

**An Analysis of the Purple Line: How Can We Do Better?**

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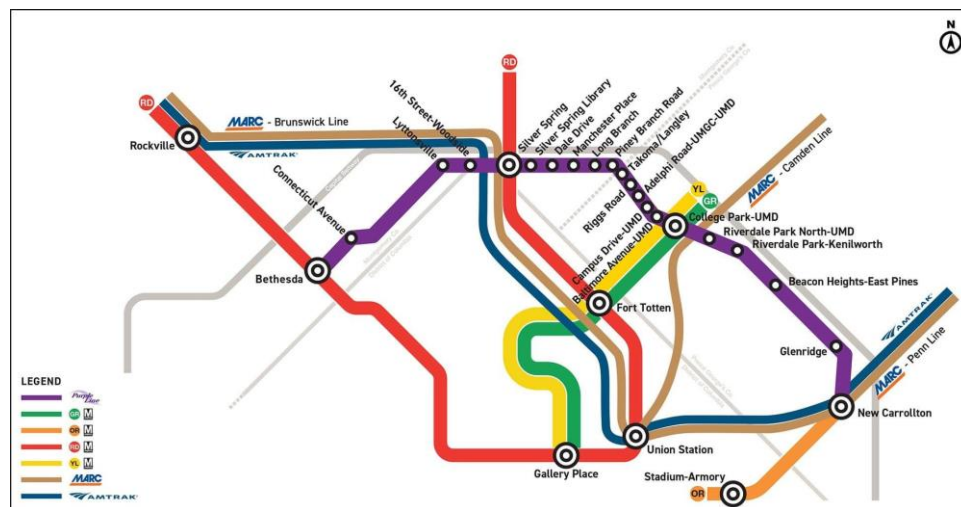
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## **Introduction:**

Extending from Bethesda in Montgomery County to New Carrollton in Prince George's County, the Purple Line is a 16-mile light rail that is expected to “carry an estimated 65,000 passengers a day” (Office of Marketing and Communications, 2023). Even with the benefit of better connecting the already-existing public transportation methods in the Washington metropolitan area, the project has endured a long and grueling planning process. Despite these various challenges, the project has persisted and now looks forward to an opening date of Spring 2027. Pictured below in figure 1 is a map of the proposed Purple Line route along with other existing Washington metropolitan transportation.



*Figure 1: Proposed Route of the Purple Line in relation to other public transportation*

This paper looks to analyze and critique both the process and impacts of the Purple Line. After this, the paper will explain how these critiques can be applied to future projects such as the Baltimore Red Line. To do this effectively, this paper will first explore the history of the project and how it got to where it is today. This will then allow for a constructive analysis of the benefits and drawbacks of this project. Finally, this paper will provide recommendations for future

projects of a similar nature in hopes of improving the process of introducing new public transportation options.

### **Background of the Purple Line Project:**

Through various gubernatorial administrations, the Purple Line has faced numerous obstacles and as a result the final product has constantly changed. The first mention of a project resembling the Purple Line was in 1989 by Maryland Governor Donald Schaefer. The proposed plan would build two light rail lines, one crossing through Baltimore, and the other running “on the Georgetown Branch, a 3-mile stretch of abandoned railroad,” in Montgomery County (ACT, 2018).

Due to the loss of previously available funds, the project faded from the public eye. Other attempts were made to regenerate the project, some more successful than others, but it was not until the election of Martin O’Malley in 2006 that optimism surrounding the future of the project had been reintroduced. “In October 2011, the federal Department of Transportation approved the project’s move into the preliminary engineering phase,” and by March of 2014, “the Federal Transit Administration issued its Record of Decision approving the project” (ACT, 2018).

