

City of Knoxville

DISPARITY STUDY

November 2023

FINAL REPORT



PREPARED BY:

Miller³ Consulting, Inc.
260 Peachtree Street, Suite 501
Atlanta, GA 30303
404-827-9019 • www.miller3group.com



Contents

EXECUTIVE SUMMARY..... E-1

E.1	INTRODUCTION.....	E-1
E.2	MILLER ³ CONSULTING’S APPROACH AND METHODOLOGY.....	E-5
E.3	FINDINGS AND CONCLUSIONS.....	E-13
E.4	RECOMMENDATIONS.....	E-30
E.5	SUMMARY.....	E-40

CHAPTER 1: INTRODUCTION..... 1-1

1.1	SCOPE OF THE DISPARITY STUDY.....	1-1
1.2	ORGANIZATION OF THE DISPARITY STUDY.....	1-2

CHAPTER 2: LEGAL ANALYSIS..... 2-1

2.1	INTRODUCTION.....	2-1
2.2	CONSTITUTIONALITY OF RACE AND GENDER-CONSCIOUS PROGRAMS.....	2-2
2.3	FACTUAL PREDICATE STANDARDS (CONDUCTING THE DISPARITY STUDY).....	2-34
2.4	SUMMARY OF FINDINGS.....	2-49

CHAPTER 3: PROCUREMENT ANALYSIS..... 3-1

3.1	INTRODUCTION.....	3-1
3.2	BEST PRACTICES IN PUBLIC SECTOR PROCUREMENT.....	3-2
3.3	THE CITY’S ORGANIZATIONAL STRUCTURE AND PROCUREMENT PROCESS.....	3-6
3.4	INFORMAL PROCUREMENT.....	3-22
3.5	FORMAL PROCUREMENT.....	3-25
3.6	NON-COMPETITIVE PROCUREMENT.....	3-32
3.7	ANALYSIS OF KNOXVILLE’S DIVERSITY, INCLUSION, AND ASSISTANCE INITIATIVES.....	3-35
3.8	SUMMARY OF FINDINGS AND CONCLUSIONS.....	3-40

CHAPTER 4: STATISTICAL METHODOLOGY..... 4-1

4.1	INTRODUCTION.....	4-1
4.2	STATISTICAL METHODOLOGY.....	4-2
4.3	DATA SOURCES UTILIZED FOR STATISTICAL ANALYSIS FOR THE CITY OF KNOXVILLE.....	4-21
4.4	SUMMARY OF FINDINGS.....	4-30

CHAPTER 5: STATISTICAL ANALYSIS OF RELEVANT MARKET AND SMWBE AVAILABILITY..... 5-1

5.1	INTRODUCTION.....	5-1
5.2	RELEVANT MARKET.....	5-2
5.3	AVAILABILITY DEFINITION.....	5-6
5.4	TOTAL AVAILABILITY.....	5-9
5.5	AVAILABILITY IN ARCHITECTURE AND ENGINEERING.....	5-12
5.6	AVAILABILITY IN CONSTRUCTION.....	5-14
5.7	AVAILABILITY IN PROFESSIONAL SERVICES.....	5-16
5.8	AVAILABILITY IN NON-PROFESSIONAL SERVICES.....	5-18
5.9	AVAILABILITY IN GOODS & SUPPLIES.....	5-20
5.10	SUMMARY OF FINDINGS.....	5-22

CHAPTER 6: STATISTICAL ANALYSIS OF SMWBE UTILIZATION..... 6-1

6.1	INTRODUCTION.....	6-1
6.2	TOTAL UTILIZATION BASED ON CONTRACT AWARDS, PURCHASE ORDERS, AND PAYMENTS.....	6-2
6.3	UTILIZATION BY PROCUREMENT TYPE.....	6-8
6.4	ARCHITECTURE AND ENGINEERING UTILIZATION.....	6-10
6.5	CONSTRUCTION AND CONSTRUCTION- RELATED SERVICES UTILIZATION.....	6-14
6.6	PROFESSIONAL SERVICES UTILIZATION.....	6-18

Contents (cont'd)

6.7	NON-PROFESSIONAL SERVICES UTILIZATION	6-22
6.8	GOODS & SUPPLIES UTILIZATION.....	6-26
6.9	UTILIZATION THRESHOLDS.....	6-30
6.10	TOP TEN BIDDERS AND AWARDEES	6-45
6.11	SUMMARY OF FINDINGS.....	6-60

CHAPTER 7: STATISTICAL ANALYSIS OF SMWBE DISPARITY IN CONTRACTING 7-1

7.1	INTRODUCTION	7-1
7.2	DISPARITY RATIOS METHODOLOGY	7-1
7.3	DISPARITIES IN ARCHITECTURE AND ENGINEERING.....	7-2
7.4	DISPARITIES IN CONSTRUCTION AND CONSTRUCTION-RELATED SERVICES	7-6
7.5	DISPARITIES IN PROFESSIONAL SERVICES	7-10
7.6	DISPARITIES IN NON-PROFESSIONAL SERVICES...	7-14
7.7	DISPARITIES IN GOODS & SUPPLIES	7-18
7.8	SUMMARY OF FINDINGS.....	7-22

