Technical Report: Proposed FTA DBE Goals, Metropolitan Council FY 2024 - 2026

Technical Report: 10/03/2023

Acknowledgments

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Alternative formats of this report are available upon request.

Table of Contents

Executive Summary

The Metropolitan Council is the regional policy-making body, planning agency, and provider of essential services in the seven-county Twin Cities metro area. On April 1, 2023, Metropolitan Council contracted with the Roy Wilkins Center, Hubert H. Humphrey School of Public Affairs, to produce a proposed Disadvantaged Business Enterprise (DBE) program goal for fiscal years 2024-2026 on its Federal Transit Administration- (FTA) funded expenditures.

This report uses information on Metropolitan Council's FTA prime and subcontract awards Metropolitan Council as well as the government-published secondary data listed in the Technical Report and Appendices. The findings of our analysis point to a proposed agency-wide DBE goal of 13.4 percent for FY 2024-2026 on FTA-funded projects. This goal was derived in the following manner:

A Base Goal of 9.6 percent was computed.

An adjustment to the Base Goal was made to account for disparities in prime and subcontract awards that cannot be attributed to differences in industry, location, firm size, credit risk or other characteristics of DBE versus non- DBE contracts. This calculation resulted in an adjustment of 39.9 percent to the Base Goal, resulting in the Adjusted Goal of 13.4 percent.[1]

The maximum portion of the Adjusted Goal achievable by race-neutral means was found to be equal to 18.2 percent. Therefore, the Race-Neutral Goal was computed to be equal to 2.4 percent and the Race-Conscious Goal is 11 percent.[2]

Table ES.1. Proposed Metropolitan Council FTA DBE Goals FY 2024–2026

Base Goal	9.6%
Adjustment to Base Goal	*39.9%*
Adjusted Goal	13.4%
Race-Neutral Portion	*18.2%*
Race-Neutral Goal	2.4%
Race-Conscious Portion	*81.8%*
Race-Conscious Goal	11.0%

Source: RWC analytical methods and data sources are fully detailed in the Technical Report and Appendices.

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[1] Adjusted Goal of 13.43 percent (= 9.6 × 1.399)
[2] Race-Neutral Goal of 2.44 percent (= 13.4 × 0.182) and Race-Conscious Goal of 10.96 percent (= 13.4 × 0.818)

Background

As a recipient of federal transportation dollars awarded through the U.S. Department of Transportation's Federal Transportation Administration (FTA), Metropolitan Council is required to establish and submit a three-year goal to the FTA for review. This goal is to be established in compliance with the federal regulations governing the *Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs* (hereafter referred to as "USDOT regulations"). The USDOT regulations provide guidance to state and local grant recipients on how establish their annual DBE goal [*49 C.F.R. §26.45*]. The current report uses this guidance and uses the best available data on contract awards, availability of DBEs in the relevant industries and geographic market areas to produce proposed base goals, adjustments to the base goals, and estimation of the maximum portion of the adjusted goals that can be achieved through race-neutral means.

Between July 2015 and June 2022, Metropolitan Council issued 409 prime contracts totaling $1,974,825,538.49. For these years the DBE share of prime contract awards was 8.8 percent, and its share of prime contract award dollars was 0.6 percent. The DBE share of subcontract awards was 52.6 percent, and the DBE share of subcontract dollars was 40.6 percent.

Methodology

As a first step, the research team must determine availability rates in well-defined geographic market areas (GMAs). The second step is to produce any adjustments to the base DBE goal. A final step is to propose the maximum portion of the goal that can be achieved through race-neutral means.

Geographic Market Area

The research team established four different geographic market areas (GMAs) displayed in Table 3. All four are political jurisdictions defined by different aggregations of counties within Minnesota. Almost all Metropolitan Council's contracts have been within Minnesota, including vendors from other states with only a branch office in Minnesota.

Availability Analysis and Base Goal

Metropolitan Council's expenditure projections for the period FY2024-2026 reveal a significant shift in the distribution of contract dollars with a single NAICS code (485113) accounting for over 60 percent of future projects where there are but a few firms currently represented in the state. In addition, this unique code does not cover all the wide variety of potential bidders, including qualified women and minority owned firms, for proposed bus and transit operation services.

In computing availability to determine a Base Goal, RWC used five different data bases and approaches (Bidders List, Vendors List, DBE Method, Dun & Bradstreet Method, and the Annual Business Survey), while defining an alternative and representative category of bus and transit

operations and GMA that maximizes DBE/women and minority shares. For each method, the weights used are based on the share of contract dollars awarded within the defined GMAs. The availability rates were appropriately weighted by Metropolitan Council's expenditure projections to produce a base goal. Each of these methods have advantages and disadvantages summarized in the Technical Report.

Adjusted Base Goal

Base goal was then adjusted by 39.9 percent to account for disparities in prime contract and subcontract award amounts. The result constitutes a proposed goal, which is further partitioned between a race-conscious and race- neutral portion.[3]

Race Neutral Portion of Adjusted Base Goal

The methodology for computing the race-neutral portion of the DBE goal estimates the maximum share of the goal that can be achieved through race-neutral means. The logic of the analysis is that some share of previous DBE dollars awarded would have gone to DBEs without goals. The race-neutral analysis uses the best regression model that controls for a list of relevant variables.to predict DBE contract amounts with and without goals.[4]

Executive Summary Tables

Table ES.2. DBE Share of FTA Awarded Contract Amounts (2016-2022)

Type	N	Average Contract Amount	Total Contract Amount	Share
Prime Contracts				
DBE	36	$317,370.82	$11,425,349.52	0.6%
Non-DBE	373	$5,263,807.48	$1,963,400,188.97	99.4%
Total	409	$4,828,424.30	$1,974,825,538.49	100.0%
Subcontracts				
DBE	525	$577,489.06	$303,181,754.53	40.6%
Non-DBE	473	$938,288.90	$443,810,647.83	59.4%
Total	998	$748,489.38	$746,992,402.36	100.0%
Both Prime and Subcontracts				
DBE	561	$560,796.98	$314,607,104.05	15.9%
2016	20	$219,215.16	$4,384,303.20	20.3%
2017	68	$89,142.53	$6,061,692.35	13.4%
2018	69	$263,758.97	$18,199,368.75	13.0%
2019	174	$1,028,136.46	$178,895,744.29	16.3%
2020	87	$356,767.26	$31,038,751.27	13.0%
2021	48	$215,374.40	$10,337,971.16	14.0%
2022	95	$691,466.03	$65,689,273.03	18.2%

Source: RWC analytical methods and data sources are fully detailed in the Technical Report and Appendices.

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[3] Race-conscious and race-neutral portions of the goals are computed using a methodology upheld by the 3rd Circuit Federal Court in *GEOD v. New Jersey Transit* and published in the peer-reviewed journal *Applied Economics Letters*.

[4] Myers and Ha have pioneered the use of a detailed econometric procedure that maximizes the race-neutral component of the DBE goals.

Table ES.3. Metropolitan Council Geographic Market Areas (GMAs) for FTA DBE Goals (2016-2022)

Geographic Market Area	GMA	Prime Contracts only			Subcontracts only		
		N	Contract Amount	Share	N	Contract Amount	Share
Total		409	$1,974,825,538.49	-	1032	$746,992,402.36	-
All MN counties	GMA-1	313	$1,893,605,652.68	95.9%	889	$701,418,929.53	93.9%
Twin Cities MSA [a, b]	GMA-2	311	$1,893,176,685.28	95.9%	864	$693,223,243.52	92.8%
7-county metro [c]	GMA-3	296	$1,884,003,255.95	95.4%	781	$632,568,727.21	84.7%
MN 4 counties [d]	GMA-4	286	$1,879,121,277.00	95.2%	701	$602,407,238.15	80.6%

Source: RWC analytical methods and data sources are fully detailed in the Technical Report and Appendices.

[a] Census-defined metropolitan statistical area, comprising 15 counties in both Minnesota (13) and Wisconsin (2).

[b] There were no prime contracts awarded in 3 counties: Isanti and Mille Lacs, MN; and Pierce, WI. There were no subcontracts awarded in 1 county: Isanti, MN.

[c] Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington

[d] Anoka, Dakota, Hennepin, and Ramsey

Table ES.4. FTA Weighted Availability Rate[a] and Base Goal by Method/Proxy

Method	Original NAICS Code 485113	Supplement for NAICS Code 485113[b]	National Estimate for NAICS Code 485113	Base Goal
Bidders List Method	8.0%	8.0%	13.5%	
Vendors List Method	6.0%	6.0%	11.5%	
ABS Method	15.2%	15.2%	15.2%	
DBE List Method	3.8%	15.1%	9.3%	9.6%
D & B Method	6.8%	3.2%	7.4%	
Weighted Average	**8.0%**	**9.5%**	**11.4%**	

Source: RWC analytical methods and data sources are fully detailed in the Technical Report and Appendices.

[a] Weighted by GMA's contract amount

[b] Includes 485113, 485111, 485210 and 485991

Technical Report

Background

USDOT Requirement for DBE Goals

The Metropolitan Council is the regional policy-making body, planning agency, and provider of essential services in the seven-county Twin Cities metro area. On April 1, 2023, Metropolitan Council contracted with the Roy Wilkins Center, Hubert H. Humphrey School of Public Affairs, to produce a proposed Disadvantaged Business Enterprise (DBE) program goal for fiscal years 2024-2026 on its Federal Transit Administration- (FTA) funded expenditures. As a recipient of federal transportation dollars awarded through the U.S. Department of Transportation's Federal Transportation Administration (FTA), Metropolitan Council is required to establish and submit a three-year goal to the FTA for review. This goal is to be established in compliance with the federal regulations governing the *Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs* (hereafter referred to as "USDOT regulations").

Guidance and Objectives for Goal Setting

The USDOT regulations provide guidance to state and local grant recipients on how establish their annual DBE goal [*49 C.F.R. §26.45*]. The overall goal must be based on demonstrable evidence of the availability of ready, willing and able Disadvantaged Business Enterprises (DBEs) relative to all businesses ready, willing and able to participate on USDOT-assisted contracts (hereafter, the "relative availability of DBEs"). The guidance provides examples for examining evidence in the recipient's jurisdiction of DBE availability, including a review of a bidders list and a certified DBE directory. Other methods or combinations of methods to determine a base figure may be used, subject to approval by the concerned operating administration. Any methodology chosen must be based on demonstrable evidence of local market conditions and be designed to ultimately attain a goal that is rationally related to the relative availability of DBEs in the market area.

The objectives of the goal are to reflect the relative availability of DBEs in the market area and to determine the expected level of DBE participation absent the effects of discrimination. Therefore, as a first step in goal setting, a recipient of federal funds must determine a base figure for the relative availability of DBEs in the geographical market. The second step is to adjust the base figure if evidence suggests that there are additional market barriers to DBE participation.

The USDOT identifies several objectives for DBE goal setting requirement. As listed under 49 CFR §26.1,[3] the goals seek:

a. To ensure nondiscrimination in the award and administration of DOT-assisted contracts in the Department's highway, transit, and airport financial assistance programs;

b. To create a level playing field on which DBEs can compete fairly for DOT-assisted contracts;

c. To ensure that the Department's DBE program is narrowly tailored in accordance with applicable law;

d. To ensure that only firms that fully meet this part's eligibility standards are permitted to participate as DBEs;

e. To help remove barriers to the participation of DBEs in DOT-assisted contracts;

f. To promote the use of DBEs in all types of federally assisted contracts and procurement activities conducted by recipients;

g. To assist the development of firms that can compete successfully in the marketplace outside the DBE program; and

h. To provide appropriate flexibility to recipients of Federal financial assistance in establishing and providing opportunities for DBEs.

The Roy Wilkins Center uses this guidance and the best available data on contract awards, availability of DBEs in the relevant industries and geographic market areas to produce proposed base goals, adjustments to the base goals, and estimation of the maximum portion of the adjusted goals that can be achieved through race-neutral means.

Data Collection

Data used in this report were compiled primarily from four sources: data provided by the Metropolitan Council between April and June 2023, Dun & Bradstreet Hoover's data, the State and the County Business Patterns of 2021 and the Public Use Annual Business Survey of 2020. A complete list of the data and the associated information are listed in this Report.

Metropolitan Council Data

Semi-Annual Award Files
The Metropolitan Council provided 14 Semi-Annual Award Files, dated between June 2016 to December 2022. The research team combined these files of various years into a uniform format. There

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[3] 49 CFR 26.1 https://www.ecfr.gov/current/title-49/section-26.1

was a total of 409 contracts and 1441 entries of firms across these years. This combined awarded file provides information on the total contract dollars, subcontract dollars, prime and subcontractors names, DBE classification, zip codes and NAICS codes, among others. These firms were uploaded to the Dun & Bradstreet website to merge with the Hoover's dataset to obtain individual firm information such as years found, total sales, credit risk, and others that were used in the econometric analysis. The merging rate was 74%. Firms with missing the firm information from the Dun & Bradstreet were excluded from the econometric analysis.

Vendors List

Vendors refer to firms that have done business with the Metropolitan Council. The Metropolitan Council provided 2 sets of vendors – the active vendors and the inactive vendors.[4] The active vendors file has a total count of 10,589 entries, and the inactive vendors, 19,126. To avoid including businesses that are no longer in business, only the active vendors were included in the analysis. The vendors file provides information on the vendor's name, vendor ID, and addresses, but not the NAICS code. The research team uploaded all the active vendors to the Dun & Bradstreet website to merge with the Hoover's dataset to get the NAICS code. After merging and removing duplicates, 38% of the active unique vendors did not have a NAICS code and were excluded from the analysis.

Bidders List

The research team received a total of 591 pdf files listing the bidders who were either a prime or a sub to bid for a contract between 2016 and 2022. There are 4 types of pdf files: the A-1 files, the Sub files, the Bidsum files, and the Resp files. The A-1 (68 files) and the Sub (227 files) list the prime and the sub of a bid. The Bidsum (129 files) and the Resp (167 files) list primarily the primes in a bid. The research team transcribed all the Bidsum and the Resp files, and the A-1/Sub files that were not in the contract awarded files. A total of 1,731 firms were manually entered. To merge with the Dun & Bradstreet Hoover's data to obtain the NAICS code, the research team conducted internet searches to identify the addresses of these companies. Of the 1,731 firms uploaded to the Dun & Bradstreet site for merging, 36% were not merged. The research team then added the semi-annual award files which listed the companies of the winning bid into the bidders' file. In the combined file, 25 percent did not have a NAICS code and were excluded from the analysis.

Forecast Projects

The Metropolitan Council also provided project dollar amount, project primary and secondary NAICS codes, and share of the project dollar amount by NAICS codes of projects forecasted for 2024-2026. When the project value was given in a range instead of a fix amount, the mid-point was used. The research team compiled a total of 28 NAICS codes and over $1.22 billion in contract dollars.

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[4] Active vendors are defined as companies that had a financial transaction with the Council in the last 5 years.

Private Economic Data

Dun & Bradstreet Hoover's Data

The research team used Dun & Bradstreet Hoover's database in two ways. The first way is to upload individual companies (1000 companies maximum per upload) to the site, select the company information needed, and download the results. Information such as a NAICS code for the vendors and the bidders, and business information such as credit risk, number of employees, and total sales for the awardees in the Semi-Annual Award files were obtained through uploading. The second way is to obtain aggregated counts of companies for a particular NAICS code in a particular city/county/state with certain characteristics such as Minority Owned status, Women Owned status, and total sales amount.

Public Data

DBE List

The research team used firms in the Minnesota Unified Certification Program (MnUCP) Excel file provided by the Metropolitan Council as the list of DBEs in the state of Minnesota. The file has the name of the firms, the NAICS code, and addresses of the companies. A company is repeated as a separate entry for each NAICS code it has. In total, there were 4,455 entries and 1,266 companies.

The Annual Business Survey (ABS)

ABS, one of the business and financial surveys collected by the Bureau of Census, provides information on selected economic and demographic characteristics for businesses and business owners by sex, ethnicity, race, and veteran status. Using the public data available on the ABS website, the research team generated multiple tables with respect to minority or women owned businesses in July-August of 2023. The data for each firm in the ABS sample were weighted to represent the national population of firms more appropriately.

ABS has several limitations. Data tables are only available at the national level, and not at the state or lower levels. A second limitation is that the Public Use ABS data of 2020 only have 2-digit NAICS codes, instead of 6-digit NAICS codes used in the other datasets. The use of 2-digit NAICS codes could over or underestimate the number of women or minority owned businesses. The third limitation is that there is no designated field of DBE in the data set. To be qualified as a DBE, the business must be certified as a minority owned or a woman owned business with a net worth or revenue below a certain amount. Although public use data can generate data table on women and minority owned businesses, ABS does not include net worth and revenue information to determine the DBE status.

County and State Business Pattern (CBP)

CBP is an annual series that provides subnational economic data by industry. The research team downloaded the 2021 Complete County file and the Complete State file from the CBP site of the US Bureau of Census. Each of these files have the counts of establishments at 2-6 digits NAICS codes. Due to privacy concerns, a NAICS code that has fewer than 4 establishments in a county is omitted. The same NAICS code, however, is included in the state file if there are sufficient counts at the state level.

