up-front loan for remediation costs. The tax increment is then used to pay back this lender, rather than the municipality. Through the interviews, municipal officials stated they are wary of incorporating a third party into brownfield remediation agreements, which are already complex and multifaceted. Moreover, the financial lenders stated they were cautious about loaning for remediation work and engaging in a program never used in Ontario, expressing risk concerns. The low level of enthusiasm for a market-based TIF could be attributed to the low level of understanding of TIF more generally. If a stakeholder is unclear about what TIF is and how it works, it seems unlikely for that person to support a specific model of TIF.
- 3) Finally, local remediation programs vary from municipality to municipality. Cities such as Hamilton and Ottawa have well-used brownfield programs generating strong results; officials in these municipalities seemed somewhat resistant to the notion of introducing a new, and largely untested, tool to their program. Conversely, municipalities such as Sudbury and Oshawa have less developed brownfield incentive programs and lower demand attributed to smaller market sizes. Smaller jurisdictions are less concerned with brownfield remediation because they face issues related to high construction costs and broader economic growth challenges. Despite the possibility of using TIF to alleviate some of these issues, officials from smaller municipalities expressed minimal interest in advancing TIF regulations for brownfield development because their priorities lie elsewhere.

Overall, the interviews revealed a low-level understanding of TIF. Stakeholders were asked to rank their knowledge of TIF on a scale of one to ten (ten being an expert, 0 being no prior knowledge) and the average response among all interviewees was 5.2 out of 10. This low level of awareness is assumed to have resulted in minimal vocal support for the implementation of

regulations. While the Pro Forma analysis suggests TIF is a viable economic development tool for brownfield development - and evidence from other jurisdictions using TIF reinforces this finding - the Project Team's recommendations do not suggest regulations for TIF implementation at this moment. Rather, based on the findings from interviews that revealed a low understanding of TIF, combined with a financial analysis that shows feasibility for TIF, the Project Team recommends a phased approach that is based on increasing education, awareness and understanding of how TIF works and the development of a pilot project in an Ontario municipality. The Project Team is confident that this approach will be an effective way to develop regulations and implement TIF in Ontario.

# Introduction

CBN is a national network of brownfield practitioners and stakeholders committed to “uncovering, understanding and sharing brownfield barriers and solutions” (Canadian Brownfield Network). Much of CBN’s advocacy effort focuses on overcoming legislative and financial barriers associated with brownfield development. For example, CBN partnered with the Ontario Real Estate Association in 2011 to provide recommendations to the Province of Ontario to ensure properties under remediation “should pay tax rates at the same level as agricultural land or greenfields” (OREA, 2011). In September 2019, the CBN engaged the Project Team to develop a TIF approach for brownfield development in Ontario.

In addition to developing recommendations for TIF implementation, CBN asked the Project Team to:

- Develop a regulatory framework for a market-based TIF model similar to what is used in the State of Michigan;
- Research the existing TIF legislation in Ontario and understand why it has never been used;
- Develop an advocacy tool kit for municipalities and the private sector to help advance CBNs priorities with TIF; and
- Provide an analysis and comparison of TIF as it compares to existing financial tools.

The Province of Ontario has emphasized the importance of brownfield sites to achieve economic development and sustainability goals (PPS, 2014). At the same time, surveys with brownfield practitioners mention cost and lack of available funding as major barriers to remediation and redevelopment (De Sousa, 2015). Although a number of tools exist to help offset the high cost associated with remediation, brownfield practitioners have been calling for more tools and incentives to further incentivize development; TIF was one of the financial incentives requested to be further explored.

Under Section 92 of the *Canadian Constitution Act, 1982*, provinces are responsible for municipalities, rendering them ‘creatures of the province’. The lack of municipal autonomy in The Constitution has led to a significant and growing fiscal strain in Canadian cities. Often, the tools and financial support provided to municipalities from upper levels of governments are not enough to handle the variety of issues arising in cities (Canadian Centre for Policy Alternatives, 2015). In addition, significant cutbacks in grants and transfers from the federal and provincial level have increased the fiscal strain on municipal budgets (Enid Slack Consulting Inc, 1996). This fiscal strain has caused governments to look for innovative ways to fund lower priority projects to help drive economic activity (Found, 2016). A market-based TIF instrument may help to ease these municipal budget strains.

# Study Approach

The Project Team used three methods to achieve its goals. First, a literature and policy review of existing brownfield programs, provincial regulation, and brownfield history (see Appendix A). This also included a review of the academic literature on TIF and a review of TIF policy and legislation in the United States (US) and Canada. Second, the Project Team conducted 22 interviews with stakeholders in the private and public sector to better understand how different municipalities deal with brownfields and whether or not there is support for TIF (See Appendix E for interview questions). Finally, the Project Team conducted a Pro Forma analysis to understand the financial implications of TIF compared to other brownfield programs. The findings from all three aspects of the study have informed the recommendations.

## Policy and Literature Review

TIF is a method of using future incremental property tax revenues generated by the redevelopment of a property to offset the upfront costs of remediation (Found, 2016). The difference between the taxes paid by the property prior to redevelopment and the taxes paid following redevelopment is referred to as the “tax increment.”

TIF began in 1952 in California and is one of the most widely used municipal financing tools in the United States (US). Every state in the US, except for Arizona, has some form of TIF enabling legislation and it has been used in almost every type of community, including central business districts, industrial neighbourhoods, small towns, suburbs, farmlands, and brownfields (Briffault, 2010). TIF was originally implemented as a tool for combating economic blight in urban neighbourhoods but has evolved over the years to include a variety of economic development tools, including brownfield development.

Most TIF enabling legislation in the US requires evidence of blight before TIF can be enabled. In addition, a project must meet the “but for” test (Tomme, 2005). The ‘but for’ test asks: “*But for* TIF, would the property have been developed?” This test ensures TIF is used to serve the public good. TIF revenue is not intended to displace public spending because the funding produced by TIF would not exist “but for” the TIF project. Developers are gaining revenue from a heightened tax base caused by the TIF project, which is tax appreciation created by the initial investment by TIF (Merriman, 2018).

TIF also promotes sustainable partnerships between public and private sector entities. This partnership is significant as the public revenues used to finance a TIF project are being generated by private economic development (Man, 1999). On one side of the partnership, the developer must pledge private investment to increase property values. On the other side, there must be strong legal commitment by the municipality to transfer future revenues towards the TIF site. Therefore, TIF ensures reciprocal responsibility and benefit and the developer’s motivation to maximize the value of their investment is consistent with the city’s motivation to increase

their property tax base (Kenyon et al., 2012). Implementing TIF without this commitment would be challenging because developers may be reluctant to engage in long-term projects due to political or financial risks.

Although TIF may facilitate widespread political support for public investments, taxpayers may be opposed to an investment if the increase in taxes paying for the investment is greater than the benefit received (Merriman, 2018). TIF presents a workaround to this problem because it allows a city to make investments capturing revenue, while improving the allocation of resources without burdening taxpayers in unaffected regions (Brueckner, 2001).

Additionally, TIF can perform many of the functions of existing tax increment tools in Ontario but has several other important functions. For example, Tax Increment Equivalent Grants (TIEGs), one of the most used financial tools by municipalities for brownfield development, are set to a limited term of up to 10 years and may not completely offset a developer's total principal cost for eligible activities (See Appendix F). By comparison, TIF is less time restrictive, allowing all principle, holding, and environmental costs to be covered. In addition, TIF can capture provincial education taxes, cover interest on the loan, and provide money upfront to a developer, all of which TIEGs cannot accomplish. Additionally, in a market-based model TIF may be used to establish a reserve fund used for public projects, redeveloping additional land, and renovating existing buildings.

TIF can be applied to a specific site or a district. TIF districts cover multiple users and property owners and tend to be more complicated arrangements. The TIF districts are employed when an entire neighborhood is targeted for redevelopment and the funds are typically used to support infrastructure improvements necessary for attracting private development, such as roads, traffic lights, landscaping, or parks (The Council of Development Finance Agencies and the International Council of Shopping Centres, 2007). On the other hand, a site specific specific TIF is used for a single project or property and tends to have a less complicated arrangement because it involves one user or property owner. Site specific TIF funds are usually used to make a project more feasible, such as remediation costs (The Council of Development Finance Agencies and the International Council of Shopping Centres, 2007). As such, the Project Team focused on site-specific TIF for brownfield remediation throughout the project.

## **Critiques of TIF**

### Planned developments may not materialize

TIF districts are based on plans requiring both public and private investments. If public investment occurs but the intended private investment does not follow suit, or comes much later, the amount of revenue needed may be inadequate, and the municipality may either default on the TIF debt or have to service it through other pathways. Complete failures of this type are quite rare; however, it is not unusual for public or private investment to lag, or significantly underperform relative to the amount stated in the TIF plan (Lemov, 2010).