The momentum and optimism were soon brought into question after the election of Governor Larry Hogan in 2014. Delays brought increasing uncertainty to the future of the project, but in 2015 the Governor announced “that the project will go forward with some cost savings and a somewhat greater financial contribution by Montgomery and Prince George’s Counties” (ACT, 2018). During this same press conference, it was also announced that the Red Line, a similar light rail project in the Baltimore area, would not continue forward (WMAR-2 News, 2015).

To add to the list of obstacles that the Purple Line has faced, on August 3<sup>rd</sup>, 2016, a U.S. District Court Judge, Richard Leon, halted the project due to a lawsuit filed by a group of Chevy Chase residents. The lawsuit questioned the ridership estimates while also demanding “that a supplemental Environmental Impact Statement (SEIS) be conducted,” (ACT, 2018). On July 17, 2017, a three-judge panel of the Federal Court of Appeals suspended the District Court’s injunction. With a final decision having been reached, the groundbreaking of the project took place shortly thereafter on August 28<sup>th</sup>, 2017.

#### Montgomery and Prince George’s County History:

In order to have a full understanding of the Purple Line, it is important to also look at the history and background of the area. Both Montgomery and Prince George’s County have a history of redlining and other racially motivated policies that have affected the land use of these two counties. After all, there have been several court cases that have found that local banks were participating in such racist decision making.

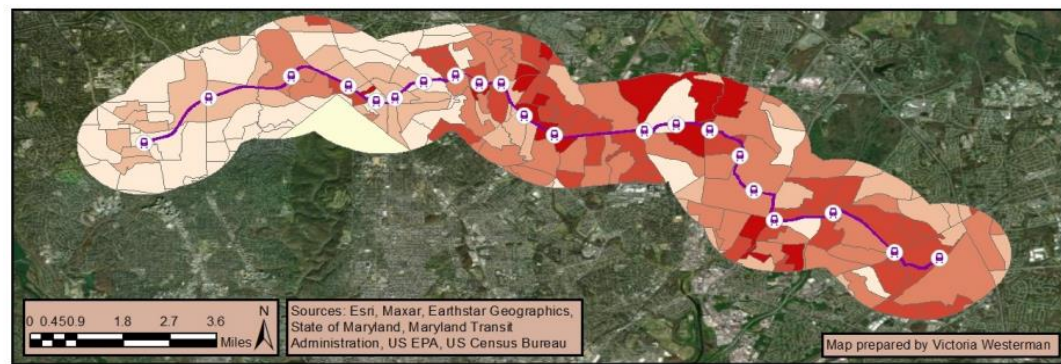
One of them is *United States v. Chevy Chase Bank F.S.B.* As the Justice Department explained, the Chevy Chase Federal Savings Bank “practiced redlining by carving out white neighborhoods in the district to serve while ignoring black communities in the city and Prince George’s County” . The Department of Justice had started their investigation after several articles released by the Washington Post had found that out of the 956 mortgage loans made by Chevy Chase Bank in 1991, 864 of them were in overwhelmingly white communities (U.S. Department of Justice, 1994). In 1994, the bank agreed to settle rather than going to trial, despite denying any wrongdoing. The bank’s representative has explained this decision by stating “we were happy to enter into the settlement because the relief sought the kind of investment in the community that makes good business sense” (Singletary, 1994). As a result of such

wrongdoings, the bank promised to “open offices in black neighborhoods of the district and Prince George’s County and to invest \$11 million there”.

Approximately 15 years later, this bank was yet again under investigation by the Department of Justice. In this complaint, it is alleged that the Chevy Chase Bank was charging higher prices for black and Hispanic home buyers from 2006 to 2009. As a result, the Department of Justice has ensured that “borrowers who paid more for their mortgages... [would] be properly compensated” (U.S. Department of Justice, 2023). This case, along with many others, is a prime example that issues concerning race and other social factors are still alive and well, especially in this area of Maryland.

This complicated history is not just applicable to Prince George’s County. Montgomery County has a similar past, especially concerning the Silver Spring community. Silver Spring “was originally developed with a restrictive deed covenant that prevented Black families from becoming homeowners, and that racism still has its impacts today” (Bogle, 2022).