List of Data Sources

The following are sources for the data used in this analysis:

1. Vendors List: received active and inactive vendors excel files from Metropolitan Council, April 13 2023

2. Bidders List – received pdf files from Metropolitan Council, April 13 2023

3. DBE list – received the Minnesota Unified Certification Program Directory excel file from the Metropolitan Council, April 13, 2023

4. Future Projects: received from Metropolitan Council, June 2023

5. Dun & Bradstreet, Hoover data downloads:
   a) Last download of matched vendors, August 14, 2023; https://app.Hoover's.dnb.com/list
   b) Last download of matched Bidders, August 21, 2023; https://app.Hoover's.dnb.com/list
   c) Last download of matched DBE list, August 14, 2023; https://app.Hoover's.dnb.com/list

6. County Business Patterns, Complete County File, 2021
   https://www.census.gov/data/datasets/2021/econ/cbp/2021-cbp.html

7. County Business Patterns, Complete State File 2021;
   https://www.census.gov/data/datasets/2021/econ/cbp/2021-cbp.html

8. FTA Semi-Annual Report Awarded file, FY 2016-2022, received from the Metropolitan Council, April 13, 2023

9. Annual Business Survey,2020
   https://data.census.gov/table?q=AB2000CSA01:+Annual+Business+Survey:+Statistics+for+Employer+Firms+by+Industry,+Sex,+Ethnicity,+Race,+and+Veteran+Status+for+the+U.S.,+States,+and+Metropolitan+Areas:+2020&tid=ABSCS2020.AB2000CSA01

Methodology

Figure 1. RWC Methodology Flow Chart
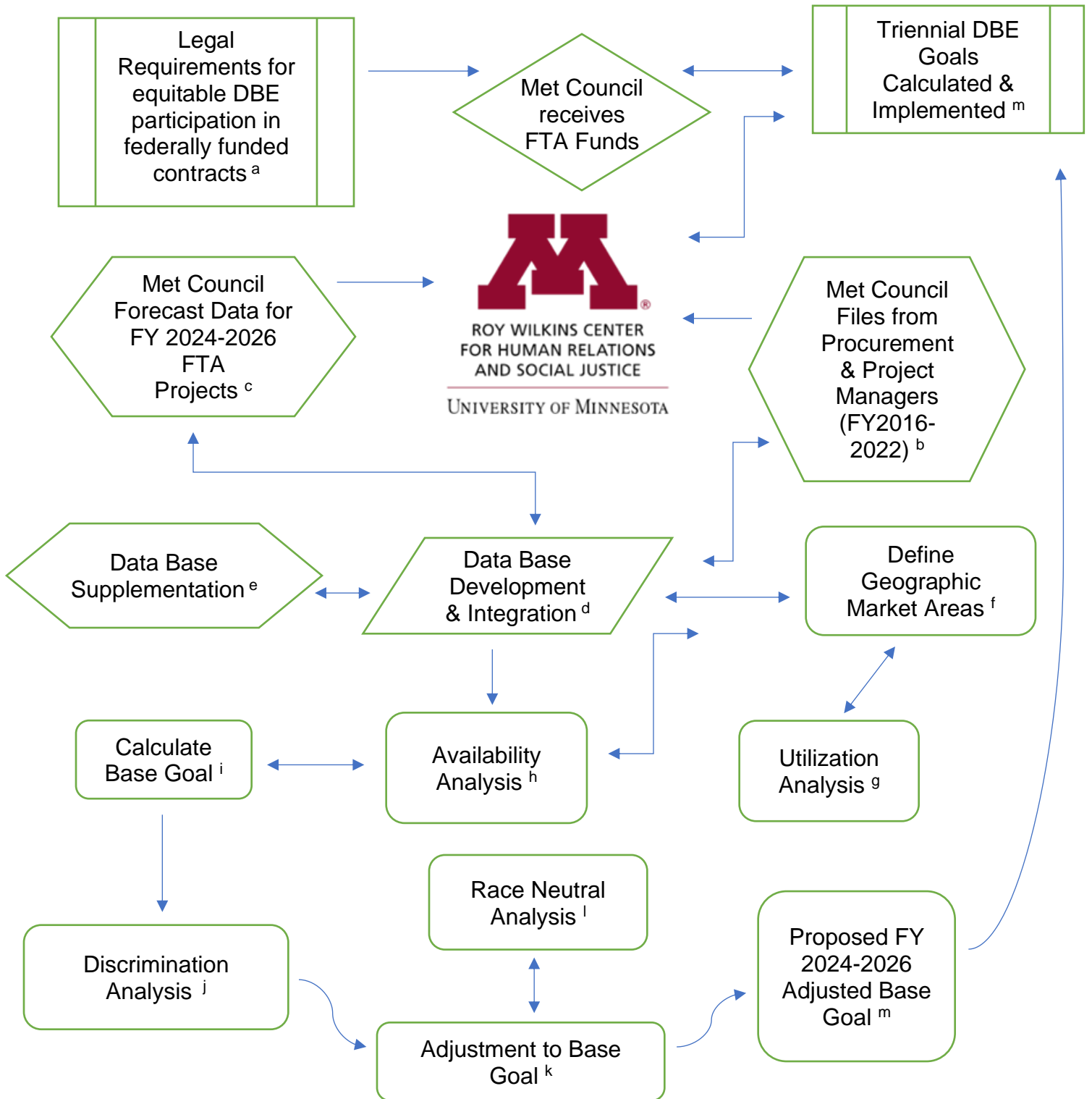
Notes on Figure 1

[a] Code of Federal Regulations: Title 49, Subtitle A, Section 26. Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs. https://www.ecfr.gov/current/title-49/part-26

[b] Contract award files on semi-annual reports; Vendors List and PDF Bid files from Metropolitan Council.

[c] Metropolitan Council Office of Equity and Equal Opportunity provided files from the Council's projected capital expenditures during FY 2024-2026.

[d] Compilation of Contract Award Files and Bidders List; merging of Bidders List and Vendors List with DBE List and integration of supplementary data from Dun & Bradstreet Hoover's, County and State Business Patterns and Annual Business Survey into usable databases.

[e] Public data from US Census State and County Business Patterns for 2021, The Annual Business Survey for 2020, and the April 2023Minnesota Unified Certification Program Directory; private economic from Dun & Bradstreet Hoover's database.

[f] Defining the Minnesota counties and MSAs that accounted for at least 75 percent of the awarded contract value and where the marginal contribution to the contract value was at least one percent of the dollars spent during the reporting period.

[g] DBE share of prime and subcontracts during the research period in number of awards, in dollar value and percent of total value.

[h] Determining the rate of availability of ready, willing and able Disadvantaged Business Enterprises (DBEs) relative to all businesses ready, willing and able to participate on USDOT-assisted contracts in the geographic market area. This analysis utilizes certified DBE lists from the State of Minnesota, Vendors and Bidders Lists from Metropolitan Council, amplified by methods utilizing public and private data to attain the broadest possible measure of available DBEs in a given industrial code.

[I] The Base Goal is determined by averaging the weighted availability rates across all methods of analysis identified in the availability analysis.

[j] Discrimination analysis measures the probability of a DBE receiving a contract award compared to a non-DBE firm when variables other than race, ethnicity or gender are held constant. When variables such as credit risk, size and tenure are equal, buyers or investors are likely to be indifferent to doing business with a DBE or a non-DBE with similar company ratings. The discrimination analysis will yield a percentage of unexplained differences in awards of contracts between DBEs and non-DBEs. This discrimination gap will be the basis for adjusting the base goal.

[k] Adjustments to the base goal are permitted under USDOT regulations to account for evidence of past discrimination and/or differences in a DBE firm's ability to get financing, bonding or insurance, education, training or apprenticeship opportunities. This adjustment will be based on discrimination analysis percentage gap of unexplained difference in contract awards between DBEs and NonDBEs. 49 CFR 26.45(d)   https://www.ecfr.gov/current/title-49/part-26/section-26.45#p-26.45(d)

[l] The analysis must indicate the maximum feasible portion of the adjusted base goal that can be achieved by race neutral means., i.e., the share of dollars that would have gone to DBEs without goals for contracts and firms that are comparable. The logic underlying the race neutral analysis is that some share of DBE dollars awarded would have gone to DBEs without goals. The difference between the adjusted base goal and the race neutral portion is the race conscious portion or (1- race neutral portion of the goal). The RWC identifies the proportion of the proposed adjusted goal that can be achieved by race neutral means and by race conscious means. 49 CFR 26.51   https://www.ecfr.gov/current/title-49/section-26.51

[m] RWC provides to Metropolitan Council the proposed triennial goal. It is an adjustment from the base goal, using the discrimination analysis calculation of the unexplained gap between DBE and non-DBE contract awards, apportioned between race neutral and race conscious goals.

Defining the Geographic Market Area

To satisfy requirements set forth in the USDOT regulations as well as comply with the Supreme Court's narrowly tailored standard, the Metropolitan Council's FTA DBE goal must be based on a narrowly defined geographic market. To define the geographic market in such a manner, the research team analyzed Metropolitan Council's contracts awarded between June 2015 and December 2022. These contracts were ranked from the highest to lowest dollar amount across all counties such that the sum in each area was greater than 75% of the total awarded contract value, and such that and the marginal contribution of each county to the overall total contract amount was at least 1 percent of total dollars spent over the reporting period.

The research team identified four GMAs that capture the overwhelming majority of FTA-funded prime and subcontracts awarded between FY 2016 - 2022. All four GMAs were derived using the political jurisdiction method (PJM) of defining GMAs by different aggregations of counties in Minnesota. The first method, PJM-1, represents the State of Minnesota. The second method, PJM-2, defines those Minnesota counties where there are enough contract dollars to represent the Minnesota counties where the total contract amount or prime contract awarded exceeds 90 percent of the total for the study period. Table 1 shows the four narrowly defined GMAs for FTA DBE goals.

Table 1. Metropolitan Council Geographic Market Areas (GMAs) for FTA DBE Goals

Geographical Market Area	GMA	Prime Contracts only*			Subcontracts only**		
		N	Contract Amount	Share	N	Contract Amount	Share
Total		409	$1,974,825,538.49	-	1032	$746,992,402.36	-
All counties in MN	1	313	$1,893,605,652.68	95.9%	889	$701,418,929.53	93.9%
Twin Cities MSA (15 counties)[1]	2	311	$1,893,176,685.28	95.9%	864	$693,223,243.52	92.8%
MN 7 counties (Anoka, Carver, Dakota, Hennepin Ramsey, Scott, and Washington)	3	296	$1,884,003,255.95	95.4%	781	$632,568,727.21	84.7%
MN 4 counties (Anoka, Dakota, Hennepin and Ramsey)	4	286	$1,879,121,277.00	95.2%	701	$602,407,238.15	80.6%

Source: FTA Contracts for FY 2016-2022.

* For primes, no contracts were awarded in 3 counties: Issanti, Mille Lacs in MN and Pierce, WI.
** For subcontracts, no contracts were awarded in 1 county: Issanti, MN.

More than 95.8 percent of prime contracts were awarded in the State of Minnesota between FY 2016-2022. See Appendix A, Table 1 for Prime Contract data and Table 2 for Subcontract data during these years.

Utilization

DBE Share of Awarded Contracts

As shown in Table 2, the utilization analysis shows that 99.4 percent of prime contract dollars were awarded to non-DBE contractors (equivalent to $1.96 billion) while 0.6 percent of prime contract dollars were awarded to DBE contractors ($11.4 million). Of the 409 total prime contracts, 36 were awarded to DBEs for the period FY2016 – 2022. DBEs were awarded about 40.6 percent of subcontracts or $303.1 million of a total of $746.9 million subcontracts.

Table 2. Utilization Rate of Certified DBEs in FTA-funded Contract Awards

Type	N	Average Contract Amount	Total Contract Amount	Share of Dollars
Prime Contracts				
DBE	36	$317,370.82	$11,425,349.52	0.6%
Non-DBE	373	$5,263,807.48	$1,963,400,188.97	99.4%
Total	409	$4,828,424.30	$1,974,825,538.49	100.0%
Subcontracts				
DBE	525	$577,489.06	$303,181,754.53	40.6%
Non-DBE	473	$938,288.90	$443,810,647.83	59.4%
Total	998	$748,489.38	$746,992,402.36	100.0%
Both Prime and Subcontracts*				
DBE	561	$560,796.98	$314,607,104.05	15.9%
Source: FTA Contracts FY2016-2022				
* The denominator of the share is total prime awarded contract dollars.				

Figure 2 depicts the very small share of prime contracts awarded to DBEs. Most of the DBE contract awards are from subcontracts. The figure shows the DBE share of total contract dollars awarded is small and DBEs cannot compete for subcontracts.

Figure 2. DBE Share of FTA Contract Dollars (FY 2016-2022)

DBE Prime Contracts- $11.43 MM 1%

DBE Subcontracts - $303.18 MM 15%

Non-DBE All Contracts - $1,660.22 MM 84%

- DBE Prime Contracts- $11.43 MM
- DBE Subcontracts - $303.18 MM
- Non-DBE All Contracts - $1,660.22 MM
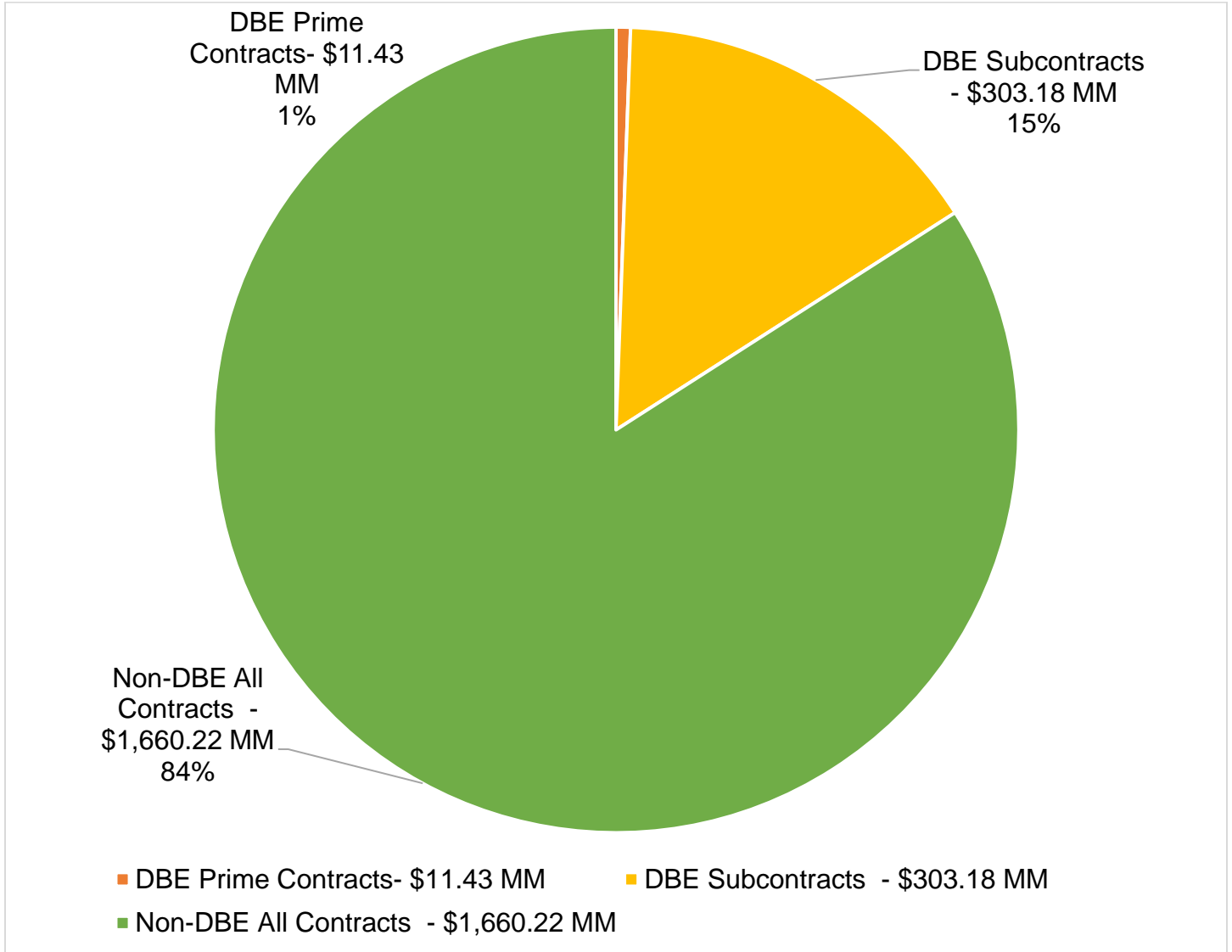
Distribution of Contracts by Gender

As shown in Table 3, 15.9 percent of the total contract dollars were awarded to DBEs either through prime or subcontracts. Out of these contracts, female-owned firms were awarded 9.1 percent while male-owned firms were awarded 6.8 percent. DBE firms were awarded between 13.0 percent to 20.3 percent of the total contract amounts every year.

Table 3. Utilization Rates of Certified DBEs by Gender and by Fiscal Year

Type	N	Average Contract Amount	Total Contract Amount	DBE Share
Both DBE Prime and Subcontracts*				
Overall	561	$560,796.98	$314,607,104.05	15.9%
Female	308	$586,255.45	$180,566,677.62	9.1%
Male	253	$529,804.06	$134,040,426.43	6.8%
Both DBE Prime and Subcontracts by Fiscal Year**				
FY2016	20	$219,215.16	$4,384,303.20	20.3%
FY2017	68	$89,142.53	$6,061,692.35	13.4%
FY2018	69	$263,758.97	$18,199,368.75	13.0%
FY2019	174	$1,028,136.46	$178,895,744.29	16.3%
FY2020	87	$356,767.26	$31,038,751.27	13.0%
FY2021	48	$215,374.40	$10,337,971.16	14.0%
FY2022	95	$691,466.03	$65,689,273.03	18.2%

Source: FTA Contracts FY2016-2022
*The denominator of the share is total prime contract dollars.
**The denominator of the share is total prime contract dollars each year.

Figure 3. DBE Share by Gender of all Contracts
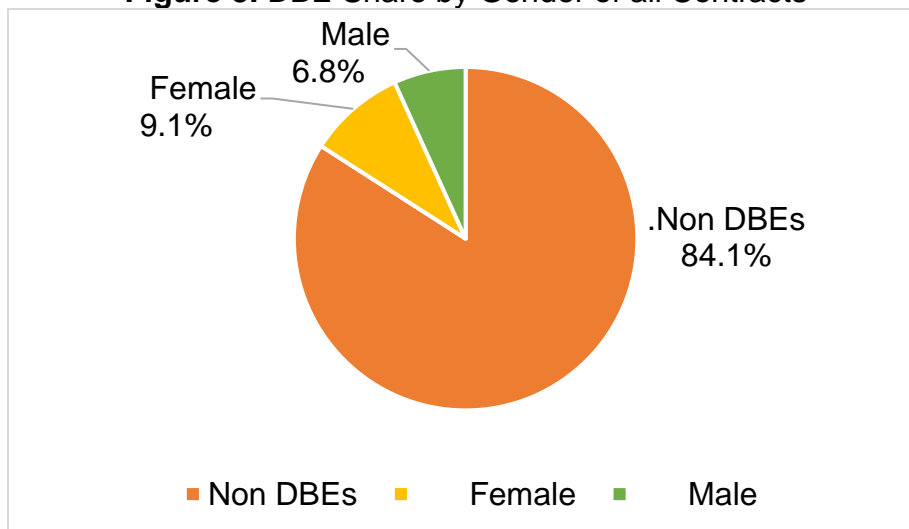
Table 4. Distribution of Contract Dollars by Gender

Type	N	Average Contract Amount	Total Contract Amount	Share of Dollars
Prime Contracts				
Female	30	$182,702.18	$5,481,065.35	0.3%
Male	379	$5,196,159.56	$1,969,344,473.14	99.7%
Overall	409	$4,828,424.30	$1,974,825,538.49	100.0%
Subcontracts				
Female	324	$557,191.32	$180,529,986.82	24.2%
Male	674	$840,448.69	$566,462,415.54	75.8%
Overall	998	$748,489.38	$746,992,402.36	100.0%

Source: FTA Contracts FY2016-2022

Figure 4. Distribution of Subcontract Dollars by Gender
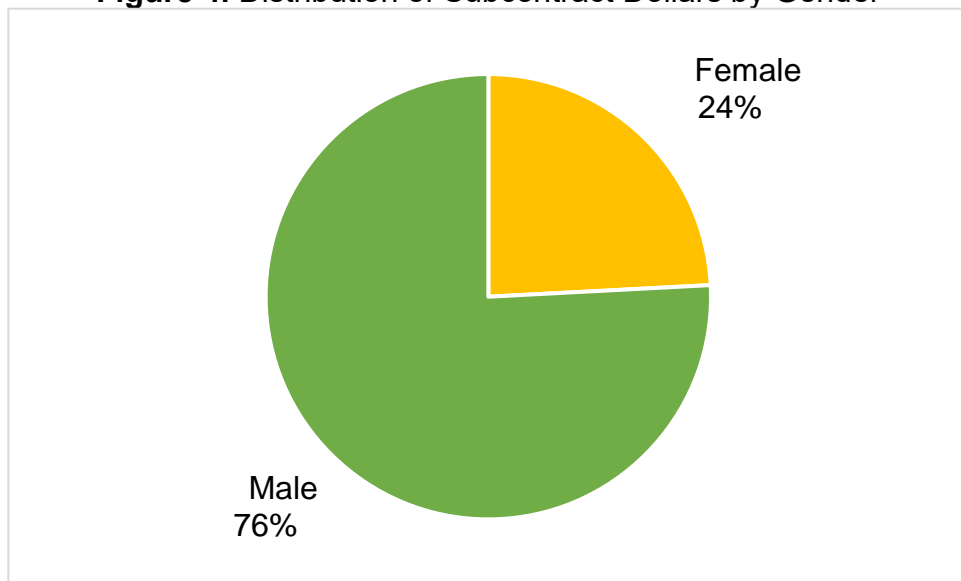
Distribution of Contract Dollars by Race and Ethnicity

Table 5 shows a demographic distribution of contract dollars. Note that the unit of observation is prime and subcontracts, rather than contractors. There is a significant number of subcontracts with missing demographic information. Despite 381 prime contracts where awards did not note the race of recipients, 0.3% of the share of contract award dollars went to Asian firms, the largest racial group identified in the data. Among the subcontracts, 63% of the awards were to recipients of unknown racial and gender identity. Where racial identity was available for subcontracts, the data show that White firms received the largest share of 23.2%, followed by Asians with a 5.5% share, Hispanics with a 3.6% share, Native Americans with a 3.1% share and Blacks with a 1.6% share.