### TIF may capture revenue that would otherwise go elsewhere

In the US, TIF districts are commonly established prior to receiving approval from nearby regions or school districts that may rely on the same tax base (Merriman, 2018). Therefore, TIF allows municipalities to claim property tax revenue that might not have been collected without this tool. A TIF district allows cities to secure property tax revenue generated by non-TIF related increases in taxable assets that would have potentially gone to fund other public needs. Hence, allowing TIF districts to collect unearned revenue is especially troublesome in situations where it would have channelled to overlying public assets and services (Youngman, 2017).

The TIF district collects all incremental property tax revenues produced by appreciation above the frozen base value (Merriman, 2018). However, in many cases, some appreciation is likely to occur regardless of investment. This may be caused by regional growth raising demand for all fixed assets, as well as inflation. Development in a TIF district may also be neutralized by a loss of similar development that would have taken place at a later time or in a nearby location, even if the TIF project had not been approved (Merriman et al., 2018).

One of the reasons a “but for” clause was put into TIF legislation was to prevent TIF districts from generating rewards without stimulating economic development. By establishing the requirement that no real estate appreciation would have otherwise transpired, adjacent areas and public services still receive the same amount of property tax revenue they would have gained in absence of the TIF district, until the TIF expires (Dye et al., 2003). However, due to a variety of interpretations, the “but for” clause can be stretched to apply to most developments and is only a rough constraint. Minnesota’s legislative auditor found there were many arguments presented for why TIF-based assistance was needed for development, including:

- Unusual circumstances making the project too expensive to develop;
- Even if development was likely to take place without TIF assistance, it might not occur at a location consistent with the city’s planning goals;
- The development would happen earlier with TIF funding;
- The development would be larger or better with TIF funding;
- A company could threaten to relocate without TIF funding; and
- The city could make public improvements that would not have happened otherwise.

### TIF can make financial transactions less transparent

TIF revenues are typically placed in special funds only to be used for limited purposes before the TIF district expires. There are a variety of ways to record and account for the receipt of these funds. In the best case scenario, TIF authorities document expenditures publicly, including account balances and fund transfers. However, even in this case, the existence of a separate account not reflected in annual municipal financial reports may obscure a city’s financial situation (Merriman, 2018). In less optimistic cases, funds may be misused if TIF

expenditures are not well recorded. For instance, capital may be diverted for political favour or illegitimate private uses (Youngman, 2016).

## **Market-based TIF: The State of Michigan**

The State of Michigan has incorporated a number of financial incentives in their TIF programs, which the Project Team refers to as a “market-based TIF.” Under this model, a third-party financial lender provides funding for brownfield remediation rather than the municipality, and the tax increment is used to repay the loan on an annual basis. The municipality collects and distributes the tax increment in a similar fashion as a non-market-based TIF.

In 1996, Michigan passed the *Brownfield Redevelopment Financing Act* (Act 381, 1996) which differs from the current statute in Ontario as the latter focuses on delegating authority to brownfield redevelopment coordinators and provides a regulatory framework for creating financial incentives. The statute allows municipalities:

- To create a brownfield redevelopment authority to facilitate the implementation of brownfield plans;
- To create brownfield redevelopment zones;
- To promote the revitalization, redevelopment, and reuse of certain property, including, but not limited to, tax reverted, blighted, or functionally obsolete property;
- To prescribe the powers and duties of brownfield redevelopment authorities;
- To permit the issuance of bonds and other evidences of indebtedness by an authority; to authorize the acquisition and disposal of certain property;
- To authorize certain funds; to prescribe certain powers and duties of certain state officers and agencies; and to authorize and permit the use of certain TIF.

In addition, Michigan has created 295 municipal Brownfield Redevelopment Authorities (BRA) and 10 regional state officers responsible for them (MEDC, 2016). The BRAs are established by municipalities and/or counties and operate under the authority of the Michigan Economic Development Corporation (MEDC). The state delegates authoritative power to implement redevelopment financing incentives to their respective counties/municipalities. Act 381 of 1996 delegates specific powers to municipalities/counties such as the provision of program funding/expenditures while also allowing for flexibility for municipalities to utilize any tax increment incentive they see fit (such as TIF, TIEGS, grants, etc.). Furthermore, the MEDC also regulates and manages a reserve fund to decrease the risk of developers and provide extra funding for remediation in the event of uncovering surprise costs. (See Statute in Appendix D).

The use of TIF in Michigan has seen much success in terms of incentivizing brownfield development and provides an interesting model in Ontario. In part, the success of Michigan’s TIF model is that it removes much of the financial burden from the municipalities and relies on

third party lenders to front the remediation costs. Although the tax increment is temporarily diverted from public coffers, property tax revenue increases in the long-term. The creation of TIF authorities and a reserve fund provide needed administrative funding and risk mitigation. Based on these findings, the Project Team engaged local stakeholders to gauge their perspective on market-based TIFs to determine whether or not it could be implemented in Ontario.

## Stakeholder Interviews

The Project Team conducted a series of interviews with stakeholders in the brownfield development industry, including developers, financial institutions, provincial and municipal officials and municipal agencies. Attention was paid to geographic areas with weaker real estate markets as opposed to stronger real estate markets, as the latter already have high profits experienced with increased land values (EPA, 2015). These interviews sought to examine four components from the key stakeholders:

1. Experience with brownfield development;
2. Experience with financial incentive programs for development;
3. Overall knowledge of TIF;
4. Insight to what is needed for the implementation of a formalized TIF brownfield redevelopment framework.

In total, The Project Team conducted 22 interviews: nine municipalities, five developers, two financial lenders, and six government agencies. See Appendix E for the full list of interview questions used for each stakeholder group.

### Interview Summary

The interviews displayed a lack of knowledge of TIF among key stakeholders. When asked to rank their knowledge of TIF out of 10 (with 10 being an expert, 0 being no prior knowledge), the average response was 5.2. These stakeholders were either directly involved with brownfield redevelopment or financial incentives for redevelopment. The interviews showed confusion among TIFs and TIEGs and those stakeholders that demonstrated a stronger understanding of TIF did not provide support for its immediate implementation. Many of those interested in TIF stated they would like to see further research and public education on TIF before any regulations are put forward.

### Developers

- Five developers from across the GTA and Ottawa region were interviewed. Two of these developers admitted to having strong prior experience with brownfield development;
- On average, developers ranked their knowledge of TIFs as **5.6 out of 10**;
- An 80/20 split of residential (majority) and office or commercial space was common for developers in their brownfield redevelopments;

- Most developers have experience with public investment, including the use of TIEGs, property tax rebates, development charge credit, and study grants, for brownfield development;
- Some of the developers voiced concern over the political stability of a TIF program, potentially caused by changes in City Councils or provincial governments. Some asked for financial incentives to be guaranteed, as well as transferable between property owners;
- Most developers agreed a TIF program would be better suited for small-medium size markets. However, some said it would also be helpful in larger markets such as Toronto, as the profit margins are becoming lower compared to small-to-medium markets;
- Some developers said they were hesitant about bringing financial institutions into an agreement with the city, claiming banks to be “an unnecessary middle man.” However, other developers said they appreciated the idea of including a financial institution as private lenders may be easier to extract money from;
- Most developers agreed more education on TIF is needed within their own industry, as well as with financial lenders and municipal staff and councillors. Many expressed the connection between high development charges, remediation costs, and unaffordable housing.
  - **Advantages of TIF**
    - Offers money upfront, rather than after the work is done as found in a TIEG;
    - Financial lenders could be easier to pull money from than municipalities;
    - Could allow smaller developers to take on riskier projects, as larger developers already have the finances to provide upfront costs.
  - **Disadvantages of TIF**
    - TIF may be unpredictable due to political or administrative changes;
    - Have to deal with a government entity, which can be time-consuming.

## **Municipalities**

- Nine municipalities across Canada were interviewed, mainly in Ontario;
- On average, municipal staff ranked their knowledge of TIFs as **4.7 out of 10**;
- Almost all municipalities have a Community Improvement Plan (CIP) established specifically for brownfields;
- On average 87% of municipalities deal with residential and/or mixed use developments;
- Most municipalities dealt with one brownfield development application per year under their current brownfield CIP or TIEG program;
- Brownfield development is mainly happening in the downtown core and waterfront areas;
- A handful of municipalities use Development Charge cancellations to incentivize brownfield redevelopment while the rest mainly use grants (eg. TIEG);
- Municipalities said developers get frustrated with the long and strict timelines;

- They noted it was helpful for developers to have one point of contact in the municipality with regards to funding
- Most municipalities were worried about the risks associated with TIFs and what would happen if a project did not meet their expectations.
  - **Advantages of TIF**
    - Municipalities can provide developers with money faster since they do not have to rely on the Province or the municipal budget for redevelopment funds
  - **Disadvantages of TIF**
    - The money is coming out of the property taxes normally used to fund municipal services;
    - Some municipalities want the province to take a bigger part in financing brownfield redevelopment programs;
    - Some of the larger municipalities said they liked their existing financial incentives (eg. TIEGs) and were not interested in implementing TIF as a new tool;
    - To implement TIF, some municipalities suggested having training sessions for staff on how it works.

