

Title VI Service Equity Analysis

Introduction of the METRO D Line & Local Service Changes to Routes 5, 39, 133, 721, and 724

July 2022



Prepared by:



Metropolitan Council

The Metropolitan Council is the regional policy-making body, metropolitan planning organization (MPO), and provider of essential services for the Twin Cities metropolitan region. The Council's mission is to foster efficient and economic growth for a prosperous region.

The 17-member Metropolitan Council is a policy board, which has guided and coordinated the strategic growth of the metro area and achieved regional goals for more than 50 years. Elected officials and residents share their expertise with the Council by serving on key advisory committees.

The Council also provides essential services and infrastructure – Metro Transit's bus and rail system, Metro Mobility, Transit Link, wastewater treatment services, regional parks, planning, affordable housing, and more – that support communities and businesses and ensure a high quality of life for residents.

Metro Transit

Metro Transit is the transportation resource for the Twin Cities, offering an integrated network of buses, light rail, and commuter trains, as well as resources for those who carpool, vanpool, walk, or bike. Metro Transit is developing a network of enhanced transitways throughout the region.

TABLE OF CONTENTS

Chapter 1: Introduction	4
Report Purpose	4
Federal Requirements	4
Chapter 2: Proposed Service Changes	5
D Line Project	5
Local Service Changes	7
Chapter 3: Title VI Principles and Definitions	12
Title VI and Environmental Justice	12
Requirement to Conduct Service Equity Analyses	13
Title VI Definitions of Minority and Low-Income Populations	15
Chapter 4: Analysis Methodology	17
Modeling Current and Proposed Service Levels	17
Assigning Transit Trips to Census Blocks	18
Calculating Change in Service Level by Census Block	18
Determining Average Percent Change in Service	19
Chapter 5: Evaluation of Impacts	20
Affected Population	20
Percent Change in Service by Census Block	21
Average Percent Change in Service by Population Group	22
Chapter 6: Conclusions	24
Appendix A: Additional Methodology Details	25
Appendix B: Additional Change Details	27

TABLE OF FIGURES

Figure 1. METRO D Line Project Map	6
Figure 2. Formula for determining average percent change in service	19
Figure 3. Distribution of BIPOC and white populations	20
Figure 4. Distribution of low-income and non-low-income populations	21
Figure 5. Percent change in service by census block	22
Figure 6. Census Small Area Geography Relationships	25
Figure 7. Average percent change in service by detailed population group	27
Figure 8. Affected census blocks by percent change in service	28

TABLE OF TABLES

Table 1. Daily scheduled in-service hours by route by service day	9
Table 2. Weekly scheduled transit trips by route	9
Table 3. Daily in-service hours by route by service day	11
Table 4. 2020 U.S. Census Bureau poverty thresholds (185%) in dollars	16
Table 5. Average percent change in service	23
Table 6. Proposed Change in Annual In-Service Hours by Route by Service Day	27

CHAPTER 1: INTRODUCTION

Metro Transit and the Metropolitan Council are preparing to introduce the METRO D Line bus rapid transit (BRT) route in December 2022. The 18-mile D Line will substantially replace Route 5 with faster, frequent, and all-day service, and will connect neighborhoods and destinations in Brooklyn Center, Minneapolis, Richfield, and Bloomington. These and other proposed service changes to connecting routes are the subject of this Title VI service equity analysis.

The Metropolitan Council pledges that the public will have access to all its programs, services, and benefits without regard to race, color, or national origin, in accordance with Title VI of the Civil Rights Act of 1964. This pledge applies to Metro Transit, an operating division of the Metropolitan Council.

Report Purpose

The purpose of this report is to review planned service changes associated with the implementation of the METRO D Line rapid bus project to ensure the impacts of those changes would be made in a nondiscriminatory manner on the basis of race, color, national origin, and low-income status.

In this and all Metro Transit Title VI service equity analyses, the impact of the service change is measured by the change in service availability – or access to transit. Put another way, we quantify how much transit service is within a reasonable walk or roll from one’s home, and how that would change under the proposed scenario. This is measured by the number of weekly scheduled transit trips (count of trips from public route schedules) available to each census block and the people that live within it.

Specifically, this analysis reviewed the extent to which the percent change in weekly scheduled transit trips differs between Black, Indigenous, and people of color (BIPOC) residents and white non-Hispanic residents, and between low-income residents and non-low-income residents. The results will help determine whether there may be disparate impact on the basis of race, color, national origin, or disproportionate burden on low-income populations.

Federal Requirements

The Federal Transit Administration (FTA) requires recipients of federal funding, including Metro Transit, to ensure communities of color and people with lower incomes do not experience discrimination in the level and quality of public transportation service. This FTA requirement stems from Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin in programs receiving federal financial assistance; and President Clinton’s *Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (1994), which directed federal agencies to consider impacts to low-income populations as well.

As part of this effort, FTA requires transit providers such as Metro Transit to conduct a Title VI service equity analysis, prior to implementation, for any proposed service change that meets the agency’s “major service change” threshold (defined in *Chapter 3: Title VI Principles and Definitions*). This analysis fulfills this requirement as it relates to proposed service changes as part of implementing the METRO D Line.

CHAPTER 2: PROPOSED SERVICE CHANGES

D Line Project

Metro Transit is planning improvements to the Route 5 corridor with the METRO D Line BRT project. Construction of the D Line BRT project began in March 2021 and is continuing in 2022, with revenue service beginning in late 2022. The D Line will substantially replace Route 5 with fast, frequent, and all-day service.

The D Line corridor stretches approximately 18 miles from the Brooklyn Center Transit Center (BCTC) in Brooklyn Center to the Mall of America Transit Center in Bloomington, serving Fremont/Emerson Avenues in north Minneapolis, 7th/8th Streets in downtown Minneapolis, Chicago Avenue and Portland Avenue in south Minneapolis, Portland Avenue in Richfield, and American Boulevard in Bloomington (Figure 1).

Arterial bus rapid transit, or BRT, is a package of transit enhancements that produces a faster trip and an improved experience for customers in the Twin Cities' busiest bus corridors. It runs on urban corridors in mixed traffic.

The D Line will help deliver more equitable service in a corridor that has the region's highest ridership, even during the pandemic. One in four households on the corridor doesn't own a car and relies on transit to get to work, play, and run errands.