CHAPTER 8: CAPACITY AND REGRESSION ANALYSIS 8-1

8.1	INTRODUCTION	8-1
8.2	CAPACITY ANALYSIS.....	8-1
8.3	MULTIVARIATE REGRESSION ANALYSIS.....	8-65
8.4	DISPARITIES IN BUSINESS FORMATION: PUMS ANALYSIS.....	8-70
8.5	SUMMARY OF FINDINGS.....	8-81

CHAPTER 9: ANECDOTAL COMMENTS FROM THE MARKETPLACE 9-1

9.1	INTRODUCTION	9-1
9.2	INTERVIEW METHODOLOGY.....	9-2
9.3	ANECDOTAL INTERVIEW FINDINGS	9-4
9.4	SUMMARY OF FINDINGS	9-15

CHAPTER 10: MARKETPLACE ANALYSIS 10-1

10.1	INTRODUCTION	10-1
10.2	DEMOGRAPHIC & ECONOMIC PROFILE OF THE RELEVANT MARKET.....	10-2
10.3	EDUCATION & TRAINING: PATHWAYS TO THE CONSTRUCTION SECTOR	10-5
10.4	ANALYSIS OF DODGE GENERAL CONSTRUCTION DATA	10-18
10.5	CITY OF KNOXVILLE BUSINESS LICENSE ANALYSIS	10-23
10.6	SUMMARY OF FINDINGS.....	10-26

CHAPTER 11: RACE NEUTRAL ANALYSIS 11-1

11.1	INTRODUCTION	11-1
11.2	METHODOLOGY	11-2
11.3	DISCUSSION OF RACE-NEUTRAL PROGRAMS.....	11-2
11.4	ANECDOTAL COMMENTS FROM AGENCY EXECUTIVES, MANAGERS, AND DIRECTORS	11-19
11.5	SUMMARY OF FINDINGS.....	11-24

CHAPTER 12: CONCLUSIONS AND RECOMMENDATIONS 12-1

12.1	INTRODUCTION	12-1
12.2	CONCLUSIONS REGARDING RACE- AND GENDER-CONSCIOUS GOALS	12-1
12.3	RECOMMENDATIONS.....	12-3
12.4	SUMMARY OF FINDINGS.....	12-35

APPENDIXA-1

List of Tables

EXECUTIVE SUMMARY

TABLE E.1:
SUMMARY OF RELEVANT MARKET DETERMINATION.....E-13

TABLE E.2:
SUMMARY TABLE - RWASM LEVEL 2 AVAILABILITY
PERCENTAGE REPRESENTATION, RELEVANT MARKET;
FY 2017 – FY 2021 E-15

TABLE E.3:
SUMMARY TABLE – DATA AXLE AVAILABILITY, RELEVANT
MARKET, 2021 E-16

TABLE E.4:
M/WBE UTILIZATION IN PERCENT OF DOLLARS OF
PURCHASE ORDERS, PAYMENTS, AND CONTRACT AWARDS,
SUMMARY OF M/WBE UTILIZATION; FY 2017 - FY 2021, BY
RELEVANT MARKET E-18

TABLE E.5:
UTILIZATION IN DOLLARS OF PURCHASE ORDERS,
PAYMENTS, AND CONTRACT AWARDS SUMMARY OF
UTILIZATION; FY 2017 – FY 2021 BY
RELEVANT MARKET E-19

TABLE E.6:
SUMMARY DISPARITY RATIOS BY RACE, ETHNICITY, AND
GENDER - UTILIZATION VS. RWASM AVAILABILITY LEVEL 2,
RELEVANT MARKET, FY 2017 - FY 2021 E-20

TABLE E.7:
INFERENCE OF DISCRIMINATION BASED ON FINDINGS
OF STATISTICALLY SIGNIFICANT DISPARITY BY
RACE/ETHNICITY/GENDER BY PROCUREMENT TYPE
FOR THE CITY OF KNOXVILLE E-31

CHAPTER 4: STATISTICAL METHODOLOGY

TABLE 4.1:
CONTRACT DISTRIBUTION ACROSS
PROCUREMENT TYPES 4-28

TABLE 4.2:
PURCHASE ORDER PROCUREMENT TYPE
REALLOCATION..... 4-30

CHAPTER 5: STATISTICAL ANALYSIS OF RELEVANT MARKET AND MBE AVAILABILITY

TABLE 5.1:
SUMMARY OF RELEVANT MARKET DETERMINATION.....5-3

TABLE 5.2:
RELEVANT MARKET SUMMARY: ARCHITECTURE AND
ENGINEERING; FY 2017 - FY 2021.....5-3

TABLE 5.3:
CONSTRUCTION AND CONSTRUCTION-RELATED SERVICES,
FY 2017 - FY 2021..... 5-4

TABLE 5.4:
PROFESSIONAL SERVICES, FY 2017 - FY 20215-4

TABLE 5.5:
NON-PROFESSIONAL SERVICES, FY 2017 - FY 2021.....5-5

TABLE 5.6:
GOODS & SUPPLIES, FY 2017 - FY 2021.....5-5

TABLE 5.7:
RWASM AVAILABILITY: LEVELS 1-3, TOTAL AVAILABILITY,
NATIONWIDE, FY 2017 - FY 2021..... 5-10

TABLE 5.8:
DATA AXLE AVAILABILITY, TOTAL AVAILABILITY,
NATIONWIDE, 2021 5-11

TABLE 5.9:
RWASM AVAILABILITY: LEVELS 1-3, ARCHITECTURE AND
ENGINEERING, CITY OF KNOXVILLE, FY 2017-FY 2021 ... 5-12

TABLE 5.10:
DATA AXLE AVAILABILITY, ARCHITECTURE AND
ENGINEERING, CITY OF KNOXVILLE, 2021 5-13

TABLE 5.11:
RWASM AVAILABILITY: LEVELS 1-23 CONSTRUCTION AND
CONSTRUCTION-RELATED SERVICES, KNOXVILLE, TN MSA,
FY 2017 - FY 2021..... 5-14