Table 5. Demographic Distribution of Contract Dollars

Race	N	Average Contract Amount	Total Contract Amount	Share of Dollars
Prime Contracts				
Asian	12	$455,458.88	$5,465,506.52	0.3%
Black	2	$375,000.00	$750,000.00	0.0%
White	9	$185,840.44	$1,672,564.00	0.1%
Hispanic	5	$275,700.00	$1,378,500.00	0.1%
Unknown	381	$5,158,947.42	$1,965,558,967.97	99.5%
Total	409	$4,828,424.30	$1,974,825,538.49	100.0%
Subcontracts				
Asian	51	$808,641.93	$41,240,738.46	5.5%
Black	29	$408,089.19	$11,834,586.55	1.6%
White	219	$791,252.32	$173,284,257.50	23.2%
Hispanic	57	$473,355.78	$26,981,279.73	3.6%
Native American	20	$1,167,715.35	$23,354,307.00	3.1%
Unknown	622	$756,104.88	$470,297,233.13	63.0%
Total	998	$748,489.38	$746,992,402.36	100.0%

Source: FTA Contracts FY 2016-2022

The demographic distribution of DBE contract awards reflects utilization of certified DBEs in specific NAICS codes. These demographics differ from the directory compiled in Minnesota Uniform Certified Program which accounts for registered and certified DBEs in all industrial categories. The demographic distribution by gender, race and ethnicity of certified DBEs in Minnesota is provided in Appendix E for reference.

Availability Analysis

Availability rates were calculated separately using the Bidders List, the Vendors List, the DBE List, and RWC Methods for ABS data and Dun & Bradstreet Hoover's data. Although each method differs, the calculations share the following steps.

1) The availability rate is the number of ready, willing and able DBE firms of an industry (represented by a NAICS code), divided by the number of all firms in the same industry within a defined GMA. Only industries to be used in the forecast projects are included.

2) The research team identified 28[5] six-digit NAICS codes associated with the forecast projects.[6] The share of forecasted expenditures in each of the 28 NAICS codes is calculated and then multiplied by each industry to obtain the rate. See Table 6 for future expenditures by industry and its shares by NAICS code.

3) As shown in the general formula below, the next step is to sum the availability rates across the industries (NAICS codes) for a given GMA. The numerator and denominator will differ according to the data list or method used.

$$Availability\ Rate = \sum_{j=1}^{n} \frac{\#\ of\ DBEs\ in\ NAICS_j}{Total\ Number\ of\ Firms\ in\ NAICS_j} weight_j, where\ j = industry$$

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[5] Not including the proxy NAICS code for 485113.

[6] According to U.S. Department of Transportation regulations, the availability rate should be weighted by the "amount of money to be spent" in each industry. The research team obtained a copy of Metropolitan Council's estimated expenditures for the FY 2024-2026, broken down by NAICS code. Metropolitan Council provided its projected expenditures for FTA-funded projects, identified by NAICS codes, for the next three years. To calculate the weights for the availability analysis, the research team categorized projected expenditures by NAICS code. The result was 28 NAICS codes.

Table 6. FTA Weights by 6-Digit NAICS Codes

6-digit NAICS	Estimated Future Spending	Weight
236210	$6,000,000.00	0.0049
236220	$41,965,000.00	0.0344
237110	$750,000.00	0.0006
237130	$250,000.00	0.0002
237310	$5,390,000.00	0.0044
237990	$108,777,500.00	0.0891
238110	$14,022,500.00	0.0115
238120	$350,000.00	0.0003
238160	$1,020,000.00	0.0008
238210	$32,135,041.60	0.0263
238220	$13,326,694.40	0.0109
238290	$7,200,000.00	0.0059
238390	$2,750,000.00	0.0023
238910	$3,155,000.00	0.0026
238990	$385,000.00	0.0003
332312	$3,600,000.00	0.0029
336320	$400,000.00	0.0003
336510	$500,000.00	0.0004
339950	$3,550,000.00	0.0029
423120	$4,900,000.00	0.0040
423440	$6,000,000.00	0.0049
485113	$753,000,000.00	0.6166
488210	$25,202,500.00	0.0206
541310	$12,020,000.00	0.0098
541330	$39,092,500.00	0.0320
541611	$30,525,000.00	0.0250
561730	$5,000,000.00	0.0041
624190	$100,000,000.00	0.0819
Total	$1,221,266,736.00	1.0000

Source: FTA Projected Expenditures (FY2024-2026)

Metropolitan Council's expenditure projections for the period FY2024-2026 reveal a significant shift in the distribution of contract dollars by industrial classification from its previous pattern. Metropolitan Council has embarked on an expenditure forecast that projects more than 60 percent of future expenditures in a single NAICS code 485113 (Bus and Transit Operation Services) where there are but a few firms – no DBEs - currently represented in the state. The problem is that this unique code does not cover all the wide variety of potential bidders on the RFPs issued or proposed for bus and transit operation services or areas, where there are potential bidders among qualified women and minority owned firms. To address this concern, the research team identified a representative category of bus and transit operations and GMA that maximizes DBE/ women and minority shares.

The research team employed three different ways to address this issue.

- The first way is to use the actual number of firms with NAICS code 485113.

- The second way combines NAICS codes 485111 (Mixed Mode Transit Systems), 485210 (Inter-urban and Rural Bus Transportation) and 485991 (Special Needs Transportation) along with 485113 into a single industry.
- The third way uses the Dun & Bradstreet Hoover's dataset to generate a national average of DBEs in the NAICS code 485113 – 8.9 percent - as a proxy in all GMAs.

The rest of the NAICS codes in the FTA-funded contracts remained the same for the purposes of this availability analysis.

The research team conducted the three steps, described above, for each of the three definitions of NAICS 485113.

The research team merged the DBE list with the Bidders List (as described in the Data Collection section) to identify bidders who are DBEs. Due to the small number of firms and no DBEs in NAICS code 485113, the research team calculated the rates three ways, using the actual number of bidders for 485113 and using the number of bidders for the two proxies, as described above.

- The numerator of the bidders' availability rate of a GMA is the sum of the number of DBEs bidders in a GMA for each NAICS code of future projects. The denominator is the total number of bidders of the same NAICS code and GMA.

- The ratio is then multiplied by the share of future expenditures of a NAICS code.

- Sum the resulting ratios across NAICS codes for a given GMA.

Tables 7.1 - 7.3 show, for each proxy of 485113, the unweighted availability rate by GMA, list method and the weighted availability. Appendix Tables C.1 – C.3 for the calculations of the bidders' availability rates by GMAs.

Table 7.1. Availability Analysis, NAICS Code 485113

Method	GMA-1	GMA-2	GMA-3	GMA-4	Unweighted Average	Weighted Average
Bidder List Method	7.95%	8.69%	8.19%	7.01%	7.96%	7.97%
Vendor List Method	6.27%	6.50%	6.42%	4.86%	6.01%	6.02%
ABS Method	15.22%				15.22%	15.22%
DBE List Method	1.85%	4.25%	4.58%	4.66%	3.84%	3.82%
D & B Method	8.00%	6.03%	6.49%	6.54%	6.77%	6.77%
Distribution of the award amount and proportional weights						
Percent Distribution of Award Amount	95.3%	95.0%	92.5%	91.2%		
	(a)	(b)	(c)	(d)		
Proportional Weight	25.5%	25.4%	24.7%	24.4%		
	(e)	(f)	(g)	(h)		

GMA-1: State of Minnesota

GMA-2: Twin Cities MSA (15 Counties)

GMA-3: 7 Metro Counties

GMA-4: 4 Counties (Anoka, Dakota, Hennepin and Ramsey Counties)

(e) = (a)/[(a)+(b)+(c)+(d)]

(f) = (b)/[(a)+(b)+(c)+(d)]

(g) = (c)/[(a)+(b)+(c)+(d)]

(h) = (d)/[(a)+(b)+(c)+(d)]

Table 7.2. Availability Analysis Combined NACIS codes 485111, 485210, 485991, 485113

Method	GMA-1	GMA-2	GMA-3	GMA-4	Unweighted Average	Weighted Average
Bidders List Method	7.95%	8.69%	8.19%	7.01%	7.96%	7.97%
Vendors List Method	6.27%	6.50%	6.42%	4.86%	6.01%	6.02%
ABS Method	15.22%				15.22%	15.22%
DBE List Method	15.06%				15.06%	15.06%
D & B List Method	3.16%	2.98%	3.21%	3.36%	3.18%	3.18%
Distribution of the award amount and proportional weights						
Percent Distribution of Award Amount	95.30% (a)	95.00% (b)	92.50% (c)	91.20% (d)		
Proportional Weight	25.50% (e)	25.40% (f)	24.70% (g)	24.40% (h)		

GMA-1: State of Minnesota

GMA-2: Twin Cities MSA (15 Counties)

GMA-3: 7 Metro Counties

GMA-4: 4 Counties (Anoka, Dakota, Hennepin and Ramsey Counties)

(e) = (a)/[(a)+(b)+(c)+(d)]

(f) = (b)/[(a)+(b)+(c)+(d)]

(g) = (c)/[(a)+(b)+(c)+(d)]

(h) = (d)/[(a)+(b)+(c)+(d)]

Table 7.3. Availability Analysis (FTA -- National Average for 485113)

Method	GMA-1	GMA-2	GMA-3	GMA-4	Unweighted Average	Weighted Average
Bidders List Method	13.44%	14.18%	13.67%	12.50%	13.45%	13.46%
Vendors List Method	11.76%	11.99%	11.91%	10.35%	11.50%	11.51%
ABS List Method	15.22%				15.22%	15.22%
DBE List Method	7.34%	9.74%	10.06%	10.15%	9.32%	9.31%
D & B List Method	7.11%	7.41%	7.57%	7.63%	7.43%	7.43%
Distribution of the award amount and proportional weights						
Percent Distribution of Award Amount	95.30% (a)	95.00% (b)	92.50% (c)	91.20% (d)		
Proportional Weight	25.50% (e)	25.40% (f)	24.70% (g)	24.40% (h)		

GMA-1: State of Minnesota

GMA-2: Twin Cities MSA (15 Counties)

GMA-3: 7 Metro Counties

GMA-4: 4 Counties (Anoka, Dakota, Hennepin and Ramsey Counties)

(e) = (a)/[(a)+(b)+(c)+(d)]

(f) = (b)/[(a)+(b)+(c)+(d)]

(g) = (c)/[(a)+(b)+(c)+(d)]

(h) = (d)/[(a)+(b)+(c)+(d)]

Vendors List

The research team merged the DBE List with the active Vendors List (as described in the Data Collection section) to identify active vendors who are DBEs. As with the Bidders List method, the research team calculated the availability rate for the Vendors List using the three proxies for 485113.

- The numerator of the vendors' availability rate of a GMA is the sum of the number of DBE active vendors in a GMA for each NAICS code of future projects. The denominator is the total number of active vendors of the same NAICS code and GMA.

- The ratio is then multiplied by the share of future expenditures of a NAICS code.

- Sum the resulting ratios across NAICS codes for a given GMA.

Tables 7.1 - 7.3 show, for each proxy of 485113, the unweighted availability rate by GMA, list method, and the weighted availability. Appendix Tables C.4 – C.6 for the calculations of the vendors availability rates by GMAs.

The research team obtained the list of certified DBEs from the Minnesota Uniform Certification Program. The numerator and denominator of this availability rate comes from different sources.

As there are no DBEs in Minnesota listed for NAICS code 485113, the research team calculated the DBE availability rates in three ways. The first one used the actual count of firms in NAICS code 485113. The second way used national average percent of DBEs in 485113 for all GMAs. The third way used the three out-of-state companies on the certified DBE List in the numerator and the actual number of 485113 businesses in the state of Minnesota in the denominator. Due to confidentiality restrictions on the County Business Patterns data, the proxy was only computed for GMA 1, which includes the entire state of Minnesota.

- The numerator in the availability rate is the number of certified DBE firms for specified NAICS codes within a given geographic market area.

- The denominator is the number of firms in the Complete County Business Patterns (CBP) and the Complete State file for the state of Minnesota (GMA1), of the same NAICS codes and geographic market area as the numerator.

- The ratio is then multiplied by the share of future expenditures of a NAICS code.

Dun & Bradstreet Method

The Dun & Bradstreet (D & B) Hoover's dataset was used to estimate the share of DBE firms among all the firms in each NAICS code. While there is no DBE variable in the D & B dataset, the research team used "women-owned" or "minority-owned" small businesses as a proxy for DBE firms. In order to be qualified for as a DBE, a firm has to be owned by women or minorities, its owner must have a personal net worth of less than $1.32 million, and its revenue must be below a certain threshold for each NAICS code according to SBA size criteria. [7] [8]

- The numerator is the number of non-overlapping women and minority owned small business of an industry within a GMA. As a firm can be both minorty and woman owned, the

---

[7] In the D&B dataset, there is no owner's personal net worth variable, but there are firm total sales and number of employees information. Thus, the research team uses the revenue criteria, along with the women/minority status to narrow down the qualified DBE firms. The revenue criteria mean the firm should either have total sales below a threshold or the number of employees below a certain threshold depending on its NAICS code.

[8] For all the firms in Minnesota, 46908 out of 622050 (7.54%) are missing in sales and 43657 out of 622050 (7.02%) are missing in the number of employees. Among all the women-owned firms in Minnesota, 650 out of 26286 (2.47%) are missing in sales, and 636 out of 26286 (2.42%) are missing in number of employees. For minority-owned firms, 196 out of 2391 (8.20%) are missing in sales, and 196 out of 2391 (8.20%) are missing in number of employees. The dataset has more missing values in minority-owned firms than in women-owned firms. In this study, firms with missing values in sales or numbers of employees are excluded when counting the number of DBE firms, which might deflate the result.

numerator was dervied from subtracting the numbe of overlapping women and minority-owned small businesses from the sum total of women-owned small businesses and minority-owned small businesses of an industry.

- The denominator is the total number of Employer Firms in the same industry as the numerator.

- The ratio is then multiplied by the share of future expenditures of a NAICS code.

- Sum the resulting ratios across NAICS codes for a given GMA.

American Survey of Business Method

The ABS method utilizes the Annual Business Survey (ABS) data to identify the fraction of DBE firms among all the employer firms for each NAICS code. ABS do not identify whether a firm is DBE, instead, a firm's owners are classified by sex, ethnicity, and race. To be qualified as a DBE, over 51% of the business is owned by one of the federally defined minorities and the firm must have a net worth and revenue lower than a standard. ABS do not include the business net worth and revenue information. The research team based the calculation on non-overlapping women and minorities owned firms as proxy for DBEs. This may overestimate the rate as there might be women or minority-owned firms that have net-worth or revenue larger than the thresholds for small business. In addition, ABS provides only national data, not at the state or lower levels, and the calculation is based on 2-digit NAICS codes.

- The numerator is the number of non-overlapping women and minority owned small business of an industry of US. As a firm can be both minorty and woman owned, the numerator was dervied from subtracting the number of overlapping women and minority-owned small businesses from the sum total of women-owned small businesses and minority-owned small businesses of an industry.

- The denominator is the total number of Employer Firms in the same industry as the numerator.

- The ratio is then multiplied by the share of future expenditures of a NAICS code.

- Sum the resulting ratios across NAICS codes.

  .

The Base Goal

Depending on the method used for calculating availability, each defined GMA captures a different share of available current contracts. As a result, each method also yields a different DBE availability goal for each market. In order to derive a single base goal that is based on all the goals

calculated for each GMA, it is necessary to weigh each geographic market-specific goal according to the percentage of contract dollars awarded in that area. Therefore, the availability rate of a GMA calculated above is multiplied by a proportional weight derived from the percent distribution of awarded contracts amount in the same GMA (see Tables 7.1 – 7.3). If there were only one definition of NAICS code 485113, the base goal would be the average of the weighted averages across methods. The base goal would have been 8.0 percent, as shown in Table 8. Because the research team defined this NACIS code in three different ways, the base goal is the average across the three ways (the average of 8.0, 9.5 and 11.4) or 9.6 percent.

Table 8. FTA Weighted Availability Rate[a] and Base Goal by Method / by Proxy

Method	NAICS Code 485113	Proxy for NAICS Code 485113[b]	National Estimate for NAICS Code 485113	Base Goal
Bidders List Method	7.97%	7.97%	13.46%	
Vendors List Method	6.02%	6.02%	11.51%	
ABS List Method	15.22%	15.22%	15.22%	
DBE List Method	3.82%	15.06%	9.31%	9.6%
D&B List Method	6.77%	3.18%	7.43%	
Average of weighted averages	**8.0%**	**9.5%**	**11.4%**	

a) Weighted by a GMA's contract amount
b) Includes 485113, 485111, 485210 and 485991

Source: The research team's calculation compiled Metro Council data files with US Census Bureau data.

Adjustment to the Base Goal

Consistent with USDOT guidelines, the second step after calculating a base goal is to determine whether there is sufficient evidence in the GMAs to warrant an adjustment. Table 9 summarizes the USDOT guidelines for adjusting the base goal, under CFR, title 49, part 26, section 26.45(d) [9]

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[9] 49 CFR 26.45(d)   https://www.ecfr.gov/current/title-49/part-26/section-26.45#p-26.45(d)

Table 9. USDOT Guidance for Adjusting the Base Goal

> There are many types of evidence that must be considered when adjusting the base figure. These include:
>
> - The current capacity of DBEs to perform work in the USDOT-assisted contracting program, as measured by the volume of work DBEs have performed in recent years;
> - Evidence from disparity studies conducted anywhere within the jurisdiction, to the extent it is not already accounted for in the base figure; and
> - If the base figure is the goal of another recipient, adjust it for differences in the local market and the relevant contracting program.
>
> If available, consider the evidence from related fields that affect the opportunities for DBEs to form, grow and compete. These include, but are not limited to:
>
> - Statistical disparities in the ability of DBEs to get the financing, bonding and insurance required to participate in the contract;
> - Data on employment, self-employment, education, training and union apprenticeship programs, to the extent it relates to the opportunities for DBEs to perform the required contract work.
>
> Adjustments to the base figure that account for the continuing effects of past discrimination (often called the "but for" factor) or the effects of an ongoing DBE program must be based on demonstrable evidence that is logically and directly related to the effect for which the adjustment is sought.

