

# Capital Metro FTA Availability Study 2022





# CAPITAL METRO FTA AVAILABILITY STUDY

## 2022

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**Colette Holt & Associates**

16 Carriage Hills · San Antonio, TX 78257

(773) 255-6844

[colette.holt@mwbelaw.com](mailto:colette.holt@mwbelaw.com)

[facebook.com/MWBELAW](https://www.facebook.com/MWBELAW) • [twitter: @mwbelaw](https://twitter.com/mwbelaw)

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# AVAILABILITY STUDY FOR CAPITAL METRO'S FEDERAL TRANSIT ADMINISTRATION FUNDED CONTRACTS

## A. Contract Data Overview

We analyzed data from Capital Metropolitan Transportation Authority's ("Cap Metro") Federal Transportation Administration ("FTA") funded contracts for the period from October 1, 2016 through June 30, 2021. We constructed all the fields necessary for our analysis where they were missing in Cap Metro's contract records (*e.g.*, industry type; zip codes; six-digit North American Industry Classification System ("NAICS") codes of prime contractors and subcontractors; and Disadvantaged-owned Business Enterprise ("DBE") information, including payments, race, gender; etc.). Tables 1-1 and 1-2 provide data on the resulting Final Contract Data File ("FCDF").

**Table 1-1: Final Contract Data File**

Contract Type	Total Contracts	Share of Total Contracts
Prime Contracts	30	20.3%
Subcontracts	118	79.7%
<b>TOTAL</b>	<b>148</b>	<b>100.0%</b>

*Source: CHA analysis of Cap Metro data*

**Table 1-2: Final Contract Data File Net Dollar Value**

Business Type	Total Contract Dollars	Share of Total Contract Dollars
Prime Contracts	\$306,277,887.15	82.4%
Subcontracts	\$65,643,802.14	17.6%
<b>TOTAL</b>	<b>\$371,921,689.29</b>	<b>100.0%</b>

Source: CHA analysis of Cap Metro data

The following sections present our analysis of Cap Metro’s FTA contracts. Our research was designed to assist Cap Metro to meet its regulatory obligation under 49 C.F.R. §26.45 to set its triennial goal for DBE participation in its FTA assisted contracts. First, we determined the geographic and product markets for the analysis. Next, we estimated the utilization of DBEs by Cap Metro. Finally, we used the FCDF, in combination with other databases (as described below), to calculate DBE unweighted and weighted availability in Cap Metro’s marketplace.

## B. Capital Metro’s Geographic and Product Market

The federal courts and the DBE program regulations<sup>1</sup> require that a USDOT recipient narrowly tailor its DBE program elements to its geographic market area. This element of the analysis must be empirically established.<sup>2</sup> The accepted approach is to analyze those detailed industries, as defined by six-digit NAICS codes,<sup>3</sup> that make up at least 75% of the prime contract and subcontract payments for the study period.<sup>4</sup> The determination of Cap Metro’s geographic and product market required three steps:

1. Develop the Final Contract Data File to determine the product market. These results are provided in Table 1-3.
2. Identify the geographic market.

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1. *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 508 (1989) (Richmond was specifically faulted for including minority contractors from across the country in its program based on the national evidence that supported the USDOT DBE program); see 49 C.F.R. §26.45(c); <https://www.transportation.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise> (“D. Explain How You Determined Your Local Market Area... your local market area is the area in which the substantial majority of the contractors and subcontractors with which you do business are located and the area in which you spend the substantial majority of your contracting dollars.”).
2. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1520 (10th Cir. 1994) (to confine data to strict geographic boundaries would ignore “economic reality”).
3. [www.census.gov/eos/www/naics](http://www.census.gov/eos/www/naics).
4. J. Wainwright and C. Holt, *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*, National Academies of Sciences, Engineering, and Medicine, 2010 (“*National Disparity Study Guidelines*”).



3. Determine the product market given the geographic parameters. Table 1-4 presents these results.

## 1. Capital Metro’s Final Contract Data File

The FCDF, which establishes Cap Metro’s product market, consisted of 45 NAICS codes, with a total contract dollar value of \$371,921,689. Table 1-3 presents each NAICS code with its share of the total contract dollar value. The NAICS codes are presented from the code with the largest share to the code with the smallest share.