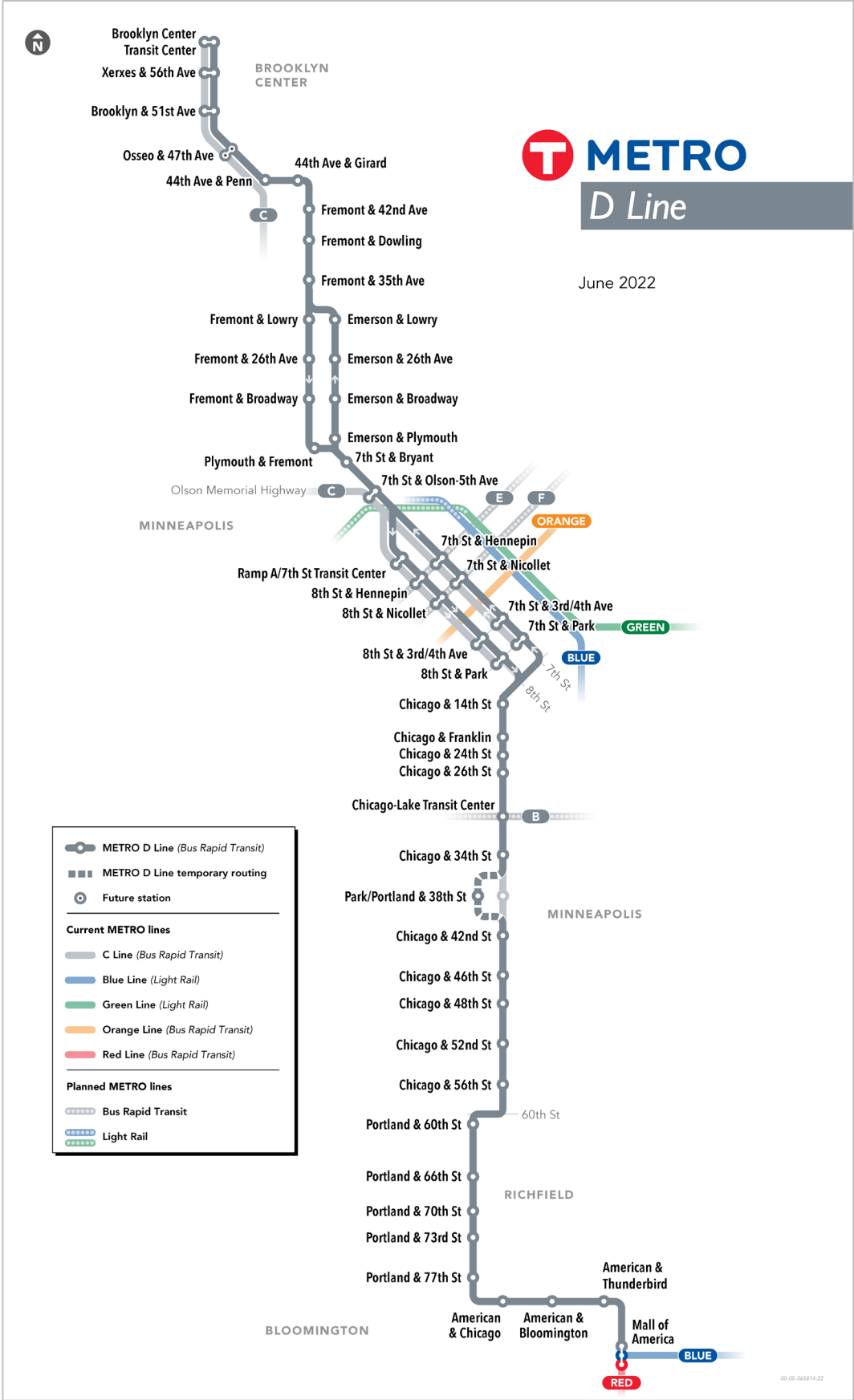
Service Plan

The D Line will operate between BCTC and the Mall of America Transit Center in Bloomington. The D Line will become the primary service in the corridor, running every 10-15 minutes throughout the day with increased service on nights and weekends – every 10-15 minutes – compared to existing Route 5 service. Route 5 will continue to operate within the corridor but with changes to its alignment and at reduced frequency of once every 30 minutes.

As shown in Figure 1, the D Line will serve 40 enhanced station areas¹, spaced approximately every half-mile. More distance between stations significantly increases overall travel speeds when compared to local bus stop spacing of 1/8 mile (the length of a north-south block in Minneapolis), while also allowing for most customers to access stations comfortably on foot.

¹ Generally, pairs or one-way station platforms. Nine of the D Line station areas are existing, with eight having been constructed as part of the C Line; the ninth, Mall of America Transit Station, is served today by the Red Line (BRT) and Blue Line (light rail).

Figure 1. METRO D Line Project Map



Planning Process

BRT on the Chicago-Emerson/Fremont corridor was prioritized for implementation by adoption into the amended 2030 Transportation Policy Plan in 2013 and the 2040 Transportation Policy Plan in 2015. Since that time, Metro Transit has implemented a D Line planning process that includes a mix of interagency coordination, data analysis and review, and community outreach and engagement.

- 2016-2017: Preliminary planning, with inputs from interagency coordination and community outreach and engagement
- 2018: Draft station plan, community input, recommended station plan, public review, and approved station plan
- 2018-2019: Detailed design and engineering, project coordination
- 2020-2022: Construction, project coordination

The D Line Final Station Plan was approved by the Metropolitan Council in July 2018, with amendments adopted in April 2022.

The D Line will be the third operational arterial BRT system line within the Twin Cities region. The A Line on Snelling Avenue and Ford Parkway began service in June of 2016, and the C Line on Penn Avenue and downtown Minneapolis opened in June 2019.

Local Service Changes

Metro Transit is proposing changes to other routes that operate within or connect to the D Line corridor, including Routes 5, 39, 133, 721, and 724. Arterial BRT stations are spaced approximately every half-mile, focusing on upgrading stops to stations where the greatest numbers of customers board buses today. The local service plan ensures continued service between D Line stations where station spacing is greater and where warranted by historical demand.

The D Line will operate between BCTC in Brooklyn Center (northern terminal) and the Mall of America Transit in Bloomington (southern terminal). Changes to local service as part of the D Line service plan are summarized below.

- **Route 5** will be substantially replaced by the D Line, with changes to its alignment and frequency. Route 5 will continue to operate within the majority of the corridor to provide continued local service every 30 minutes for customers who cannot or choose not to walk to a nearby station.

On the southern end of the route, rather than continue to Mall of America Transit Center in Bloomington (the current southern terminal), Route 5 would end at Chicago Avenue and 56th Street in Minneapolis. On the northern end, when Osseo Road is under construction Route 5 would operate on detour between 44th Avenue and 49th Avenue and continue to serve BCTC as its northern terminal. However, long-term, the northern terminal of Route 5 would shift south to the Osseo & 47th Avenue D Line station.²

² Following completion of the Hennepin County-led construction project on Osseo Road, which will start Spring 2023.

Lastly, the “F” branch of the current Route 5 would be eliminated with the introduction of the D Line. Route 5F is unique in that it serves 26th Avenue between Emerson and Penn avenues in north Minneapolis every 30-60 minutes. To continue accessing the D Line / Route 5 corridor, Route 5F riders would be required to walk / roll up to 0.70 miles east to access D Line stations at 26th Avenue and Emerson (northbound) and Fremont (southbound) avenues. However, these riders would continue to have Route 14 as an alternative to connect to the D Line / Route 5 corridor. Moreover, Route 5F riders seeking access to either downtown Minneapolis or BCTC can use the METRO C Line or Route 19, which operate along Penn Avenue. (Note: the Route 19 was suspended in December 2021 due to historic operator shortage) Just one stop currently served by Route 5F, at 26th Avenue and Knox Avenue, is not within one-quarter mile of alternative service; the stop has less than 10 average daily boardings.

- **Routes 39 and 133** will be eliminated when D Line service begins. Both routes have been suspended since spring 2020 in response to changes in transit demand in light of the COVID-19 pandemic, and historic operator shortages. Route 39 previously operated as a supporting local route that many riders used as a sort of shuttle service between downtown Minneapolis and employers such as Wells Fargo Home Mortgage and medical campuses near Lake Street. Operating weekdays only, Route 39 primarily operated on Park and Portland Avenues, parallel to the Chicago Avenue / D Line corridor. To reach the Chicago Avenue / D Line corridor, Route 39 riders would be required to walk / roll about 0.30 miles east or use local Route 27 (no changes are proposed to this route as part of the project).

Route 133 previously operated as a weekday-only Commuter & Express route between the Gateway Ramp in downtown Minneapolis and 56th Street in south Minneapolis. The route operated express between Gateway Ramp and 38th Street, and with local stop spacing south of 38th Street. Local service was available on Chicago Avenue (the D Line corridor) between 38th Street and 54th Street; on 54th Street between Chicago Avenue and Bloomington Avenue; on Bloomington Avenue between 54th Street and 46th Street; before ending on 46th Street near McRae Park, two blocks east of Chicago Avenue. To reach the Chicago Avenue / D Line corridor, Route 133 riders would be required to walk / roll as much as one half-mile west or use local Routes 14 or 46 (no changes are proposed to either route as part of the project).

- **Route 721** will no longer operate south of BCTC when the D Line is introduced. Route 721 is a suburban local route operating seven days per week serving areas north and west of BCTC and the D Line corridor. On weekdays, three of about 30 daily directional Route 721 trips operate south of BCTC to serve peak-period commute trips oriented toward downtown Minneapolis. Today, the six daily trips to / from downtown Minneapolis operate within the D Line corridor along Brooklyn Boulevard / Osseo Road, 44th Avenue, Fremont Avenue, and Dowling Avenue before operating express along I-94 into downtown (reverse in the afternoon rush hour). The D Line will replace this service.
- **Route 724**, like Route 721, will no longer operate south of BCTC when the D Line is introduced. Route 724 is a suburban local route operating seven days per week serving areas north of BCTC and the D Line corridor. Prior to the COVID-19 pandemic, Route 724 operated 16 of its 40 daily directional trips south of BCTC – through the D Line corridor – to serve peak-period commute trips oriented toward downtown Minneapolis, similar to the operations of Route 721. Today, in light of changes resulting from the pandemic, all trips operate north of BCTC. This

temporary change will be made permanent with the introduction of the D Line, which will serve these same trips patterns.