The evidence RWC considered when proposing an adjustment to the base goal focused on the current capacity of DBEs in the GMAs to perform the expected FTA-assisted work during FY 2024-2026 in the in the industrial codes forecast. In fact, there were only three in-State DBEs or companies qualified in the industrial code where over 60 percent of future contract dollars are expected to be awarded. (See Table 1.) This evidence is based on the DBEs and all in-State contractors that have performed work under the last triennial goals or over the longer period of the team's research from 2015-2022.

Table 10 shows the proposed adjusted base DBE goal of 13.4 percent for the period FY 2024-2026. This adjusted base goal was calculated using the evidence and methodology from the research team's discrimination analysis. The discrimination gap for this adjustment was estimated to be 39.9 percent above the base goal of 9.6 percent. Description of the methodology follows.

Table 10. Proposed FTA Triennial DBE Goal for FY 2024-2026

Type	Goal	RN/RC Portion	Note
Base Goal	9.6%		(a)
Discrimination Gap for Adjustment	39.9%		(b)
Adjusted Goal	13.4%		(c)= (a)*[1 + (b)]
Race-Neutral (RN) Goal	2.4%	18.2%	= (c) * 18.2%
Race-Conscious (RC) Goal	11.0%	81.8%	= (c) * 81.8%

The research team estimated the measures of discrimination for prime contracts and subcontracts in four model specifications. The reasons for different specifications include the fact that there are missing values for some observations on the credit risk, tenure, and size of firms.

Oaxaca Decomposition Models

The research team used the Blinder-Oaxaca-Duncan residual difference decomposition[10] method to make the base goal adjustment. The residual difference decomposition estimates separately the log-transformed contract amounts to DBEs and non-DBEs and computes the amount that DBEs would have received had they been treated like equally situated non-DBEs. The difference between the actual contract amounts and the "equal-treatment" amounts defines the discriminatory portion of the gap between DBEs and non-DBEs.

Gelbach Decomposition Models

The Gelbach decomposition is an extension of the Oaxaca-Blinder-Duncan decomposition that allows for more flexibility and detailed analysis. A generalization of this technique is often used for the nonlinear case. This method first run a base regression, run a full regression with additional regressors, and computes the difference in the coefficient estimates. Like the Oaxaca-Blinder-Duncan decomposition, the Gelbach decomposition decomposes the gap into two main components – explained and unexplained components.

Table 11 shows the discrimination analysis used four methods of estimating the unexplained portion from the residual difference composition for prime and subcontractors contract disparities. The average across the four models equals 39.9 percent. This adjustment was applied to the base goal as the "discrimination gap" resulting in a proposed base goal of 13.4 percent shown on Table 10.

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[10] Many analysts reference the technique simply as the Oaxaca method, due to the continuing role that Ronald Oaxaca has played in developing and expanding the decomposition methodology.   Blinder, Alan, (1973), Wage Discrimination: Reduced Form and Structural Estimates, *Journal of Human Resources*, 8, issue 4, p. 436-455; Oaxaca, Ronald, (1973), Male-Female Wage Differentials in Urban Labor Markets, *International Economic Review*, 14, issue 3, p. 693-709.

Table 11. FTA Discrimination Analysis for Goal Adjustments

Method	Model	Mean Difference in Log Contract Amount by DBE Status (A)	Explained Gap (B)	Unexplained Gap (C)	Unexplained Portion (= C/A)
Oaxaca Decomposition	1	0.6112	0.3328	0.2784	45.5%
	2	0.5569	0.2482	0.3086	55.4%
Gelbach Decomposition	3	-	-	-	27.8%
	4	-	-	-	30.9%
Average					39.9%

Source: FTA Contracts FY2016-2022

Model 1: Oaxaca Decomposition; FTA-funded only; Small contracts (<$10K) excluded

Model 2: Oaxaca Decomposition; Overall; Small contracts (<$10K) excluded

Model 3: Gelbach first stage estimator of unrestricted model 1

Model 4: Gelbach first stage estimator of unrestricted model 2

(A) = mean of predicted value of ln(contract amount of non-DBE) - mean of predicted value of ln(contract amount of DBE)

Race Neutral Analysis

In compliance with federal regulations, state and local transportation authorities must identify the maximum feasible portion of the DBE goal that can be achieved through race-neutral measures and the percentage of the goal that can only be achieved through race-conscious measures [*49 C.F.R. §26.51*   Specific excerpts from the regulatory code state: [11]

> (a) You must meet the maximum feasible portion of your overall goal by using race-neutral means of facilitating race-neutral DBE participation. Race-neutral DBE participation includes any time a DBE wins a prime contract through customary competitive procurement procedures or is awarded a subcontract on a prime contract that does not carry a DBE contract goal."
>
> (b) Each time you submit your overall goal for review by the concerned operating administration, you must also submit your projection of the portion of the goal that you expect to meet through race-neutral means and your basis for that projection.

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[11] 49 CFR 26.51   https://www.ecfr.gov/current/title-49/section-26.51

(c) You must establish contract goals to meet any portion of your overall goal you do not project being able to meet using race-neutral means.

(e.2).…over the period covered by your overall goal, you must set contract goals so that they will cumulatively result in meeting any portion of your overall goal you do not project being able to meet through the use of race-neutral means."

Myers and Ha have pioneered the use of a detailed econometric procedure that maximizes the race-neutral component of the DBE goals.[12] This method has established a rigorous standard for maximizing the race-neutral portion of the overall DBE goal.[13] The logic of the analysis is that some share of DBE dollars awarded would have gone to DBEs without goals. One can compute the share of dollars that would have gone to DBEs without goals for contracts and firms that are comparable. This method requires the estimation of a regression model that controls for a list of relevant variables.

First, the actual DBE shares with and without DBE goals are calculated (in Method A). Then, in Method B, the race-neutral analysis uses the best regression model for predicting DBE contract amounts with and without goals. Table 12 shows the estimation of goals that can be achieved by race-neutral measures and the goals that must be achieved with race-conscious goals. Based on the evidence from DBE contract awards during the period FY 2016 – 2022, only 8.4 percent of DBE contracts were awarded without goals in place. Using a different method of estimation, the Dummy Variable Method, the mean of the estimated contract amount without DBE goals in place would be 28 percent. The average of these two methods yields an 18.2 percent estimate of the DBE goal component that can be achieved by race neutral means. The underlying regression results are shown in Appendix Table D.6.

Table 10 shows that the adjusted base goal of 13.4 percent can be apportioned between a race neutral component and a race conscious component. The maximum goal attainable by race neutral means is 2.4 goal (or 18.2 percent x 13.4 percent) and the race conscious goal is 11.0 percent (13.4 percent – 2.4 percent).

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[12] Myers, Samuel L. and Inhyuck "Steve" Ha. "Estimation of Race Neutral Goals in Public Procurement and Contracting," *Applied Economics Letters*, 2009, vol. 16, issue 3, pages 251-256.

[13] 2010-10-19, Civil Action No. 04-2425, *GEOD CORPORATION, et al., Plaintiffs v. NEW JERSEY TRANSIT CORPORATION, et al., Defendants*.

Table 12. FTA Race Neutral Analysis

Method	N	Contract Amount	Race Neutral Portion	Note
A. Method 1: DBE primes and subs				
Actual DBE contract (a= b+c)	561	$314,607,104.05		
Actual DBE contract with goals (b)	388	$288,084,165.83		
Actual DBE contract without goals (c)	173	$26,522,938.22	8.4%	= c/a
B. Method 2: Dummy Variable Method				
Mean of predicted DBE amount with goal (d)	516	$143,222.10		
Mean of estimated DBE amount setting 0% goal (e)	516	$40,041.28	28.0%	= e/d
Average			18.2%	

Source: FTA contracts FY 2016-2022

Public Comment Period

To establish its overall goal in accordance with the USDOT regulations, as amended by the Final Rule effective November 3, 2014, Metropolitan Council provided a 30-day consultation process and publication of its goal [*49 C.F.R. §26.45(g)*]. Metropolitan Council published on its website its DBE goal and a notice to solicit public comments (including information on how to submit comments) from August 28 to September 28, 2023. A virtual public meeting was announced and held on September 14, 2023. In addition, the public is able to attend meetings of Metropolitan Council and committees, scheduled and held on this topic: September 13, 2023 (Management Committee) and September 19, 2023 (Equity Advisory Committee). Finally, Metropolitan Council directly contacted, via email, various organizations with an interest in the goal process. Examples include but are not limited to: Council Members, certified small businesses, MNUCP partners, Equity Advisory Committee, DBE Workforce Advisory Committee, National Association of Minority Contractors, Association of Women Contractors, and the Association of General Contractors. The public meeting announcements were also advertised in the Star Tribune, which is the newspaper of regional circulation in the Twin Cities region, and via Metropolitan Council communications channels.

 A separate document that categorizes the public's comments during this period will be issued. Any comments pertaining to the analytical methodology used to derive the overall proposed goals will be addressed.

APPENDIX A: Geographic Market Area Definition

Table A.1. FTA Distribution of Contract Amount by State: Prime Contracts Only

Table A.2. FTA Distribution of Contract Amount by State: Subcontracts only

Table A.1. FTA Distribution of Contract Amount by State: Prime Contracts Only

State	N	Average Contract Amount	Total Contract Amount	Share
AZ	3	$82,142.95	$246,428.85	0.01%
CA	12	$889,668.21	$10,676,018.57	0.54%
CO	5	$2,768,066.90	$13,840,334.50	0.70%
DC	1	$135,378.00	$135,378.00	0.01%
FL	2	$3,926,301.50	$7,852,603.00	0.40%
GA	3	$94,476.67	$283,430.00	0.01%
IA	1	$71,000.00	$71,000.00	0.00%
IL	12	$836,955.81	$10,043,469.71	0.51%
IN	1	$166,435.67	$166,435.67	0.01%
KS	1	$1,332,368.00	$1,332,368.00	0.07%
KY	1	$130,784.00	$130,784.00	0.01%
MD	6	$870,260.83	$5,221,565.00	0.26%
MI	6	$209,580.62	$1,257,483.73	0.06%
MN	313	$6,049,858.32	$1,893,605,652.68	95.89%
NC	1	$3,169,800.00	$3,169,800.00	0.16%
NV	1	$49,859.55	$49,859.55	0.00%
NY	5	$129,468.24	$647,341.22	0.03%
OH	1	$73,500.00	$73,500.00	0.00%
OR	1	$385,000.00	$385,000.00	0.02%
PA	1	$72,443.80	$72,443.80	0.00%
SC	2	$7,891,779.95	$15,783,559.90	0.80%
TX	1	$88,339.20	$88,339.20	0.00%
UT	1	$162,875.00	$162,875.00	0.01%
VA	1	$44,471.79	$44,471.79	0.00%
WI	9	$311,979.89	$2,807,819.02	0.14%
Unknown	18	$370,976.52	$6,677,577.30	0.34%
Total	409	$4,828,424.30	$1,974,825,538.49	100.00%

Source: FTA Contracts FY2016-2022

Table A.2. FTA Distribution of Contract Amount by State: Subcontracts only

State	N	Average Contract Amount	Total Contract Amount	Share
AL	2	$6,297.89	$12,595.79	0.00%
AZ	1	$33,984.48	$33,984.48	0.00%
CA	8	$87,551.20	$700,409.62	0.09%
CO	1	$458,920.00	$458,920.00	0.06%
CT	2	$230,888.88	$461,777.75	0.06%
FL	3	$4,225,037.05	$12,675,111.14	1.70%
GA	6	$930,418.48	$5,582,510.86	0.75%
IA	1	$249,750.00	$249,750.00	0.03%
IL	14	$459,075.29	$6,427,054.13	0.86%
IN	3	$114,586.67	$343,760.01	0.05%
LA	1	$51,810.00	$51,810.00	0.01%
MA	1	$1,293.00	$1,293.00	0.00%
MD	2	$127,653.50	$255,307.00	0.03%
MI	3	$243,458.62	$730,375.87	0.10%
MN	868	$808,086.32	$701,418,929.53	93.90%
NC	1	$47,528.00	$47,528.00	0.01%
ND	3	$32,556.67	$97,670.00	0.01%
NE	1	$167,992.00	$167,992.00	0.02%
NJ	1	$14,726.24	$14,726.24	0.00%
NY	3	$111,410.67	$334,232.00	0.04%
OH	5	$292,759.54	$1,463,797.70	0.20%
PA	1	$78,000.00	$78,000.00	0.01%
SD	2	$265,230.00	$530,460.00	0.07%
TX	4	$220,925.13	$883,700.50	0.12%
UT	1	$3,600.00	$3,600.00	0.00%
VA	1	$9,438.00	$9,438.00	0.00%
WA	1	$9,500.00	$9,500.00	0.00%
WI	29	$304,560.03	$8,832,240.92	1.18%
Unknown	29	$176,411.30	$5,115,927.81	0.68%
Total	998	$748,489.38	$746,992,402.36	100.00%

Source: FTA Contracts FY2016-2022

APPENDIX B: Utilization Analysis

Table B.1. Demographic Distribution of Contract Dollars

Table B.2. FTA DBE Share by NAICS (Primes and Subcontracts combined)

Table B.1. Demographic Distribution of Contract Dollars

Race	N	Average Contract Amount	Total Contract Amount	Share of Dollars
Prime Contracts				
Asian	12	$455,458.88	$5,465,506.52	0.3%
Black	2	$375,000.00	$750,000.00	0.0%
Caucasian	9	$185,840.44	$1,672,564.00	0.1%
Hispanic	5	$275,700.00	$1,378,500.00	0.1%
Unknown	381	$5,158,947.42	$1,965,558,967.97	99.5%
Overall	409	$4,828,424.30	$1,974,825,538.49	100.0%
Subcontracts				
Asian	51	$808,641.93	$41,240,738.46	5.5%
Black	29	$408,089.19	$11,834,586.55	1.6%
Caucasian	219	$791,252.32	$173,284,257.50	23.2%
Hispanic	57	$473,355.78	$26,981,279.73	3.6%
Native American	20	$1,167,715.35	$23,354,307.00	3.1%
Unknown	622	$756,104.88	$470,297,233.13	63.0%
Overall	998	$748,489.38	$746,992,402.36	100.0%

Source: FTA Contracts FY2016-2022

Table B.2. FTA DBE Share by NAICS (Primes and Subcontracts combined)

NAICS	Non-DBE			DBE			DBE Share
	N	Average Contract Amount	Total Contract Amount	N	Average Contract Amount	Total Contract Amount	
221310				4	$57,971.30	$231,885.22	100.0%
213111	1	$74,945.00	$74,945.00				0.0%
221320	1	$2,769,686.25	$2,769,686.25				0.0%
236115				2	$132,750.00	$265,500.00	100.0%
236210	4	$939,942.91	$3,759,771.65				0.0%
236220	27	$7,906,473.23	$213,474,777.27	13	$475,546.08	$6,182,099.00	2.8%
237110	5	$894,438.20	$4,472,190.99	12	$3,050,805.77	$36,609,669.19	89.1%
237210				1	$12,750.00	$12,750.00	100.0%
237310	34	$762,028.84	$25,908,980.61	38	$1,005,172.02	$38,196,536.78	59.6%
237910	1	$1,143,000.00	$1,143,000.00				0.0%
237990	26	$38,232,205.31	$994,037,337.99	4	$503,262.75	$2,013,051.00	0.2%
238110	16	$1,294,539.36	$20,712,629.77	27	$309,877.46	$8,366,691.50	28.8%
238120	13	$397,234.23	$5,164,045.05	14	$130,201.21	$1,822,816.87	26.1%
238140	6	$65,992.92	$395,957.50	3	$59,007.33	$177,022.00	30.9%
238150	4	$435,670.75	$1,742,683.00	3	$597,552.33	$1,792,657.00	50.7%
238160	5	$353,499.70	$1,767,498.50	7	$615,086.52	$4,305,605.61	70.9%
238190				1	$33,072.00	$33,072.00	100.0%
238210	66	$5,057,424.13	$333,789,992.44	23	$1,187,567.61	$27,314,055.13	7.6%
238220	21	$1,006,274.87	$21,131,772.20	9	$1,314,384.56	$11,829,461.00	35.9%
238290	10	$208,993.69	$2,089,936.88				0.0%
238310	13	$122,179.00	$1,588,327.00	3	$162,579.00	$487,737.00	23.5%
238320	10	$324,835.46	$3,248,354.64	4	$227,350.46	$909,401.86	21.9%
238330	8	$263,640.00	$2,109,120.00				0.0%
238340	4	$112,253.50	$449,014.00	3	$130,454.56	$391,363.67	46.6%
238350				1	$720,000.00	$720,000.00	100.0%
238390	9	$531,118.25	$4,780,064.27	10	$363,369.46	$3,633,694.56	43.2%
238910	40	$6,962,819.60	$278,512,784.14	19	$532,864.82	$10,124,431.50	3.5%
238990	16	$152,910.06	$2,446,560.90	10	$705,861.49	$7,058,614.90	74.3%
321113	2	$376,582.95	$753,165.91				0.0%
321114	2	$63,748.42	$127,496.85				0.0%
321911	1	$87,082.87	$87,082.87				0.0%
323111	1	$150,000.00	$150,000.00	2	$37,950.00	$75,900.00	33.6%
324110	2	$86,398.50	$172,797.00				0.0%
325520	1	$952.58	$952.58				0.0%
326150				1	$50,639.00	$50,639.00	100.0%
326199	1	$47,300.00	$47,300.00				0.0%
327215	1	$117,687.56	$117,687.56				0.0%

327332	1	$1,697,514.63	$1,697,514.63				0.0%
327992	1	$103,982.00	$103,982.00				0.0%
331110	4	$1,799,047.63	$7,196,190.50				0.0%
331222	1	$3,186.00	$3,186.00				0.0%
331491	1	$14,726.24	$14,726.24				0.0%
331511	1	$43,173.00	$43,173.00				0.0%
332216	1	$63,967.02	$63,967.02				0.0%
332311	4	$31,533.47	$126,133.87				0.0%
332312	8	$59,237.48	$473,899.86	14	$527,822.65	$7,389,517.10	94.0%
332321	7	$79,906.15	$559,343.02				0.0%
332322	2	$146,788.50	$293,577.00	1	$2,522,637.00	$2,522,637.00	89.6%
332323	3	$117,236.41	$351,709.23	1	$70,001.00	$70,001.00	16.6%
332618	1	$12,501.49	$12,501.49				0.0%
332991	1	$120,000.00	$120,000.00				0.0%
333310	1	$676,074.44	$676,074.44				0.0%
333415	1	$46,251.00	$46,251.00				0.0%
333611	2	$125.00	$250.00				0.0%
333921	2	$666,930.00	$1,333,860.00				0.0%
333924	1	$435,364.00	$435,364.00				0.0%
333999	1	$309,730.78	$309,730.78				0.0%
334220	3	$327,908.33	$983,725.00				0.0%
334413	2	$969.82	$1,939.64				0.0%
334416	4	$1,231.33	$4,925.34				0.0%
334419	1	$643.00	$643.00				0.0%
334511	1	$22,174.20	$22,174.20				0.0%
334513	2	$41,650.00	$83,300.00				0.0%
334514	1	$1,711,000.00	$1,711,000.00				0.0%
334519	1	$107,950.00	$107,950.00				0.0%
335122	1	$79,205.85	$79,205.85				0.0%
335132	1	$163,355.60	$163,355.60				0.0%
335139	1	$2,317.00	$2,317.00				0.0%
335311	3	$51,653.56	$154,960.69	11	$305,964.89	$3,365,613.79	95.6%
335312	3	$131,273.18	$393,819.55				0.0%
335313	2	$4,593.11	$9,186.23				0.0%
335314	1	$100.00	$100.00				0.0%
335921	1	$42.00	$42.00				0.0%
335931	1	$922.76	$922.76	2	$43,867.50	$87,735.00	99.0%
336350	2	$158,110.35	$316,220.70				0.0%
336510	7	$569,846.78	$3,988,927.47				0.0%
337215	1	$85,000.00	$85,000.00				0.0%
339950	7	$105,055.68	$735,389.77	7	$145,401.49	$1,017,810.44	58.1%
423110	1	$108,322.00	$108,322.00				0.0%
423120	2	$124,256.34	$248,512.67				0.0%