Looking more locally to the Purple Line, pictured below in figure 2 is an infographic that displays the disparities of another socioeconomic factor, average income. This analysis helps to convey the percentage of each community that is identified as low-income. The map shows that there is a broad variety of communities that this project would be traveling through.



*Figure 2: Income demographics and disparities within one mile of the proposed purple line route*

All of this is to say that because discrimination and racism have been such present factors in the past of Montgomery and Prince George's County, their impacts need to be considered in current day projects. Given the expansiveness of the Purple Line Project and the variety of communities affected by it, this mindset needs to be applied.

### **Benefits of the Project:**

Despite the complex history of the area that the Purple Line will soon occupy, there is no arguing against the benefits that this project will bring. One of the most obvious direct benefits of this project is the improved transportation of the area. In the official record of decision, many of the listed benefits of this project revolve around the improved transportation. Additionally, this direct impact also leads to other indirect impacts such as decreased traffic and vehicle pollution, as well as better connecting a different variety of communities.

### **Improving Transportation:**

Providing "faster, more direct, and more reliable east-west transit service connecting major activity centers," bettering the "connections to Metrorail services located in the corridor," and improving "connectivity to the communities in the corridor," are all benefits that are cited in the record of decision (FTA, 2014). Currently, a trip from the Bethesda metro station to the College Park station using only Metrorail would require traveling 18 miles, which also involves a transfer from the red to green line. Comparatively, the new Purple Line will decrease the required distance traveled to 11.6 miles. This makes sense, after all the "station locations were selected based on connections with existing transit services," as well as "public space availability, local plans, ridership catchment areas," and "agency and community input".

### Environmental Benefits:

The environmental benefits that this project will have are undeniable, and it was one of the most often cited pros when advocating for the Purple Line. According to the Maryland Transit Administration (MTA), it is projected that “the Purple Line is estimated to take 17,000 cars off the road daily,” while also “saving 1 million gallons of gas within 20 years” (MTA, Nov. 2023). Additionally, MTA also touts the projects’ “use of existing roadways to minimize effects on land and water resources” (FTA, 2014).

By providing alternative transportation options to cars, this project is directly decreasing the demand for fossil fuels. Given the current state of climate change, prioritizing and investing in more environmentally friendly transit options is one of the many ways to decrease the usage of fossil fuels. The project is likely also to decrease the number of trips taken by car by better-connecting local transit options. Rather than having to drive to the nearest metro station, passengers may now have the option to take the Purple Line. Again, this is another example of how this project is improving the D.C. Metropolitan transportation system.

### Drawbacks and Criticism of the Project:

Given the lengthy and complex history of the Purple Line project, it should come as no surprise that the project has faced its fair share of criticisms. These criticisms range from issues surrounding gentrification to the environmental impacts of the project. Some of the main criticisms and drawbacks of the Purple Line will be described in further detail below to have a more complete understanding of the entirety of this project.

### Gentrification:

When researching academic literature surrounding the Purple Line, one of the topics that continually appeared was its relation to gentrification. Gentrification is generally defined as “the process whereby the character of a poor urban area is changed by wealthier people moving in, improving housing, and attracting new businesses, typically displacing current inhabitants in the process” (Oxford, 2023). While transit investments like the Purple Line are needed and long overdue for these disadvantaged and underserved communities, they “can displace incumbent residents and their business, culture, and social networks,” which then contributes to the longstanding cycle of hardship and discriminatory policies (Finio, 2023).

The diverse population of the neighboring areas for this project is undeniably a contributing factor to the complexity at hand. It was identified by the National Center for Smart Growth that the majority of the population within a half-mile radius of the expected route “is nonwhite, and one third identifies as Hispanic” (Finio, 2023). Additionally, it was also noted that “poverty rates in some areas exceed 20 percent of the population”.