Table 1 and Table 2 list the number of daily and weekly scheduled transit trips, respectively, under existing and proposed scenarios. The D Line alone will operate slightly fewer weekday daily scheduled transit trips than the existing Route 5 (September 2019) – 197 compared to 216 (Table 1). However, the incorporation of underlying local service from the modified Route 5 along with the D Line would increase the number of weekday daily scheduled transit trips by 27%.

The D Line would significantly increase the number of daily scheduled transit trips on weekends. Considering service from the D Line and Route 5, the proposed changes would increase Saturday and Sunday service by 56% and 83%, respectively (Table 1). On a weekly basis – accounting for weekdays and weekends – the number of scheduled transit trips from the D Line and Route 5, combined, would increase nearly 37%, as shown in Table 2.

Table 1. Daily scheduled trips by route by service day

“Existing” is representative of typical conditions, whether pre-COVID-19 (September 2019) or March 2022

--	Wk.	Wk.	Wk.	Wk.	Sat.	Sat.	Sat.	Sat.	Sun.	Sun.	Sun.	Sun.
Route	Existing	Proposed	Change	%Change	Existing	Proposed	Change	%Change	Existing	Proposed	Change	%Change
D Line	0	197	197	100%	0	196	196	100%	0	184	184	100%
5*	216	78	-138	-64%	175	77	-98	-56%	142	76	-66	-46%
39**	8	0	-8	-100%	0	0	0	NA	0	0	0	NA
133**	9	0	-9	-100%	0	0	0	NA	0	0	0	NA
721*	54	54	0	0%	44	44	0	0%	44	44	0	0%
724**^	79	77	-2	-3%	71	69	-2	-3%	65	65	0	0%
Total	366	406	40	11%	290	386	96	33%	189	369	180	95%
Total: D & 5	216	275	59	27%	175	273	98	56%	142	260	118	83%

*Existing = March 2022. **Existing = September 2019. ^Route 724 operated in March 2022 but did not serve areas south of Brooklyn Center Transit Center, including downtown Minneapolis, as it typically would; as such, September 2019 was used to represent existing conditions.

Table 2. Weekly scheduled transit trips by route

“Existing” is representative of typical conditions, whether pre-COVID-19 (September 2019) or March 2022

Route	Existing	Proposed	Change	%Change
D Line	0	1,365	1,365	100%
5*	1,397	543	-854	-61%
39**	40	0	-40	-100%
133**	45	0	-45	-100%
721*	358	358	0	0%
724**^	531	519	-12	-2%
Total	2,371	2,785	414	17.5%
Total: D & 5	1,397	1,908	511	36.6%

*Existing = March 2022. **Existing = September 2019. ^Route 724 operated in March 2022 but did not serve areas south of Brooklyn Center Transit Center, including downtown Minneapolis, as it typically would; as such, September 2019 was used to represent existing conditions.

Major Service Change

Some of the proposed changes summarized above meet the threshold for a “Major Service Change” as defined in Metro Transit and the Metropolitan Council’s Title VI Program.³

Major service changes meet at least one of the following criteria:

- a) For an existing route(s), one or more service changes resulting in at least a 25% change in the daily in-service hours within a 12-month period (minimum of 3,500 annual in-service hours)
- b) A new route in a new coverage area (minimum net increase of more than 3,500 annual in-service hours)
- c) Restructuring of transit service throughout a sector or sub-area of the region as defined by Metro Transit
- d) Elimination of a transit route without alternate fixed route replacement

Table 3 lists the number of daily in-service hours under existing and proposed scenarios by route and service day. In-service hours are the cumulative time between the first timepoint and last timepoint on the public schedule; essentially, the time in which passengers can ride.

The proposed changes to existing Routes 5 and 721 meet the definition of a major service change based on the greater than 25% decrease in the number of daily in-service hours.

The proposed elimination of Routes 39 and 133 would meet the major service change definition, however, both routes would have alternative service within one half mile, and the decrease in annual in-service hours on either route does not meet the 3,500-hour minimum.⁴ Despite this technicality, the impacts of eliminating Routes 39 and 133 are included in this analysis.

While the D Line does not technically meet the definition of a major service change,^{5,6} Metro Transit has historically chosen to conduct a service equity analysis when introducing a new METRO Line.

The package of service changes proposed as part of implementation of the D Line – “major service changes” and others – were designed with specific consideration of travel patterns and the interconnectivity of routes, in addition to ridership demand and operational reliability. As such, and in keeping with past practice, this service equity analysis evaluates the impacts of the package of route changes in the aggregate.

³ Metropolitan Council, *Title VI Program*, January 2020, <https://www.metrotransit.org/Data/Sites/1/media/about/titlevi/2020%20Title%20VI%20Program%20Update.pdf>.

⁴ Under “existing” or “typical” conditions (represented here as September 2019), Routes 39 and 133 each operate less than 3 daily in-service hours. The decreases in annual in-service hours to Routes 39 and 133 are 544 hours and 642 hours, respectively, less than the 3,500 annual in-service hour minimum to qualify as a major service change.

⁵ Taken by itself, the D Line is not an existing route (subpart (a) of the major service change policy), does not introduce service to a new coverage area (subpart (b)), and is not part of restructuring of a sector or sub-area as defined by Metro Transit (subpart (c)).

⁶ The D Line is not a New Start, Small Start, or other new fixed guideway capital project. Thus, it is not subject to the requirement to complete a service equity analysis on that basis alone (Circular 4702.1B, page IV-21).

Table 3. Daily in-service hours by route by service day

"Existing" is representative of typical conditions, whether pre-COVID-19 (Fall 2019) or March 2022

--	Wk.	Wk.	Wk.	Wk.	Sat.	Sat.	Sat.	Sat.	Sun.	Sun.	Sun.	Sun.
Route	Existing	Proposed	Change	%Change	Existing	Proposed	Change	%Change	Existing	Proposed	Change	%Change
D Line	0.0	220.4	220.4	100.0%	0.0	213.8	213.8	100.0%	0.0	198.9	198.9	100.0%
5*	252	77.8	-174.2	-69.1%	208	75.9	-132.1	-63.5%	162	72.7	-89.3	-55.1%
39**	2.1	0.0	-2.1	-100.0%	0.0	0.0	0.0	NA	0.0	0.0	0.0	NA
133**	2.5	0.0	-2.5	-100.0%	0.0	0.0	0.0	NA	0.0	0.0	0.0	NA
721*	21.7	20.0	-1.7	-7.9%	14.7	14.7	0.0	0.0%	14.7	14.7	0.0	0.0%
724**^	44.7	28.5	-16.2	-36.2%	21.3	20.1	-1.2	-5.6%	19.2	18.7	-0.6	-2.9%
Total	312.5	346.7	34.2	10.9%	234.4	324.5	90.1	38.5%	189.0	304.9	115.9	61.3%
Total: D & 5	241.5	298.2	56.7	23.5%	198.4	289.7	91.3	46.0%	155.1	271.6	116.5	75.1%

*Existing = March 2022. **Existing = September 2019. ^Route 724 operated in March 2022 but did not serve areas south of Brooklyn Center Transit Center, including downtown Minneapolis, as it typically would; as such, September 2019 was used to represent existing conditions.

CHAPTER 3: TITLE VI PRINCIPLES AND DEFINITIONS

Title VI and Environmental Justice

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in programs receiving federal financial assistance. Title VI states:

no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.⁷

Moreover, FTA guidance recognizes the inherent overlap between Title VI and environmental justice principles, which extend protections to low-income populations. In 1994, President Clinton issued *Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, which states that each federal agency:

shall make achieving environmental justice part of its mission by identifying and addressing disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.⁸

Title VI was identified as one of several Federal laws that should be applied “to prevent minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects.”⁹

To provide direction to recipients of federal funding, FTA issued *Circular 4702.1B Title VI Requirements and Guidelines for Federal Transit Administration Recipients* in 2012.¹⁰ FTA Circular 4702.1B outlines Title VI evaluation procedures for recipients of FTA-administered transit program funds and includes guidance for a variety of equity evaluations, including service equity analyses.