## **Lenders**

- Two major Canadian banks with brownfield experience were interviewed;
- One financial lender ranked their knowledge of TIFs as **2 out of 10** and did not know the difference between a TIEG and a TIF. The other financial lender had experience with TIFs in other provinces and ranked their knowledge as **8 out of 10**;
- Both financial lenders normally provide loans for construction or land purchasing, not remediation work. They said the latter is too risky. Usually, developers fund their own remediation work, with lenders coming in once pre-sales and construction is beginning;
- Questions arose about the risk: “If financial lenders were to cover remediation work and then the project fails, will the loan be attached to the property? If so, are they stuck with a contaminated property as collateral? Does the municipality cover this risk of defaulting?”;
- Both financial lenders were receptive to the idea of TIF, but wanted to ensure their loans had a valuable interest and strong risk protections for projects that fell through or did not see increases in property values;
- Both financial lenders normally fund more than 100 brownfield projects each year nationwide, with most being residential and mixed-use redevelopments;
- Both lenders noted everything in Toronto is technically a brownfield, so their level of experience with brownfields is high. However, they both agreed developers do not need TIF to remediate brownfields in Toronto, suggesting small-to-medium markets instead;

- They both noted many developers in major markets have large enough finances to fund projects, so they would rather just loan to these developers instead of having to deal with the government for TIF projects;
- Both did note, however, that if TIF program became well-used and the process became standardized, they could see interest from their financial institutions to join;
- One of the lenders with more knowledge of TIF noted most municipalities lack the necessary knowledge of TIF needed before regulations could be put forward. “The banks want to know that the municipality is aware of what they are getting involved in so that this portion of the funding can be utilized properly.”
  - **Advantages of TIF**
    - Guaranteed interest for a loan on a type of work that normally does not receive loans (remediation work)
  - **Disadvantages of TIF**
    - Have to deal with a government entity, which can be time-consuming

### **Government Agencies**

- Six public servants from municipal and provincial agencies were interviewed. These agencies are all involved in brownfield redevelopment and/or tax incentives for development;
- On average, these public servants ranked their knowledge of TIF at **5.7 out of 10**;
- Of the 6 public servants, one was from outside of Ontario and had experience with TIF;
- Most of them said redevelopment of brownfields were mostly residential, with projects ranging from 60 to 100 percent residential, with the remaining being retail or office units;
- Most of the agencies said they were interested in exploring a market-based TIF;
- Many agencies voiced concern over the lengthy development process in Ontario, saying this was a larger issue than remediation costs;
- The restraints against using TIF were varied among different agencies, with concerns rising from the political instability of TIF to the conservative taxation style of Canada;
- One public servant said, "Need to be really confident that the market can handle TIF. If not, you will lose out. However, if the market is so strong it can handle it, do you really to provide the investment then?"
  - **Advantages of TIF**
    - Reduces risk for developers, which could entice them to work with government agencies on land deals
  - **Disadvantages of TIF**
    - Many public servants noted the reluctance of government agencies to work on public-private partnerships

## **Pro Forma Model**

A Pro Forma model was generated to compare a TIF model against a Tax Increment Equivalent Grants (TIEG), a TIEG Plus program (inclusive of other financial incentives, such as study grants), and a base case within the City of Windsor (See Appendix D for a detailed explanation of TIEG). Windsor was chosen because of its smaller real estate market in comparison to Toronto or Hamilton. The Project Team's interview process revealed that private developers in smaller markets typically require higher financial incentives to engage brownfield projects due to the high upfront costs of remediation.

The models maintain the same assumptions and structure as the base case, but each is manipulated to account for the changes in project financing. The Pro Forma analysis observes the leveraged and unleveraged Internal Rate of Return (IRR) in a year 10, year 11, and year 12 sale. The Pro Forma analysis ranks the different models and addresses the benefits and impacts of each one.

The base model uses a gas station site located in Windsor. It has a parcel size of 19,928 square feet and is currently utilized as a commercial lot (Patpatia, 2019). The proposed site contains a land value of \$100.34 per square foot. The lot is currently zoned as MD1-2, which is defined by the Municipality as Light Industrial with limited Commercial within the category of Manufacturing Districts (City of Windsor, 2019). This analysis demonstrates the feasibility to construct a low-rise commercial building with a Floor Space Index (FSI) of 3 and a building efficiency of 85%.

The City of Windsor is a mid-sized market with high vacancy rates, which it aims to address through its 2017 Enhancement and Community Improvement Plan. A recent survey conducted by the City determined the overall vacancy rate for commercial space is around 25% (City of Windsor, 2019). This weaker market is shown in the Pro Forma's high discount and capitalization rates. Remediation costs also play a large role in the Pro Forma, which uses the per-foot gas station remediation costs outlined by a previous Master of Planning student at Ryerson University in a Brownfields Incentive Pro Forma (Wilson, 2016).

## **Pro Forma Analysis**

The Pro Forma analysis measures the financial feasibility of remediation using a Base Case, TIEG, TIEG Plus, and TIF model (see Appendix F for more information on the model assumptions). A cross-comparison is made for the Internal Rate of Return and overall municipal investment required.

The Internal Rate of Return analysis compares the fiscal models at their current remediation coverage rates (with TIEG at 70%, TIEG Plus at 70%, and TIF at 100%) and at the same coverage rate (with all fiscal models covering 100% of the remediation costs). Comparing the internal rate of return shows the percentage rate earned for every dollar invested. This metric allows for the understanding of which financial model is the most opportunistic to the developer.

The municipal investment analysis compares the Base Case, TIEG, TIEG Plus, TIF Non-Market, TIF Market (without reserve fund), and TIF Market (with reserve fund). The Market-Based TIF is presented through a remediation amortization schedule (See Appendix F for visualization of amortization structures). Performance is visualized with the least desirable in red, the mid-range in yellow, and the best in green. Both the Internal Rate of Return and the municipal investment comparison provide an understanding of the benefits and impacts of each financial model.

### Year 10, 11, 12 Sale IRR Comparison With Existing Remediation Coverage Percentages

Comparing the financial models at their existing remediation coverage rates illustrates how TIF would compare to a TIEG and TIEG Plus model within existing legislation. The chart below compares a TIEG and TIEG plus remediation coverage of 70% against a TIF coverage of 100%:

**Table 1: Internal Rate of Return Comparison of Each Financial Model (With Existing Coverage Percentages for Windsor and Ontario)**

	Leveraged			Unleveraged		
	Y10	Y11	Y12	Y10	Y11	Y12
Base Case	-6.57%	0.54%	4.38%	3.83%	4.47%	5.01%
TIEG Plus	-1.61%	4.63%	7.99%	4.76%	5.33%	5.81%
TIEG	-1.69%	4.58%	7.95%	4.75%	5.32%	5.80%
TIF	3.18%	7.19%	9.63%	5.39%	5.93%	6.38%

The TIF model yields the strongest returns in all three sale years for both the leveraged and unleveraged analysis. TIF had the only positive return rate in year 10 while TIEG, TIEG Plus, and the Base Case were all limited in sales before year 11. TIF has the strongest performance against the other models at their current remediation coverage rates.

### Year 10, 11, 12 Sale IRR Comparison With the Same Remediation Coverage Percentages

Comparing the leveraged and unleveraged Internal Rate of Return for each of the fiscal models at the same coverage percentage (i.e. 100%) presents a direct comparison of their fiscal performance, shown below:

**Table 2: IRR Comparison of Each Financial Model (With Existing 100% Remediation Coverage For All Models)**

	Leveraged			Unleveraged		
	Y10	Y11	Y12	Y10	Y11	Y12
Base Case	-6.57%	0.54%	4.38%	3.83%	4.47%	5.01%
TIEG	0.84%	6.33%	9.36%	5.10%	5.64%	6.09%



TIEG Plus	0.88%	6.36%	9.38%	5.11%	5.65%	6.10%
TIF	3.18%	7.19%	9.63%	5.39%	5.93%	6.38%

These results match the previous Internal Rate of Return comparison with existing coverage percentages, which further demonstrates the strength of TIF against the TIEG and TIEG Plus. Therefore, the TIF presents the most desirable financing option for developers interested in remediation and outperforms TIEG and TEIG Plus at both 70% and 100% coverage rates.

### Cost to the Municipality

The following chart presents a breakdown of municipal investment:

**Table 3: Fiscal Impact to Municipality**

	Total Cost of Remediation	Coverage %	Total Cost to Municipality
Base Case	\$2,492,800.00	0.00%	\$0.00
TIEG Plus	\$2,492,800.00	70.00%	\$1,744,960.00
TIEG	\$2,460,300.00	70.00%	\$1,722,210.00
TIF Non-Market (without reserve fund)	\$2,492,800.00	100.00%	\$2,492,800.00
TIF Market (without reserve fund)	\$2,699,850.56	100.00%	\$2,699,850.56
TIF Market (with reserve fund)	\$2,729,703.25	100.00%	\$2,729,703.25

The cost to the municipality is higher in the TIF Market model with the reserve fund because of the 7% interest required by the third-party financial lender. Even though there is a higher cost to the municipality, there are several key benefits, such as upfront third-party capital, the inclusion of administrative fees in project finances, and an additional municipal reserve fund for future brownfield remediation projects.