A study from Nicholas Finio published in 2023 conducted an in-depth analysis of the relation between gentrification and business closures, many of which were owned by minority and/or low-income residents. The main question presented in this study was if “increased growth and transit investment come with increased risk of closure for local businesses,” and the author found that the answer to this was “a clear yes”. As noted by the author, this could be attributable to a number of factors including “disruption from utility work, closed roads, noise,” all of which may have led customers to seek out other alternatives. Additionally, in advance of the Purple Line becoming operational, “firms may be subject to increasing commercial rents,” which may act as a compounding factor to the many causes that result in local business closures. Regardless



of the cause, the outcome is all the same: this project could lead to the “displacement of longtime residents with lower incomes in the corridor” (Bogle, 2022).

Other academic literature surrounding public transportation projects similar to the Purple Line have found that “gentrification has been noted to cluster spatially near stations of the existing regional subway system” (Turner et. al., 2001). The Purple Line is following in the footsteps of countless other public transit projects, because real estate price increases have already begun in advance of the project’s opening (Finio, 2022). This follows the findings of another academic article which found that housing prices increased “after the light rail transit went into the engineering phase” (Peng, et. al., 2023).

Another area of contention for the Purple Line are the methods used to engage local communities in the planning and decision-making process. Despite MTA explaining that they “used a wide range of outreach techniques,” and that the open houses were “well attended,” there are still criticisms to be had. In the record of decision for the Purple Line, it was stated that “when requested, Spanish-speaking staff attended these meetings” (FTA, 2014). Given the fact that one-third of the population is within a half-mile radius of the project, this presents a key issue. If the citizens attending to provide input cannot understand what is presented to them, how are they supposed to provide such input?

#### Economic Impacts and Cost:

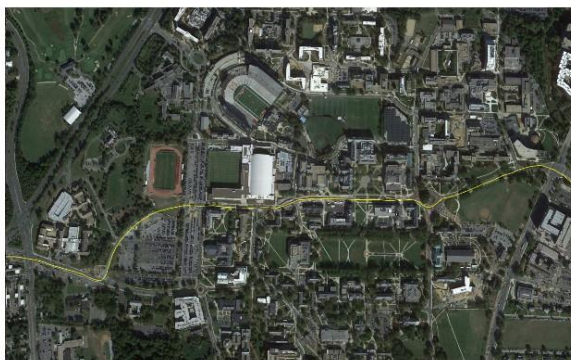
When the project was originally approved back in 2019, the expected cost was \$5.6 billion. Due to project delays and numerous other factors, the cost has now jumped to \$9.3 billion. As a result of this large price tag, the Purple Line has become “the nation’s largest public-private partnership” (Pasacale, 2022). Many opponents of this project criticize this transportation investment when there is still such obvious “socioeconomic inequality in [the] corridor,” especially considering that this area has already experienced significant gentrification

in the past. Given the diverse communities of the corridor, there is also great concern that the benefits provided by this project may not be equitably distributed. After all, the impacts to the Bethesda community where housing costs “on average 3-4 times as much as the median home in the US,” is going to be vastly different to that of the Riverdale area where “household incomes are below the US average” (Finio, 2022).

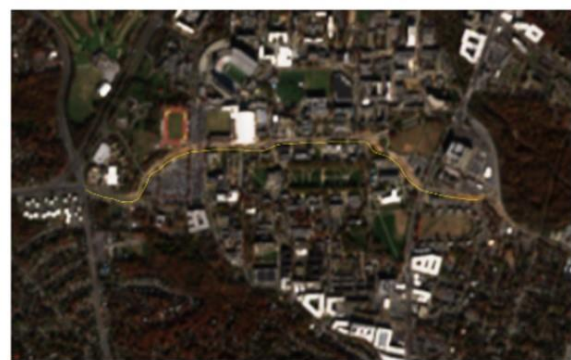
### Environmental Impacts:

The long-term environmental benefits of this project are substantial, but that is not to say that there are still no negative impacts that need to be taken into consideration. Many of the concerns surrounding the environment and the Purple Line are related to the construction of the project. In the record of decision, the “increased impervious surfaces, stormwater run-off, and nonpoint source water pollution<sup>7</sup>” are all mentioned several times. More specifically, it also explains that “construction impacts will include excavation of slopes, resulting in short-term redirecting of runoff and small drainage patterns.” An example of the changes that occur as a result of the Purple Line is pictured below in figure 3. The figure displays a side-by-side comparison of Campus Drive, represented by the yellow line, at the University of Maryland before and during construction.

Figure 3



Above is a satellite image captured on December 19th, 2016. Pictured is the area of Campus Drive at the University of Maryland prior to the construction of the Purple Line.



This is another satellite image of Campus Drive at the University of Maryland. This image was captured on November 16th, 2023, while construction of the Purple Line is taking place.

Additionally, there are also specific sections of the Purple Line Route that will require a substantial amount of tree removal. Both the record of decision and the final environmental impact statement make mention of the main area of concern, which is the Georgetown Branch Trail. While these documents say that the impacts will mostly be restricted to the edge of forest habitat, this will still influence the functionality of that ecosystem. Along with this, there is also a concern of tree mortality due to “significant critical root zone (CRZ) disturbance,” as well as other changes to the habitat (FTA, 2014).

Given all of these factors and comments, it is important to note that the agencies heading this project are aware of such concerns. In the record of decision, both MTA and FTA acknowledge that the “Capital Crescent Trail will be different from the Georgetown Branch Interim Trail that exists today,” but they make an attempt to offset this by implementing new landscaping and by planting new native species.

### **Application to the Red Line:**

Everything prior to this section serves the purpose of establishing the background and analyzing this project, but also portraying the complexity of it. Like many transit projects similar to the Purple Line, it cannot be simply categorized as good or bad. The topic has many intricacies and therefore requires in-depth analysis. Once the analysis has been done, there needs to be a use for the conclusions that have been made, and that’s where the applications of these findings come in.

At the time of writing this paper, it was recently announced that the Baltimore Red Line, a similar light rail transit project to the Purple Line, was being rebooted. Though it was not

discussed in depth in this paper earlier, the Red and Purple Line had a very similar path, as the two light rail projects had emerged at approximately the same time.

The two projects diverged from each other in a press conference on June 25<sup>th</sup>, 2015, where then Governor Larry Hogan announced that the Purple Line would continue through its planning process (with drastic changes to funding), while the Red Line would not (WMAR-2 News, 2015). It was at this point that the Baltimore Red Line appeared to have faded away. That was until a press conference almost 8 years later on June 15<sup>th</sup>, 2023, that the current Governor, Wes Moore, announced the relaunch of the Baltimore Red Line (State of Maryland, 2023). While many of the details are still unknown and to be decided, the announcement to invest in Baltimore's public transportation system is a monumental one.

As mentioned numerous times throughout this paper, the Purple Line has faced a complex journey to arrive at where it is today. Given the experiences, lessons, and hindsight gained from this project, it seems sensible to apply these to the now-impending Red Line Project in hopes of avoiding some of the past difficulties.

While many of the details of the project are not yet available, the prior goal of better connecting pre-existing transit by providing accessible East to West transit is still relevant today. This likely sounds familiar as this was also one of the main goals of the Purple Line. At the time of writing this paper, the Red Line is still in the preliminary stages of planning. The map presented in figure 4 shows other locally available transportation options, as well as an estimated idea of the paths that the project could take.