Title VI Program

Metro Transit and the Metropolitan Council’s commitment to Title VI of the Civil Rights Act of 1964 is documented in the agency’s Title VI Program, which includes policies and procedures that:

- Ensure that the level and quality of public transportation service is provided in a nondiscriminatory manner;
- Promote full and fair participation in public transportation decision-making without regard to race, color, or national origin; and
- Ensure meaningful access to transit-related programs and activities by persons with limited English proficiency.

⁷ U.S. Department of Labor, *Title VI, Civil Rights Act of 1964*, <https://www.dol.gov/agencies/oasam/regulatory/statutes/title-vi-civil-rights-act-of-1964>.

⁸ U.S. President, Proclamation, *Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*, Feb. 11, 1994, <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>.

⁹ Federal Transit Administration, *Circular 4702.1B Title VI Requirements and Guidelines for Federal Transit Administration Recipients*, October 1, 2012, page I-6, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Title_VI_FINAL.pdf.

¹⁰ FTA, *Circular 4702.1B*.

The Title VI Program also applies to Metro Transit, is updated by the Metropolitan Council every three years, and is available online and upon request.¹¹ This report references several elements from the current Title VI Program, approved by the Metropolitan Council in January 2020.

Requirement to Conduct Service Equity Analyses

Transit providers that operate 50 or more fixed route vehicles in peak service and are located in an urbanized area of 200,000 or more in population, including Metro Transit, are required to prepare and submit a service equity analysis, prior to implementation, for any proposed major service change (as defined previously in *Major Service Change*). This analysis fulfills the requirement.

In accordance with FTA Circular 4702.1B, completion of a service equity analysis requires the incorporation of several Title VI policies, which are set by the transit provider. These include the and **“disparate impact” and “disproportionate burden” policies**, used to assess whether the effects of proposed service changes rise to the level of disparate impact on racial/ethnic minority populations and disproportionate burden on low-income populations, respectively.

Discrimination, Disparate Impact, and Disproportionate Burden

In FTA Circular 4702.1B, discrimination is defined as referring to:

any action or inaction, whether intentional or unintentional, in any program or activity of a federal aid recipient, subrecipient, or contractor that results in disparate treatment, disparate impact, or perpetuating the effects of prior discrimination based on race, color, or national origin.¹²

Disparate impact, a key concept for understanding Title VI regulations, is defined in the Circular as:

a facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the recipient’s policy or practice lacks a substantial legitimate justification and where there exists one or more alternatives that would serve the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin.¹³

Similarly, FTA defines *disproportionate burden* as:

a neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations.¹⁴

Per FTA guidance, Metro Transit uses its disparate impact and disproportionate burden policy thresholds as evidence of impacts severe enough to meet the definition of disparate impact or disproportionate burden.

¹¹ Metropolitan Council, *Title VI Program*, January 2020, <https://www.metrotransit.org/Data/Sites/1/media/about/titlevi/2020%20Title%20VI%20Program%20Update.pdf>.

¹² Federal Transit Administration, *Circular 4702.1B Title VI Requirements and Guidelines for Federal Transit Administration Recipients*, October 1, 2012, page I-2, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Title_VI_FINAL.pdf.

¹³ FTA, *Circular 4702.1B*, page I-2

¹⁴ FTA, *Circular 4702.1B*, page I-2

Metro Transit has defined its **disparate impact and disproportionate burden policies** and thresholds using the “80% rule”, which states that there may be evidence of disparate impact if:

- *Benefits* are being provided to BIPOC populations at a rate less than 80% of the benefits being provided to white populations, or
- *Adverse effects* are being borne by white populations at a rate less than 80% of the adverse effects being borne by BIPOC populations.

Metro Transit uses the same framework when evaluating whether low-income populations would experience disproportionate burden relative to the impacts on non-low-income populations.

The 80% rule originates from employment law but is applied in this setting to compare the distribution of benefits and/or adverse impacts among various population groups.¹⁵ The 80% rule suggests that a selection rate for any racial, ethnic, or gender group that is less than 80% of the rate for the group with the highest selection rate will be regarded as evidence of adverse impact. Although it is a general principle and not a legal definition, it is a practical way for identifying adverse impacts that require mitigation or avoidance. Many transit agencies, including some of the largest in the country, use a similar framework when defining their disparate impact and disproportionate burden policies.

Metro Transit’s decision to use the 80% rule for its disparate impact and disproportionate burden thresholds was subject to a formal public outreach process before being adopted by the Metropolitan Council in 2013. Additional information about the policies and their applications can be found in the Council’s current Title VI Program.¹⁶

Policies Applied to this Proposed Service Change

The proposed package of service changes evaluated in this report would introduce the METRO D Line and increase service levels in the Route 5 corridor, resulting in an increase in the number of weekly scheduled transit trips available to the average resident.

As such, in this analysis, if the quantitative results indicate that the percent increase in the average number of weekly scheduled transit trips for BIPOC (minority) residents is less than 80% of the percent increase in the average number of weekly scheduled transit trips for white (non-minority) residents, this could be evidence of a disparate impact. In this case, additional analysis will be conducted, and potential mitigation measures will be identified, if necessary.

A major service change that results in a disparate impact may only be implemented if:

- There is a substantial legitimate justification for the proposed major service change, and
- There are no alternatives that would have a less disparate impact while still accomplishing the transit provider’s legitimate program goals.

This same framework applies for determination of disproportionate burden on low-income riders.

¹⁵ Section 60-3.4(D), *Uniform Guidelines on Employee Selection Procedure* (1978); 43 FR 38295, August 25, 1978, <https://www.ecfr.gov/current/title-41/subtitle-B/chapter-60/part-60-3>.

¹⁶ Metropolitan Council, *Title VI Program*, January 2020, <https://www.metrotransit.org/Data/Sites/1/media/about/titlevi/2020%20Title%20VI%20Program%20Update.pdf>.

Title VI Definitions of Minority and Low-Income Populations

Racial and Ethnic Minorities

FTA defines a “minority” person as one who self-identifies as American Indian/Alaska Native, Asian, Black or African American, Hispanic or Latino, and/or Native Hawaiian/Pacific Islander.¹⁷ However, as part of efforts to use respectful and inclusive language, Metro Transit and the Metropolitan Council prefer to use the term Black, Indigenous, and People of Color (BIPOC), or communities of color, rather than “minority” when referring to people who identify as one or more of the above racial or ethnic groups. As such, references to BIPOC or communities of color in this report should be interpreted to mean the same thing as “minority”.

For the purposes of this evaluation, “non-minority” or “non-BIPOC” persons are defined as those who self-identify as non-Hispanic white (“white”). All other persons, including those identifying as two or more races and/or ethnicities, are defined as BIPOC (equivalent to “minority”).

FTA requires transit providers to evaluate service using this dichotomy between “minority” and “non-minority” populations. However, focusing on the global “minority” or BIPOC category (versus using disaggregated race and ethnicity data) obscures the racial and ethnic diversity of the many identities within it, treating BIPOC residents as interchangeable. To remedy this, Metro Transit and the Metropolitan Council are now using and providing more detail on race and ethnicity in their evaluations and data products. For example, as part of regular monitoring of route and system-wide performance (outside of the realm of Title VI), Metro Transit disaggregates transit performance by race and ethnicity for more power and knowledge by community.

Low-Income Population

While low-income populations are not an explicitly protected class under Title VI, FTA recognizes the inherent overlap between the principles of Title VI and environmental justice. Consequently, FTA encourages required transit providers to conduct service equity analyses with regard of low-income populations in addition to minority populations, and to identify any disproportionate burden placed on low-income populations.

FTA defines a low-income person as one whose household income is at or below the poverty guidelines set by the Department of Health and Human Services (HHS). HHS poverty guidelines are based on family/household size. However, FTA *Circular 4702.1B* also allows for low-income populations to be defined using other established measures that are at least as inclusive as those developed by HHS.