**Table 1-3: Industry Percentage Distribution of Capital Metro Contracts by Dollars**

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
485999	All Other Transit and Ground Passenger Transportation	32.2%	32.2%
238210	Electrical Contractors and Other Wiring Installation Contractors	17.8%	49.9%
485991	Special Needs Transportation	13.3%	63.2%
541330	Engineering Services	9.0%	72.3%
236220	Commercial and Institutional Building Construction	7.0%	79.3%
237990	Other Heavy and Civil Engineering Construction	4.7%	84.0%
541380	Testing Laboratories	2.6%	86.6%
238220	Plumbing, Heating, and Air-Conditioning Contractors	2.5%	89.1%
237310	Highway, Street, and Bridge Construction	2.2%	91.3%
541611	Administrative Management and General Management Consulting Services	1.7%	93.0%
541511	Custom Computer Programming Services	1.0%	94.0%
541990	All Other Professional, Scientific, and Technical Services	0.7%	94.7%
811192	Car Washes	0.7%	95.4%
541614	Process, Physical Distribution, and Logistics Consulting Services	0.7%	96.1%
541613	Marketing Consulting Services	0.7%	96.8%
238910	Site Preparation Contractors	0.5%	97.3%

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NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	0.4%	97.7%
541370	Surveying and Mapping (except Geophysical) Services	0.3%	98.0%
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	0.3%	98.3%
541310	Architectural Services	0.2%	98.6%
541820	Public Relations Agencies	0.2%	98.8%
484220	Specialized Freight (except Used Goods) Trucking, Local	0.2%	98.9%
561730	Landscaping Services	0.1%	99.1%
561990	All Other Support Services	0.1%	99.2%
541620	Environmental Consulting Services	0.1%	99.3%
423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers	0.1%	99.4%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	0.1%	99.6%
237130	Power and Communication Line and Related Structures Construction	0.1%	99.6%
315210	Cut and Sew Apparel Contractors	0.1%	99.7%
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	0.1%	99.8%
541910	Marketing Research and Public Opinion Polling	0.1%	99.9%
423390	Other Construction Material Merchant Wholesalers	0.04%	99.90%
541410	Interior Design Services	0.02%	99.91%
512110	Motion Picture and Video Production	0.02%	99.93%
238110	Poured Concrete Foundation and Structure Contractors	0.01%	99.94%
238390	Other Building Finishing Contractors	0.01%	99.95%
611430	Professional and Management Development Training	0.01%	99.96%
561920	Convention and Trade Show Organizers	0.01%	99.97%

NAICS	NAICS Code Description	Pct Contract Dollars	Cumulative Pct Contract Dollars
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	0.01%	99.98%
541340	Drafting Services	0.005%	99.988%
541922	Commercial Photography	0.003%	99.991%
561720	Janitorial Services	0.003%	99.993%
541320	Landscape Architectural Services	0.002%	99.996%
238990	All Other Specialty Trade Contractors	0.002%	99.998%
531320	Offices of Real Estate Appraisers	0.002%	100.000%
<b>TOTAL</b>		<b>100.0%</b>	

*Source: CHA analysis of Cap Metro data*

## 2. Capital Metro’s Geographic Market

To determine the geographic market area, we applied the standard of identifying the firm locations that account for at least 75% of contract and subcontract dollar payments in the FCDF.<sup>5</sup> Firm location was determined by zip code and aggregated into counties as the geographic unit. The State of Texas accounted for 77.7% of the FCDF. When we examined the three primary counties of the Austin metropolitan area – Travis, Hays, and Williamson – captured 92.8% of the Texas contract dollars and 72.1% of the FCDF. As this came very close to the standard, we used these three counties as the geographic market.

## C. Capital Metro’s Utilization of DBEs in its Geographic and Product Market

Having determined Cap Metro’s geographic market area, the next step was to determine the dollar value of its utilization of DBEs<sup>6</sup> as measured by net payments to prime firms and subcontractors and disaggregated by race and gender. There were 32 NAICS codes after constraining the FCDF by the geographic market; the dollar value of the contracts in these codes is \$268,262,295. Table 1-4 presents these data. We note that the contract dollar shares in Table 1-4 are equivalent to

5. *National Disparity Study Guidelines*, at p. 29.

6. For our analysis, the term “DBE” includes firms that are certified by government agencies and minority- and woman-owned firms that are not certified. The inclusion of all minority- and female-owned businesses in the pool casts the broad net approved by the courts and that supports the remedial nature of these programs. *See Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715, 723 (7th Cir. 2007) (The “remedial nature of the federal scheme militates in favor of a method of DBE availability calculation that casts a broader net.”).

the weight of spending in each NAICS code. These data were used to calculate weighted availability<sup>7</sup> from unweighted availability, as discussed below.