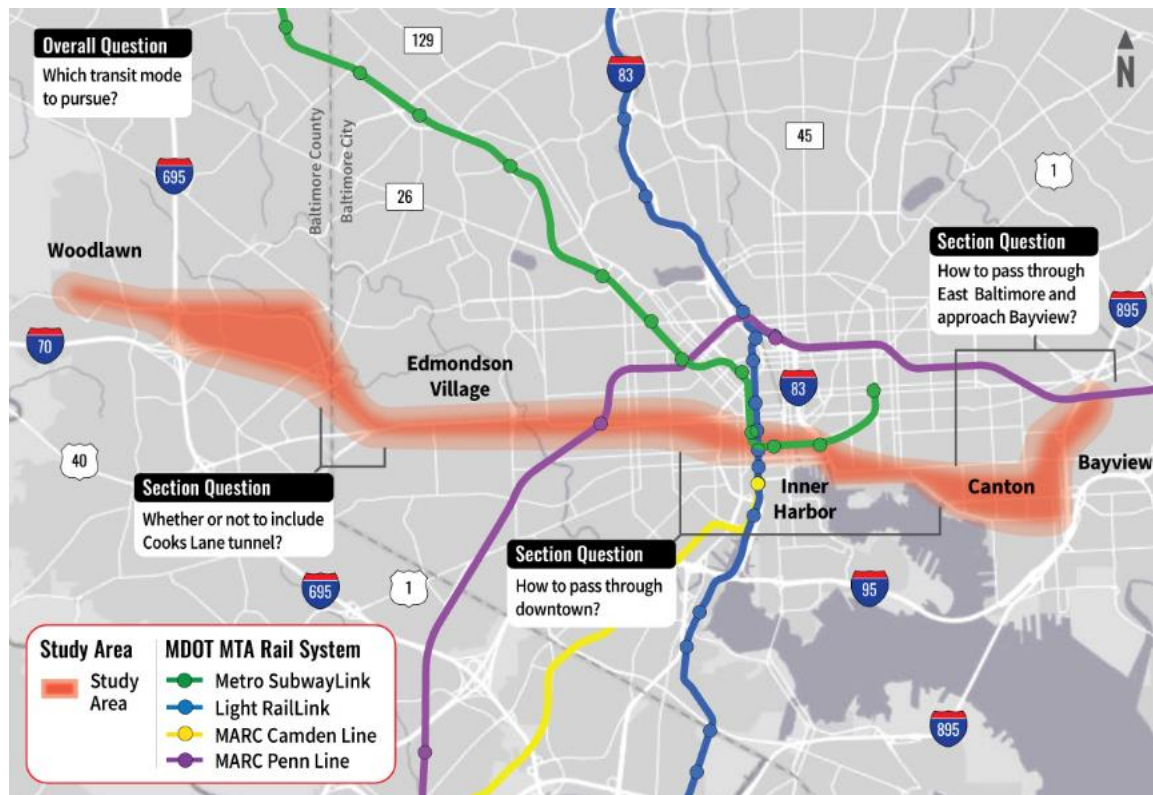


Figure 4

### **Recommendations:**

Not at all attempting to undermine or invalidate the historical struggles of Montgomery and Prince George's County mentioned earlier, but it is important to note that the history and present state of Baltimore is very different to that of the two counties. Even so, it is clear that the City of Baltimore faces similar threats of gentrification. A substantial community of Baltimore residents are multigenerational, meaning that previous generations of their family have also called Baltimore home. Therefore, the increased development of the area presents the risk of driving out and displacing these residents because of factors like increased rent and property taxes. This is by no means implying that we should not invest in the city as a result. Rather, the investments need to be strategic and aware of the threat that gentrification poses for many lifelong and multigenerational residents. This idea is highly correlated to the topic of environmental justice.

As defined by the Environmental Protection Agency, “environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (EPA, 2023). While this definition emphasizes that no one group should be overburdened with environmental harms, it is also crucial to note that environmental justice also means that all communities should have equitable access to healthy environmental areas such as parks. It is key in the process of this project that these identified EJ communities are experiencing the benefits of the Red Line, but not at the cost of displacing them from their homes.