TABLE 5.12:
DATA AXLE AVAILABILITY, CONSTRUCTION AND
CONSTRUCTION-RELATED SERVICES KNOXVILLE,
TN MSA, 2021 5-15

TABLE 5.13:
RWASM AVAILABILITY: LEVELS 1-3, PROFESSIONAL SERVICES,
STATE OF TENNESSEE, FY 2017 - FY 2021 5-16

List of Tables (cont'd)

TABLE 5.14:
DATA AXLE AVAILABILITY, PROFESSIONAL SERVICES,
STATE OF TENNESSEE, 2021 5-17

TABLE 5.15:
RWASM AVAILABILITY: LEVELS 1-3, NON-PROFESSIONAL
SERVICES, NATIONWIDE, FY 2017-FY 2021..... 5-18

TABLE 5.16:
DATA AXLE AVAILABILITY, NON-PROFESSIONAL
SERVICES, NATIONWIDE, 2021 5-19

TABLE 5.17:
RWASM AVAILABILITY: LEVELS 1-3, GOODS & SUPPLIES,
NATIONWIDE, FY 2017 - FY 2021..... 5-20

TABLE 5.18:
DATA AXLE AVAILABILITY, GOODS & SUPPLIES,
NATIONWIDE, 2021 5-21

TABLE 5.19:
UMMARY TABLE - RWASM LEVEL 2 AVAILABILITY
PERCENTAGE PARTICIPATION, RELEVANT MARKET;
FY 2017 – FY 2021 5-23

TABLE 5.20:
SUMMARY TABLE – DATA AXLE AVAILABILITY
RELEVANT MARKET, 2021 5-24

CHAPTER 6: STATISTICAL ANALYSIS OF MBE UTILIZATION

TABLE 6.1:
TOTAL UTILIZATION, CONTRACT AWARDS—DOLLARS,
NATIONWIDE, FY 2017 – FY 20216-5

TABLE 6.2:
TOTAL UTILIZATION, PURCHASE ORDERS—DOLLARS,
NATIONWIDE, FY 2017 – FY 20216-6

TABLE 6.3:
TOTAL UTILIZATION, ACCOUNTS PAYABLE—DOLLARS,
NATIONWIDE, FY 2017 – FY 20216-7

TABLE 6.4:
SUMMARY OF RELEVANT MARKET DETERMINATION.....6-8

TABLE 6.5:
CONTRACT AWARDS – PURE PRIME + SUBCONTRACTOR
DOLLARS, NATIONWIDE, FY 2017 – FY 20216-9

TABLE 6.6:
ARCHITECTURE & ENGINEERING UTILIZATION, PURCHASE
ORDER — DOLLARS, CITY OF KNOXVILLE,
FY 2017 – FY 2021 6-11

TABLE 6.7:
ARCHITECTURE & ENGINEERING UTILIZATION
COMPARISON, CONTRACT AWARDS, PURCHASE ORDERS,
PAYMENTS — DOLLARS, CITY OF KNOXVILLE,
FY 2017 – FY 2021 6-13

TABLE 6.8:
CONSTRUCTION AND CONSTRUCTION-RELATED SERVICES
UTILIZATION, PAYMENTS — DOLLARS, KNOXVILLE, TN MSA,
FY 2017 – FY 2021 6-15

TABLE 6.9:
CONSTRUCTION AND CONSTRUCTION-RELATED SERVICES
UTILIZATION COMPARISON, CONTRACT AWARDS,
PURCHASE ORDERS, PAYMENTS—DOLLARS, KNOXVILLE,
TN MSA, FY 2017 – 2021..... 6-17

TABLE 6.10:
PROFESSIONAL SERVICES UTILIZATION, PURCHASE
ORDER—DOLLARS, STATE OF TENNESSEE,
FY 2017 – FY 2021 6-19

TABLE 6.11:
PROFESSIONAL SERVICES UTILIZATION, COMPARISON,
CONTRACT AWARDS, PURCHASE ORDERS, PAYMENTS—
STATE OF TENNESSEE, FY 2017 – FY 2021..... 6-21

TABLE 6.12:
NON-PROFESSIONAL SERVICES UTILIZATION, PURCHASE
ORDER—DOLLARS, NATIONWIDE,
FY 2017 – FY 2021 6-23

TABLE 6.13:
NON-PROFESSIONAL SERVICES UTILIZATION, COMPARISON,
CONTRACT AWARDS, PURCHASE ORDERS, PAYMENTS—
DOLLARS NATIONWIDE, FY 2017 – FY 2021 6-25

TABLE 6.14:
GOODS & SUPPLIES UTILIZATION, PURCHASE ORDER—
DOLLARS, NATIONWIDE, FY 2017 – FY 2021 6-27

TABLE 6.15:
GOODS & SUPPLIES UTILIZATION, COMPARISON, CONTRACT
AWARDS, PURCHASE ORDERS, PAYMENTS—DOLLARS,
NATIONWIDE, FY 2017 – FY 2021 6-29