**Table 1-4: NAICS Code Distribution of Contract Dollars in the Constrained Product Market**

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
485999	All Other Transit and Ground Passenger Transportation	\$119,684,928	44.6%
485991	Special Needs Transportation	\$49,367,920	18.4%
541330	Engineering Services	\$32,915,010	12.3%
236220	Commercial and Institutional Building Construction	\$26,040,888	9.7%
237990	Other Heavy and Civil Engineering Construction	\$11,792,352	4.4%
237310	Highway, Street, and Bridge Construction	\$8,042,945	3.0%
541611	Administrative Management and General Management Consulting Services	\$5,025,158	1.9%
541613	Marketing Consulting Services	\$2,546,631	0.9%
541990	All Other Professional, Scientific, and Technical Services	\$2,467,085	0.9%
541380	Testing Laboratories	\$2,333,934	0.9%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	\$1,614,342	0.6%
541370	Surveying and Mapping (except Geophysical) Services	\$1,183,335	0.4%
811192	Car Washes	\$1,131,660	0.4%
541310	Architectural Services	\$877,463	0.3%
541820	Public Relations Agencies	\$730,399	0.3%
484220	Specialized Freight (except Used Goods) Trucking, Local	\$569,875	0.2%
561730	Landscaping Services	\$515,631	0.2%

7. See “Tips for Goal Setting in the Disadvantaged Business Enterprise Program” (“F. Wherever Possible, Use Weighting. Weighting can help ensure that your Step One Base Figure is as accurate as possible. While weighting is not required by the rule, it will make your goal calculation more accurate. For instance, if 90% of your contract dollars will be spent on heavy construction and 10% on trucking, you should weight your calculation of the relative availability of firms by the same percentages.”) (emphasis in the original), <https://www.transportation.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise>.

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NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
541620	Environmental Consulting Services	\$481,833	0.2%
238210	Electrical Contractors and Other Wiring Installation Contractors	\$254,448	0.1%
541910	Marketing Research and Public Opinion Polling	\$188,952	0.1%
423390	Other Construction Material Merchant Wholesalers	\$163,222	0.1%
541410	Interior Design Services	\$67,046	0.02%
512110	Motion Picture and Video Production	\$62,270	0.02%
238110	Poured Concrete Foundation and Structure Contractors	\$44,369	0.02%
561920	Convention and Trade Show Organizers	\$36,500	0.01%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	\$36,383	0.01%
541614	Process, Physical Distribution, and Logistics Consulting Services	\$35,460	0.01%
541340	Drafting Services	\$14,750	0.01%
541922	Commercial Photography	\$10,890	0.004%
561720	Janitorial Services	\$10,866	0.004%
541320	Landscape Architectural Services	\$8,695	0.003%
531320	Offices of Real Estate Appraisers	\$7,055	0.003%
<b>TOTAL</b>		<b>\$268,262,295</b>	<b>100.0%</b>

*Source: CHA analysis of Cap Metro data*

Tables 1-5 and 1-6 present data on Cap Metro's DBE utilization, measured in contract dollars and percentage of contract dollars.

**Table 1-5: Distribution of Contract Dollars by Race and Gender  
(total dollars)**

NAICS	Black	Hispanic	Asian	Native American	Woman	DBE	Non-DBE	Total
236220	\$0	\$0	\$0	\$0	\$205,841	\$205,841	\$25,835,048	\$26,040,889
237310	\$0	\$32,286	\$150,703	\$0	\$145,852	\$328,841	\$7,714,104	\$8,042,945
237990	\$0	\$1,670,933	\$0	\$0	\$0	\$1,670,933	\$10,121,419	\$11,792,352
238110	\$0	\$44,369	\$0	\$0	\$0	\$44,369	\$0	\$44,369
238210	\$0	\$254,448	\$0	\$0	\$0	\$254,448	\$0	\$254,448
423320	\$0	\$1,614,342	\$0	\$0	\$0	\$1,614,342	\$0	\$1,614,342
423390	\$0	\$0	\$0	\$163,222	\$0	\$163,222	\$0	\$163,222
423990	\$0	\$0	\$0	\$0	\$36,383	\$36,383	\$0	\$36,383
484220	\$0	\$493,700	\$0	\$0	\$76,175	\$569,875	\$0	\$569,875
485991	\$0	\$0	\$0	\$0	\$49,367,920	\$49,367,920	\$0	\$49,367,920
485999	\$119,684,928	\$0	\$0	\$0	\$0	\$119,684,928	\$0	\$119,684,928
512110	\$0	\$62,270	\$0	\$0	\$0	\$62,270	\$0	\$62,270
531320	\$0	\$0	\$0	\$0	\$2,500	\$2,500	\$4,555	\$7,055
541310	\$0	\$0	\$368,367	\$0	\$101,715	\$470,082	\$407,381	\$877,463
541320	\$0	\$8,695	\$0	\$0	\$0	\$8,695	\$0	\$8,695
541330	\$0	\$453,580	\$0	\$4,012	\$3,808,694	\$4,266,287	\$28,648,723	\$32,915,009
541340	\$0	\$0	\$0	\$0	\$0	\$0	\$14,750	\$14,750
541370	\$0	\$0	\$0	\$0	\$1,183,335	\$1,183,335	\$0	\$1,183,335
541380	\$0	\$0	\$0	\$0	\$847,115	\$847,115	\$1,486,819	\$2,333,934
541410	\$0	\$0	\$0	\$0	\$67,046	\$67,046	\$0	\$67,046
541611	\$0	\$0	\$0	\$29,540	\$154,150	\$183,690	\$4,841,469	\$5,025,158