### Conclusion

The Pro Forma analysis demonstrates the strength of TIF over the TIEG, TIEG Plus, and Base Case models. Although TIF may appear less affordable to the municipality in the short term, it is much more feasible for the developer. Market and non-market TIF programs will provide municipalities with a valuable opportunity to promote development in the long term.

## Next Steps

As mentioned above, the Project Team used three methods to assess the implications for TIF in Ontario. Though the Pro Forma analysis demonstrates feasibility for the use of TIF, knowledge and understanding of TIF remains low among key stakeholders. The Project Team believes that implementing and regulating TIF at this time is premature and have provided a recommended approach to work towards TIF regulations in Ontario.

Phase One is based on education, awareness and building capacity and support for TIF among key stakeholders in Ontario. Phase Two builds on these recommendations and provides an approach for implementation vis-a-vis a pilot project.

### **Phase One: Education and Awareness and Building Support for TIF**

As noted in the interviews, knowledge of TIF varies but remains in the low-to-middle range of the spectrum (the average knowledge of TIF was 5.2 out of 10). Many of the interviewees did not know the difference between TIF or TIEG, were unsure of how TIF could be operationalized in their market or jurisdiction, and had some concerns around risk mitigation. In order to regulate and implement TIF in Ontario, CBN should focus on education and awareness and building support with key stakeholders in the industry. This will help stakeholders involved in brownfield development understand the potential use of TIF and whether or not there is a need for TIF in Ontario.

#### **Incorporate TIF in the 2020 CBN Conference**

Education and awareness requires knowledge sharing among brownfield practitioners. The annual Canadian Brownfield Network (CBN) Conference is the ideal forum to achieve this goal and build support within the brownfield network. CBN should consider including a session on TIF and invite leaders from other jurisdictions to participate. The TIF session participants should include financial lenders, developers, regulators and policymakers from the United States to share best practices, lessons learned, and other important information.

#### **Form Strategic Partnerships to Develop Support for TIF**

In addition to building support within the brownfield network, CBN must focus its efforts on education and awareness among key stakeholders outside the brownfield network. The knowledge gap among municipal officials, as well as the uncertainty among some financial lenders, became apparent through the interview process. An official from a financial lender stated, “banks want to know that the municipality is aware of what they are getting involved in so that this portion of the funding can be utilized properly.”

In order to generate support for the regulation and implementation of TIF, CBN should reach out to organizations that engage in policy and represent many of the stakeholders involved in brownfield development. CBN will enable stronger awareness of TIF by working with

organizations not solely focused on brownfield development but maintain an influence in municipal and provincial policy decision. Below are several organizations CBN should form relationships with to advance TIF priorities in Ontario. It should be noted that this is not an exhaustive list.

#### Association of Ontario Municipalities (AMO)

AMO has a mandate to support and enhance strong and effective municipal government in Ontario. AMO promotes the value of the municipal level of government as a vital and essential component of Ontario and Canada's political system.

Through AMO, Ontario's 444 municipalities work together to achieve shared goals and meet common challenges. AMO's programs include policy development, cost-savings programs, conference and training opportunities for municipal officials.

#### Building Industry and Land Development Association (BILD)

BILD is the leading voice and resource for the development industry and works to secure policy changes on issues impacting development. BILD facilitates information sharing and discussions between industry and governments at all levels and helps shape legislation and policy. BILD's goal is to provide solution-oriented recommendations to political decision makers.

BILD is the go-to resource for government officials on housing, land development, and renovation. Members from across the GTA and Simcoe County participate in regionally based Chapters and other committees and councils to build relationships with key decision-makers, engage in productive dialogue with government officials, and to influence policy.

#### The Canadian Bankers Association (CBA)

The Canadian Bankers Association is the voice of more than 60 domestic and foreign banks in Canada. The CBA advocates for public policies contributing to a sound, thriving banking system.

#### Economic Development Corporation of Ontario (EDCO)

EDCO supports municipalities in fostering economic prosperity in Ontario. They are the leading professional economic development organization and support Economic Development Officers through enhanced training and education. The Council holds one annual conference and several professional development events in different communities throughout Ontario. These meetings provide a forum for networking and exchange of ideas. In addition, seminars are held in cooperation with various levels of government and the private sector.

#### The Federation of Canadian Municipalities (FCM)

FCM has been the national voice of municipal government since 1901. Their members include more than 2,000 municipalities of all sizes, from Canada's cities and rural communities,

to northern communities and 20 provincial and territorial municipal associations. Together, they represent more than 90 percent of all Canadians from coast to coast to coast. Municipal leaders from across Canada assemble each year to set FCM policy on key issues.

#### Ontario Business Improvement Area Association (OBIAA)

The OBIAA supports and advocates on behalf of BIAs across Ontario through advocacy, communications, and education. The OBIAA represents more than 130 part-time staff and 200 full-time staff with a combined budget of over \$50 million dollars. There are more than 70,000 businesses represented in over 300 BIAs in Ontario.

#### The Ontario Chamber Network

The Ontario Chamber Network is the leading independent, non-partisan voice of Ontario business. Their mission is to support economic growth in Ontario by defending business priorities at Queen's Park and municipalities across the province. Through the Ontario Network, there are over 200 chambers of commerce and boards of trade representing over 60,000 business in Ontario, including the financial, development and construction industries.

#### The Real Property Association of Canada (REALPAC)

REALPAC is the national industry association for Canada's real property sector. Their members include publicly traded companies, real estate investment trusts (REITs), private companies pension funds, banks and life insurance companies. REALPAC advocates directly with government at all levels to achieve the most desirable business, environmental, tax, infrastructure, property and capital market conditions in Canada. REALPAC's research-based policy is grouped into five categories: taxation and financial policy, energy and the environment, land use planning, housing, and capital markets

#### Municipal Property Assessment Corporation (MPAC)

MPAC is an independent, not-for-profit corporation funded by all Ontario municipalities, accountable to the Province, municipalities and property taxpayers. MPAC assesses and classifies all properties in Ontario in compliance with the *Assessment Act* and regulations set by the Government of Ontario. MPAC's province-wide Assessment Updates of property values have met international standards of accuracy. MPAC's assessments and data are also used by banks, insurance companies and the real estate industry.

#### **Further Consultations**

The stakeholder interviews captured a broad and diverse perspective that has enabled the development of a set of recommendations. Throughout the interview process, it became clear a broader cross section of perspectives and opinions were needed. The Project Team recommends CBN continue to engage with key stakeholders in brownfield remediation and development

industry about the benefits and risks of using TIF. This will further CBN's goal of implementing TIF regulations in Ontario.

#### Provincial and Municipal Finance Department

The Project Team's research determined one of the primary reasons Ontario's TIF legislation did not receive regulations was due to push back from officials in the Ministries of Finance and Education. It was also discovered that officials in the City of Toronto's finance department made a recommendation to Council against the use of TIF.

CBN will need to engage financial authorities at the provincial and municipal level to win support for the use of TIF. Specifically, these departments expressed concern with a loss (or temporary loss) of tax revenue. While it is true TIF diverts a portion of tax revenue into a specific project or fund, it is only for a period of time after which the overall tax rate will be increased. Provincial and municipal finance departments may present the biggest obstacle to implementing TIF.

#### Small-to-Medium Sized Developers

Research was focused on medium-to-large size developers with experience navigating brownfield programs and complex regulatory environments. In general, the developers spoken to were interested in cost savings and efficiency. This perspective is believed to be true for most developers, however a broader cross-section of companies will provide a more nuanced understanding of the development perspective and whether or not TIF could be a successful tool in Ontario. Therefore, the Project Team recommends CBN should further engage the development community.

#### Small-to-Medium Size Lenders

The Project Team's research focused on two of Canada's main financial institutions. Yet, there are 87 banks in Canada, of which, 37 are domestic, including credit unions (Government of Canada, 2014). The scope and timeline limitations of the project prevented further engagement with the financial sector. CBN should conduct a broader engagement of the financial sector which can be achieved through strategic partnerships.

#### **Advocate for a Provincial Brownfield Authority**

Interviews conducted with developers, municipalities and financial lenders uncovered two important perspectives. First, inconsistencies were observed in how various stakeholders interpreted brownfields. Financial lenders and developers suggested almost every development site is a brownfield site, particularly in Toronto. Yet, the Ministry of the Environment, Conservation and Parks defines brownfield sites as "vacant or underutilized places where past industrial or commercial activities may have left contamination (chemical pollution) behind." The inconsistency in definition leads to an inconsistency in application.

Second, there is little consistency among municipalities in terms of how they approach brownfield development. Municipalities such as Hamilton and Ottawa have robust brownfield programs while smaller municipalities such as Sudbury and Windsor have less developed programs. Brownfield programs also differ substantially between municipalities, with some using development charge reductions, others using grants or TIEGs, and some using a combination. The larger municipalities interviewed expressed satisfaction with their programs and were not interested in making changes. At the same time, many of the smaller and medium municipalities expressed a desire to see the province take a larger role in financing brownfield redevelopment.