List of Tables (cont'd)

TABLE 6.16: ARCHITECTURE & ENGINEERING UTILIZATION THRESHOLDS, PURCHASE ORDERS—DOLLARS, CITY OF KNOXVILLE, FY 2017 – FY 2021	6-31,32
TABLE 6.17: CONSTRUCTION AND CONSTRUCTION-RELATED SERVICES UTILIZATION THRESHOLDS, PURCHASE ORDERS—DOLLARS, KNOXVILLE, TN MSA, FY 2017 – FY 2021	6-34, 35
TABLE 6.18: PROFESSIONAL UTILIZATION THRESHOLDS, PURCHASE ORDERS—DOLLARS, STATE OF TENNESSEE, FY 2017 – FY 2021	6-37, 38
TABLE 6.19: NON-PROFESSIONAL SERVICES UTILIZATION THRESHOLDS, PURCHASE ORDERS—DOLLARS, NATIONWIDE, FY 2017 – FY 2021	6-40, 41
TABLE 6.20: GOODS & SUPPLIES UTILIZATION THRESHOLDS, PURCHASE ORDERS—DOLLARS, NATIONWIDE, FY 2017 – FY 2021	6-43, 44
TABLE 6.21: TOP TEN BIDDERS, ARCHITECTURE & ENGINEERING, NATIONWIDE; FY 2017 - FY 2021	6-45
TABLE 6.22: TOP TEN AWARDEES, ARCHITECTURE & ENGINEERING, CONTRACT AWARDS, NATIONWIDE, FY 2017 - FY 2021	6-46
TABLE 6.23: SUCCESS RATE OF TOP TEN AWARDEES: ARCHITECTURE & ENGINEERING, NATIONWIDE; FY 2017 - FY 2021	6-47
TABLE 6.24: TOP TEN BIDDERS, CONSTRUCTION AND CONSTRUCTION- RELATED SERVICES, NATIONWIDE; FY 2017 - FY 2021 ...	6-48
TABLE 6.25: TOP TEN AWARDEES, CONSTRUCTION AND CONSTRUCTION-RELATED SERVICES, CONTRACT AWARDS, NATIONWIDE; FY 2017--FY 2021	6-49
TABLE 6.26: SUCCESS RATE OF TOP TEN AWARDEES: CONSTRUCTION AND CONSTRUCTION-RELATED SERVICES, NATIONWIDE; FY 2017 - FY 2021	6-50
TABLE 6.27: TOP TEN BIDDERS, PROFESSIONAL SERVICES, NATIONWIDE; FY 2017 - FY 2021	6-51
TABLE 6.28: TOP TEN AWARDEES, PROFESSIONAL SERVICES, CONTRACT AWARDS, NATIONWIDE; FY 2017 - FY 2021	6-52
TABLE 6.29: SUCCESS RATE OF TOP TEN AWARDEES: PROFESSIONAL SERVICES, STATE OF TENNESSEE; FY 2017 - FY 2021	6-53
TABLE 6.30: TOP TEN BIDDERS, NON-PROFESSIONAL SERVICES, NATIONWIDE; FY 2017 - FY 2021	6-54
TABLE 6.31: TOP TEN AWARDEES, NON-PROFESSIONAL SERVICES, CONTRACT AWARDS, NATIONWIDE FY 2017 - FY 2021	6-55
TABLE 6.32: SUCCESS RATE OF TOP TEN AWARDEES: NON-PROFESSIONAL SERVICES, NATIONWIDE; FY 2017 - FY 2021	6-56
TABLE 6.33: TOP TEN BIDDERS, GOODS & SUPPLIES, NATIONWIDE; FY 2017 - FY 2021	6-57
TABLE 6.34: TOP TEN AWARDEES, GOODS & SUPPLIES, CONTRACT AWARDS, NATIONWIDE; FY 2017 - FY 2021	6-58
TABLE 6.35: SUCCESS RATE OF TOP TEN AWARDEES: GOODS & SUPPLIES, NATIONWIDE; FY 2017 - FY 2021	6-59
TABLE 6.36: M/WBE UTILIZATION IN PERCENT OF DOLLARS OF PURCHASE ORDERS, PAYMENTS AND CONTRACT AWARDS, SUMMARY OF MWBE UTILIZATION; FY 2017 – FY 2021, BY RELEVANT MARKET	6-61
TABLE 6.37: UTILIZATION IN DOLLARS OF PURCHASE ORDERS, PAYMENTS, AND CONTRACT AWARDS, SUMMARY OF MWBE UTILIZATION; FY 2017 – FY 2021, BY RELEVANT MARKET	6-62

List of Tables (cont'd)

CHAPTER 7: STATISTICAL ANALYSIS OF MBE DISPARITY IN CONTRACTING

TABLE 7.1:
PURCHASE ORDER UTILIZATION VS. RWASM AVAILABILITY
LEVEL 2, ARCHITECTURE & ENGINEERING, CITY OF
KNOXVILLE, FY 2017 – FY 20217-3

TABLE 7.2:
ARCHITECTURE & ENGINEERING, SUMMARY DISPARITY
RATIOS BY RACE, ETHNICITY AND GENDER, UTILIZATION VS.
RWASM AVAILABILITY LEVEL 2, CITY OF KNOXVILLE
FY 2017—FY 20217-4