NAICS	Black	Hispanic	Asian	Native American	Woman	DBE	Non-DBE	Total
541613	\$0	\$137,739	\$0	\$0	\$2,408,892	\$2,546,631	\$0	\$2,546,631
541614	\$0	\$0	\$35,460	\$0	\$0	\$35,460	\$0	\$35,460
541620	\$0	\$0	\$1,125	\$0	\$480,708	\$481,833	\$0	\$481,833
541820	\$82,786	\$187,162	\$0	\$0	\$460,451	\$730,399	\$0	\$730,399
541910	\$0	\$0	\$0	\$0	\$188,952	\$188,952	\$0	\$188,952
541922	\$0	\$8,340	\$0	\$0	\$0	\$8,340	\$2,550	\$10,890
541990	\$9,228	\$0	\$0	\$0	\$580,162	\$589,390	\$1,877,695	\$2,467,085
561720	\$0	\$0	\$0	\$0	\$10,866	\$10,866	\$0	\$10,866
561730	\$360,601	\$155,030	\$0	\$0	\$0	\$515,631	\$0	\$515,631
561920	\$0	\$36,500	\$0	\$0	\$0	\$36,500	\$0	\$36,500
811192	\$1,131,660	\$0	\$0	\$0	\$0	\$1,131,660	\$0	\$1,131,660
<b>Total</b>	<b>\$121,269,203</b>	<b>\$5,159,394</b>	<b>\$555,655</b>	<b>\$196,775</b>	<b>\$60,126,755</b>	<b>\$187,307,782</b>	<b>\$80,954,513</b>	<b>\$268,262,295</b>

Source: CHA analysis of Cap Metro data

**Table 1-6: Percentage Distribution of Contract Dollars by Race and Gender  
(share of total dollars)**

NAICS	Black	Hispanic	Asian	Native American	White Woman	DBE	Non-DBE	Total
236220	0.0%	0.0%	0.0%	0.0%	0.8%	0.8%	99.2%	100.0%
237310	0.0%	0.4%	1.9%	0.0%	1.8%	4.1%	95.9%	100.0%
237990	0.0%	14.2%	0.0%	0.0%	0.0%	14.2%	85.8%	100.0%
238110	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
238210	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
423320	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
423390	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
423990	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
484220	0.0%	86.6%	0.0%	0.0%	13.4%	100.0%	0.0%	100.0%
485991	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
485999	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
512110	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
531320	0.0%	0.0%	0.0%	0.0%	35.4%	35.4%	64.6%	100.0%
541310	0.0%	0.0%	42.0%	0.0%	11.6%	53.6%	46.4%	100.0%
541320	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
541330	0.0%	1.4%	0.0%	0.0%	11.6%	13.0%	87.0%	100.0%
541340	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541370	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541380	0.0%	0.0%	0.0%	0.0%	36.3%	36.3%	63.7%	100.0%
541410	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541611	0.0%	0.0%	0.0%	0.6%	3.1%	3.7%	96.3%	100.0%
541613	0.0%	5.4%	0.0%	0.0%	94.6%	100.0%	0.0%	100.0%
541614	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%
541620	0.0%	0.0%	0.2%	0.0%	99.8%	100.0%	0.0%	100.0%
541820	11.3%	25.6%	0.0%	0.0%	63.0%	100.0%	0.0%	100.0%
541910	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541922	0.0%	76.6%	0.0%	0.0%	0.0%	76.6%	23.4%	100.0%
541990	0.4%	0.0%	0.0%	0.0%	23.5%	23.9%	76.1%	100.0%



NAICS	Black	Hispanic	Asian	Native American	White Woman	DBE	Non-DBE	Total
561720	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
561730	69.9%	30.1%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
561920	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
811192	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
<b>Total</b>	<b>45.2%</b>	<b>1.9%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>22.4%</b>	<b>69.8%</b>	<b>30.2%</b>	<b>100.0%</b>

Source: CHA analysis of Cap Metro data

## D. The Availability of DBEs in Capital Metro’s Geographic and Product Market

### 1. The Methodological Framework

Estimates of the availability of DBEs in Cap Metro’s geographic and product market are a critical component of Cap Metro’s compliance with its constitutional and regulatory obligations to ensure its DBE program is narrowly tailored. The courts and the DBE program regulations require that the availability estimates reflect the number of “ready, willing and able” firms that can perform on specific types of work involved in the recipient’s prime contracts and associated subcontracts; general population is legally irrelevant.<sup>8</sup> The availability estimates should form the basis for the agency’s triennial DBE goal and to set narrowly tailored contract goals.