The Project Team recommends CBN advocate for the creation of a Provincial Brownfield Authority (PBA). The PBA would be tasked with monitoring, tracking, and reporting on brownfield properties across the province. In addition, the PBA could provide a source of funding for municipal TIEG programs and, in the future, the PBA could regulate and monitor a brownfield TIF program.

It is important to note that a blanket approach to brownfield development across all Ontario municipalities is not being recommended. Each program should be made to fit the specific conditions of the market and municipality. A TIF program, regulated through a PBA, would be an additional resource for municipalities to utilize.

### **Conduct a Banking Regulatory Comparison Between the US and Canada**

An analysis of Canada's banking regulatory framework is out of scope for the purposes of this project. However, in order to build support for a market-based TIF, CBN must complete an analysis of Canada's banking regulations. It is important to compare Canadian banks to the US to better understand how financial lenders are involved in brownfield remediation, as well as to note the barriers to lending in Canada and Ontario.

In Ontario, financial lenders typically provide loans for construction or land purchasing, not remediation work because it is deemed too risky. Developers typically fund remediation and lenders become involved during the pre-sales and construction phase. When asked about a market-based TIF, officials interviewed from the financial institutions had questions about how a remediation loan would be repaid if a project failed, if the loan would be attached to the property, and who would ultimately own and be responsible for the contamination. These questions and the general uncertainty reflect the way in which banking and financial institutions are regulated in Canada.

Canada's banking system is considered more conservative, and therefore more stable, than the US system. The regulatory regime and Canada's conservative mentality towards the financial system has insulated Canada's economy from much of the economic turmoil in the US (Government of Canada, 2014). Importing the Michigan model into Canada will be challenging. Instead, a market-based TIF in Ontario will need to be context specific and requires a

made-in-Canada approach. A deeper analysis of Canada's regulatory regime compared to the US is necessary to achieve this goal.

## **Phase Two: Pilot Project**

In order to demonstrate the feasibility of a site-specific TIF model in Ontario, the Project Team recommends the future implementation of a pilot project. Windsor is proposed as an ideal location due to the positive results from the pro forma analysis. Moreover, with a history of past industrial land use, Windsor contains many brownfields in need of remediation. Windsor's proximity to Michigan provides potential for partnership and knowledge sharing with organizations and institutions that have more experience with the use of site-specific TIF. However, before a pilot project can be instituted, an analysis is needed of what is not currently in place to facilitate the use of TIF for brownfield remediation. There are three important mechanisms that warrant further examination:

### **Establish a Cross Border TIF Working Group**

A pilot project should be closely monitored by a cross-border working group comprised of financial lenders, municipalities, and state and provincial regulators from the US and Canada. The purpose of such a task force would be to connect Canadian stakeholders with their counterparts in the US who have more experience working with TIF to share best practices and information about how TIF functions with respect to brownfield redevelopment.

CBN should establish this working group to determine the parameters of the pilot project, share best practices, provide on-going advice and monitoring, and report back on outcomes, successes, and lessons learned. Specifically, the working group can be tasked with identifying the following criteria:

#### TIF Agreement Structure

The working group can provide insight into the agreement structure. A closer examination of the agreements in Michigan will determine what aspects are transferable to Ontario. For example, if a third-party lender is involved, there must be clear language that states what their role is, and what happens if TIF does not promote future growth or development.

Similarly, there must be transparency as to what will happen if public investment occurs, but then the developer fails to uphold their infrastructure promises or severely drags out their timeline. If the TIF debt is forced to be serviced through another pathway, this must be outlined ahead of time.

#### Implementing TIF

Municipalities in Ontario require a Community Improvement Plan (CIP) to authorize the use of existing brownfield programs, such as TIEGs, and the same would likely be true if TIF was used. In the US, municipalities establish TIF districts through legislation, a process that

resembles the CIP process. A closer examination of how these two processes compare and differ is required to establish a site-specific TIF.

TIF regulations in Ontario would require flexibility so that they can be tailored to a municipality's financial needs, demand for growth, and severity of brownfield contamination. This would help ease concerns from the Ministry of Finance about a blanket regulation being created for TIF in all regions of Ontario. Furthermore, because a site-specific TIF only applies to a parcel of land, it would not have the traditional drawbacks or constraints of a district based TIF. For instance, since taxes would not be frozen over an entire area, the municipality would not be hindered for the decades of the that TIF life cycle. This would be especially beneficial for smaller to medium size municipalities with less resource capacity to respond to public demands.

#### The Use of a TIF Reserve Fund

A fund containing the surplus capital generated from TIF for community improvements and public infrastructure investments is an immense benefit of TIF. However, channeling additional revenue into a reserve fund poses certain regulatory issues that must be mitigated prior to using TIF. Alberta's Community Revitalization Levy uses this type of fund, and thus further research into the policy supporting this must be investigated for similar use in Ontario.

The reserve also has the added benefit of being used for administrative draws to finance municipal positions that would facilitate future economic development and use of TIF. For example, hiring a brownfield coordinator would ensure that remediation of blighted regions is placed higher on municipal agendas, leading to further use of TIF, and increased removal of contaminated sites from the urban land portfolio.

## **Conclusion**

The findings in this report demonstrate mixed results for the implementation of TIF in Ontario. Although TIF has been shown to function in other jurisdictions, local stakeholders are currently reluctant to move forward with its regulations and use. Achieving TIF regulations will require a robust educational effort by CBN to build support across the province. Additionally, a pilot project will demonstrate that TIF can work in Ontario and lead the way for its further expansion across the province.

As municipalities in Ontario continue to grapple with the legacy of deindustrialization, TIF may be a viable tool to incentivize the remediation and development of brownfield sites. Provincial and municipal officials, developers, financial lenders, and other brownfield practitioners should consider the use of TIF as another financial tool to achieve this shared goal.



# Appendices

## Appendix A: History of Brownfields

Brownfield sites are “vacant or underutilized places where past industrial or commercial activities may have left contamination (chemical pollution) behind” (MECP, 2019) and pose potential risks to human and environmental health and safety. These sites have a long and arduous history in Ontario. Prior to the 1970s, there was limited regulation, enforcement, and oversight of property owners polluting their land. The only real restriction to a property owner was contamination could not affect or compromise the rights and property of those adjacent (De Sousa & Spiess, 2018). When selling property, owners were not required to disclose site contamination (Fishlock, 2010). This practice was the norm in many jurisdictions until the Love Canal incident in the 1980s. Love Canal was an industrial dumping ground that became a residential neighbourhood by the late 1950s with approximately 100 single-family homes and a school. Over the years, it became evident there was an unusually high number of birth defects and cancer rates among residents in the area (Beck, 1979). By the 1980s, a total evacuation of the Love Canal community was complete, marking the end of one of the worst environmental disasters in North America (Gibbs, 1998). This event gained national publicity and prompted policy makers in North America to address the problem of contaminated sites through legislation and stronger regulations (Kleinman, n.d.)

The remediation and redevelopment of these properties has potential to attract public and private sector investment to a neighbourhood and foster economic development for cities. In Toronto alone, the socio-economic and environmental benefits to the public associated with redeveloping urban brownfields versus greenfields is estimated to be \$21 to \$31 million for industrial redevelopment, and approximately \$16 to \$23 million for residential redevelopment (De Sousa, 2015, p. 8-9). Ontario’s 2015 Provincial Policy Statement (PPS) and 2019 Growth Plan for the Greater Golden Horseshoe recognize the economic potential of brownfield sites and provide policy direction for their intensification. In municipalities across Southern Ontario, there are many abandoned or under utilized brownfield sites as a result of past industrial uses. These brownfield sites make up 3.3% to 25% of the land in Southern Ontario (De Sousa, 2015, p. 1).

This being said, the remediation and redevelopment is often cited as being too expensive, time-consuming, and risky for developers and also requires support from the public sector, usually through a mix of subsidies, tax breaks, or grants (De Sousa, 2015, p. 1). Between October 1, 2004 to December 31, 2015 4,524 Records of Site Condition were filed with the province, covering 23,689 hectares of brownfields (roughly the size of Markham). Most of these brownfield sites were intended for conversion to Residential (67.5%) or Commercial (14.9%) uses and were previously used for Commercial (36.8%), Industrial (22.3%), and Agriculture/Other (18.7%) uses (D Sousa, 2018).

## Appendix B: Existing Tools

### Community Improvement Plans

To spur brownfield remediation projects, municipalities in Ontario use financial incentive tools to make their projects financially feasible and competitive with greenfield development. In Ontario, section 111(1) of the *Municipal Act* dictates municipalities are prohibited from directly or indirectly assisting any commercial enterprise through the "granting of bonuses" (i.e. lending money, guaranteeing borrowing, giving a total or partial exemption from a levy, charge, or fee).

However, under Section 28 of the *Planning Act*, municipalities are permitted to provide grants and loans within a designated Community Improvement Area. Municipalities must pass a by-law establishing an area or single property as a *Community Improvement Plan* (CIP). A municipality may establish a CIP area for "environmental, social, or community economic reasons". This may include building age, overcrowding, affordable housing, physical deterioration or neighbourhood quality. As stated in Section 28(7.1) of the *Planning Act*, the eligible costs in a CIP include "environmental site assessment, environmental remediation, development, redevelopment, construction and reconstruction of lands and buildings for rehabilitation purposes or for the provision of energy efficient uses, buildings, structures, works, improvements or facilities".