Correspondingly, this Title VI service monitoring analysis uses 185% of the 2020 U.S. Census Bureau poverty thresholds to determine low-income status. U.S. Census Bureau poverty thresholds use a more sophisticated measure of poverty that considers not only family/household size, but also the number of related children present, and, for one- and two-person family units, whether one is elderly

¹⁷ More specifically, Title VI *Circular 4702.1B* (page I-4) defines minority persons as including the following identities: (1) American Indian and Alaska Native, which refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment; (2) Asian, which refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam; (3) Black or African American, which refers to people having origins in any of the Black racial groups of Africa; (4) Hispanic or Latino, which includes people of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race; and (5) Native Hawaiian or Other Pacific Islander, which refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

or not. The U.S. Census Bureau's poverty thresholds are used for statistical purposes, while HHS's poverty guidelines are used for administrative purposes.¹⁸

The Metropolitan Council uses 185% of poverty thresholds to define poverty in its place-based equity research, regional policies, and other initiatives, and this Title VI analysis mirrors that approach.¹⁹

Table 4 lists 185% of the 2020 U.S. Census Bureau poverty thresholds that are used in this analysis.

Table 4. 2020 U.S. Census Bureau poverty thresholds (185%) in dollars

By Size of Family Unit and Number of Related Children Under 18 Years of Age

Size of Family Unit	Weighted Average Poverty Thresholds (\$)	None	One	Two	Three	Four	Five	Six	Seven	Eight or more
One Person (Unrelated Individual)	24,366									
Under 65 Years	24,910	24,909								
65 Years & Over	22,964	22,963								
Two People	30,956									
Householder Under 65 Years	32,214	32,062	33,002							
Householder 65 Years & Over	28,969	28,941	32,877							
Three People	38,093	37,452	38,539	38,576						
Four People	49,018	49,385	50,193	48,556	48,725					
Five People	58,121	59,556	60,423	58,572	57,140	56,266				
Six People	65,673	68,501	68,772	67,355	65,997	63,977	62,780			
Seven People	74,751	78,818	79,310	77,614	76,432	74,229	71,658	68,839		
Eight People	82,797	88,152	88,931	87,330	85,927	83,937	81,411	78,782	78,113	
Nine People or More	99,724	106,041	106,555	105,138	103,948	101,995	99,307	96,876	96,274	92,566

Source: U.S. Census Bureau; 100% of the 2020 poverty thresholds are available at <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html>.

¹⁸ The distinctions between poverty thresholds and guidelines are described further at <https://aspe.hhs.gov/frequently-asked-questions-related-poverty-guidelines-and-poverty>.

¹⁹ The use of 185% poverty thresholds differs from some previous service equity analyses, which used the 100% thresholds. The decision to use 185% thresholds was a result of a recent internal review of Metro Transit and the Council's Title VI service equity analysis practices, and research on those used by other agencies nationwide. The review found that half of the 26 transit agencies reviewed used a definition of "low income" that was more inclusive than the standard definition (100%) suggested by FTA in *Circular 4702.1B*. FTA allows agencies to set their own, more tailored definitions of what constitutes "low income," as long as they are at least as inclusive.

CHAPTER 4: ANALYSIS METHODOLOGY

A geographic information systems (GIS)-based approach was used in this analysis to measure the location and magnitude of service changes and compare the distribution of impacts (positive or negative) to BIPOC, white (non-BIPOC), low-income, and non-low-income populations based on where they live. The analysis consists of five steps:

1. Model existing/baseline and proposed service levels (scheduled weekly transit trips).
2. Allocate current and proposed transit service levels to population groups based on the spatial relationship between census blocks and transit service “walksheds” (e.g., quarter mile/5-minute walk or roll from a bus stop) based on the street network.
3. Calculate the percent change in service between the existing/baseline and proposed service levels for each census block served in either time period.
4. Calculate the population-weighted average percent change in service for all population groups within the area served by transit in either time period.
5. Determine whether the proposed service will result in a potential disparate impact or disproportionate burden by applying Metro Transit’s disparate impact and disproportionate burden policies.

This analysis used the number of scheduled trips available to each census block as a measure of overall transit service levels. Common improvements to transit service, such as increased frequency and increased span of service, will result in an increase in the number of scheduled trips available. The addition of service to a new area will also result in an increase in the number of trips available to the surrounding areas. Total weekly scheduled trips were used in this analysis, accounting for Saturday and Sunday service levels, in addition to those on weekdays.

Modeling Current and Proposed Service Levels

Two networks were modeled to represent service levels from which to calculate changes – an existing/baseline network and a proposed network. With one exception, this analysis considered only the routes impacted by the proposed service changes: D Line and Routes 5, 39, 133, 721, and 724.²⁰

The existing/baseline service level network represents the conditions as of March 2022 or September 2019, depending on which was more representative of established “typical” service. March 2022 was used as the baseline for routes currently operating service levels and alignments that are typical; this applies to Routes 5 and 721, which by March 2022 had essentially returned to pre-COVID operations. September 2019 was used as the baseline for Routes 39 and 133, which are not currently operating; and for Route 724, which is currently operating, but not south of BCTC as it would pre-COVID.

²⁰ While no changes are proposed, this analysis included in the proposed and existing/baseline networks service from Route 553 that would typically operate within a portion of the D Line / Route 5 corridor. Route 553 is currently suspended and would remain suspended when the D Line opens. Route 553 is a weekday-only Commuter & Express route connecting south Minneapolis to downtown Minneapolis and DeLaSalle High School just north of downtown. It operates as local service south of Diamond Lake Road via Portland Avenue in the D Line corridor, with its southern terminal outside the corridor along Old Shakopee Road in Bloomington. This analysis included service from Route 552 that would typically operate within the D Line corridor – along Portland Avenue from Diamond Lake Road to American Boulevard.

The proposed service level network represents the conditions after the proposed D Line and Route 5 service changes are implemented concurrently in December 2022, with some exceptions to reflect long-term conditions.²¹

Assigning Transit Trips to Census Blocks

The number of weekly scheduled transit trips at each stop or station was assigned to census blocks as a means of quantifying the amount of transit service available in a given area. A bus stop was assumed to serve a census block (and its population) if the geographic center of the census block was within a 5-minute walk (about a quarter mile) of the stop. Alternatively, a D Line BRT station was assumed to serve a census block (and its population) if the geographic center of the census block was within a 10-minute walk (about a half mile) of the stop. These time-based “walksheds” were created using the existing street network to better reflect where people can actually walk or roll (i.e., reflecting real-world barriers such as water features, interstates, etc.)

Measuring transit service at the stop/station level assigns service only to areas near where a transit vehicle may pick up and drop off passengers, disregarding non-stop route segments.

Demographic Data

To understand the Title VI implications of a major service change, level of transit service is reviewed in context of the demographics of the areas served. As discussed above, level of transit service in this analysis is measured by the number of weekly scheduled trips available to people living in census blocks. Census blocks are the smallest geographic unit used by the U.S. Census Bureau and are bounded by roadways or water features in urban areas. Block-level data are often preferred over that reported at larger geographies (i.e., block group or tract) because their smaller size increases the potential level of precision of analysis.

In this analysis, BIPOC, white, low-income, and non-low-income populations were estimated at the census block level by applying data extrapolation techniques to the 2016-2020 American Community Survey (ACS) 5-year Estimates and 2020 Decennial Census datasets. The methods and assumptions used to calculate block-level estimates are described in greater detail in *Appendix A: Additional Methodology Details*.

Calculating Change in Service Level by Census Block

The absolute change in service – or the impact of the proposed major service change – was calculated for each served census block by subtracting the existing/baseline number of weekly scheduled trips available from the proposed number of weekly scheduled trips available. Next, for each census block, the percent change in service was calculated by dividing the absolute change in weekly scheduled trips by the existing/baseline number of weekly scheduled trips. To minimize artificial skewing, all changes greater than 100%, including those that are incalculable due to no existing or proposed service, were adjusted to a maximum absolute value of 100%.

²¹ In this analysis, the proposed network reflects the long-term operations of the D Line and Route 5. This includes service to the Osseo & 47th Avenue D Line station, which will be the new northern terminal of modified Route 5. In reality, these changes will be implemented after Hennepin County has finished construction along Osseo Road, which is scheduled to start in Spring 2023.

Determining Average Percent Change in Service

As described in the Metropolitan Council and Metro Transit's Title VI Program, major service changes are assessed cumulatively, or as a package of changes. The average percent change in service for each target population (i.e., BIPOC, white, low-income, and non-low-income) was calculated by weighting the percent change in service for each census block by the target population served in that census block. For example, the average percent change in service for BIPOC populations was completed by multiplying each census block's BIPOC population by the percent change in service for that block, summing the results for all blocks, and dividing that sum by the total BIPOC population for all blocks served in either the current or proposed scenario. The formula used for these analyses is shown in Figure 2.