We applied the “custom census” approach, with refinements, to estimating availability. The courts and the National Model Disparity Study Guidelines<sup>9</sup> have recognized this methodology as superior to the other methods for at least four reasons:

- First, it provides an internally consistent and rigorous “apples to apples” comparison between firms in the availability numerator and those in the denominator. Other approaches often have different definitions for the firms in the numerator (e.g., certified DBEs or firms that respond to a survey) and the denominator (e.g., registered vendors or the Census Bureau’s County Business Patterns data).
- Second, by examining a comprehensive group of firms, it “casts a broader net” beyond those known to the agency. As recognized by the courts, this

8. 49 C.F.R. §25.45(c).

9. *National Disparity Study Guidelines*, pp.57-58.

comports with the remedial nature of contracting affirmative action programs by seeking to bring in businesses that have historically been excluded. Our methodology is less likely to be tainted by the effects of past and present discrimination than other methods, such as bidders’ lists, because it seeks out firms in Cap Metro’s market area that have not been able to access the agency’s opportunities.

- Third, this approach is less impacted by variables affected by discrimination. Factors such as firm age, size, qualifications, and experience are all elements of business success where discrimination would be manifested. Several courts have held that the results of discrimination – which impact factors affecting capacity – should not be the benchmark for a program designed to ameliorate the effects of discrimination. They have acknowledged that minority and woman firms may be smaller, newer, and otherwise less competitive than non-M/W/DBEs because of the very discrimination sought to be remedied by race-conscious contracting programs. Racial and gender differences in these “capacity” factors are the outcomes of discrimination and it is therefore inappropriate as a matter of economics and statistics to use them as “control” variables in a disparity study.<sup>10</sup>
- Fourth, it has been upheld by every court that has reviewed it, including most recently in the successful defense of the Illinois State Toll Highway’s DBE program, for which we served as testifying experts.<sup>11</sup>

Using this framework, CHA utilized three databases to estimate availability:

1. The Final Contract Data File.
2. The Master M/W/DBE Directory compiled by CHA.
3. Dun & Bradstreet/Hoovers Database.

First, we eliminated any duplicate entries in the geographically constrained FCDF. Some firms received multiple contracts for work performed in the same NAICS codes. Without this elimination of duplicate listings, the availability database would be artificially large. This list of unique firms comprised the first component of the Study’s availability determination.

To develop the Master Directory, we utilized the Texas Unified Certification Program Directory, the City of Austin’s M/WBE Directory and Cap Metro Contract Data File to compile the Master Directory. We limited the firms we used in our analysis to those operating within Cap Metro’s product market.

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10. For a detailed discussion of the role of capacity in disparity studies, see the *National Disparity Study Guidelines*, Appendix B, “Understanding Capacity.”

11. *Midwest Fence, Corp. v. U.S. Department of Transportation et al.*, 840 F.3d 932 (2016); see also *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7<sup>th</sup> Cir. 2007), cert. denied, 137 S.Ct. 2292 (2017).

We next developed a custom database from Hoovers, a Dun & Bradstreet company, for minority- and woman-owned firms and non-DBEs. Hoovers maintains a comprehensive, extensive and regularly updated listing of all firms conducting business. The database includes a vast amount of information on each firm, including location and detailed industry codes, and is the broadest publicly available data source for firm information. We purchased the information from Hoovers for the firms in the NAICS codes located in Cap Metro's market area in order to form our custom Dun & Bradstreet/Hoovers Database. In the initial download, the data from Hoovers simply identified a firm as being minority-owned.<sup>12</sup> However, the company does keep detailed information on ethnicity (*i.e.*, is the minority firm owner Black, Hispanic, Asian, or Native American). We obtained this additional information from Hoovers by special request.

The Hoovers database is the most comprehensive list of minority-owned and woman-owned businesses available. It is developed from the efforts of a national firm whose business is collecting business information. Hoovers builds its database from over 250 sources, including information from government sources and various associations, and its own efforts. Hoovers conducts an audit of the preliminary database prior to the public release of the data. That audit must result in a minimum of 94% accuracy. Once published, Hoovers has an established protocol to regularly refresh its data. This protocol involves updating any third-party lists that were used and contacting a selection of firms via Hoover's own call centers.

We merged these three databases to form an accurate estimate of firms available to work on Cap Metro contracts. For an extended explanation of how unweighted and weighted availability are calculated, please see Appendix A.