### Tax Increment Equivalent Grants

One of the most widely used financial incentive programs permitted in a CIP is a Tax Incremental Equivalent Grants (TIEG). This incentive allows the municipality to provide a rebate on an increment or for the full portion of a property tax increase resulting from redevelopment, remediation or intervention (Ministry of Municipal Affairs, 2011). The rebate is set as a percentage of the incremental increase from a base tax and may decrease in a sliding scale each year. In the case of brownfields, TIEG assists to offset the cost of remediation or other expenses in order to incentivize redevelopment that would not have been possible without financial assistance. The grant is provided for a certain period of time and specifies which costs are considered eligible (Ministry of Municipal Affairs, 2011). In Ontario, 93 percent of municipalities use TIEGs (De Sousa, 2015).

### Other Financial Incentives

TIEGs are not the only incentive programs used in Ontario by municipalities in a CIP. Other incentive programs include:

- *Study Grant*: for Environmental Assessments and remedial work plans;
- *Tax Assistance Program*: Freeze or cancel part or all property taxes during the redevelopment or remediation period;
- *Redevelopment Grants*: Upfront grants or loans for eligible activities;

- *Municipal Fees Grant Program*: Grant on municipal fees related to development (Ministry of Municipal Affairs, 2011).

## **Appendix C: Existing Municipal Brownfield Incentive Programs**

### **Hamilton**

The City of Hamilton has multiple CIPs under the umbrella of its Brownfield ERASE Program. ERASE is a “Grant Program”, or a TIEG, and is calculated as 80% of the incremental increase in municipal property taxes. It is paid annually for 10 years once the redevelopment is completed. Hamilton’s program includes environmental remediation, environmental studies, and site preparation (i.e. construction or on-site works) (City of Hamilton, 2018). Additionally, Hamilton has a property tax freeze incentive and study grant program.

Other municipal legislation allows financial incentives, such as development charge rebate programs. These programs are legislated and regulated through the *Development Charge Act [1990]*, rather than the *Planning Act*. Hamilton’s ERASE program also includes a Development Charge Reduction Program, where commercial and residential properties are exempt from paying development charges within a designated CIP area. In this program, development charges are reduced equal to the cost of environmental remediation and other costs, such as LEED certification, Environmental Site Assessments, monitoring and maintaining environmental works (City of Hamilton, 2018).

### **Brockville**

The City of Brockville has a brownfield remediation CIP TIEG, but slightly varies from Hamilton in the structure of the grant and eligible costs (City of Brockville 2017). In its TIEG, the increment is 70% of the property tax increase, and eligible costs include: Environmental Site Assessment’s Phase 1 and 2, costs for Record of Site Condition, waste transfer and tipping fees, fill and grading, site development and infrastructure, demolition costs, legal fees, insurance premiums, and protections for interim financing.

### **Kingston**

The City of Kingston [2017] offers several Brownfield Incentive Programs through their CIP. For instance, it offers an Initial Study Grant matching funding for up to 50% of Phase II and III Environmental Site Assessments (ESA) and Site-Specific Risk Assessments (SSRA). The City takes advantage of a provincial tax assistance program called the Brownfield Financial Tax Incentive Program (BFTIP). Combining BFTIP with the municipal TIEG, developers can receive relief from paying 100% of both the municipal and educational property tax for a period of 36 months, beginning at the start of the rehabilitation period (City of Kingston, 2017). The amount is based on the pre-development tax assessment as per the Municipal Property Assessment Corporation (MPAC). The municipal portion of the tax assistance is approved by the

City, while the education portion is approved by the Minister of Finance. The City applies for this tax assistance on behalf of the proponent (City of Kingston, 2017).

Furthermore, Kingston offers a Municipal Tax Rebate program called the Tax Increment-Based Rehabilitation Grant Program (TIRGP). This is intended to offer financial relief to land owners that undertake and complete brownfield redevelopment projects within the CIP Project Area. The grants cover: environmental remediation, environmental studies, demolition, Record of Site Condition preparation costs, environmental monitoring programs, insurance premiums, financing costs, legal costs, fees for LEED certification, and other eligible program costs (City of Kingston, 2017). These grants are only available for brownfield properties where the redevelopment results in an increase in assessed value and property taxes, and are only awarded when development is complete. It is calculated as 80% of the increase in the municipal portion of the taxes and is paid on an annual basis for up to 10 years or a maximum of the eligible remediation costs (City of Kingston, 2017).

The City of Kingston's *Failed Tax Sale Brownfields* program is another example of a financial incentive for brownfield redevelopment. It won best overall project at the 2018 Brownie Awards gala presented by the Canadian Brownfields Network (CBN). With respect to failed tax sales, Section 354(3) of the *Municipal Act* [2001] grants the write off of taxes after a failed tax sale within a CIP (City of Kingston, 2017). In other words, when there is no successful buyer in response to a public property tax sale. The purpose of this program is to stimulate the redevelopment of properties in tax arrears by third parties. The program allows the City to cancel taxes owing on a property after a failed tax sale as an incentive to a potential purchaser to acquire and redevelop the property.

## **Appendix D: Excerpt from State of Michigan Brownfield Redevelopment Financing Act**

- a. *Adopt, amend, and repeal bylaws for the regulation of its affairs and the conduct of its business.*
- b. *Incur and expend funds to pay or reimburse a public or private person for costs of eligible activities attributable to an eligible property.*
- c. *As approved by the authority, incur costs and expend funds from the local brownfield revolving fund created under section 8 for purposes authorized in that section.*
- d. *Make and enter into contracts necessary or incidental to the exercise of its powers and the performance of its duties, including, but not limited to, lease purchase agreements, land contracts, installment sales agreements, and loan agreements.*
- e. *On terms and conditions and in a manner and for consideration the authority considers proper or for no monetary consideration, own, mortgage, convey, or otherwise dispose of, or lease as lessor or lessee, land and other property, real or personal, or rights or interests in the property, that the authority determines are reasonably necessary to*

*achieve the purposes of this act, and grant or acquire licenses, easements, and options with respect to the property.*

- f. Acquire, maintain, repair, or operate all devices necessary to ensure continued eligible activities on eligible property.*
- g. Accept grants and donations of property, labor, or other things of value from a public or private source.*
- h. Incur costs in connection with the performance of its authorized functions, including, but not limited to, administrative costs and architect, engineer, legal, or accounting fees.*
- i. Study, develop, and prepare the reports or plans the authority considers necessary to assist it in the exercise of its powers under this act and to monitor and evaluate the progress under this act.*
- j. Procure insurance against loss in connection with the authority's property, assets, or activities.*
- k. Invest the money of the authority at the authority's discretion in obligations determined proper by the authority, and name and use depositories for its money.*
- l. Make loans, participate in the making of loans, undertake commitments to make loans and mortgages, buy and sell loans and mortgages at public or private sale, rewrite loans and mortgages, discharge loans and mortgages, foreclose on a mortgage, commence an action to protect or enforce a right conferred upon the authority by a law, mortgage, loan, contract, or other agreement, bid for and purchase property that was the subject of the mortgage at a foreclosure or other sale, acquire and take possession of the property and in that event compute, administer, pay the principal and interest on obligations incurred in connection with that property, and dispose of and otherwise deal with the property, in a manner necessary or desirable to protect the interests of the authority.*
- m. Borrow money and issue its bonds and notes under the revised municipal finance act, 2001 PA 34, MCL 141.2101 to 141.2821, in anticipation of collection of tax increment revenues.*
- n. Do all other things necessary or convenient to achieve the objectives and purposes of the authority, this act, or other laws that relate to the purposes and responsibilities of the authority.*

## **Appendix E: Sample of an Interview Question Template**

*Carrying out this survey indicates that I am at least 18 years old and I am giving my informed consent to be a participant in this study.*

**Exploring the Use of Tax Increment Financing (TIF) to Establish a More Robust Self-Funding Brownfields<sup>1</sup> Redevelopment Program Structure for Ontario Municipalities**

*No identification of names/affiliation will be included in the final report.*

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Affiliation (contact Info: if different from the original participant contacted): \_\_\_\_\_

**Background Information & Company Characteristics**

- 1) *What is the nature of your company/department?*
- 2) *What type of brownfield development does your company/department deal with, as percentages?*

<i>Residential</i>	<i>%</i>
<i>Office</i>	<i>%</i>
<i>Retail</i>	<i>%</i>
<i>Institutional</i>	<i>%</i>
<i>Industrial</i>	<i>%</i>
<i>Other:</i>	<i>%</i>

- 3) *How many brownfields redevelopment projects has your company/department been involved in? \_\_\_\_\_*
- 4) *Where are the brownfield projects located in the city/region, and how active is brownfield development in your primary scope of operations?*
- 5) *Generally, how many of your brownfields projects have received public investment (e.g. grants, tax incentives)? \_\_\_\_\_*
  - a) *Generally, what proportion of total costs did the public investment represent in these projects? \_\_\_\_\_%*