Figure 2. Formula for determining average percent change in service

$$\text{Avg \% change in service} = \frac{\sum (\text{Population}_i \times \text{Percent Change}_i)}{\sum \text{Population}_i}$$

Where:

Population_i = Target population of census block i .

Percent Change_i = Percent change in service levels for census block i

In this manner, the weighted percent change was calculated individually for the total population, BIPOC population, white population, low-income population, and non-low-income population. Using this method, the impacts of the service changes for each census block are proportionate to both the demographics of the census blocks and the degree of service level change.

CHAPTER 5: EVALUATION OF IMPACTS

Affected Population

Figure 3 and Figure 4, respectively, show the distribution of BIPOC and white residents and low-income and non-low-income residents, by census block, within the area served by the D Line and/or Routes 5, 39, 133, 721, and 724 in either scenario: existing/baseline or proposed (December 2022). The service equity analysis is based on the impact to these residents. Areas with zero population are excluded from the figure and analysis.

Figure 3. Distribution of BIPOC and white populations

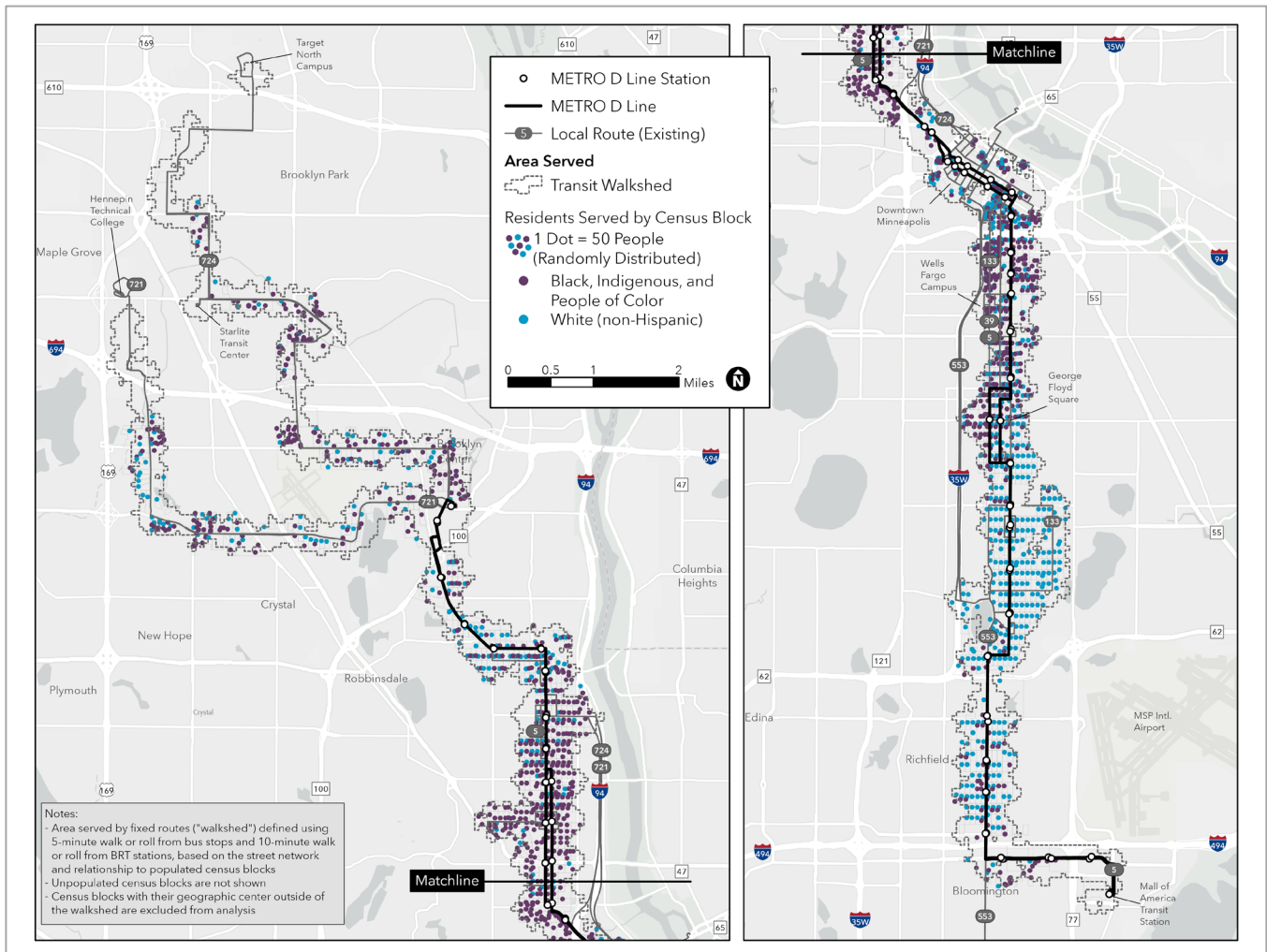
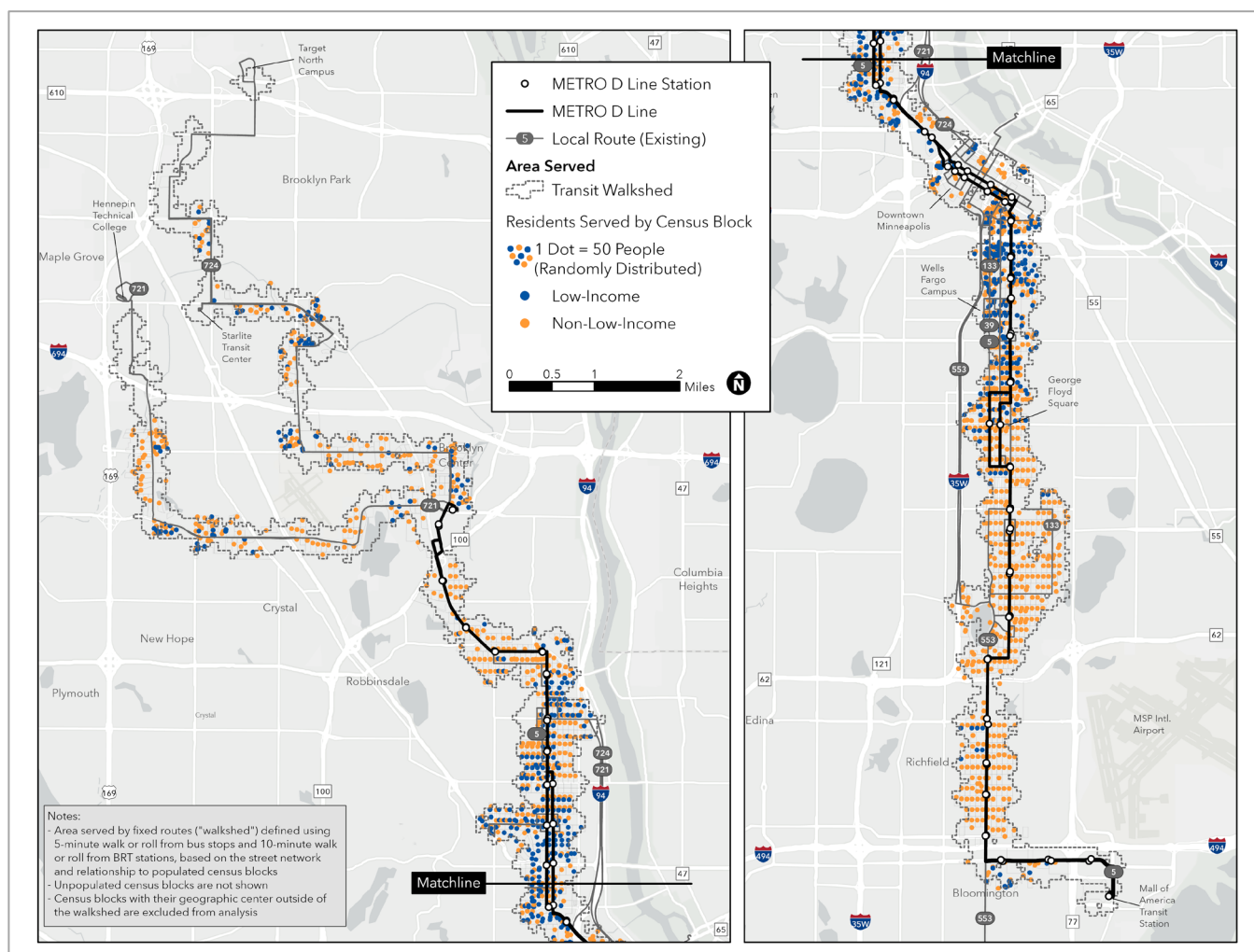


Figure 4. Distribution of low-income and non-low-income populations



Percent Change in Service by Census Block

The percent change in transit service level, as measured by weekly scheduled transit trips, by census block, is shown in Figure 5. Areas with zero population are excluded from the figure. A large majority of census blocks, and population, within the service change area would receive an increase in service.