## **2. The Availability Data and Results**

Tables 1-7 through 1-9 present data on:

1. The unweighted availability percentages by race and gender and by NAICS codes for Cap Metro's product market;
2. The weights used to adjust the unweighted numbers;<sup>13</sup> and
3. The final estimates of the weighted averages of the individual six-digit level NAICS availability estimates in Cap Metro's market area.

We "weighted" the availability data for two reasons. First, the weighted availability represents the share of total possible contractors for each demographic group, weighted by the distribution of contract dollars across the NAICS codes in which Cap Metro spends its dollars.

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12. The variable is labeled: "Is Minority Owned" and values for the variable can be either "1" (for yes) or blank.

13. These weights are equivalent to the share of contract dollars presented in the previous section.

Second, as recognized by USDOT in its *Tips for Goal Setting*,<sup>14</sup> weighting also reflects the importance of the availability of a demographic group in a particular NAICS code, that is, how important that NAICS code is to Cap Metro’s contracting patterns. For example, in a hypothetical NAICS Code 123456, the total available firms are 100 and 60 of these firms are DBEs; hence, DBE availability would be 60%. However, if Cap Metro spends only one percent of its contract dollars in this NAICS code, then this high availability would be offset by the low level of spending in that NAICS code. In contrast, if Cap Metro spent 25% of its contract dollars in NAICS Code 123456, then the same availability would carry a greater weight.

To calculate the weighted availability for each NAICS code, we first determined the unweighted availability for each demographic group in each NAICS code (presented in Table 1-7). In the previous example, the unweighted availability for DBEs in NAICS Code 123456 is 60%. We then multiplied the unweighted availability by the share of Cap Metro spending in that NAICS code presented in Table 1-8. This share is the *weight*. Using the previous example, where Cap Metro spending in NAICS Code 123456 was one percent, the component of DBE weighted availability for NAICS Code 123456 would be 0.006: 60% multiplied by one percent.

We performed this calculation for each NAICS code and then summed all of the individual components for each demographic group to determine the weighted availability for that group. The results of this calculation are presented in Table 1-9.

**Table 1-7: Unweighted DBE Availability for Capital Metro Contracts**

NAICS	Black	Hispanic	Asian	Native American	White Woman	DBE	Non-DBE	Total
236220	3.4%	6.8%	1.8%	0.7%	10.5%	23.2%	76.8%	100.0%
237310	2.7%	14.2%	1.7%	1.0%	9.8%	29.5%	70.5%	100.0%
237990	2.2%	14.4%	3.3%	0.0%	4.4%	24.4%	75.6%	100.0%
238110	0.7%	4.3%	0.2%	0.2%	2.2%	7.5%	92.5%	100.0%
238210	0.3%	3.0%	0.6%	0.2%	4.8%	8.9%	91.1%	100.0%
423320	0.6%	2.5%	0.6%	0.6%	4.4%	8.8%	91.3%	100.0%
423390	2.0%	5.9%	0.0%	3.9%	9.8%	21.6%	78.4%	100.0%
423990	0.4%	0.6%	0.1%	0.0%	4.5%	5.6%	94.4%	100.0%
484220	11.8%	13.2%	1.5%	0.0%	11.8%	38.2%	61.8%	100.0%

14. <https://www.transportation.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise>.

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NAICS	Black	Hispanic	Asian	Native American	White Woman	DBE	Non-DBE	Total
485991	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
485999	3.2%	0.0%	0.0%	0.0%	0.0%	3.2%	96.8%	100.0%
512110	0.5%	2.7%	0.3%	0.0%	5.3%	8.8%	91.2%	100.0%
531320	0.0%	1.2%	0.0%	0.0%	7.7%	8.9%	91.1%	100.0%
541310	1.8%	3.5%	1.4%	0.3%	11.5%	18.5%	81.5%	100.0%
541320	0.0%	1.7%	0.4%	0.0%	4.6%	6.7%	93.3%	100.0%
541330	1.9%	6.7%	4.7%	0.1%	8.8%	22.2%	77.8%	100.0%
541340	5.6%	19.4%	8.3%	0.0%	25.0%	58.3%	41.7%	100.0%
541370	2.5%	8.5%	1.0%	1.5%	21.4%	34.8%	65.2%	100.0%
541380	0.9%	1.2%	1.8%	0.0%	3.4%	7.4%	92.6%	100.0%
541410	0.9%	0.7%	0.4%	0.0%	19.3%	21.3%	78.7%	100.0%
541611	2.1%	1.4%	0.8%	0.2%	7.2%	11.8%	88.2%	100.0%
541613	0.8%	0.8%	0.5%	0.0%	4.4%	6.5%	93.5%	100.0%
541614	14.6%	4.9%	7.3%	0.0%	7.3%	34.1%	65.9%	100.0%
541620	1.9%	3.3%	1.9%	0.3%	20.7%	28.2%	71.8%	100.0%
541820	3.8%	3.5%	0.7%	0.0%	16.1%	24.1%	75.9%	100.0%
541910	1.7%	4.3%	0.9%	0.0%	13.0%	20.0%	80.0%	100.0%
541922	1.8%	1.3%	0.4%	0.0%	7.6%	11.2%	88.8%	100.0%
541990	0.4%	0.5%	0.2%	0.0%	4.7%	5.8%	94.2%	100.0%
561720	2.0%	2.3%	0.2%	0.0%	4.6%	9.1%	90.9%	100.0%
561730	1.5%	1.5%	0.2%	0.0%	2.8%	5.9%	94.1%	100.0%
561920	0.0%	5.7%	0.0%	0.0%	7.5%	13.2%	86.8%	100.0%
811192	1.0%	0.0%	0.0%	0.0%	1.0%	2.0%	98.0%	100.0%
<b>Total</b>	<b>1.2%</b>	<b>2.3%</b>	<b>0.8%</b>	<b>0.1%</b>	<b>6.4%</b>	<b>10.8%</b>	<b>89.2%</b>	<b>100.0%</b>