---

<sup>1</sup> *Brownfields: "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant"*

- 6) *Which public investments were typically employed (e.g. development charge reduction, grant, TIF)?*
- 7) *What was your experience with public investment?  
a) Would you do it again? Why or why not?*
- 8) *How would you rank your knowledge of Tax Incremental Financing on a scale of 1 to 10?*
- 9) *How would your approach to brownfield development be impacted if a market-based TIF program existed in Ontario, similar to the model implemented in Michigan?<sup>2</sup>*
- 10) *What are the advantages of a TIF Program for brownfield development?*
- 11) *What are the disadvantages?*
- 12) *What would you like to see included in a TIF program in Ontario?*
- 13) *How can the government and private sector work together to improve the conditions for which a market-based TIF can be successful?*

## **Appendix F: Pro Forma Information and Assumptions**

### **Fiscal Model Scenarios**

#### 1) Base Model

The original analysis used a rent per square foot of \$15, which conformed with the average price of rent per square foot in Windsor as mentioned by a Windsor developer. This yielded a poor performance in all three sale years through both the leveraged and unleveraged IRR and Net Present Value (NPV). The IRR was incalculable and did not present an effective baseline for further comparison. Therefore, the rent per square foot was raised to \$55 to yield both leveraged and unleveraged IRR and NPV performance results.

#### 2) TIEG Model

The TIEG model utilized the same assumptions and property tax rate as the base model. Adjustments to this model were made through the revenue portion of the Pro Forma. The

---

<sup>2</sup> Tax Incremental Financing in Michigan directs revenue from TIF districts and parcels towards three areas: to repay a property owner for remediation costs of a brownfield site, to the administrative costs of a TIF authority, and towards a reserve fund managed by the TIF authority to fund future brownfield remediation projects.

TIEG payments were calculated by multiplying the property tax increment by 70%. Remediation payments were discontinued after remediation coverage was achieved.

3) TIEG Plus Model

The TIEG plus model utilized the same property tax and operational revenue streams as the TIEG model. This model included three of Windsor's municipal grant programs in the revenue assumptions (summarized below). The Pro Forma subtracted the cumulative value of both the Feasibility Study Grant Program and the ESA Grant Program. The TIEG Plus payments were calculated by multiplying the property tax increment by 70%. Remediation payments were discontinued after remediation coverage was achieved.

4) TIF Model

The Market-Based TIF model utilized the same operational Pro Forma and property tax rate as the base model. Adjustments were made through the assumptions portion of the model. This model eliminated the remediation costs from the development cost assumptions.

**Windsor Remediation Grant Programs (City of Windsor, 2010)**

1) The Feasibility Study Grant Program:

- 50% of the cost of an eligible feasibility study, maximum \$7,500 per study
- 5 years with the possibility to extend to another 5 years
- Ex. market study, concept plans, structural analysis, evaluation of building system

2) The Brownfield Development Charge Exemption Program:

- 60% reduction of development charges payable on a brownfield site approved in the grant program
- If it meets LEED, smart growth, or official plan objectives, the cost of remediation applied against development charges will not be deducted from the brownfield rehabilitation grant
- Must have an approved brownfield rehabilitation grant
- Issued at date of building permit
- Eligible properties must conform to urban design guidelines
- Eligible Costs: Phase 2 environmental site assessment, risk assessment, in-placing clean fill, installing works, monitoring, and environment insurance premiums.

3) The ESA Grant Program:

- 50% of the cost of an eligible environmental assessment
- Maximum \$15,000 per environment study (maximum 2 studies)
- Maximum total grant of \$25,000



## TIF Market Model Amortization Schedules

### TIF Market (Without the Reserve Fund)

Current Ontario legislation limits the Tax Increment Financing structure to only include remediation and construction costs.

<b>Inputs</b>	
Remediation & Reserve before	
Interest	\$2,492,800
Draws (Years)	7
Annual Interest Rate	7.00%

<b>TIF Market (Without Reserve Fund) Remediation Amortization Schedule</b>				
<b>Year</b>	<b>Payment</b>	<b>Interest</b>	<b>Balance</b>	<b>Payment Attribute</b>
<b>0</b>	\$0.00	\$0.00	\$2,492,800.00	<b>Remediation Payments</b>
<b>1</b>	\$418,654.93	\$29,305.85	\$2,103,450.91	
<b>2</b>	\$419,948.18	\$29,396.37	\$1,712,899.11	
<b>3</b>	\$421,244.91	\$29,487.14	\$1,321,141.34	
<b>4</b>	\$422,545.15	\$29,578.16	\$928,174.35	
<b>5</b>	\$423,848.90	\$29,669.42	\$533,994.87	
<b>6</b>	\$425,156.17	\$29,760.93	\$138,599.64	
<b>7</b>	\$426,466.97	\$29,852.69	(\$258,014.65)	
<b>Totals</b>	<b>\$2,957,865</b>	<b>\$207,050.56</b>		
<b>Total Remediation Investment</b>				<b>\$2,699,850.56</b>

### TIF Market (Including the Reserve Fund)

The TIF Market Model (with the reserve fund) includes administrative fees into the market-based loan structure. The reserve fund is another financing stream that follows the complete repayment of the remediation loan.

<b>Inputs</b>	
Remediation before Interest	\$2,492,800
Admin Costs	\$300,000
Reserve Costs	\$782,410
Draws (Years)	9
Annual Interest Rate	7.00%

<b>Market TIF (Reserve Fund) Remediation Amortization Schedule</b>						
<b>Year</b>	<b>Payment</b>	<b>Admin Expenses</b>	<b>Interest</b>	<b>Developer DS</b>	<b>Reserve Fund</b>	<b>Payment Attribute</b>
<b>1</b>	\$418,654.93	\$75,000.00	\$29,305.85	\$314,349.09		<b>Remediation Loan Payments</b>
<b>2</b>	\$419,948.18	\$75,000.00	\$29,396.37	\$315,551.80		
<b>3</b>	\$421,244.91	\$75,000.00	\$29,487.14	\$316,757.77		
<b>4</b>	\$422,545.15	\$75,000.00	\$29,578.16	\$317,966.99		
<b>5</b>	\$423,848.90		\$29,669.42	\$394,179.48		
<b>6</b>	\$425,156.17		\$29,760.93	\$395,395.24		
<b>7</b>	\$426,466.97		\$29,852.69	\$396,614.28		
<b>8</b>	\$426,466.97		\$29,852.69	\$41,985	\$354,628.93	<b>Remediation Loan + Reserve</b>
<b>9</b>	\$427,781.31				\$427,781.31	<b>Reserve Fund</b>
<b>Totals</b>	<b>\$3,812,113.49</b>	<b>\$300,000.00</b>	<b>\$236,903.25</b>	<b>\$2,492,800.00</b>	<b>\$782,410.23</b>	
<b>Total Remediation Investment</b>						<b>\$2,729,703.25</b>

## References

Beck, E. C. (1979) *The Love Canal Tragedy*. Retrieved from:  
<https://archive.epa.gov/epa/aboutepa/love-canal-tragedy.html>

Briffault, Richard. (2010). *The Most Popular Tool: Tax Increment Financing and the Political Economy of Local Government*

Brueckner, Jan K. (2001). "Tax Increment Financing: A Theoretical Inquiry." *Journal of Public Economics* 81: 321–343.

Canadian Centre for Policy Alternatives. (2015) *Under Pressure: How Public Policy is Constraining Ontario Municipalities*. Retrieved from: <https://www.policyalternatives.ca/sites/default/files/uploads/publications/Ontario%20Office/2014/10/Under%20PressureFINAL.pdf>

Calgary Municipal Land Corp. (2018). "2018 Business Plan Update." Retrieved from:  
<http://www.calgarymlc.ca/documents>.

City of Brockville. (2011). "Brockville Community Improvement Plans." Retrieved From:  
<http://brockville.com/UploadedFiles/PDF%20of%20CIP%20Brochure%20-%20Feb%202017.pdf>

City of Calgary. (2007). "Rivers District Community Revitalization Plan." Retrieved from:  
<http://www.calgary.ca/CS/CPB/Pages/Projects-and-initiatives/The-Rivers-development/The-Rivers-District-Community-Revitalization-Plan.aspx>.

City of Chicago, Department of Planning and Development. (2018). "Tax Increment Financing." [www.cityofchicago.org/city/en/depts/dcd/provdrs/tif.html](http://www.cityofchicago.org/city/en/depts/dcd/provdrs/tif.html).

City of Edmonton. (2015). "2015 Financial Report to Citizens." Retrieved from:  
[https://www.edmonton.ca/city\\_government/documents/2015\\_per\\_cent20FRTC\\_WEB\\_per\\_cent20Final1.pdf](https://www.edmonton.ca/city_government/documents/2015_per_cent20FRTC_WEB_per_cent20Final1.pdf).