TABLE 7.3:
PURCHASE ORDER UTILIZATION VS. DATA AXLE
AVAILABILITY, ARCHITECTURE & ENGINEERING,
CITY OF KNOXVILLE, FY 2017—FY 2021.....7-5

TABLE 7.4:
PAYMENTS UTILIZATION VS. RWASM AVAILABILITY, LEVEL 2,
CONSTRUCTION AND CONSTRUCTION-RELATED SERVICES,
KNOXVILLE, TN MSA, FY 2017 – FY 20217-7

TABLE 7.5:
CONSTRUCTION AND CONSTRUCTION-RELATED SERVICES,
SUMMARY DISPARITY RATIOS BY RACE, ETHNICITY AND
GENDER, UTILIZATION VS. RWASM AVAILABILITY LEVEL 2,
CITY OF KNOXVILLE, TN MSA; FY 2017—FY 2021.....7-8

TABLE 7.6:
CONTRACT AWARDS UTILIZATION VS. DATA AXLE
AVAILABILITY, CONSTRUCTION AND CONSTRUCTION-
RELATED SERVICES, CITY OF KNOXVILLE, TN MSA;
FY 2017—FY 20217-9

TABLE 7.7:
PURCHASE ORDER UTILIZATION VS. RWASM AVAILABILITY
LEVEL 2, PROFESSIONAL SERVICES, STATE OF TENNESSEE;
FY 2017—FY 2021 7-11

TABLE 7.8:
NON-PROFESSIONAL SERVICES, SUMMARY DISPARITY
RATIOS BY RACE, ETHNICITY AND GENDER, UTILIZATION VS.
RWASM AVAILABILITY LEVEL 2, STATE OF TENNESSEE;
FY 2017—FY 2021 7-12

TABLE 7.9:
PURCHASE ORDER UTILIZATION VS. DATA AXLE
AVAILABILITY, PROFESSIONAL SERVICES, STATE OF
TENNESSEE; FY 2017—FY 2021 7-13

TABLE 7.10:
PURCHASE ORDER UTILIZATION VS. RWASM AVAILABILITY
LEVEL 2, NON-PROFESSIONAL SERVICES NATIONWIDE;
FY 2017—FY 2021 7-15

TABLE 7.11:
NON-PROFESSIONAL SERVICES, SUMMARY DISPARITY
RATIOS BY RACE, ETHNICITY, AND GENDER, UTILIZATION VS.
RWASM AVAILABILITY LEVEL 2, NATIONWIDE;
FY 2017—FY 2021 7-16

TABLE 7.12:
PURCHASE ORDER UTILIZATION VS. DATA AXLE
AVAILABILITY, NON-PROFESSIONAL SERVICES,
NATIONWIDE; FY 2017—FY 2021 7-17

TABLE 7.13:
PURCHASE ORDER UTILIZATION VS. RWASM AVAILABILITY
LEVEL 2, GOODS & SUPPLIES, NATIONWIDE;
FY 2017—FY 2021 7-19

TABLE 7.14:
GOODS & SUPPLIES, SUMMARY DISPARITY RATIOS BY
RACE, ETHNICITY AND GENDER, UTILIZATION VS. RWASM
AVAILABILITY LEVEL 2, NATIONWIDE;
FY 2017—FY 2021 7-20

TABLE 7.15:
PURCHASE ORDER UTILIZATION VS. DATA AXLE
AVAILABILITY, GOODS & SUPPLIES, NATIONWIDE;
FY 2017—FY 2021 7-21

TABLE 7.16:
SUMMARY DISPARITY RATIOS BY RACE, ETHNICITY AND
GENDER, UTILIZATION VS. RWASM AVAILABILITY LEVEL 2,
RELEVANT MARKET; FY 2017—FY 2021 7-23

CHAPTER 8: CAPACITY AND REGRESSION ANALYSIS

TABLE 8.1:
DATA AXLE CAPACITY BASED ON TOTAL NUMBER OF
EMPLOYEES, KNOXVILLE, TN MSA, 20228-4, 5

TABLE 8.2:
DATA AXLE CAPACITY BASED ON TOTAL NUMBER OF
EMPLOYEES ARCHITECTURE AND ENGINEERING KNOXVILLE,
TN MSA, 2022 8-6, 7

TABLE 8.3:
DATA AXLE CAPACITY BASED ON TOTAL NUMBER OF
EMPLOYEES CONSTRUCTION KNOXVILLE,
TN MSA, 20228-8, 9

List of Tables (cont'd)