*Source: CHA analysis of Cap Metro data; Hoovers; CHA Master Directory*

These unweighted estimates can be used by Cap Metro as the starting point for setting narrowly tailored contract goals. The agency uses the B2Gnow electronic data collection and monitoring system, and the goal setting module has been designed specifically to interface with our study methodology and results.

**Table 1-8: Distribution of Capital Metro Spending by NAICS Code  
(the Weights)**

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
236220	Commercial and Institutional Building Construction	9.7%
237310	Highway, Street, and Bridge Construction	3.0%
237990	Other Heavy and Civil Engineering Construction	4.4%
238110	Poured Concrete Foundation and Structure Contractors	0.02%
238210	Electrical Contractors and Other Wiring Installation Contractors	0.1%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	0.6%
423390	Other Construction Material Merchant Wholesalers	0.1%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	0.01%
484220	Specialized Freight (except Used Goods) Trucking, Local	0.2%
485991	Special Needs Transportation	18.4%
485999	All Other Transit and Ground Passenger Transportation	44.6%
512110	Motion Picture and Video Production	0.02%
531320	Offices of Real Estate Appraisers	0.003%
541310	Architectural Services	0.3%
541320	Landscape Architectural Services	0.003%
541330	Engineering Services	12.3%
541340	Drafting Services	0.01%
541370	Surveying and Mapping (except Geophysical) Services	0.4%
541380	Testing Laboratories	0.9%
541410	Interior Design Services	0.02%
541611	Administrative Management and General Management Consulting Services	1.9%
541613	Marketing Consulting Services	0.9%
541614	Process, Physical Distribution, and Logistics Consulting Services	0.01%
541620	Environmental Consulting Services	0.2%
541820	Public Relations Agencies	0.3%
541910	Marketing Research and Public Opinion Polling	0.1%

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NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
541922	Commercial Photography	0.004%
541990	All Other Professional, Scientific, and Technical Services	0.9%
561720	Janitorial Services	0.004%
561730	Landscaping Services	0.2%
561920	Convention and Trade Show Organizers	0.01%
811192	Car Washes	0.4%
<b>TOTAL</b>		<b>100.0%</b>

*Source: CHA analysis of Cap Metro data*

Table 1-9 presents the weighted availability results for each of the racial and gender categories. The aggregated availability of DBEs, weighted by Cap Metro’s spending in its geographic and industry markets, is 27.7%. This overall, weighted DBE availability result can be used by Cap Metro to determine its triennial DBE goal.

**Table 1-9: Aggregated Weighted Availability for City Contracts**

Black	Hispanic	Asian	Native American	White Woman	DBE	Non-DBE	Total
2.3%	2.7%	1.0%	0.1%	21.5%	27.7%	72.3%	100.0%

*Source: CHA analysis of Cap Metro data; Hoovers; CHA Master Directory*





# APPENDIX A:

## UNWEIGHTED AND WEIGHTED AVAILABILITY

Central to the analysis, under strict constitutional scrutiny, of an agency's contracting activity is understanding what firms could have received contracts. Availability has two components: unweighted availability and weighted availability. Below we define these two terms; why we make the distinction; and how to convert unweighted availability into weighted availability.