City of Hamilton. (2018). "Review of City of Hamilton ERASE CIP Incentives Program". Retrieved From: <http://investinhamilton.ca/wp-content/uploads/2019/07/ERASE-CIP-2018.pdf>

City of Kingston. (2017). “Brownfield Community Improvement Plan”. Retrieved from: <https://www.cityofkingston.ca/documents/10180/19597/Community+Improvement+Plan+-+Brownfields/3b821ee0-259d-4d15-a195-1507578cdd4c>.

City of Toronto. (2002). Using Tax Increment Financing as a Development Incentive within the Draft Etobicoke Centre Secondary Plan Area (Ward 5 Etobicoke Lakeshore). Report to the Policy and Finance Committee. <http://www.toronto.ca/legdocs/2003/agendas/council/cc030204/pof1rpt/cl032.pdf>.

City of Windsor. (2019). INDEX OF BY-LAWS AMENDING BY-LAW 8600. Retrieved from: <https://www.citywindsor.ca/cityhall/By-laws-Online/Documents/BL%208600%20REVISED%20OCTOBER%20202019.pdf>.

City of Windsor. (2019). DOWNTOWN WINDSOR ENHANCEMENT STRATEGY AND COMMUNITY IMPROVEMENT PLAN <https://www.citywindsor.ca/cityhall/committeesofcouncil/Standing-Committees/Development-and-Heritage-Standing-Committee/Documents/Downtown%20Windsor%20Enhancement%20Strategy%20and%20Community%20Improvement%20Plan.pdf>

City of Windsor. (2010). “The City of Windsor Brownfield Redevelopment Strategy and Community Improvement Plan” <https://www.citywindsor.ca/residents/planning/Land-Development/Planning-Policy/Documents/Brownfield%20Redevelopment%20Strategy.pdf>

De Sousa, C., and Spiess, T.B. (2018) The management of brownfields in Ontario: A comprehensive review of remediation and reuse characteristics, trends, and outcomes, 2004–2015, *Environmental Practice*, 20:1, 4-15, DOI: 10.1080/14660466.2018.1407615

De Sousa, C. (2015). Overcoming Barriers and Facilitating Brownfields Redevelopment in the GTHA: A Review of Results from Interviews with Private Sector Stakeholders. Centre for Urban Research and Land Development. Retrieved from: [https://www.ryerson.ca/content/dam/cur/pdfs/WorkingPapers/CUR%20Working%20Paper\\_Brownfields\\_Redevelopment\\_November%2023%2C%202015.pdf](https://www.ryerson.ca/content/dam/cur/pdfs/WorkingPapers/CUR%20Working%20Paper_Brownfields_Redevelopment_November%2023%2C%202015.pdf)

De Sousa, C. (2018) Cleanup and Smart-In-Up: A look at Ontario’s efforts to connect brownfields remediation, infill development and regional growth planning. Centre for Urban Research and Land Development. Retrieved from: <https://www.ryerson.ca/cur/Blog/blogentry29/>

Dye, Richard F., and David F. Merriman. (2003). "The Effect of Tax Increment Financing on Land Use." In *The Property Tax, Land Use, and Land Use Regulation*, Ed. Dick Netzer. Northampton, MA: Edward Elgar Publishing.

Enid Slack Consulting Inc (1996). Financing Infrastructure: Evolution of Existing Research and Information Gaps. Retrieved from: [http://publications.gc.ca/collections/collection\\_2018/schl-cmhc/nh15/NH15-174-1997-eng.pdf](http://publications.gc.ca/collections/collection_2018/schl-cmhc/nh15/NH15-174-1997-eng.pdf)

Fishlock, R. 2010. Brownfields Reform in Ontario. Web version reprinted from Key Developments in Environmental Law. 2010. Canada Law Book, Aurora, ON, p. 18. Retrieved from: [http://www.blakesfiles.com/Reports/2011\\_Blakes\\_Brownfields\\_Reform\\_in\\_Ontario\\_EN.pdf](http://www.blakesfiles.com/Reports/2011_Blakes_Brownfields_Reform_in_Ontario_EN.pdf)

Found, A. (2016). Tapping the Land: Tax Increment Financing of Infrastructure. C.D. Howe Institute. Retrieved from: [http://www.exchangemagazine.com/morningpost/2016/week13/Tuesday/e-brief\\_232.pdf](http://www.exchangemagazine.com/morningpost/2016/week13/Tuesday/e-brief_232.pdf)

Gibbs, L. (1998) Love Canal: The Start of an Environmental Justice Movement. Retrieved from: <http://chej.org/wp-content/uploads/Love-Canal-PDF-v1.pdf>

Government of Canada, Office of the Superintendent of Financial Institutions. (2014). "Who We Regulate". Retrieved from: <http://www.osfi-bsif.gc.ca/Eng/wt-ow/Pages/wwr-er.aspx?sc=1&gc=1#WWRLink11>.

Government of Alberta, Municipal Affairs. (2010). Guide to Property Assessment and Taxation in Alberta. Retrieved from: [http://www.municipalaffairs.alberta.ca/documents/as/AB\\_GuidePtyAssmt\\_fnrev.pdf](http://www.municipalaffairs.alberta.ca/documents/as/AB_GuidePtyAssmt_fnrev.pdf).

Kenyon, D. A., A. H. Langley, and B. P. Paquin. 2012. Rethinking Property Tax Incentives for Business. Cambridge, MA: Lincoln Institute of Land Policy.

Kerth, Rob and Phineas Baxandall. (2011). Tax Increment Financing Report: The Need for Increased Transparency and Accountability in *Local Economic Development Subsidies*. <https://www.smartgrowthamerica.org/app/legacy/documents/Tax-Increment-Financing.pdf>.

Kleinman, J. (n.d) Love Canal: A Brief History. Retrieved from: [https://www.geneseo.edu/history/love\\_canal\\_history](https://www.geneseo.edu/history/love_canal_history)

- Lemov, Penelope. (2010). "Tough Times for TIFs?" *Governing*.  
[www.governing.com/topics/finance/tough-times-tax-increment-financing.html](http://www.governing.com/topics/finance/tough-times-tax-increment-financing.html).
- Man, Joyce Y. (1999). "Fiscal Pressure, Tax Competition, and the Adoption of Tax Increment Financing." *Urban Studies* 36(7): 1151–1167.
- Merriman, D. (2018). Improving tax increment financing (TIF) for economic development. Policy Focus Report, *Lincoln Institute of Land Policy*.
- Merriman, David F., Di Qiao, and Tianshu Zhao. (2018). "Evidence About State-by-State Use of Tax Increment Financing." <https://ssrn.com/abstract=3144474>.
- Michigan Economic Development Corporation (2016). Community Development Brownfield Program Review. *State of Michigan*. Retrieved from  
<https://www.miplace.org/4a14f9/globalassets/documents/tif/brownfield-fact-sheet.pdf>
- Ministry of the Environment, Conservation and Parks (2019). Brownfields Redevelopment. Retrieved from: <https://www.ontario.ca/page/brownfields-redevelopment>
- Ministry of Municipal Affairs and Housing. (2011). Municipal Financial Incentives for Brownfield Redevelopment. Retrieved From: [mah.gov.on.ca/AssetFactory.aspx?did=9590](http://mah.gov.on.ca/AssetFactory.aspx?did=9590).
- Minnesota Office of the Legislative Auditor, Program Evaluation Division. (1996). "Tax Increment Financing." <https://www.auditor.leg.state.mn.us/ped/1996/pe9606.htm>.
- Ontario Real Estate Association. Encouraging Brownfield Redevelopment. Accessed from <https://www.canadianbrownfieldsnetwork.ca/advocacy-and-outreach>
- Office of the Cook County Clerk. (2016). "TIF District Summary: City of Chicago Only 2014 to 2015 Revenue Comparison." <https://www.cookcountyclerk.com/sites/default/files/pdfs/ChicagoTIFTotalsSummary2015.pdf>.
- Planning Act. RSO 1990, c. P13, s 16.
- Spahlinger, M., & Wayne, N. (2019). Community Revitalization Levy as a Municipal Financing Mechanism in Alberta. *The School of Public Policy Publications* (2019) Volume, 12(4).
- The Council of Development Finance Agencies and the International Council of Shopping Centres. (2007). *Tax Increment Finance Best Practices Reference Guide*.

Tomme, Alyson. (2005). Tax Increment Financing: Public Use or Private Abuse? *Minnesota Law Review*, 90:213, pp 215.

United States Environmental Protection Agency [EPA]. (2015). Anatomy of Brownfields Redevelopment. *United States Environmental Protection Agency*. Retrieved from [https://www.epa.gov/sites/production/files/2015-09/documents/anat\\_bf\\_redev\\_101106.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/anat_bf_redev_101106.pdf)

Vance, Steven. (2016). "Transit TIF Districts Pass State House and Senate, Would Fund CTA Projects." Streets Blog Chicago. June 30. <http://chi.streetsblog.org/2016/06/30/transit-tif-districts-pass-state-house-and-senate-would-fund-major-cta-projects>.

Youngman, Joan. (2016). *A Good Tax*. Cambridge, MA: Lincoln Institute of Land Policy.