423130	1	$14,463,419.33	$14,463,419.33				0.0%
423210	1	$37,176.00	$37,176.00	1	$20,800.00	$20,800.00	35.9%
423220	2	$227,349.64	$454,699.28				0.0%
423310	4	$60,010.25	$240,040.98	1	$91,755.60	$91,755.60	27.7%
423320	2	$266,031.00	$532,062.00				0.0%
423390	2	$1,620,980.89	$3,241,961.78	13	$639,411.10	$8,312,344.29	71.9%
423430	2	$446,833.75	$893,667.50	1	$222,862.00	$222,862.00	20.0%
423460	1	$120,000.00	$120,000.00				0.0%
423510	1	$107,123.09	$107,123.09	2	$896,837.90	$1,793,675.80	94.4%
423610	3	$7,446.85	$22,340.54	23	$835,729.97	$19,221,789.31	99.9%
423690	2	$82,097.38	$164,194.75				0.0%
423710	3	$31,724.15	$95,172.45				0.0%
423810				1	$20,730.50	$20,730.50	100.0%
423830	8	$323,428.19	$2,587,425.49	1	$91,683.00	$91,683.00	3.4%
423840	1	$120,027.60	$120,027.60				0.0%
423850	3	$2,311,156.08	$6,933,468.25	1	$274,435.29	$274,435.29	3.8%
423860	2	$184,432.88	$368,865.75	1	$12,300,000.00	$12,300,000.00	97.1%
423910	1	$44,538.95	$44,538.95				0.0%
423930	1	$6,000.00	$6,000.00				0.0%
423990	2	$1,344,855.00	$2,689,710.00				0.0%
424690	1	$72,875.00	$72,875.00				0.0%
424720	2	$16,546.28	$33,092.56	1	$1,000,000.19	$1,000,000.19	96.8%
424950				1	$3,888.24	$3,888.24	100.0%
425120	4	$158,543.41	$634,173.62	1	$723,737.77	$723,737.77	53.3%
441110				1	$312.50	$312.50	100.0%
444180				2	$46,389.50	$92,778.99	100.0%
484110				1	$89,500.00	$89,500.00	100.0%
444190	1	$15,872.84	$15,872.84				0.0%
484220				23	$1,315,800.70	$30,263,416.19	100.0%
445132	1	$73,500.00	$73,500.00				0.0%
445240	1	$59,844.00	$59,844.00				0.0%
453998	1	$51,810.00	$51,810.00				0.0%
459999	1	$301,497.00	$301,497.00				0.0%
484220	1	$650,000.00	$650,000.00				0.0%
485111	2	$14,797,645.00	$29,595,290.00				0.0%
485119	3	$5,133,434.33	$15,400,303.00				0.0%
488210	4	$643,788.25	$2,575,153.00				0.0%
488999				1	$64,407.57	$64,407.57	100.0%
513210	6	$256,433.89	$1,538,603.36				0.0%
517110				4	$348,897.15	$1,395,588.59	100.0%
517111	1	$2,283.00	$2,283.00				0.0%
517810	2	$1,667,728.15	$3,335,456.29				0.0%
518210	2	$220,174.50	$440,349.00				0.0%

Code	Count	Amount	Total	Count	Amount	Total	Percent
524126	1	$689.00	$689.00				0.0%
524127				1	$4,535.77	$4,535.77	100.0%
531210	3	$128,035.00	$384,105.00				0.0%
531320	2	$140,000.00	$280,000.00				0.0%
532111	2	$194,522.90	$389,045.80				0.0%
532120	1	$70,342.20	$70,342.20	4	$52,910.38	$211,641.50	75.1%
532289				2	$35,879.20	$71,758.39	100.0%
541110	14	$574,331.85	$8,040,645.86	2	$138,614.17	$277,228.35	3.3%
541211	1	$2,945.00	$2,945.00				0.0%
541310	16	$853,861.52	$13,661,784.28	22	$107,377.14	$2,362,297.00	14.7%
541320	10	$1,044,409.20	$10,444,092.00	3	$293,143.67	$879,431.00	7.8%
541330	131	$2,168,562.33	$284,081,665.72	121	$333,092.02	$40,304,134.84	12.4%
541340				2	$20,987.65	$41,975.30	100.0%
541360	1	$141,045.00	$141,045.00	1	$198,021.07	$198,021.07	58.4%
541370	5	$99,412.00	$497,060.00	15	$273,660.80	$4,104,912.07	89.2%
541380	14	$161,193.50	$2,256,709.05	1	$9,500.00	$9,500.00	0.4%
541410				1	$8,750.00	$8,750.00	100.0%
541411	1	$385,000.00	$385,000.00				0.0%
541490	1	$1,295.00	$1,295.00	1	$50,000.00	$50,000.00	97.5%
541511	10	$110,356.86	$1,103,568.62				0.0%
541512	9	$174,238.99	$1,568,150.93				0.0%
541519				2	$1,848,733.00	$3,697,466.00	100.0%
541611	37	$822,680.01	$30,439,160.46	9	$91,313.72	$821,823.48	2.6%
541613	1	$100,000.00	$100,000.00				0.0%
541614	3	$61,028.67	$183,086.00				0.0%
541618	1	$135,378.00	$135,378.00	3	$25,824.05	$77,472.14	36.4%
541620	4	$105,085.91	$420,343.62	4	$158,647.30	$634,589.20	60.2%
541690	1	$918,898.64	$918,898.64				0.0%
541720	2	$145,446.50	$290,893.00				0.0%
541820				8	$320,349.66	$2,562,797.25	100.0%
541910	2	$739,384.00	$1,478,768.00	3	$134,606.67	$403,820.00	21.5%
541922	1	$21,300.00	$21,300.00				0.0%
554110	1	$100,000.00	$100,000.00				0.0%
541990				2	$43,735.00	$87,470.00	100.0%
561311	1	$2,000,000.00	$2,000,000.00				0.0%
561492	1	$50,200.00	$50,200.00				0.0%
561499				1	$65,000.00	$65,000.00	100.0%
561621	1	$58,000.00	$58,000.00				0.0%
561720	2	$112,912.00	$225,824.00				0.0%
561730	9	$230,086.96	$2,070,782.65	2	$857,714.50	$1,715,429.00	45.3%
561790				3	$571,853.33	$1,715,560.00	100.0%
561990	1	$310,000.00	$310,000.00				0.0%
562111	1	$7,000.00	$7,000.00	2	$173,125.00	$346,250.00	98.0%

562112	1	$41,450.00	$41,450.00				0.0%
562119				1	$26,925.00	$26,925.00	100.0%
562910	5	$55,407.50	$277,037.50	2	$28,904.50	$57,809.00	17.3%
562991	1	$3,000.00	$3,000.00	5	$97,178.96	$485,894.81	99.4%
562998				2	$55,500.00	$111,000.00	100.0%
611210	1	$51,200.00	$51,200.00				0.0%
611430	1	$64,620.00	$64,620.00				0.0%
624190	2	$46,250.00	$92,500.00				0.0%
722511	2	$1,100,409.00	$2,200,818.00				0.0%
812930	1	$264,986.00	$264,986.00				0.0%
922160	2	$291,339.00	$582,678.00				0.0%
Unknown	20	$176,174.34	$3,523,486.70	6	$38,656.33	$231,937.95	6.2%
Total	846	$2,845,402.88	$2,407,210,836.80	561	$560,796.98	$314,607,104.05	11.6%

APPENDIX C: Availability Analysis

Table C.1. Vendors List Method, 485113 Actual

NAICS	Weight	GMA 1			GMA 2			GMA 3			GMA 4		
		Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate
236210	0.5%	2	4	0.25%	2	4	0.25%	2	4	0.25%	2	4	0.25%
236220	3.4%	4	35	0.39%	4	30	0.46%	3	26	0.40%	3	25	0.41%
237110	0.1%	3	16	0.01%	3	15	0.01%	3	15	0.01%	3	10	0.02%
237130	0.0%	1	1	0.02%	1	1	0.02%	1	1	0.02%	1	1	0.02%
237310	0.4%	9	28	0.14%	9	26	0.15%	8	24	0.15%	6	19	0.14%
237990	8.9%	1	6	1.48%	1	6	1.48%	1	6	1.48%	0	5	0.00%
238110	1.1%	9	17	0.61%	8	16	0.57%	6	14	0.49%	4	12	0.38%
238120	0.0%	3	3	0.03%	2	2	0.03%	1	1	0.03%	1	1	0.03%
238160	0.1%	4	10	0.03%	4	10	0.03%	4	9	0.04%	4	8	0.04%
238210	2.6%	7	36	0.51%	7	33	0.56%	7	29	0.64%	7	28	0.66%
238220	1.1%	6	57	0.11%	6	50	0.13%	5	48	0.11%	4	42	0.10%
238290	0.6%	1	5	0.12%	1	4	0.15%	1	4	0.15%	1	4	0.15%
238390	0.2%	6	7	0.19%	6	7	0.19%	5	6	0.19%	4	5	0.18%
238910	0.3%	10	17	0.15%	10	16	0.16%	10	16	0.16%	7	10	0.18%
238990	0.0%	15	49	0.01%	13	42	0.01%	12	40	0.01%	10	36	0.01%
332312	0.3%	2	8	0.07%	1	7	0.04%	1	6	0.05%	1	6	0.05%
336320	0.0%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
336510	0.0%	0	1	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
339950	0.3%	5	24	0.06%	5	24	0.06%	5	24	0.06%	4	22	0.05%
423120	0.4%	1	12	0.03%	1	11	0.04%	1	10	0.04%	1	10	0.04%
423440	0.5%	1	7	0.07%	1	7	0.07%	1	7	0.07%	1	6	0.08%
485113	61.7%	0	3	0.00%	0	3	0.00%	0	3	0.00%	0	3	0.00%
488210	2.1%	0	5	0.00%	0	5	0.00%	0	4	0.00%	0	4	0.00%
541310	1.0%	5	11	0.45%	5	11	0.45%	5	11	0.45%	5	11	0.45%
541330	3.2%	10	60	0.53%	9	55	0.52%	9	53	0.54%	9	51	0.56%
541611	2.5%	9	27	0.83%	10	26	0.96%	9	24	0.94%	9	24	0.94%
561730	0.4%	7	19	0.15%	7	19	0.15%	7	19	0.15%	4	14	0.12%
624190	8.2%	0	29	0.00%	0	28	0.00%	0	28	0.00%	0	26	0.00%
Sum				**6.27%**			**6.50%**			**6.42%**			**4.86%**

Table C.2. Vendors List Method, Combined Proxy

NAICS	Weight	GMA 1 Num.	GMA 1 Denom.	GMA 1 Rate	GMA 2 Num.	GMA 2 Denom.	GMA 2 Rate	GMA 3 Num.	GMA 3 Denom.	GMA 3 Rate	GMA 4 Num.	GMA 4 Denom.	GMA 4 Rate
236210	0.5%	2	4	0.25%	2	4	0.25%	2	4	0.25%	2	4	0.25%
236220	3.4%	4	35	0.39%	4	30	0.46%	3	26	0.40%	3	25	0.41%
237110	0.1%	3	16	0.01%	3	15	0.01%	3	15	0.01%	3	10	0.02%
237130	0.0%	1	1	0.02%	1	1	0.02%	1	1	0.02%	1	1	0.02%
237310	0.4%	9	28	0.14%	9	26	0.15%	8	24	0.15%	6	19	0.14%
237990	8.9%	1	6	1.48%	1	6	1.48%	1	6	1.48%	0	5	0.00%
238110	1.1%	9	17	0.61%	8	16	0.57%	6	14	0.49%	4	12	0.38%
238120	0.0%	3	3	0.03%	2	2	0.03%	1	1	0.03%	1	1	0.03%
238160	0.1%	4	10	0.03%	4	10	0.03%	4	9	0.04%	4	8	0.04%
238210	2.6%	7	36	0.51%	7	33	0.56%	7	29	0.64%	7	28	0.66%
238220	1.1%	6	57	0.11%	6	50	0.13%	5	48	0.11%	4	42	0.10%
238290	0.6%	1	5	0.12%	1	4	0.15%	1	4	0.15%	1	4	0.15%
238390	0.2%	6	7	0.19%	6	7	0.19%	5	6	0.19%	4	5	0.18%
238910	0.3%	10	17	0.15%	10	16	0.16%	10	16	0.16%	7	10	0.18%
238990	0.0%	15	49	0.01%	13	42	0.01%	12	40	0.01%	10	36	0.01%
332312	0.3%	2	8	0.07%	1	7	0.04%	1	6	0.05%	1	6	0.05%
336320	0.0%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
336510	0.0%	0	1	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
339950	0.3%	5	24	0.06%	5	24	0.06%	5	24	0.06%	4	22	0.05%
423120	0.4%	1	12	0.03%	1	11	0.04%	1	10	0.04%	1	10	0.04%
423440	0.5%	1	7	0.07%	1	7	0.07%	1	7	0.07%	1	6	0.08%
485113 - proxy	61.7%	0	7	0.00%	0	7	0.00%	0	7	0.00%	0	7	0.00%
488210	2.1%	0	5	0.00%	0	5	0.00%	0	4	0.00%	0	4	0.00%
541310	1.0%	5	11	0.45%	5	11	0.45%	5	11	0.45%	5	11	0.45%
541330	3.2%	10	60	0.53%	9	55	0.52%	9	53	0.54%	9	51	0.56%
541611	2.5%	9	27	0.83%	10	26	0.96%	9	24	0.94%	9	24	0.94%
561730	0.4%	7	19	0.15%	7	19	0.15%	7	19	0.15%	4	14	0.12%
624190	8.2%	0	29	0.00%	0	28	0.00%	0	28	0.00%	0	26	0.00%
Sum				**6.27%**			**6.50%**			**6.42%**			**4.86%**

Table C.3. Vendors List Method, National Average

NAICS	Weight	GMA 1			GMA 2			GMA 3			GMA 4		
		Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate
236210	0.5%	2	4	0.25%	2	4	0.25%	2	4	0.25%	2	4	0.25%
236220	3.4%	4	35	0.39%	4	30	0.46%	3	26	0.40%	3	25	0.41%
237110	0.1%	3	16	0.01%	3	15	0.01%	3	15	0.01%	3	10	0.02%
237130	0.0%	1	1	0.02%	1	1	0.02%	1	1	0.02%	1	1	0.02%
237310	0.4%	9	28	0.14%	9	26	0.15%	8	24	0.15%	6	19	0.14%
237990	8.9%	1	6	1.48%	1	6	1.48%	1	6	1.48%	0	5	0.00%
238110	1.1%	9	17	0.61%	8	16	0.57%	6	14	0.49%	4	12	0.38%
238120	0.0%	3	3	0.03%	2	2	0.03%	1	1	0.03%	1	1	0.03%
238160	0.1%	4	10	0.03%	4	10	0.03%	4	9	0.04%	4	8	0.04%
238210	2.6%	7	36	0.51%	7	33	0.56%	7	29	0.64%	7	28	0.66%
238220	1.1%	6	57	0.11%	6	50	0.13%	5	48	0.11%	4	42	0.10%
238290	0.6%	1	5	0.12%	1	4	0.15%	1	4	0.15%	1	4	0.15%
238390	0.2%	6	7	0.19%	6	7	0.19%	5	6	0.19%	4	5	0.18%
238910	0.3%	10	17	0.15%	10	16	0.16%	10	16	0.16%	7	10	0.18%
238990	0.0%	15	49	0.01%	13	42	0.01%	12	40	0.01%	10	36	0.01%
332312	0.3%	2	8	0.07%	1	7	0.04%	1	6	0.05%	1	6	0.05%
336320	0.0%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
336510	0.0%	0	1	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
339950	0.3%	5	24	0.06%	5	24	0.06%	5	24	0.06%	4	22	0.05%
423120	0.4%	1	12	0.03%	1	11	0.04%	1	10	0.04%	1	10	0.04%
423440	0.5%	1	7	0.07%	1	7	0.07%	1	7	0.07%	1	6	0.08%
485113 - national average	61.7%	0	3	5.49%	0	3	5.49%	0	3	5.49%	0	3	5.49%
488210	2.1%	0	5	0.00%	0	5	0.00%	0	4	0.00%	0	4	0.00%
541310	1.0%	5	11	0.45%	5	11	0.45%	5	11	0.45%	5	11	0.45%
541330	3.2%	10	60	0.53%	9	55	0.52%	9	53	0.54%	9	51	0.56%
541611	2.5%	9	27	0.83%	10	26	0.96%	9	24	0.94%	9	24	0.94%
561730	0.4%	7	19	0.15%	7	19	0.15%	7	19	0.15%	4	14	0.12%
624190	8.2%	0	29	0.00%	0	28	0.00%	0	28	0.00%	0	26	0.00%
Sum				**11.76%**			**11.99%**			**11.91%**			**10.35%**

Table C.4. Bidders List Method, 485113 Actual

NAICS	Weight	GMA 1			GMA 2			GMA 3			GMA 4		
		Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate
236210	0.5%	3	9	0.16%	3	9	0.16%	3	9	0.16%	3	9	0.16%
236220	3.4%	6	36	0.57%	6	36	0.57%	5	34	0.51%	5	33	0.52%
237110	0.1%	14	27	0.03%	13	25	0.03%	10	22	0.03%	9	17	0.03%
237130	0.0%	1	1	0.02%	1	1	0.02%	1	1	0.02%	1	1	0.02%
237310	0.4%	21	54	0.17%	19	48	0.17%	15	40	0.17%	10	32	0.14%
237990	8.9%	8	22	3.24%	8	21	3.39%	7	17	3.67%	4	14	2.54%
238110	1.2%	13	25	0.60%	14	27	0.60%	9	19	0.54%	7	17	0.47%
238120	0.0%	8	17	0.01%	6	14	0.01%	5	13	0.01%	2	7	0.01%
238160	0.1%	4	11	0.03%	4	11	0.03%	4	11	0.03%	3	9	0.03%
238210	2.6%	8	61	0.35%	7	56	0.33%	7	54	0.34%	7	48	0.38%
238220	1.1%	5	32	0.17%	5	29	0.19%	3	27	0.12%	3	25	0.13%
238290	0.6%	2	7	0.17%	2	7	0.17%	2	7	0.17%	1	5	0.12%
238390	0.2%	7	18	0.09%	7	17	0.09%	6	14	0.10%	5	13	0.09%
238910	0.3%	23	56	0.11%	23	53	0.11%	20	48	0.11%	14	34	0.11%
238990	0.0%	19	42	0.01%	19	42	0.01%	16	35	0.01%	14	30	0.01%
332312	0.3%	6	13	0.14%	3	10	0.09%	2	8	0.07%	1	7	0.04%
336320	0.0%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
336510	0.0%	0	2	0.00%	0	1	0.00%	0	1	0.00%	0	1	0.00%
339950	0.3%	4	12	0.10%	3	11	0.08%	3	11	0.08%	3	10	0.09%
423120	0.4%	0	1	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
423440	0.5%	0	0	0.00%	1	1	0.49%	0	0	0.00%	0	0	0.00%
485113	61.7%	0	2	0.00%	0	2	0.00%	0	2	0.00%	0	2	0.00%
488210	2.1%	0	2	0.00%	0	2	0.00%	0	2	0.00%	0	2	0.00%
541310	1.0%	6	23	0.26%	6	23	0.26%	6	23	0.26%	6	23	0.26%
541330	3.2%	29	98	0.95%	30	95	1.01%	29	93	1.00%	29	89	1.04%
541611	2.5%	8	31	0.65%	9	31	0.73%	7	28	0.62%	7	28	0.62%
561730	0.4%	8	24	0.14%	8	24	0.14%	7	17	0.17%	6	13	0.19%
624190	8.2%	0	1	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
Sum				**7.95%**			**8.69%**			**8.19%**			**7.01%**