### Defining Unweighted and Weighted Availability

*Unweighted availability* measures a group's share of all firms that could receive a contract or subcontract. If 100 firms could receive a contract and 15 of these firms are minority-owned, then MBE unweighted availability is 15% (15/100). *Weighted availability* converts the unweighted availability through the use of a weighting factor: the share of total agency spending in a particular NAICS code. If total agency spending is \$1M and NAICS Code AAAAAA captures \$100,000 of the total spending, then the weighting factor for NAICS code AAAAAA is 10% ( $\$100,000/\$1,000,000$ ).

### Why Weight the Unweighted Availability

It is important to understand *why* weighted availability should be calculated. A disparity study examines the overall contracting activity of an agency by looking at the firms that *received* contracts and the firms that *could have received* contracts. A proper analysis does not allow activity in a NAICS code that is not important an agency's overall spending behavior to have a disproportionate impact on the analysis. In other words, the availability of a certain group in a specific NAICS code in which the agency spends few of its dollars should have less importance to the analysis than the availability of a certain group in another NAICS code where the agency spends a large share of its dollars.

To account for these differences, the availability in each NAICS code is weighted by the agency's spending in the code. The calculation of the weighted availability compares the firms that received contracts (utilization) and the firms that could receive contracts (availability). Utilization is a group's share of total spending by an agency; this metric is measured in dollars, *i.e.*, MBEs received eight percent of all dollars spent by the agency. Since utilization

is measured in dollars, availability must be measured in dollars to permit an “apples-to-apples” comparison.

How to Calculate the Weighted Availability

Three steps are involved in converting unweighted availability into weighted availability:

1. Determine the unweighted availability
2. Determine the weights for each NAICS code
3. Apply the weights to the unweighted availability to calculate weighted availability

The following is a hypothetical example illustrating the three steps in determining weighted availability.

Table A contains data on unweighted availability measured by the number of firms:

**Table B:**

NAICS	Black	Hispanic	Asian	Native American	White Women	Non-M/W/DBE	Total
AAAAAA	10	20	20	5	15	400	470
BBBBBB	20	15	15	4	16	410	480
CCCCCC	10	10	18	3	17	420	478
TOTAL	40	45	53	12	48	1230	1428

Unweighted availability measured as the share of firms requires us to divide the number of firms in each group by the total number of firms (the last column in Table A). For example, the Black share of total firms in NAICS code AAAAAA is 2.1% (10/470). Table B presents the unweighted availability measure as a group’s share of all firms.

**Table C:**

NAICS	Black	Hispanic	Asian	Native American	White Women	Non-M/W/DBE	Total
AAAAAA	2.1%	4.3%	4.3%	1.1%	3.2%	85.1%	100.0%
BBBBBB	4.2%	3.1%	3.1%	0.8%	3.3%	85.4%	100.0%
CCCCCC	2.1%	2.1%	3.8%	0.6%	3.6%	87.9%	100.0%
TOTAL	2.8%	3.2%	3.7%	0.8%	3.4%	86.1%	100.0%

Table C presents data on the agency’s spending in each NAICS code:

**Table D:**

NAICS	Total Dollars	Share
AAAAAA	\$1,000.00	22.2%
BBBBBB	\$1,500.00	33.3%
CCCCCC	\$2,000.00	44.4%
TOTAL	\$4,500.00	100.0%

Each NAICS code’s share of total agency spending (the last column in Table C) is the weight from each NAICS code that will be used in calculating the weighted availability. To calculate the overall weighted availability for each group, we first derive the NAICS code component of a group’s overall weighted availability. This is done by multiplying the NAICS code weight by the particular group’s unweighted availability in that NAICS code. For instance, to determine NAICS code AAAAAA’s component of the overall Black weighted availability, we would multiply 22.2% (the NAICS code weight) by 2.1% (the Black unweighted availability in NAICS code AAAAAA). The resulting number is 0.005 and this number is found in Table D under the cell which presents NAICS code AAAAAA’s share of the Black weighted availability. The procedure is repeated for each group in each NAICS code. The calculation is completed by adding up each NAICS component for a particular group to calculate that group’s overall weighted availability. Table D presents this information:

**Table E:**

NAICS	Black	Hispanic	Asian	Native American	White Women	Non-M/W/DBE
AAAAAA	0.005	0.009	0.009	0.002	0.007	0.189
BBBBBB	0.014	0.010	0.010	0.003	0.011	0.285
CCCCCC	0.009	0.009	0.017	0.003	0.016	0.391
TOTAL	0.028	0.029	0.037	0.008	0.034	0.864

To determine the overall *weighted availability*, the last row of Table D is converted into a percentage (*e.g.*, for the Black weighted availability:  $0.028 * 100 = 2.8\%$ ). Table E presents these results.

**Table F:**

Black	Hispanic	Asian	Native American	White Women	Non-M/WBE	Total
2.8%	2.9%	3.7%	0.8%	3.4%	86.4%	100.0%