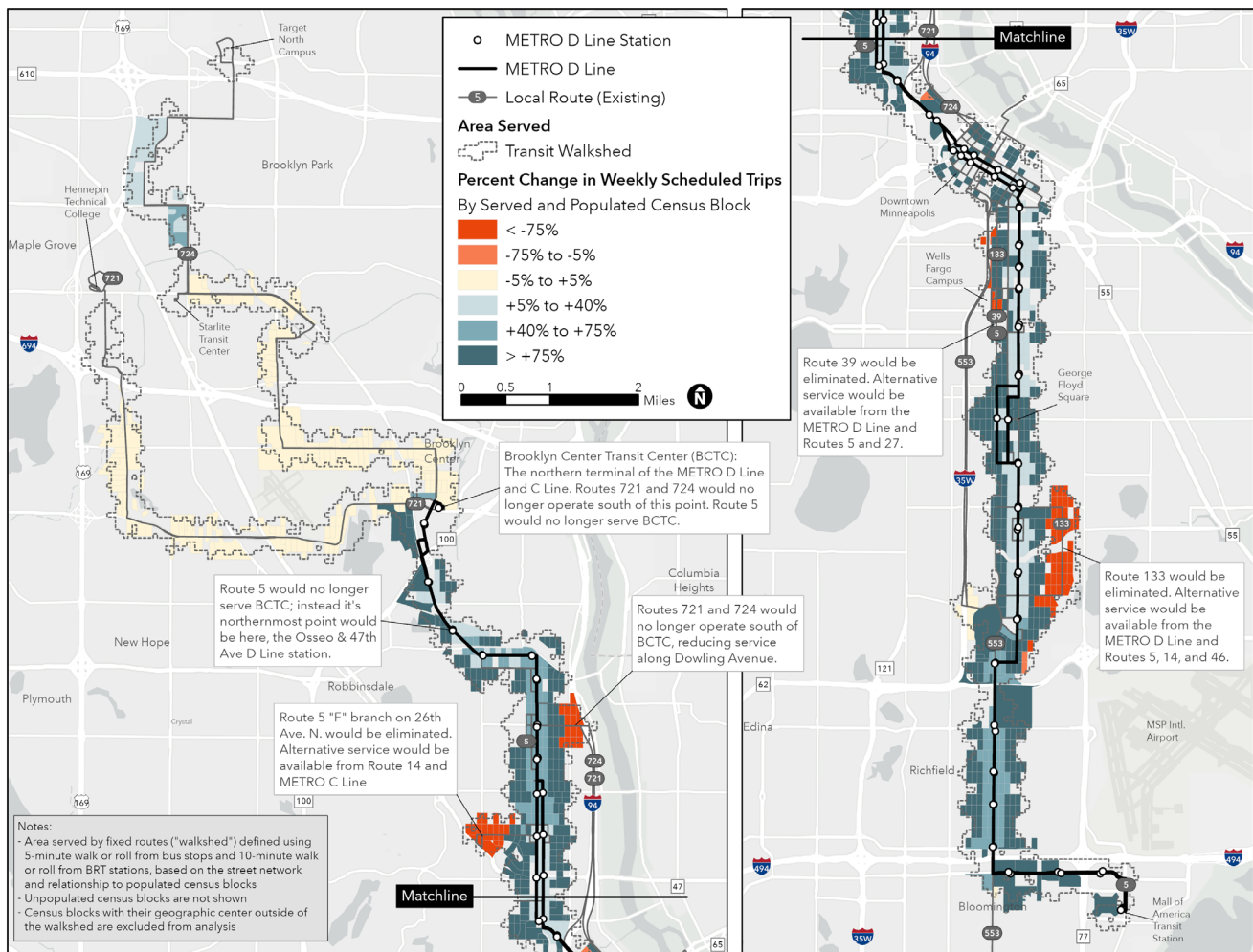
- 76% of the total population living within the service change area would receive an increase in weekly scheduled transit trips;
- 53% of residents would receive an increase in weekly scheduled transit trips greater than 50%; and

Very few areas would receive reduced service as a result of the proposed D Line, Route 5, and associated service changes. Just 7% of residents would receive a decrease in weekly scheduled transit trips greater than 5%. Areas that would see their transit service decrease greater than 5% are limited, including:

- Dowling Avenue between Aldrich Avenue and I-94 in north Minneapolis due to Routes 721 and 724 no longer operating south of BTC (alternative service available from Routes 22 and 32, and from the D Line at Fremont & Dowling station) ;

- 26th Avenue near Penn Avenue in north Minneapolis, due to the F branch of Route 5 being eliminated (alternative service available from the METRO C Line and Route 14);
- West of Portland Avenue between 26th and 28th streets (area largely defined by the Wells Fargo campus) in south Minneapolis due to elimination of Route 39 (alternative service available from Routes 5 and 27, and the D Line at Chicago and 26th Street station); and
- Bloomington Avenue between 44th and 54th streets in south Minneapolis due to elimination of Route 133 (alternative service available from Routes 5, 14, and 46, and the D Line at stations along Chicago Avenue at 46th, 48th, 52nd, and 56th streets).

Figure 5. Percent change in service by census block



Average Percent Change in Service by Population Group

Table 5 summarizes the average percent change in service level for each target population group. On average, the proposed service changes associated with introduction of the D Line result in a notable increase in transit service availability for all population groups within the service change area.

The average person living in the service change area – regardless of race, ethnicity, or low-income status – would experience a 52.2% increase in transit service after the proposed changes. The average

BIPOC resident would experience a 52.8% increase, greater than the average for white resident, who would experience a 51.2% increase (Table 5). Therefore, per Metro Transit’s Title VI policies, this analysis identifies **no disparate impact on BIPOC residents** resulting from the proposed service changes as part of implementing the METRO D Line.

Table 5. Average percent change in service

Population Group	Average Percent Change in Service	Affected Population
Black, Indigenous, and People of Color	52.8%	59,866
White non-Hispanic	51.2%	37,933
Disparate Impact Comparison Index¹	1.03 > 0.80, thus, no disparate impact	--
Low-Income	56.0%	35,983
Non-Low-Income	49.3%	61,339
Disproportionate Burden Comparison Index²	1.13 > 0.80, thus, no disproportionate burden	--
Total Population	52.2%	97,799

¹ 1.03 = 52.8% / 51.2%

² 1.13 = 56.0% / 49.3%

The average low-income resident in the service change area would experience a 56.0% increase in transit service after the proposed changes (Table 5). This service increase is greater than that for the average for non-low-income individual, who would receive a 49.3% increase. Therefore, per Metro Transit’s Title VI policies, this analysis identifies **no disproportionate burden on low-income residents** resulting from the proposed service changes as part of implementing the METRO D Line.

CHAPTER 6: CONCLUSIONS

Recipients of federal funding such as Metro Transit are required to conduct a Title VI service equity analysis prior to the implementation of any service change that meets the transit agency's major service change threshold. Metro Transit and the Metropolitan Council are preparing to introduce the METRO D Line in December 2022, alongside proposed service changes to connecting Routes 5, 39, 133, 721, and 724.

This analysis reviewed the percent change in weekly scheduled transit trips resulting from the proposed service changes. Results indicate that three out of four affected residents would receive an increase in service – and half would receive a 50% or greater increase in service. Just 7% of affected residents would experience a decrease in service greater than 5%.

On average, BIPOC residents would benefit more than white residents (52.6% increase vs. 50.6%), and low-income residents would benefit more than non-low-income residents (55.7% vs, 48.9%) [Table 5].