One of the keys to achieving this goal is the “meaningful involvement,” and inclusion of the Baltimore citizens in the planning process of the Red Line. By engaging residents in the planning process early on, the likelihood of monumental disagreements in the future are decreased. This engagement increases the opportunities for citizens to become involved in the changes that will be directly affecting their communities.

A key example of such an issue with the Purple Line was the residents of Chevy Chase as well as an opposing group known as Friends of the Capital Crescent Trail. Much of the disagreement of the project revolved around the concept of “not in my backyard,” or NIMBY. This idea, as the name hints, represents individuals or groups who do not want a proposed project in such close proximity to their property.

In the case of the Purple Line, residents were opposed to the project as it would drastically alter the current Capital Crescent Trail. Additionally, concerns were also voiced in regard to the noise among other things. As explained above, there is the possibility with increased community engagement and involvement, that these issues could have been avoided or minimized early on in the life of the project. While the issue of the Purple Line mentioned above

is far more complex than explained, this instance hopes to portray the point that community engagement is vital to the success or failure of any project, especially one as large as the Purple and Red Line.

**Conclusion:**

Today, it is identified that approximately 56% of the world's population lives in urban areas, and that this number will only continue to grow. As a result, cities need to develop transportation methods that are efficient, equitable, and environmentally safe. It is crucial to use data and lessons learned from previous projects to better improve the transportation efforts of the future. By doing such, there is the potential to create a more just society for current and future generations.

### Annotated Bibliography

Action Committee for Transit (ACT) . (2018, June 8). *The History of the Purple Line* . Purple line history. [http://actfortransit.org/purple\\_history.html](http://actfortransit.org/purple_history.html)

This was a source that was referenced to several times in this paper as it provided a detailed timeline and description of the Purple Line. This established the background of the Purple Line which then made the rest of the paper more comprehensible.

Bogle, M., Gwam, P., Park, J., & Nunna, T. (2022). Year 2 Evaluation of the PRO Neighborhoods Purple Line Collaborative. *Metropolitan Housing and Communities Policy Center* .

Federal Transit Administration (FTA). (2014, March 1). Record of Decision Purple Line Project . Montgomery and Prince George's County .

Since this was the official record of decision, this source provided a lot of great data and comments from the agencies. This was helpful to provide background for the paper, as well as explaining the methods and reasoning of the involved agencies.

Finio, N. J. (2022). *The endurance of gentrification: Three essays on meaning, measurement, and consequences* (Order No. 29161074). Available from ProQuest Dissertations & Theses Global. (2681081783). Retrieved from <https://www.proquest.com/dissertations-theses/endurance-gentrification-three-essays-on-meaning/docview/2681081783/se-2>

Within this source, I mainly focused on the third essay, but the first and second did provide some helpful background on the topic. Overall, the third essay provided great analysis that was helpful in developing critiques of the Purple Line.

Finio, N. (2023). Gentrification and Business Closures in Maryland's Purple Line Corridor. *Journal of Planning Education and Research*, 0(0). <https://doi.org/10.1177/0739456X231187119>

This article was more specifically focused on the business closure aspect of the Purple Line, but it provided a great economic piece that the paper was previously missing.

Lai, X., & Schonfeld, P. (2012). Optimization of Rail Transit Alignments considering Vehicle Dynamics. *Transportation Research Record*, 2275(1), 77–87. <https://doi.org/10.3141/2275-09>

Maryland Transit Administration . (2013, August 1). *Environmental Resources, Impacts, and Mitigation*. Purple Line MD. <https://www.purplelinemd.com/list-all-categories?task=download.send&id=107:chapter-4-environmental-resources-impacts-and-mitigation&catid=23>



This wasn't referenced as often as the ROD in my socioeconomic research, but this was a crucial source in analyzing the environmental benefits and drawbacks. Additionally, some of the graphics and tables included were useful.