Table C.5. Bidders List Method, Combined Proxy

NAICS	Weight	GMA 1			GMA 2			GMA 3			GMA 4		
		Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate
236210	0.5%	3	9	0.16%	3	9	0.16%	3	9	0.16%	3	9	0.16%
236220	3.4%	6	36	0.57%	6	36	0.57%	5	34	0.51%	5	33	0.52%
237110	0.1%	14	27	0.03%	13	25	0.03%	10	22	0.03%	9	17	0.03%
237130	0.0%	1	1	0.02%	1	1	0.02%	1	1	0.02%	1	1	0.02%
237310	0.4%	21	54	0.17%	19	48	0.17%	15	40	0.17%	10	32	0.14%
237990	8.9%	8	22	3.24%	8	21	3.39%	7	17	3.67%	4	14	2.54%
238110	1.2%	13	25	0.60%	14	27	0.60%	9	19	0.54%	7	17	0.47%
238120	0.0%	8	17	0.01%	6	14	0.01%	5	13	0.01%	2	7	0.01%
238160	0.1%	4	11	0.03%	4	11	0.03%	4	11	0.03%	3	9	0.03%
238210	2.6%	8	61	0.35%	7	56	0.33%	7	54	0.34%	7	48	0.38%
238220	1.1%	5	32	0.17%	5	29	0.19%	3	27	0.12%	3	25	0.13%
238290	0.6%	2	7	0.17%	2	7	0.17%	2	7	0.17%	1	5	0.12%
238390	0.2%	7	18	0.09%	7	17	0.09%	6	14	0.10%	5	13	0.09%
238910	0.3%	23	56	0.11%	23	53	0.11%	20	48	0.11%	14	34	0.11%
238990	0.0%	19	42	0.01%	19	42	0.01%	16	35	0.01%	14	30	0.01%
332312	0.3%	6	13	0.14%	3	10	0.09%	2	8	0.07%	1	7	0.04%
336320	0.0%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
336510	0.0%	0	2	0.00%	0	1	0.00%	0	1	0.00%	0	1	0.00%
339950	0.3%	4	12	0.10%	3	11	0.08%	3	11	0.08%	3	10	0.09%
423120	0.4%	0	1	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
423440	0.5%	0	0	0.00%	1	1	0.49%	0	0	0.00%	0	0	0.00%
485113 proxy	61.7%	0	3	0.00%	0	3	0.00%	0	3	0.00%	0	3	0.00%
488210	2.1%	0	2	0.00%	0	2	0.00%	0	2	0.00%	0	2	0.00%
541310	1.0%	6	23	0.26%	6	23	0.26%	6	23	0.26%	6	23	0.26%
541330	3.2%	29	98	0.95%	30	95	1.01%	29	93	1.00%	29	89	1.04%
541611	2.5%	8	31	0.65%	9	31	0.73%	7	28	0.62%	7	28	0.62%
561730	0.4%	8	24	0.14%	8	24	0.14%	7	17	0.17%	6	13	0.19%
624190	8.2%	0	1	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
Sum				**7.95%**			**8.69%**			**8.19%**			**7.01%**

Table C.6. Bidders List Method, National Average

NAICS	Weight	GMA 1 Num.	GMA 1 Denom.	GMA 1 Rate	GMA 2 Num.	GMA 2 Denom.	GMA 2 Rate	GMA 3 Num.	GMA 3 Denom.	GMA 3 Rate	GMA 4 Num.	GMA 4 Denom.	GMA 4 Rate
236210	0.5%	3	9	0.16%	3	9	0.16%	3	9	0.16%	3	9	0.16%
236220	3.4%	6	36	0.57%	6	36	0.57%	5	34	0.51%	5	33	0.52%
237110	0.1%	14	27	0.03%	13	25	0.03%	10	22	0.03%	9	17	0.03%
237130	0.0%	1	1	0.02%	1	1	0.02%	1	1	0.02%	1	1	0.02%
237310	0.4%	21	54	0.17%	19	48	0.17%	15	40	0.17%	10	32	0.14%
237990	8.9%	8	22	3.24%	8	21	3.39%	7	17	3.67%	4	14	2.54%
238110	1.1%	13	25	0.60%	14	27	0.60%	9	19	0.54%	7	17	0.47%
238120	0.0%	8	17	0.01%	6	14	0.01%	5	13	0.01%	2	7	0.01%
238160	0.1%	4	11	0.03%	4	11	0.03%	4	11	0.03%	3	9	0.03%
238210	2.6%	8	61	0.35%	7	56	0.33%	7	54	0.34%	7	48	0.38%
238220	1.1%	5	32	0.17%	5	29	0.19%	3	27	0.12%	3	25	0.13%
238290	0.6%	2	7	0.17%	2	7	0.17%	2	7	0.17%	1	5	0.12%
238390	0.2%	7	18	0.09%	7	17	0.09%	6	14	0.10%	5	13	0.09%
238910	0.3%	23	56	0.11%	23	53	0.11%	20	48	0.11%	14	34	0.11%
238990	0.0%	19	42	0.01%	19	42	0.01%	16	35	0.01%	14	30	0.01%
332312	0.3%	6	13	0.14%	3	10	0.09%	2	8	0.07%	1	7	0.04%
336320	0.0%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
336510	0.0%	0	2	0.00%	0	1	0.00%	0	1	0.00%	0	1	0.00%
339950	0.3%	4	12	0.10%	3	11	0.08%	3	11	0.08%	3	10	0.09%
423120	0.4%	0	1	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
423440	0.5%	0	0	0.00%	1	1	0.49%	0	0	0.00%	0	0	0.00%
485113 national average	61.7%	0	2	5.49%	0	2	5.49%	0	2	5.49%	0	2	5.49%
488210	2.1%	0	2	0.00%	0	2	0.00%	0	2	0.00%	0	2	0.00%
541310	1.0%	6	23	0.26%	6	23	0.26%	6	23	0.26%	6	23	0.26%
541330	3.2%	29	98	0.95%	30	95	1.01%	29	93	1.00%	29	89	1.04%
541611	2.5%	8	31	0.65%	9	31	0.73%	7	28	0.62%	7	28	0.62%
561730	0.4%	8	24	0.14%	8	24	0.14%	7	17	0.17%	6	13	0.19%
624190	8.2%	0	1	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
Sum				**13.44%**			**14.18%**			**13.67%**			**12.50%**

Table C.7. DBE List Method, 485113 Actual

NAICS	Weight	GMA 1			GMA 2			GMA 3			GMA 4		
		Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate
236210	0.5%	7	47	0.07%	6	9	0.33%	6	9	0.33%	6	9	0.33%
236220	3.4%	44	682	0.22%	37	399	0.32%	35	333	0.36%	34	284	0.41%
237110	0.1%	22	277	0.00%	16	120	0.01%	12	88	0.01%	10	63	0.01%
237130	0.0%	4	156	0.00%	3	77	0.00%	1	57	0.00%	1	43	0.00%
237310	0.4%	51	270	0.08%	34	98	0.15%	29	81	0.16%	22	62	0.16%
237990	8.9%	12	131	0.82%	9	31	2.59%	7	22	2.83%	5	16	2.78%
238110	1.2%	22	550	0.05%	20	250	0.09%	14	175	0.09%	12	107	0.13%
238120	0.0%	11	61	0.01%	8	24	0.01%	6	19	0.01%	3	15	0.01%
238160	0.1%	18	470	0.00%	14	346	0.00%	14	292	0.00%	13	233	0.00%
238210	2.6%	29	1581	0.05%	26	844	0.08%	23	628	0.10%	19	490	0.10%
238220	1.1%	12	1844	0.01%	12	1023	0.01%	11	757	0.02%	8	589	0.01%
238290	0.6%	4	140	0.02%	3	78	0.02%	2	66	0.02%	2	57	0.02%
238390	0.2%	16	211	0.02%	16	164	0.02%	15	137	0.03%	13	112	0.03%
238910	0.3%	68	976	0.02%	49	426	0.03%	42	269	0.04%	33	189	0.05%
238990	0.0%	69	1150	0.00%	54	751	0.00%	46	553	0.00%	41	408	0.00%
332312	0.3%	5	70	0.02%	3	27	0.03%	2	27	0.02%	1	19	0.02%
336320	0.0%	0	6	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
336510	0.0%	1	4	0.01%	1	0	0.00%	1	0	0.00%	1	0	0.00%
339950	0.3%	8	119	0.02%	6	75	0.02%	6	75	0.02%	5	66	0.02%
423120	0.4%	1	204	0.00%	1	138	0.00%	1	130	0.00%	1	116	0.00%
423440	0.5%	0	62	0.00%	1	48	0.01%	0	48	0.00%	0	42	0.00%
485113	61.7%	0	14	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
488210	2.1%	0	26	0.00%	0	10	0.00%	0	10	0.00%	0	10	0.00%
541310	1.0%	24	344	0.07%	21	272	0.08%	21	266	0.08%	20	241	0.08%
541330	3.2%	46	889	0.17%	43	662	0.21%	41	585	0.22%	39	498	0.25%
541611	2.5%	102	1370	0.19%	99	1193	0.21%	95	1134	0.21%	85	958	0.22%
561730	0.4%	48	2358	0.01%	36	1585	0.01%	32	1305	0.01%	26	968	0.01%
624190	8.2%	1	1048	0.01%	1	683	0.01%	1	618	0.01%	1	563	0.01%
Sum				**1.85%**			**4.25%**			**4.58%**			**4.66%**

Table C.8. DBE List Method, DBEs Outside of Minnesota

NAICS	Weight	GMA 1			GMA 2			GMA 3			GMA 4		
		Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate
236210	0.0%	7	47	0.07%	6	9	0.33%	6	9	0.33%	6	9	0.33%
236220	3.0%	44	682	0.22%	37	399	0.32%	35	333	0.36%	34	284	0.41%
237110	0.0%	22	277	0.00%	16	120	0.01%	12	88	0.01%	10	63	0.01%
237130	0.0%	4	156	0.00%	3	77	0.00%	1	57	0.00%	1	43	0.00%
237310	0.0%	51	270	0.08%	34	98	0.15%	29	81	0.16%	22	62	0.16%
237990	9.0%	12	131	0.82%	9	31	2.59%	7	22	2.84%	5	16	2.78%
238110	1.0%	22	550	0.05%	20	250	0.09%	14	175	0.09%	12	107	0.13%
238120	0.0%	11	61	0.01%	8	24	0.01%	6	19	0.01%	3	15	0.01%
238160	0.0%	18	470	0.00%	14	346	0.00%	14	292	0.00%	13	233	0.00%
238210	3.0%	29	1581	0.05%	26	844	0.08%	23	628	0.10%	19	490	0.10%
238220	1.0%	12	1844	0.01%	12	1023	0.01%	11	757	0.02%	8	589	0.01%
238290	1.0%	4	140	0.02%	3	78	0.02%	2	66	0.02%	2	57	0.02%
238390	0.0%	16	211	0.02%	16	164	0.02%	15	137	0.03%	13	112	0.03%
238910	0.0%	68	976	0.02%	49	426	0.03%	42	269	0.04%	33	189	0.05%
238990	0.0%	69	1150	0.00%	54	751	0.00%	46	553	0.00%	41	408	0.00%
332312	0.0%	5	70	0.02%	3	27	0.03%	2	27	0.02%	1	19	0.02%
336320	0.0%	0	6	0.00%	0	0		0	0		0	0	
336510	0.0%	1	4	0.01%	1	0		1	0		1	0	
339950	0.0%	8	119	0.02%	6	75	0.02%	6	75	0.02%	5	66	0.02%
423120	0.0%	1	204	0.00%	1	138	0.00%	1	130	0.00%	1	116	0.00%
423440	0.0%	0	62	0.00%	1	48	0.01%	0	48	0.00%	0	42	0.00%
485113 out-of-state	62.0%	3	14	13.21%	0	0		0	0		0	0	
488210	2.0%	0	26	0.00%	0	10	0.00%	0	10	0.00%	0	10	0.00%
541310	1.0%	24	344	0.07%	21	272	0.08%	21	266	0.08%	20	241	0.08%
541330	3.0%	46	889	0.17%	43	662	0.21%	41	585	0.22%	39	498	0.25%
541611	3.0%	102	1370	0.19%	99	1193	0.21%	95	1134	0.21%	85	958	0.22%
561730	0.0%	48	2358	0.01%	36	1585	0.01%	32	1305	0.01%	26	968	0.01%
624190	8.0%	1	1048	0.01%	1	683	0.01%	1	618	0.01%	1	563	0.01%
Sum				**15.06%**			**4.25%**			**4.58%**			**4.66%**

Table C.9. DBE List Method, National Average

NAICS	Weight	GMA 1			GMA 2			GMA 3			GMA 4		
		Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate	Num.	Denom.	Rate
236210	0.5%	7	47	0.07%	6	9	0.33%	6	9	0.33%	6	9	0.33%
236220	3.4%	44	682	0.22%	37	399	0.32%	35	333	0.36%	34	284	0.41%
237110	0.1%	22	277	0.00%	16	120	0.01%	12	88	0.01%	10	63	0.01%
237130	0.0%	4	156	0.00%	3	77	0.00%	1	57	0.00%	1	43	0.00%
237310	0.4%	51	270	0.08%	34	98	0.15%	29	81	0.16%	22	62	0.16%
237990	8.9%	12	131	0.82%	9	31	2.59%	7	22	2.83%	5	16	2.78%
238110	1.2%	22	550	0.05%	20	250	0.09%	14	175	0.09%	12	107	0.13%
238120	0.0%	11	61	0.01%	8	24	0.01%	6	19	0.01%	3	15	0.01%
238160	0.1%	18	470	0.00%	14	346	0.00%	14	292	0.00%	13	233	0.00%
238210	2.6%	29	1581	0.05%	26	844	0.08%	23	628	0.10%	19	490	0.10%
238220	1.1%	12	1844	0.01%	12	1023	0.01%	11	757	0.02%	8	589	0.01%
238290	0.6%	4	140	0.02%	3	78	0.02%	2	66	0.02%	2	57	0.02%
238390	0.2%	16	211	0.02%	16	164	0.02%	15	137	0.03%	13	112	0.03%
238910	0.3%	68	976	0.02%	49	426	0.03%	42	269	0.04%	33	189	0.05%
238990	0.0%	69	1150	0.00%	54	751	0.00%	46	553	0.00%	41	408	0.00%
332312	0.3%	5	70	0.02%	3	27	0.03%	2	27	0.02%	1	19	0.02%
336320	0.0%	0	6	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%
336510	0.0%	1	4	0.01%	1	0	0.00%	1	0	0.00%	1	0	0.00%
339950	0.3%	8	119	0.02%	6	75	0.02%	6	75	0.02%	5	66	0.02%
423120	0.4%	1	204	0.00%	1	138	0.00%	1	130	0.00%	1	116	0.00%
423440	0.5%	0	62	0.00%	1	48	0.01%	0	48	0.00%	0	42	0.00%
485113 - national average	61.7%	0	0	5.49%	0	0	5.49%	0	0	5.49%	0	0	5.49%
488210	2.1%	0	26	0.00%	0	10	0.00%	0	10	0.00%	0	10	0.00%
541310	1.0%	24	344	0.07%	21	272	0.08%	21	266	0.08%	20	241	0.08%
541330	3.2%	46	889	0.17%	43	662	0.21%	41	585	0.22%	39	498	0.25%
541611	2.5%	102	1370	0.19%	99	1193	0.21%	95	1134	0.21%	85	958	0.22%
561730	0.4%	48	2358	0.01%	36	1585	0.01%	32	1305	0.01%	26	968	0.01%
624190	8.2%	1	1048	0.01%	1	683	0.01%	1	618	0.01%	1	563	0.01%
Sum				**7.34%**			**9.74%**			**10.06%**			**10.15%**

Table C.10-a. Dun & Bradstreet Method, Minnesota (485113 Actual), GMA1

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	13	193	0.0674	0.0003
236220	$45	124	1708	0.0726	0.0025
237110	$45	35	638	0.0549	0.0000
237130	$45	6	72	0.0833	0.0000
237310	$45	55	820	0.0671	0.0003
237990	$45	12	238	0.0504	0.0045
238110	$19	49	1557	0.0315	0.0004
238120	$19	12	58	0.2069	0.0001
238160	$19	41	1615	0.0254	0.0000
238210	$19	122	2914	0.0419	0.0011
238220	$19	114	4637	0.0246	0.0003
238290	$22	6	102	0.0588	0.0003
238390	$19	10	489	0.0204	0.0000
238910	$19	92	1740	0.0529	0.0001
238990	$19	178	4591	0.0388	0.0000
332312	500	20	304	0.0658	0.0002
336320	1000	1	31	0.0323	0.0000
336510	1500	2	21	0.0952	0.0000
339950	500	60	727	0.0825	0.0002
423120	200	20	701	0.0285	0.0001
423440	100	11	611	0.0180	0.0001
485113	$32.5	3	29	0.1034	0.0638
488210	$34.0	17	364	0.0467	0.0010
541310	$12.5	68	865	0.0786	0.0008
541330	$25.5	107	2278	0.0470	0.0015
541611	$24.5	331	4554	0.0727	0.0018
561730	$9.5	126	4581	0.0275	0.0001
624190	$16.0	21	4749	0.0044	0.0004
					8.00%

Table C.10-b. Dun & Bradstreet Method, Minnesota (485113 Actual), GMA2

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	6	92	0.0652	0.0003
236220	$45	96	1031	0.0931	0.0032
237110	$45	20	282	0.0709	0.0000
237130	$45	2	36	0.0556	0.0000
237310	$45	32	408	0.0784	0.0003
237990	$45	6	90	0.0667	0.0059
238110	$19	26	839	0.0310	0.0004
238120	$19	9	34	0.2647	0.0001
238160	$19	32	1190	0.0269	0.0000
238210	$19	85	1524	0.0558	0.0015
238220	$19	79	2544	0.0311	0.0003
238290	$22	3	62	0.0484	0.0003
238390	$19	6	281	0.0214	0.0000
238910	$19	37	592	0.0625	0.0002
238990	$19	142	3136	0.0453	0.0000
332312	500	10	164	0.0610	0.0002
336320	1000	1	22	0.0455	0.0000
336510	1500	2	8	0.2500	0.0001
339950	500	41	452	0.0907	0.0003
423120	200	14	365	0.0384	0.0002
423440	100	9	392	0.0230	0.0001
485113	$32.5	1	15	0.0667	0.0411
488210	$34.0	10	259	0.0386	0.0008
541310	$12.5	61	723	0.0844	0.0008
541330	$25.5	92	1723	0.0534	0.0017
541611	$24.5	290	3762	0.0771	0.0019
561730	$9.5	77	2755	0.0279	0.0001
624190	$16.0	15	3265	0.0046	0.0004
					6.03%