Upon conducting the technical analysis and applying Metro Transit's Title VI policies in accordance with Metro Transit and the Metropolitan Council's Title VI Program, this analysis finds that the **proposed service changes would not result in disparate impact on BIPOC populations nor disproportionate burden on low-income populations.**

APPENDIX A: ADDITIONAL METHODOLOGY DETAILS

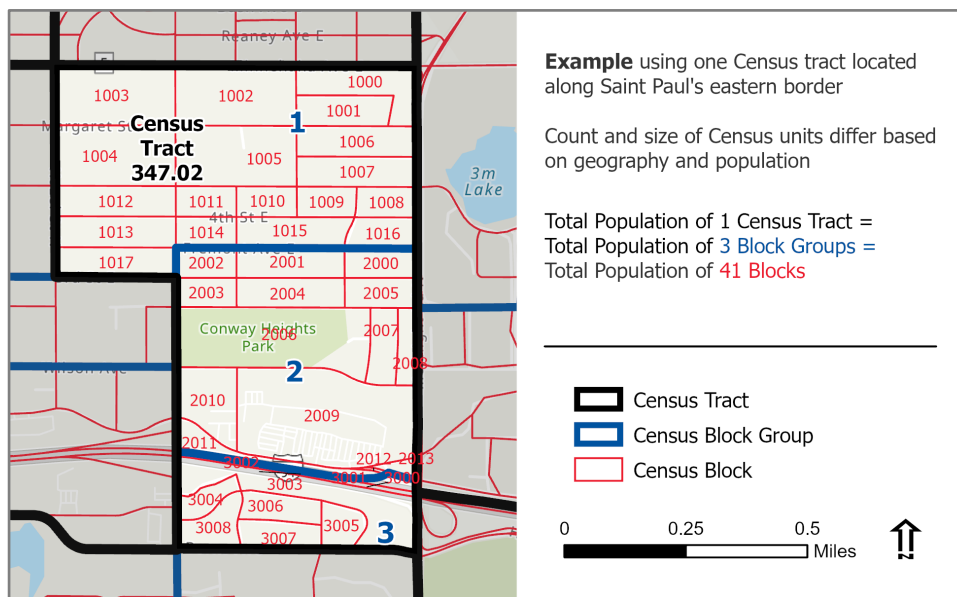
Extrapolating Census Data

Information on race and ethnicity is available at the census block level from the U.S. Census Bureau's Decennial Censuses, the latest being 2020. However, the Bureau's decennial censuses do not contain information on income and poverty, which FTA requires for identifying low-income populations. Rather, the U.S. Census Bureau's 2016-2020 American Community Survey (ACS) 5-year Estimates was the most recent dataset available at the time of analysis that contained poverty status, and are used in this analysis.²² Unfortunately, the ACS dataset is available only down to the census block group level; However, given the common time periods and geography of these two datasets, it is possible to extrapolate income and poverty data reported at the block group level to census block level estimates.

Census blocks are the smallest geographic unit used by the U.S. Census Bureau and are bounded by roadways or water features in urban areas; decennial censuses are among the few demographic datasets published by the Census Bureau that are available at the census block level. The larger census block group is made up of a cluster of nested census blocks (Figure 6); data reported at the census block group level is common among the Census Bureau's public dataset offerings. It can be more difficult to identify location-specific impacts using only census block group data, due to their larger size. Alternatively, block-level data are often preferred because their smaller size increases the potential level of precision of analysis.

Figure 6. Census Small Area Geography Relationships

Illustrated using one Census Tract in east Saint Paul



²² The 2016-2020 ACS dataset contains estimates that are based on the most recent five years of data collected by the U.S. Census Bureau (2016 through 2020). As a collection of estimates, the 2016-2020 ACS data are subject to error, but remain the most reliable and current demographic data required to complete the analysis that are readily available for the service area.

To provide more spatial granularity and detail to the analysis, BIPOC, white, low-income, and non-low-income populations were estimated at the census block level by applying data extrapolation techniques to the 2016-2020 ACS and 2020 Decennial Census datasets.²³ Due to limitations of census data availability, and because the boundaries of individual census blocks and block groups do not change between decennial censuses, the following assumption was used to estimate low-income populations for census blocks:

Parent block group low-income population is distributed among its nested blocks in a manner identical to the total population.

While this approach relies on significant assumptions, it allows for a more precise analysis than using the larger block groups. Importantly, this approach also allows for the identification of zero-population areas within each block group and incorporates the latest published data to partially reflect changes in population over time.

²³ This analysis incorporated 2020 Decennial Census data because it shared common geography with the 2016-2020 ACS data, which were developed as part of the 2020 Decennial Census (i.e., the boundaries of blocks, etc. may differ with each decennial census).

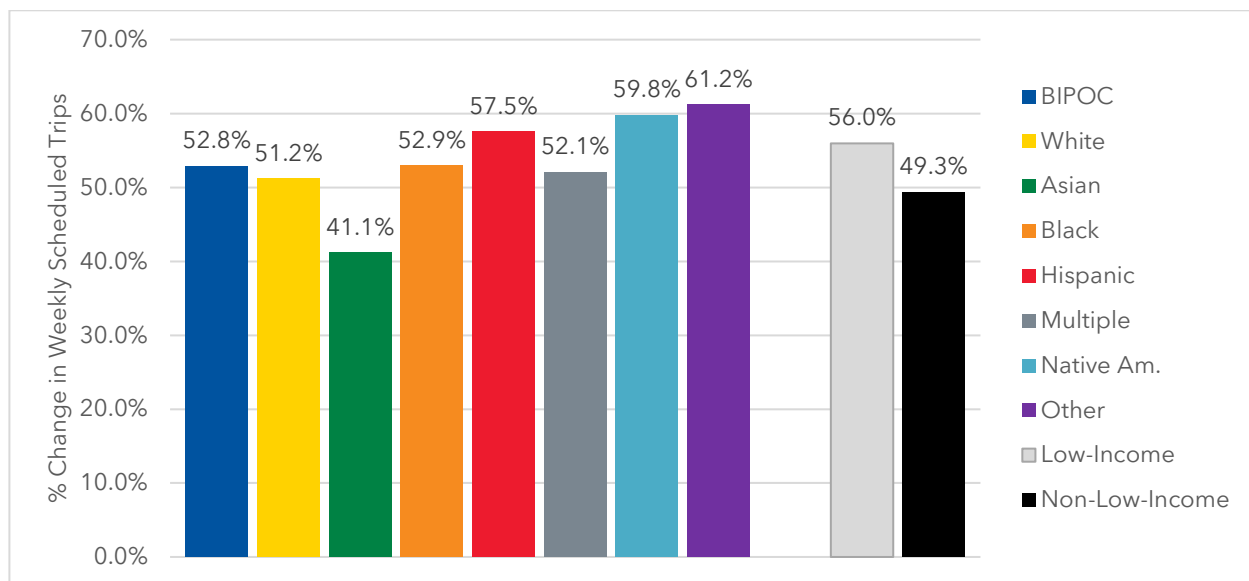
APPENDIX B: ADDITIONAL CHANGE DETAILS

Table 6. Proposed Change in Annual In-Service Hours by Route by Service Day

Route	Wk.	Sat.	Sun.
D Line	11,460.8	11,502.4	10,706.8
5	-8,980.4	-6,739.2	-4,555.2
39	-160.2	0.0	0.0
133	-317.2	0.0	0.0
552	0.0	0.0	0.0
553	0.0	0.0	0.0
721	-304.2	-93.6	-93.6
724	-97.0	-33.3	0.0
Total	1,601.8	4,636.3	6,058
Total: D & 5	2,480.4	4,763.2	6,151.6

Figure 7 displays the average percent change in service for BIPOC, white, low-income, and non-low-income residents alongside more detailed racial/ethnic identities.

Figure 7. Average percent change in service by detailed population group



The proposed service changes affect approximately 1,400 census blocks; these blocks contain transit service in the existing/baseline network and/or proposed network. Of the affected blocks, 78% would

receive an increase in the number of weekly scheduled transit trips compared to existing/baseline conditions. These blocks with a service increase are where 76% of the affected population live. Figure 8 shows the distribution of affected census blocks by percent change in weekly scheduled trips.

Figure 8. Affected census blocks by percent change in service