Maryland Transit Administration . (2023, November 30). *Next Steps to Move the Project Forward*. Red Line. <https://redlinemaryland.com/next-steps/>

Maryland Transit Administration. (2023, November 30). *The Purple line* . The Purple Line. <https://www.purplelinemd.com/about-the-project/overview>

This is the overview page that provides quick and helpful statistics of the project. Many of these were used in the introduction and background section of this paper to provide context for the subject.

The Office of Marketing and Communications. (2023, April 18). *The Promise (and Pain) of the Purple Line*. Maryland Today. <https://today.umd.edu/the-promise-and-pain-of-the-purple-line#:~:text=While%20the%20state's%20construction%20of,and%20have%20far%2Dreaching%20benefits.>

Though not cited often, this article gave an interesting perspective from students at the University of Maryland. Since there will be several stations at UMD, it felt important to include a component discussing this.

Turner, Margery, and Christopher Snow. 2001. "Leading Indicators of Gentrification in D.C. Neighborhoods." Presented at the D.C. Policy Forum at the Urban Institute, Washington, DC, June 14, 2001.

Pascale, J. (2022, January 13). *Purple Line will cost billions more than planned, open 4.5 years late*. NPR. <https://www.npr.org/local/305/2022/01/13/1072728035/purple-line-will-cost-billions-more-than-planned-open-4-5-years-late>

Peng, Q., & Knaap, G. (2023). When and Where Do Home Values Increase in Response to Planned Light Rail Construction? *Journal of Planning Education and Research*, 0(0). <https://doi.org/10.1177/0739456X221133022>

This article gave some great context to the discussion surrounding gentrification. Having concrete numbers that could be referenced were helpful from an analytical perspective.

Shaver, K. (2022, January 12). *Purple Line will open 4 1/2 years late and cost \$1.4 billion more to ...* The Washington Post. <https://www.washingtonpost.com/transportation/2022/01/12/purple-line-maryland-when-open/>

Singletary, M. (1994, August 23). *Chevy Chase settles case over bias*. The Washington Post . <https://www.washingtonpost.com/archive/politics/1994/08/23/chevy-chase-settles-case-over-bias/5abf0937-5263-40bf-9a2c-d76fca10ed13/>

Though this was not a large part of the paper, this source was helpful in explaining the case law of the Chevy Chase case. Given the age of it, information was difficult to find, so this was a great article to reference..

State of Maryland. (2023, June 15). *Governor Moore Announces Baltimore Red Line Relaunch*. Maryland.gov. <https://governor.maryland.gov/news/press/pages/governor-moore-announces-baltimore-red-line-relaunch.aspx>

U.S. Department of Justice . (2023, June 9). *Justice Department Reaches Fair Lending Settlement with Chevy Chase Bank Resulting in \$2.85 Million in Relief for Homeowners*. Office of Public Affairs . <https://www.justice.gov/opa/pr/justice-department-reaches-fair-lending-settlement-chevy-chase-bank-resulting-285-million>

United States Department of Justice . (1994, August 22). JUSTICE DEPARTMENT OBTAINS UNPRECEDENTED SETTLEMENT FROM D.C AREA BANK FOR ALLEGEDLY FAILING TO SERVICE PREDOMINANTLY BLACK AREAS . Department of Justice . [https://www.justice.gov/archive/opa/pr/Pre\\_96/August94/484.txt.html](https://www.justice.gov/archive/opa/pr/Pre_96/August94/484.txt.html)

United States Environmental Protection Agency . (2023, November 30). Environmental justice | US EPA. EPA. <https://www.epa.gov/environmentaljustice>

This was used to provide the definition of environmental justice in this paper. Having the definition to reference to was helpful in the analysis, but it also provided context for the gentrification section.

WMAR-2 News. (2015). Maryland Gov. Larry Hogan scraps plans for Baltimore Red Line, OKs Purple Line. YouTube. Retrieved November 30, 2023, from <https://www.youtube.com/watch?v=4mgChwGJTas>.