TABLE 8.4: DATA AXLE CAPACITY BASED ON TOTAL NUMBER OF EMPLOYEES PROFESSIONAL SERVICES KNOXVILLE, TN MSA, 2022	8-10, 11
TABLE 8.5: DATA AXLE CAPACITY BASED ON TOTAL NUMBER OF EMPLOYEES NON-PROFESSIONAL, KNOXVILLE, TN MSA, 2022	8-12, 13
TABLE 8.6: DATA AXLE CAPACITY BASED ON TOTAL NUMBER OF EMPLOYEES GOODS AND SUPPLIES KNOXVILLE, TN MSA, 2022	8-14, 15
TABLE 8.7: DATA AXLE CAPACITY BASED ON SALES VOLUME TOTAL KNOXVILLE, TN MSA, 2022	8-18, 19
TABLE 8.8: DATA AXLE CAPACITY BASED ON SALES VOLUME ARCHITECTURE AND ENGINEERING KNOXVILLE, TN MSA, 2022	8-20, 21
TABLE 8.9: DATA AXLE, CAPACITY BASED ON SALES VOLUME, CONSTRUCTION, KNOXVILLE, TN MSA, 2022	8-22, 23
TABLE 8.10: DATA AXLE, CAPACITY BASED ON SALES VOLUME, PROFESSIONAL SERVICES, KNOXVILLE, TN MSA, 2022	8-24, 25
TABLE 8.11: DATA AXLE, CAPACITY BASED ON SALES VOLUME, NON-PROFESSIONAL SERVICES, KNOXVILLE, TN MSA, 2022	8-26, 27
TABLE 8.12: DATA AXLE, CAPACITY BASED ON SALES VOLUME, GOODS AND SUPPLIES, KNOXVILLE, TN MSA, 2022	8-28-29
TABLE 8.13: Q1: HAS YOUR COMPANY CONTRACTED WITH ANY OF THE FOLLOWING PUBLIC ENTITIES IN THE PAST FIVE YEARS?	8-31
TABLE 8.14: Q2: HOW LONG AGO DID YOUR COMPANY FIRST CONTRACT WITH THE CITY OF KNOXVILLE?	8-31
TABLE 8.15: Q2A: HOW LONG AGO DID YOUR COMPANY FIRST CONTRACT WITH ANY PUBLIC SECTOR AGENCY?	8-32
TABLE 8.16: Q2B: HOW LONG AGO DID YOUR COMPANY FIRST CONTRACT WITH ANY PRIVATE SECTOR COMPANY?	8-32
TABLE 8.17: Q3: WHAT TYPE OF ORGANIZATION IS YOUR COMPANY?	8-33
TABLE 8.18: Q4: WHAT IS YOUR PRIMARY MARKET AREA (AREA IN WHICH YOU SELL YOUR GOODS AND/OR SERVICES?	8-33
TABLE 8.19: Q5: WHICH ONE OF THE FOLLOWING INDUSTRIES BEST CATEGORIZES WHAT YOUR COMPANY DOES?	8-34
TABLE 8.20: Q6: HOW MANY FULL-TIME, FULL-YEAR EMPLOYEES DOES YOUR COMPANY HAVE PRESENTLY ACROSS ALL LOCATIONS IT CONTROLS AND OPERATES? YOUR BEST ESTIMATE IS FINE.	8-35
TABLE 8.21: Q7A: HOW MANY YEARS HAS YOUR FIRM BEEN IN BUSINESS?	8-35
TABLE 8.22: Q7B: WHEN YOUR BUSINESS WAS ESTABLISHED WAS IT...?	8-36
TABLE 8.23: Q8: WHICH OF THE FOLLOWING CATEGORIES BEST DESCRIBES YOUR COMPANY'S TOTAL INITIAL CAPITAL INVESTMENT FOR STARTUP? YOUR BEST ESTIMATE IS FINE.	8-36
TABLE 8.24: Q9: WHAT SOURCES OF FUNDING WERE USED AS START-UP CAPITAL FOR YOUR COMPANY?	8-37
TABLE 8.25: Q9B: YOU MENTIONED A FINANCIAL INSTITUTION WAS USED AS A SOURCE OF FUNDING FOR YOUR COMPANY. TO THE BEST OF YOUR KNOWLEDGE, WERE ANY A MINORITY- OWNED FINANCIAL INSTITUTION?	8-37

List of Tables (cont'd)

TABLE 8.26:

Q12A: WHAT IS HIS/HER CURRENT AGE? YOUR BEST ESTIMATE IS FINE. 8-38

TABLE 8.27:

Q12B: WHAT IS HIS/HER CURRENT MARITAL STATUS? 8-38

TABLE 8.28:

Q12: WHAT IS THE HIGHEST DEGREE OR LEVEL OF EDUCATION THAT YOUR PRINCIPAL HAS COMPLETED?..... 8-39

TABLE 8.29:

Q14: PRIOR TO THE PRINCIPAL’S INVOLVEMENT WITH YOUR COMPANY, HOW MANY YEARS DID HE OR SHE WORK IN THE SAME PROFESSION THAT THE COMPANY SPECIALIZES IN PRESENTLY? 8-39

TABLE 8.30:

Q18: WHICH OF THE FOLLOWING CATEGORIES BEST DESCRIBES YOUR COMPANY’S TOTAL GROSS RECEIPTS FROM ALL SOURCES FOR FY 2021? 8-40

TABLE 8.31:

Q26: WHICH OF THE FOLLOWING PROGRAMS TO OBTAIN COMPANY FUNDING/FINANCING, IF ANY, HAS YOUR COMPANY USED IN THE PAST FIVE YEARS? 8-41

TABLE 8.32:

Q19: WHICH, IF ANY, OF THE FOLLOWING HAS YOUR COMPANY APPLIED FOR IN THE PAST FIVE YEARS?..... 8-41

TABLE 8.33:

Q20: HOW MANY TIMES IN THE PAST FIVE YEARS HAS YOUR COMPANY APPLIED FOR A BOND? 8-42

TABLE 8.34:

HOW MANY TIMES IN THE PAST FIVE YEARS HAS YOUR COMPANY BEEN DENIED FOR A BOND?..... 8-42

TABLE 8.35:

Q22: HOW MANY TIMES IN THE PAST FIVE YEARS HAS YOUR COMPANY APPLIED FOR A LOAN/LINE OF CREDIT? 8-43

TABLE 8.36:

Q23: HOW MANY TIMES IN THE PAST FIVE YEARS HAS YOUR COMPANY BEEN DENIED A LOAN/LINE OF CREDIT? 8-43

TABLE 8.37:

Q24: WHAT CHALLENGES, IF ANY, DID YOUR COMPANY ENCOUNTER IN ATTEMPTING TO SECURE A LOAN OR LINE OF CREDIT FROM A FINANCIAL INSTITUTION IN THE PAST FIVE YEARS? 8-44

TABLE 8.38:

Q26A: DOES YOUR COMPANY BID PROJECTS AS A PRIME OR SUBCONTRACTOR? 8-44

TABLE 8.39:

Q27A: THINKING ABOUT ALL OF THE BIDS (SUPPLYING A QUOTE OR PROPOSAL) YOUR COMPANY HAS SUBMITTED IN THE PAST 2 YEARS AS A PRIME CONTRACTOR OR CONSULTANT, WHAT PERCENTAGE HAS GONE TO EACH OF THE FOLLOWING AGENCY OR COMPANY TYPES? – CITY OF KNOXVILLE 8-45

TABLE 8.40:

Q27B: THINKING ABOUT ALL OF THE BIDS (SUPPLYING A QUOTE OR PROPOSAL) YOUR COMPANY HAS SUBMITTED IN THE PAST 2 YEARS AS A PRIME CONTRACTOR (OR CONSULTANT), WHAT PERCENTAGE HAS GONE TO EACH OF THE FOLLOWING AGENCY OR COMPANY TYPES?- OTHER PUBLIC SECTOR AGENCIES IN TENNESSEE..... 8-46

TABLE 8.41:

Q27C: THINKING ABOUT ALL OF THE BIDS (SUPPLYING A QUOTE OR PROPOSAL) YOUR COMPANY HAS SUBMITTED IN THE PAST 2 YEARS AS A PRIME CONTRACTOR OR CONSULTANT, WHAT PERCENTAGE HAS GONE TO EACH OF THE FOLLOWING AGENCY OR COMPANY TYPES? – OTHER PUBLIC SECTOR AGENCIES OUTSIDE OF TENNESSEE 8-47

TABLE 8.42:

Q27D: THINKING ABOUT ALL OF THE BIDS (SUPPLYING A QUOTE OR PROPOSAL) YOUR COMPANY HAS SUBMITTED IN THE PAST 2 YEARS AS A PRIME CONTRACTOR OR CONSULTANT, WHAT PERCENTAGE HAS GONE TO EACH OF THE FOLLOWING AGENCY OR COMPANY TYPES? – PRIVATE SECTOR AGENCIES/COMPANIES 8-48

TABLE 8.43:

Q27AA: IF YOU DID NOT SUBMIT A BID AS A PRIME CONTRACTOR/CONSULTANT THE THE CITY OF KNOXVILLE IN THE PAST 2 YEARS, WHY NOT?..... 8-49

TABLE 8.44:

Q29A: THINKING ABOUT ALL OF THE BIDS (SUPPLYING A QUOTE OR PROPOSAL) YOUR COMPANY HAS SUBMITTED IN THE PAST 2 YEARS AS A SUBCONTRACTOR OR SUBCONSULTANT, WHAT PERCENTAGE HAS GONE TO EACH OF THE FOLLOWING AGENCY OR COMPANY TYPES? – CITY OF KNOXVILLE 8-50

List of Tables (cont'd)

TABLE 8.45:

Q29B: THINKING ABOUT ALL OF THE BIDS (SUPPLYING A QUOTE OR PROPOSAL) YOUR COMPANY HAS SUBMITTED IN THE PAST 2 YEARS AS A SUBCONTRACTOR OR SUBCONSULTANT, WHAT PERCENTAGE HAS GONE TO EACH OF THE FOLLOWING AGENCY OR COMPANY TYPES? – OTHER PUBLIC SECTOR AGENCIES IN TENNESSEE..... 8-50

TABLE 8.46:

Q29C: THINKING ABOUT ALL OF THE BIDS (SUPPLYING A QUOTE OR PROPOSAL) YOUR COMPANY HAS SUBMITTED IN THE PAST 2 YEARS AS A SUBCONTRACTOR OR SUBCONSULTANT, WHAT PERCENTAGE HAS GONE TO EACH OF THE FOLLOWING AGENCY OR COMPANY TYPES? – OTHER PUBLIC SECTOR AGENCIES OUTSIDE TENNESSEE 8-51

TABLE 8.47:

Q29D: THINKING ABOUT ALL OF THE BIDS (SUPPLYING A QUOTE OR PROPOSAL) YOUR COMPANY HAS SUBMITTED IN THE PAST 2 YEARS AS A SUBCONTRACTOR OR SUBCONSULTANT, WHAT PERCENTAGE HAS GONE TO EACH OF THE FOLLOWING AGENCY OR COMPANY TYPES? – PRIVATE SECTOR AGENCIES/COMPANIES 8-52

TABLE 8.48:

Q29AA: IF YOU DID NOT SUBMIT A SUB-BID AS A SUBCONTRACTOR/SUB-CONSULTANT TO A PRIME CONTRACTOR/CONSULTANT ON A CITY OF KNOXVILLE PROJECT IN THE PAST 2 YEARS, WHY NOT?..... 8-53