Table C.10-c. Dun & Bradstreet Method, Minnesota (485113 Actual), GMA3

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	6	75	0.0800	0.0004
236220	$45	88	897	0.0981	0.0034
237110	$45	16	207	0.0773	0.0000
237130	$45	2	24	0.0833	0.0000
237310	$45	28	330	0.0848	0.0004
237990	$45	6	76	0.0789	0.0070
238110	$19	22	648	0.0340	0.0004
238120	$19	8	28	0.2857	0.0001
238160	$19	30	1006	0.0298	0.0000
238210	$19	76	1266	0.0600	0.0016
238220	$19	69	1994	0.0346	0.0004
238290	$22	1	52	0.0192	0.0001
238390	$19	6	215	0.0279	0.0001
238910	$19	30	397	0.0756	0.0002
238990	$19	123	2629	0.0468	0.0000
332312	500	8	130	0.0615	0.0002
336320	1000	0	17	0.0000	0.0000
336510	1500	2	5	0.4000	0.0002
339950	500	39	401	0.0973	0.0003
423120	200	10	302	0.0331	0.0001
423440	100	9	344	0.0262	0.0001
485113	$32.5	1	14	0.0714	0.0440
488210	$34.0	10	229	0.0437	0.0009
541310	$12.5	60	690	0.0870	0.0009
541330	$25.5	83	1596	0.0520	0.0017
541611	$24.5	280	3542	0.0791	0.0020
561730	$9.5	59	2238	0.0264	0.0001
624190	$16.0	14	3028	0.0046	0.0004
					6.49%

Table C.10-d. Dun & Bradstreet Method, Minnesota (485113 Actual), GMA4

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	6	92	0.0652	0.0003
236220	$45	96	1031	0.0931	0.0032
237110	$45	20	282	0.0709	0.0000
237130	$45	2	36	0.0556	0.0000
237310	$45	32	408	0.0784	0.0003
237990	$45	6	90	0.0667	0.0059
238110	$19	26	839	0.0310	0.0004
238120	$19	9	34	0.2647	0.0001
238160	$19	32	1190	0.0269	0.0000
238210	$19	85	1524	0.0558	0.0015
238220	$19	79	2544	0.0311	0.0003
238290	$22	3	62	0.0484	0.0003
238390	$19	6	281	0.0214	0.0000
238910	$19	37	592	0.0625	0.0002
238990	$19	142	3136	0.0453	0.0000
332312	500	10	164	0.0610	0.0002
336320	1000	1	22	0.0455	0.0000
336510	1500	2	8	0.2500	0.0001
339950	500	41	452	0.0907	0.0003
423120	200	14	365	0.0384	0.0002
423440	100	9	392	0.0230	0.0001
485113	$32.5	1	15	0.0667	0.0411
488210	$34.0	10	259	0.0386	0.0008
541310	$12.5	61	723	0.0844	0.0008
541330	$25.5	92	1723	0.0534	0.0017
541611	$24.5	290	3762	0.0771	0.0019
561730	$9.5	77	2755	0.0279	0.0001
624190	$16.0	15	3265	0.0046	0.0004
					6.03%

Table C.11. Dun & Bradstreet Method, Minnesota- GMA1
(485113 Combined Proxy)*

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	13	193	0.0674	0.0003
236220	$45	124	1708	0.0726	0.0025
237110	$45	35	638	0.0549	0.0000
237130	$45	6	72	0.0833	0.0000
237310	$45	55	820	0.0671	0.0003
237990	$45	12	238	0.0504	0.0045
238110	$19	49	1557	0.0315	0.0004
238120	$19	12	58	0.2069	0.0001
238160	$19	41	1615	0.0254	0.0000
238210	$19	122	2914	0.0419	0.0011
238220	$19	114	4637	0.0246	0.0003
238290	$22	6	102	0.0588	0.0003
238390	$19	10	489	0.0204	0.0000
238910	$19	92	1740	0.0529	0.0001
238990	$19	178	4591	0.0388	0.0000
332312	500	20	304	0.0658	0.0002
336320	1000	1	31	0.0323	0.0000
336510	1500	2	21	0.0952	0.0000
339950	500	60	727	0.0825	0.0002
423120	200	20	701	0.0285	0.0001
423440	100	11	611	0.0180	0.0001
485113	$32.5	7	281	0.0249	0.0154
488210	$34.0	17	364	0.0467	0.0010
541310	$12.5	68	865	0.0786	0.0008
541330	$25.5	107	2278	0.0470	0.0015
541611	$24.5	331	4554	0.0727	0.0018
561730	$9.5	126	4581	0.0275	0.0001
624190	$16.0	21	4749	0.0044	0.0004
					3.16%

* **485113 Combined Proxy: 485111+485210+485991+485113**

Table C.11 Dun & Bradstreet Method
Twin Cities MSA- GMA2
(485113 Combined Proxy)*

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	6	92	0.0652	0.0003
236220	$45	96	1031	0.0931	0.0032
237110	$45	20	282	0.0709	0.0000
237130	$45	2	36	0.0556	0.0000
237310	$45	32	408	0.0784	0.0003
237990	$45	6	90	0.0667	0.0059
238110	$19	26	839	0.0310	0.0004
238120	$19	9	34	0.2647	0.0001
238160	$19	32	1190	0.0269	0.0000
238210	$19	85	1524	0.0558	0.0015
238220	$19	79	2544	0.0311	0.0003
238290	$22	3	62	0.0484	0.0003
238390	$19	6	281	0.0214	0.0000
238910	$19	37	592	0.0625	0.0002
238990	$19	142	3136	0.0453	0.0000
332312	500	10	164	0.0610	0.0002
336320	1000	1	22	0.0455	0.0000
336510	1500	2	8	0.2500	0.0001
339950	500	41	452	0.0907	0.0003
423120	200	14	365	0.0384	0.0002
423440	100	9	392	0.0230	0.0001
485113	$32.5	3	175	0.0171	0.0106
488210	$34.0	10	259	0.0386	0.0008
541310	$12.5	61	723	0.0844	0.0008
541330	$25.5	92	1723	0.0534	0.0017
541611	$24.5	290	3762	0.0771	0.0019
561730	$9.5	77	2755	0.0279	0.0001
624190	$16.0	15	3265	0.0046	0.0004
					2.98%

* **485113 Combined Proxy: 485111+485210+485991+485113**

Table C.11. Dun & Bradstreet Method
Seven Counties- GMA3
(485113 Combined Proxy)*

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	6	75	0.0800	0.0004
236220	$45	88	897	0.0981	0.0034
237110	$45	16	207	0.0773	0.0000
237130	$45	2	24	0.0833	0.0000
237310	$45	28	330	0.0848	0.0004
237990	$45	6	76	0.0789	0.0070
238110	$19	22	648	0.0340	0.0004
238120	$19	8	28	0.2857	0.0001
238160	$19	30	1006	0.0298	0.0000
238210	$19	76	1266	0.0600	0.0016
238220	$19	69	1994	0.0346	0.0004
238290	$22	1	52	0.0192	0.0001
238390	$19	6	215	0.0279	0.0001
238910	$19	30	397	0.0756	0.0002
238990	$19	123	2629	0.0468	0.0000
332312	500	8	130	0.0615	0.0002
336320	1000	0	17	0.0000	0.0000
336510	1500	2	5	0.4000	0.0002
339950	500	39	401	0.0973	0.0003
423120	200	10	302	0.0331	0.0001
423440	100	9	344	0.0262	0.0001
485113	$32.5	3	164	0.0183	0.0113
488210	$34.0	10	229	0.0437	0.0009
541310	$12.5	60	690	0.0870	0.0009
541330	$25.5	83	1596	0.0520	0.0017
541611	$24.5	280	3542	0.0791	0.0020
561730	$9.5	59	2238	0.0264	0.0001
624190	$16.0	14	3028	0.0046	0.0004
					3.21%

* **485113 Combined Proxy: 485111+485210+485991+485113**

Table C.11. Dun & Bradstreet Method
Four Counties- GMA4
(485113 Combined Proxy)*

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	5	58	0.0862	0.0004
236220	$45	77	756	0.1019	0.0035
237110	$45	12	148	0.0811	0.0000
237130	$45	1	18	0.0556	0.0000
237310	$45	24	244	0.0984	0.0004
237990	$45	5	59	0.0847	0.0075
238110	$19	17	480	0.0354	0.0004
238120	$19	4	18	0.2222	0.0001
238160	$19	25	846	0.0296	0.0000
238210	$19	65	1032	0.0630	0.0017
238220	$19	57	1567	0.0364	0.0004
238290	$22	1	46	0.0217	0.0001
238390	$19	5	183	0.0273	0.0001
238910	$19	21	253	0.0830	0.0002
238990	$19	97	2168	0.0447	0.0000
332312	500	6	110	0.0545	0.0002
336320	1000	0	13	0.0000	0.0000
336510	1500	2	3	0.6667	0.0003
339950	500	36	343	0.1050	0.0003
423120	200	7	253	0.0277	0.0001
423440	100	8	289	0.0277	0.0001
485113	$32.5	3	152	0.0197	0.0122
488210	$34.0	7	198	0.0354	0.0007
541310	$12.5	55	620	0.0887	0.0009
541330	$25.5	56	1384	0.0405	0.0013
541611	$24.5	255	3084	0.0827	0.0021
561730	$9.5	49	1765	0.0278	0.0001
624190	$16.0	13	2730	0.0048	0.0004
					3.36%

* **485113 Combined Proxy: 485111+485210+485991+485113**

Table C.12. Dun & Bradstreet Method
Minnesota- GMA1
National Average, 485113

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	13	193	0.0674	0.0003
236220	$45	124	1708	0.0726	0.0025
237110	$45	35	638	0.0549	0.0000
237130	$45	6	72	0.0833	0.0000
237310	$45	55	820	0.0671	0.0003
237990	$45	12	238	0.0504	0.0045
238110	$19	49	1557	0.0315	0.0004
238120	$19	12	58	0.2069	0.0001
238160	$19	41	1615	0.0254	0.0000
238210	$19	122	2914	0.0419	0.0011
238220	$19	114	4637	0.0246	0.0003
238290	$22	6	102	0.0588	0.0003
238390	$19	10	489	0.0204	0.0000
238910	$19	92	1740	0.0529	0.0001
238990	$19	178	4591	0.0388	0.0000
332312	500	20	304	0.0658	0.0002
336320	1000	1	31	0.0323	0.0000
336510	1500	2	21	0.0952	0.0000
339950	500	60	727	0.0825	0.0002
423120	200	20	701	0.0285	0.0001
423440	100	11	611	0.0180	0.0001
485113	$32.5			0.0890	0.0549
488210	$34.0	17	364	0.0467	0.0010
541310	$12.5	68	865	0.0786	0.0008
541330	$25.5	107	2278	0.0470	0.0015
541611	$24.5	331	4554	0.0727	0.0018
561730	$9.5	126	4581	0.0275	0.0001
624190	$16.0	21	4749	0.0044	0.0004
					7.11%

Table C.12. Dun & Bradstreet Method
Twin Cities MSA- GMA2
National Average, 485113

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	6	92	0.0652	0.0003
236220	$45	96	1031	0.0931	0.0032
237110	$45	20	282	0.0709	0.0000
237130	$45	2	36	0.0556	0.0000
237310	$45	32	408	0.0784	0.0003
237990	$45	6	90	0.0667	0.0059
238110	$19	26	839	0.0310	0.0004
238120	$19	9	34	0.2647	0.0001
238160	$19	32	1190	0.0269	0.0000
238210	$19	85	1524	0.0558	0.0015
238220	$19	79	2544	0.0311	0.0003
238290	$22	3	62	0.0484	0.0003
238390	$19	6	281	0.0214	0.0000
238910	$19	37	592	0.0625	0.0002
238990	$19	142	3136	0.0453	0.0000
332312	500	10	164	0.0610	0.0002
336320	1000	1	22	0.0455	0.0000
336510	1500	2	8	0.2500	0.0001
339950	500	41	452	0.0907	0.0003
423120	200	14	365	0.0384	0.0002
423440	100	9	392	0.0230	0.0001
485113	$32.5			0.0890	0.0549
488210	$34.0	10	259	0.0386	0.0008
541310	$12.5	61	723	0.0844	0.0008
541330	$25.5	92	1723	0.0534	0.0017
541611	$24.5	290	3762	0.0771	0.0019
561730	$9.5	77	2755	0.0279	0.0001
624190	$16.0	15	3265	0.0046	0.0004
					7.41%

Table C.12. Dun & Bradstreet Method
Seven Counties- GMA3
National Average, 485113

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	6	75	0.0800	0.0004
236220	$45	88	897	0.0981	0.0034
237110	$45	16	207	0.0773	0.0000
237130	$45	2	24	0.0833	0.0000
237310	$45	28	330	0.0848	0.0004
237990	$45	6	76	0.0789	0.0070
238110	$19	22	648	0.0340	0.0004
238120	$19	8	28	0.2857	0.0001
238160	$19	30	1006	0.0298	0.0000
238210	$19	76	1266	0.0600	0.0016
238220	$19	69	1994	0.0346	0.0004
238290	$22	1	52	0.0192	0.0001
238390	$19	6	215	0.0279	0.0001
238910	$19	30	397	0.0756	0.0002
238990	$19	123	2629	0.0468	0.0000
332312	500	8	130	0.0615	0.0002
336320	1000	0	17	0.0000	0.0000
336510	1500	2	5	0.4000	0.0002
339950	500	39	401	0.0973	0.0003
423120	200	10	302	0.0331	0.0001
423440	100	9	344	0.0262	0.0001
485113	$32.5			0.0890	0.0549
488210	$34.0	10	229	0.0437	0.0009
541310	$12.5	60	690	0.0870	0.0009
541330	$25.5	83	1596	0.0520	0.0017
541611	$24.5	280	3542	0.0791	0.0020
561730	$9.5	59	2238	0.0264	0.0001
624190	$16.0	14	3028	0.0046	0.0004
					7.57%

Table C.12. Dun & Bradstreet Method
Four Counties- GMA4
National Average, 485113

NAICS	threshold	Number of DBE* Firms	Total Number of Firms	unweighted ratio	weighted ratio
236210	$45	5	58	0.0862	0.0004
236220	$45	77	756	0.1019	0.0035
237110	$45	12	148	0.0811	0.0000
237130	$45	1	18	0.0556	0.0000
237310	$45	24	244	0.0984	0.0004
237990	$45	5	59	0.0847	0.0075
238110	$19	17	480	0.0354	0.0004
238120	$19	4	18	0.2222	0.0001
238160	$19	25	846	0.0296	0.0000
238210	$19	65	1032	0.0630	0.0017
238220	$19	57	1567	0.0364	0.0004
238290	$22	1	46	0.0217	0.0001
238390	$19	5	183	0.0273	0.0001
238910	$19	21	253	0.0830	0.0002
238990	$19	97	2168	0.0447	0.0000
332312	500	6	110	0.0545	0.0002
336320	1000	0	13	0.0000	0.0000
336510	1500	2	3	0.6667	0.0003
339950	500	36	343	0.1050	0.0003
423120	200	7	253	0.0277	0.0001
423440	100	8	289	0.0277	0.0001
485113	$32.5			0.0890	0.0549
488210	$34.0	7	198	0.0354	0.0007
541310	$12.5	55	620	0.0887	0.0009
541330	$25.5	56	1384	0.0405	0.0013
541611	$24.5	255	3084	0.0827	0.0021
561730	$9.5	49	1765	0.0278	0.0001
624190	$16.0	13	2730	0.0048	0.0004
					7.63%

APPENDIX D: Quantitative Analysis

Table D.1. FTA Variables used in Regression Analysis

Table D.2. FTA Mean Difference Test by DBE Status

Table D.3. FTA Underlying Regression Results for Goal Adjustment (Model 1)

Table D.4. FTA Underlying Regression Results for Goal Adjustment (Model 2)

Table D.5. FTA Underlying Regression Results for Goal Adjustment (Models 3&4)

Table D.6. FTA Underlying Regression Results for Race Neutral Analysis (Method 2)

Table D.1. FTA Variables used in the Regression Analyses

Variable Name	Description
MN	Location (= 1 if in MN; = 0 otherwise)
Prime	Prime Contract (= 1 if prime; = 0 otherwise)
FY2017	Year (= 1 if FY 2017; = 0 otherwise)
FY2018	Year (= 1 if FY 2018; = 0 otherwise)
FY2019	Year (= 1 if FY 2019; = 0 otherwise)
FY2020	Year (= 1 if FY 2020; = 0 otherwise)
FY2021	Year (= 1 if FY 2021; = 0 otherwise)
FY2022	Year (= 1 if FY 2022; = 0 otherwise)
More than one award	= 1 if awarded more than one contract; = 0 otherwise
High Risk	Credit risk (= 1 high; = 0 otherwise)
Revenue	Firm's revenue (in USD)
Employees	Firm's total number of employees (in persons)
Tenure	Firm's age (in years)
NAICS_23	= 1 if 2-digit NAICS code = 23; = 0 otherwise
NAICS_33	= 1 if 2-digit NAICS code = 33; = 0 otherwise
NAICS_42	= 1 if 2-digit NAICS code = 42; = 0 otherwise
NAICS_48	= 1 if 2-digit NAICS code = 48; = 0 otherwise
NAICS_54	= 1 if 2-digit NAICS code = 54; = 0 otherwise
NAICS_56	= 1 if 2-digit NAICS code = 56; = 0 otherwise
FTA	= 0 if FTA-funded; = 0 otherwise
DBE Goal	DBE Goal (in percent)
DBE	= 1 if DBE; = 0 otherwise

Source: FTA Contracts FY2016-2022

Table D.2. FTA Mean Difference Test by DBE Status

Point of Differentiation	Non-DBE		DBE		t stat.	p-value	
	N	Mean	N	Mean			
Prime Contract Amount	373	$5,263,807	36	$317,371	2.1248	0.0343	**
Prime Log-Contract Amount	373	12.7143	36	12.3080	2.5626	0.0124	**
Subcontract Amount	473	$938,289	525	$577,489	1.3383	0.1813	
Sub Log-Contract Amount	473	11.0900	525	11.3117	-1.5950	0.1111	

Source: FTA Contracts FY2016-2022

Statistically significant *** at 99%, ** at 95%, * at 90%

Table D.3. FTA Underlying Regression Results for Goal Adjustments (Model 1)

	Non-DBE				DBE			
	Coeff.	Std. err.	t stat		Coeff.	Std. err.	t stat	
MN	0.0598	0.2399	0.25		-0.4526	0.3460	-1.31	
Prime	0.9989	0.1792	5.57	***	0.7524	0.3004	2.51	**
FY2017	-0.4861	0.5581	-0.87		-1.1493	0.5095	-2.26	**
FY2018	-0.0074	0.4957	-0.01		-0.3532	0.4865	-0.73	
FY2019	0.1600	0.4899	0.33		0.0875	0.4601	0.19	
FY2020	0.0786	0.4918	0.16		-0.5298	0.4772	-1.11	
FY2021	0.2232	0.5275	0.42		-0.8133	0.5106	-1.59	
FY2022	0.0520	0.4950	0.10		0.2680	0.4764	0.56	
More than one award	0.2379	0.1694	1.40		-0.4073	0.2105	-1.94	*
High Risk	0.9717	0.3590	2.71	***	0.2647	0.2953	0.90	
Revenue	0.0000	0.0000	0.28		0.0000	0.0000	0.34	
Employees	0.0000	0.0000	-0.04		-0.0027	0.0068	-0.40	
Tenure	0.0062	0.0034	1.83	*	0.0013	0.0061	0.22	
NAICS_23	0.6305	0.3398	1.86	*	0.6582	0.4089	1.61	
NAICS_33	-0.6732	0.4191	-1.61		0.5679	0.4752	1.20	
NAICS_42	0.1025	0.4488	0.23		1.0312	0.4612	2.24	**
NAICS_48	1.5573	1.0942	1.42		0.7829	0.5225	1.50	
NAICS_54	0.5891	0.3572	1.65	*	-0.1414	0.4170	-0.34	
NAICS_56	-0.3857	0.5607	-0.69		0.3875	0.5756	0.67	
Constant	11.0931	0.6126	18.11	***	12.3957	0.7260	17.07	***
Number of Observations = 561					Number of Observations = 457			
F(19, 541) = 5.77					F(19, 437) = 3.97			
Prob>F = 0.00					Prob>F = 0.00			
Adjusted R-squared = 0.1394					Adjusted R-squared = 0.1100			

Source: FTA Contracts FY2016-2022

Statistically significant *** at 99%, ** at 95%, * at 90%

Table D.4. FTA Underlying Regression Results for Goal Adjustments (Model 2)

	Non-DBE				DBE			
	Coeff.	Std. err.	t stat		Coeff.	Std. err.	t stat	
MN	0.0389	0.1810	0.21		-0.3465	0.3322	-1.04	
Prime	1.0542	0.1503	7.01	***	0.7282	0.2812	2.59	***
FY2017	-0.5828	0.4024	-1.45		-1.0283	0.4491	-2.29	**
FY2018	-0.1729	0.3581	-0.48		-0.3335	0.4335	-0.77	
FY2019	-0.0983	0.3486	-0.28		0.0593	0.4063	0.15	
FY2020	-0.0381	0.3490	-0.11		-0.4931	0.4224	-1.17	
FY2021	-0.2341	0.3708	-0.63		-0.8317	0.4483	-1.86	*
FY2022	-0.0478	0.3422	-0.14		0.2900	0.4135	0.70	
More than one award	0.3398	0.1353	2.51	**	-0.3543	0.2005	-1.77	*
High Risk	0.8323	0.2853	2.92	***	0.2283	0.2816	0.81	
Revenue	0.0000	0.0000	0.16		0.0000	0.0000	-0.12	
Employees	0.0000	0.0000	0.04		0.0005	0.0066	0.07	
Tenure	0.0045	0.0028	1.59	*	-0.0011	0.0058	-0.19	
NAICS_23	0.5235	0.2616	2.00	**	0.6134	0.4049	1.51	
NAICS_33	-0.3450	0.3232	-1.07		0.5626	0.4699	1.20	
NAICS_42	0.0176	0.3501	0.05		1.0276	0.4562	2.25	**
NAICS_48	1.9034	0.6199	3.07	***	0.7662	0.5180	1.48	
NAICS_54	0.3710	0.2684	1.38	*	-0.0831	0.4127	-0.20	
NAICS_56	-0.4005	0.4557	-0.88		0.3593	0.5710	0.63	
FTA	0.8656	0.1715	5.05	***	0.8297	0.3371	2.46	**
Constant	10.5113	0.4354	24.14	***	11.4463	0.7260	15.77	***
Number of Observations = 718					Number of Observations = 483			
F(20, 697) = 6.97					F(20, 462) = 3.97			
Prob>F = 0.00					Prob>F = 0.00			
Adjusted R-squared = 0.1427					Adjusted R-squared = 0.1099			

Source: FTA Contracts FY2016-2022

Statistically significant *** at 99%, ** at 95%, * at 90%

Table D.5. FTA Underlying Regression Results for Goal Adjustments (Models 3 & 4)

	Model 3				Model 4			
	Coeff.	Std. err.	t stat		Coeff.	Std. err.	t stat	
DBE	-0.2784	0.1334	-2.09	**	-0.3086	0.1220	-2.53	**
MN	0.0726	0.1932	0.38		0.0094	0.1557	0.06	
Prime	1.1369	0.1452	7.83	***	1.1262	0.1268	8.88	***
FY2017	-0.7203	0.3842	-1.87	*	-0.7599	0.3016	-2.52	**
FY2018	-0.0756	0.3539	-0.21		-0.2104	0.2787	-0.75	
FY2019	0.2787	0.3433	0.81		0.0594	0.2657	0.22	
FY2020	-0.0671	0.3500	-0.19		-0.1598	0.2716	-0.59	
FY2021	-0.1948	0.3749	-0.52		-0.4373	0.2876	-1.52	
FY2022	0.1987	0.3509	0.57		0.0612	0.2659	0.23	
More than one award	0.1199	0.1304	0.92		0.2195	0.1104	1.99	**
High Risk	0.6128	0.2309	2.65	***	0.5888	0.2009	2.93	***
Revenue	0.0000	0.0000	0.04		0.0000	0.0000	-0.06	
Employees	0.0000	0.0000	0.06		0.0000	0.0000	0.12	
Tenure	0.0035	0.0028	1.24		0.0028	0.0025	1.14	
NAICS_23	0.6731	0.2628	2.56	**	0.5764	0.2179	2.65	***
NAICS_33	-0.0937	0.3160	-0.30		-0.0231	0.2648	-0.09	
NAICS_42	0.7623	0.3206	2.38	**	0.5901	0.2712	2.18	**
NAICS_48	1.0365	0.4285	2.42	**	1.2274	0.3624	3.39	***
NAICS_54	0.3003	0.2723	1.10		0.2226	0.2222	1.00	
NAICS_56	0.0495	0.4056	0.12		-0.0371	0.3538	-0.10	
FTA					0.8597	0.1499	5.73	***
Constant	11.2322	0.4612	24.35	***	10.6206	0.3620	29.34	***

Number of Observations = 1,018	Number of Observations = 1,201
F(20, 997) = 7.82	F(21, 1179) = 9.16
Prob>F = 0.00	Prob>F = 0.00
Adjusted R-squared = 0.1183	Adjusted R-squared = 0.1250

Source: FTA Contracts FY2016-2022

Note: The first round regression results of the Gelbach Decomposition

Statistically significant *** at 99%, ** at 95%, * at 90%

Table D.6. FTA Underlying Regression Results for Race Neutral Analysis (Method 2)

	Method 2			
	Coeff.	Std. err.	t stat	
MN	-0.2267	0.3383	-0.67	
Prime	1.5672	0.3215	4.87	***
FY2017	-0.7854	0.3110	-2.53	**
FY2018	-0.6158	0.2704	-2.28	**
FY2019	0.1286	0.2251	0.57	
FY2020	-0.8355	0.2520	-3.32	***
FY2021	-0.8384	0.3137	-2.67	***
More than one award	-0.2316	0.2110	-1.10	
High Risk	0.0504	0.2904	0.17	
Revenue	0.0000	0.0000	-0.34	
Tenure	0.0038	0.0059	0.64	
NAICS_23	0.4398	0.4044	1.09	
NAICS_33	0.7214	0.4816	1.50	
NAICS_42	0.9801	0.4661	2.10	
NAICS_48	0.6934	0.5242	1.32	
NAICS_54	0.2955	0.4142	0.71	
NAICS_56	-0.1375	0.5672	-0.24	
DBE Goal	0.1074	0.0125	8.60	***
Constant	10.4878	0.6049	17.34	***
Number of Observations =	516			
F(18, 497) =	9.51			
Prob>F =	0.00			
Adjusted R-squared =	0.2293			

Source: FTA Contracts FY2016-2022

Statistically significant *** at 99%, ** at 95%, * at 90%

APPENDIX E: Demographic Data

Table E.1. MNUCP DBE List by Gender, Race and Ethnicity

Ethnicity	Count	Percent
Caucasian Female	559	40.5
Asian - Pacific American [a]	95	6.9
Asian - Subcontinent American [b]	63	4.6
Black American	440	31.9
Hispanic American	143	10.4
Native American	51	3.7
Others	6	0.4
Missing	24	1.7
Total	1381	100

Note: Disadvantaged Business Enterprise (DBE) as defined by the Minnesota Unified Certification Program Document is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals. In this table, a company can appear multiple times when there are more than one owner, and the owners are socially and economically disadvantaged. The gender and ethnicity of each owner is counted accordingly. The total count therefore is larger than the number of unique companies in the directory. Three companies that are listed as solely owned by Caucasian males are dropped.

[a] "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), Republic of the Northern Marianas Islands, Samoa, Macao, Fiji, Tonga, Kirbati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong.

[b] "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka.

Source: Minnesota Unified Certification Program Document, Revised Sept 1, 2016.

DBEs by Gender, Race and Ethnicity

Native American, 3.7
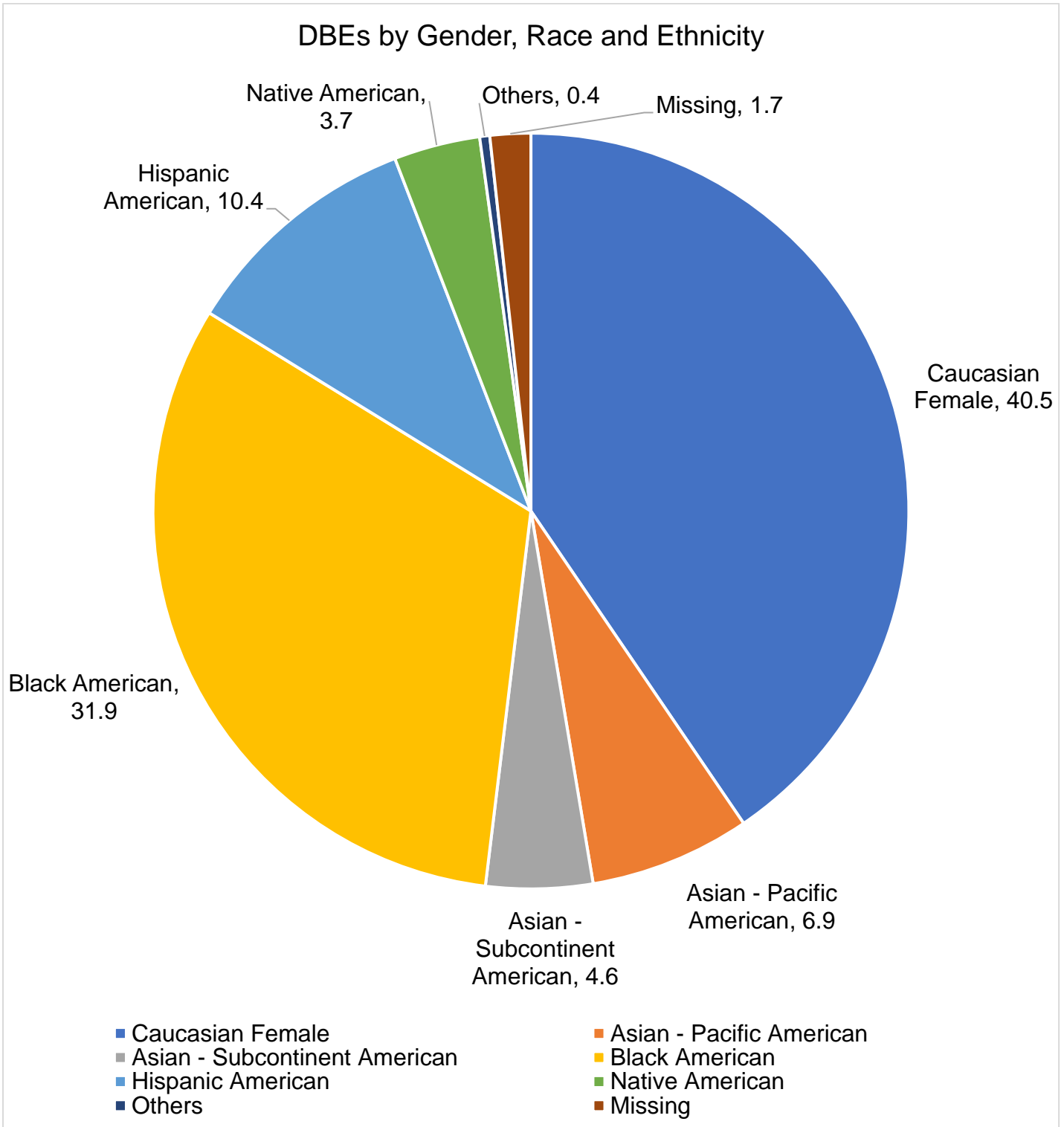
Others, 0.4

Missing, 1.7

Hispanic American, 10.4

Caucasian Female, 40.5

Black American, 31.9

Asian - Subcontinent American, 4.6

Asian - Pacific American, 6.9

■ Caucasian Female
■ Asian - Pacific American
■ Asian - Subcontinent American
■ Black American
■ Hispanic American
■ Native American
■ Others
■ Missing

Table E.2. FTA DBE Bidders List by Race, Gender and Ethnicity

	Count	Percent
Asian - Pacific American [a]	20	10.9%
Asian - Subcontinent American [b]	9	4.9%
Black American	22	12.0%
Caucasian Female	101	55.2%
Hispanic American	19	10.4%
Native American	8	4.4%
Missing	4	2.2%
Total	183	100.0%

Note: Disadvantaged Business Enterprise (DBE) as defined by the Minnesota Unified Certification Program Document is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals. In this table, a company can appear multiple times when there are more than one owner, and the owners are socially and economically disadvantaged. The gender and ethnicity of each owner is counted accordingly. The total count therefore is larger than the number of unique companies in the directory. Three companies that are listed as solely owned by Caucasian males are dropped.

[a] "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), Republic of the Northern Marianas Islands, Samoa, Macao, Fiji, Tonga, Kirbati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong.

[b] "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka.

Source: Minnesota Unified Certification Program Document, Revised Sept 1, 2016.

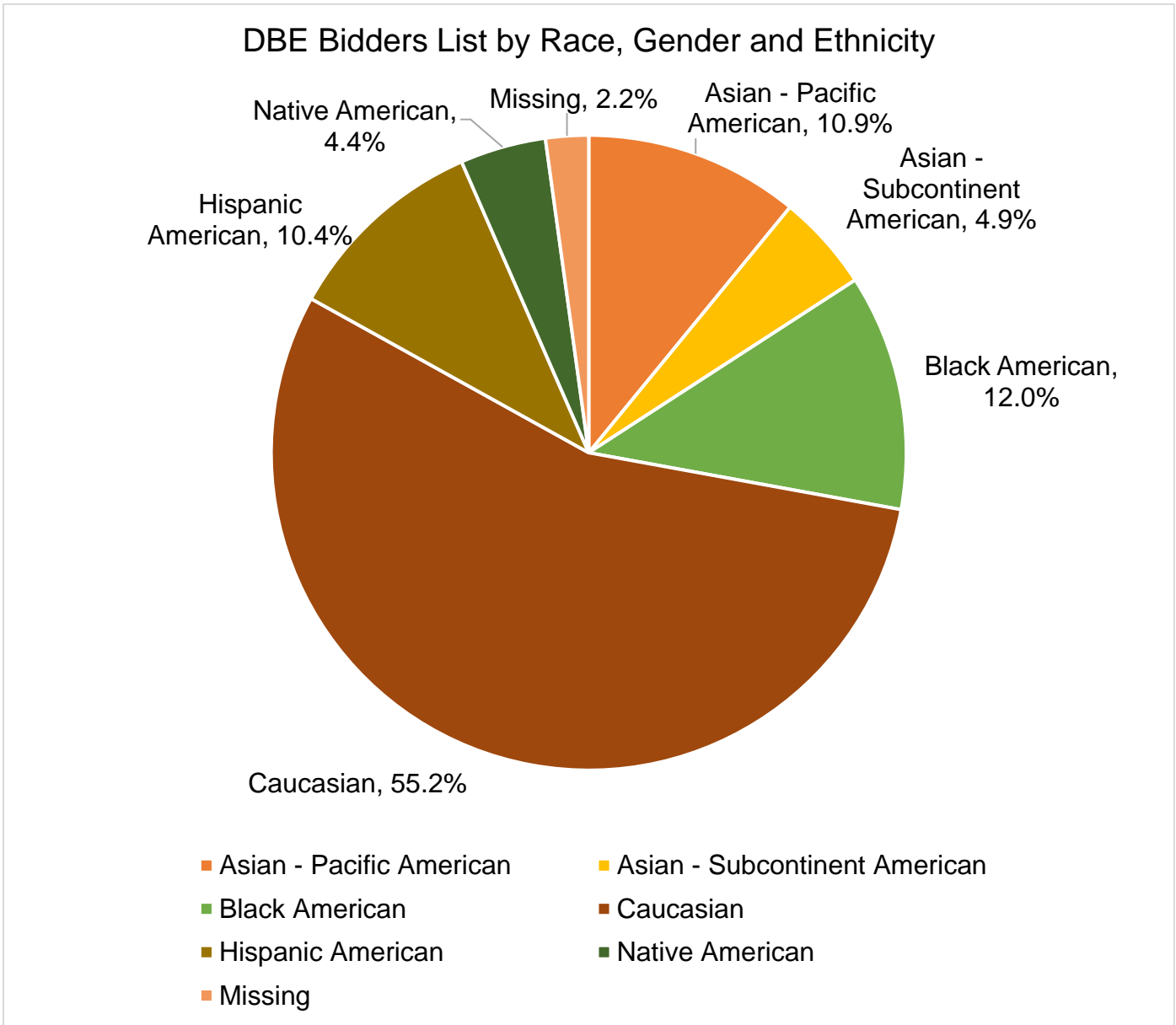Figure E.2. FTA DBE Bidders List by Race, Gender and Ethnicity

DBE Bidders List by Race, Gender and Ethnicity

Native American, 4.4%

Missing, 2.2%

Asian - Pacific American, 10.9%

Asian - Subcontinent American, 4.9%

Hispanic American, 10.4%

Black American, 12.0%

Caucasian, 55.2%

- Asian - Pacific American
- Asian - Subcontinent American
- Black American
- Caucasian
- Hispanic American
- Native American
- Missing

Table E.3. FTA/EPA Active DBE Vendors List by Race and Ethnicity

	Count	Percent
Asian - Pacific American [a]	18	11.4%
Asian - Subcontinent American [b]	3	1.9%
Black American	35	22.2%
Caucasian Female	73	46.2%
Hispanic American	20	12.7%
Native American	5	3.2%
Missing	4	2.5%
Total	158	100.0%

Note: Disadvantaged Business Enterprise (DBE) as defined by the Minnesota Unified Certification Program Document is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals. In this table, a company can appear multiple times when there are more than one owner, and the owners are socially and economically disadvantaged. The gender and ethnicity of each owner is counted accordingly. The total count therefore is larger than the number of unique companies in the directory. Three companies that are listed as solely owned by Caucasian males are dropped.

[a] "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), Republic of the Northern Marianas Islands, Samoa, Macao, Fiji, Tonga, Kirbati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong.

[b] "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka.

Source: Minnesota Unified Certification Program Document, Revised Sept 1, 2016.

Active DBE Vendors by Race/Ethnicity

- Asian - Pacific American
- Asian - Subcontinent American
- Black American
- Caucasian Female
- Hispanic American
- Native American
- Missing