TABLE 8.49:

Q28: IN THE PAST 2 YEARS, HAS YOUR COMPANY WON A CONTRACT OR BEEN AWARDED A CONTRACT AS A PRIME CONTRACTOR (CONSULTANT) ON CONTRACTS IN OR WITH ANY OF THE FOLLOWING?..... 8-54

TABLE 8.50:

Q30: IN THE PAST 2 YEARS, HAS YOUR COMPANY WON A CONTRACT OR BEEN AWARDED A CONTRACT AS A SUBCONTRACTOR (SUBCONSULTANT) ON CONTRACTS FOR ANY OF THE FOLLOWING? 8-54

TABLE 8.51:

Q31: WHICH OF THE FOLLOWING CATEGORIES BEST DESCRIBES THE AVERAGE BID RANGE THAT YOUR COMPANY HAS SUBMITTED IN THE PAST 2 YEARS? 8-55

TABLE 8.52:

Q32: WHICH OF THE FOLLOWING CATEGORIES BEST DESCRIBES THE SINGLE LARGEST CONTRACT DOLLAR AWARD RECEIVED AS A PRIME CONTRACTOR (CONSULTANT) FROM THE CITY OF KNOXVILLE?..... 8-55

TABLE 8.53:

Q33: WHICH OF THE FOLLOWING CATEGORIES BEST DESCRIBES THE SINGLE LARGEST CONTRACT DOLLAR AWARD RECEIVED AS A SUBCONTRACTOR (SUBCONSULTANT) FOR A CITY OF KNOXVILLE CONTRACT?..... 8-56

TABLE 8.54:

Q34: WHICH OF THE FOLLOWING CATEGORIES BEST DESCRIBES THE SINGLE LARGEST CONTRACT DOLLAR AWARD RECEIVED AS A PRIME CONTRACTOR FROM A PRIVATE SECTOR AGENCY OR COMPANY?..... 8-56

TABLE 8.55:

Q35: WHICH OF THE FOLLOWING CATEGORIES BEST DESCRIBES THE SINGLE LARGEST CONTRACT DOLLAR AWARD RECEIVED AS A SUBCONTRACTOR FROM A PRIVATE SECTOR AGENCY OR COMPANY?..... 8-57

TABLE 8.56:

Q36: WHICH OF THE FOLLOWING CATEGORIES BEST DESCRIBES THE SINGLE LARGEST CONTRACT DOLLAR AWARD RECEIVED AS A PRIME CONTRACTOR FROM A PUBLIC SECTOR AGENCY OR COMPANY? 8-57

TABLE 8.57:

Q37: WHICH OF THE FOLLOWING CATEGORIES BEST DESCRIBES THE SINGLE LARGEST CONTRACT DOLLAR AWARD RECEIVED AS A SUBCONTRACTOR FROM A PUBLIC SECTOR AGENCY OR COMPANY?..... 8-58

TABLE 8.58:

Q38: THE CITY OF KNOXVILLE ADMINISTERS A PROGRAM TARGETED TO PROMOTE THE INCLUSION OF DISADVANTAGED BUSINESS ENTERPRISES AND SMALL BUSINESS ENTERPRISES. WHAT IS THE GENERAL CONSENSUS OF OPINION IN YOUR COMPANY’S LEADERSHIP AS TO THE GENERAL FAIRNESS OF THIS POLICY?..... 8-58

List of Tables (cont'd)

TABLE 8.59: Q38B: THE CITY OF KNOXVILLE ADMINISTERS A PROGRAM TARGETED TO DISCOURAGE DISCRIMINATION AGAINST MINORITY/WOMEN-OWNED BUSINESS ENTERPRISES. WHAT IS THE GENERAL CONSENSUS OF OPINION IN YOUR COMPANY’S LEADERSHIP AS TO THE GENERAL FAIRNESS OF THIS POLICY?	8-59	TABLE 8.69: RESULTS OF THE BINARY LOGISTIC REGRESSION ANALYSIS FOR CONSTRUCTION ONLY	8-76
TABLE 8.60: Q42: HAS YOUR COMPANY EVER EXPERIENCED ANY OF THE FOLLOWING ISSUES WHILE BIDDING AS A PRIME OR SUBCONTRACTOR?	8-60	TABLE 8.70: “ODDS RATIO” FOR SELF-EMPLOYMENT FOR MINORITY GROUPS RELATIVE TO NON-MINORITY MALES CONTROLLING FOR ECONOMIC AND DEMOGRAPHIC FACTORS – NON-PROFESSIONAL SERVICES ONLY.....	8-77
TABLE 8.61: Q42: HAS YOUR COMPANY EVER EXPERIENCED ANY OF THE FOLLOWING ISSUES WHILE BIDDING AS A PRIME OR SUBCONTRACTOR?	8-62	TABLE 8.71: RESULTS OF THE BINARY LOGISTIC REGRESSION ANALYSIS FOR NON-PROFESSIONAL SERVICES ONLY	8-77
TABLE 8.62: Q44A: PLEASE USE THE SPACE BELOW TO RECORD ANY OTHER COMMENTS YOU MAY WISH TO SHARE ON THE SUBJECT OF THE CITY OF KNOXVILLE AND BIDDING AND AWARD OPPORTUNITIES FOR DBES OR SBES. (RESPONSES WERE CODED FROM AN OPEN-ENDED QUESTION.).....	8-63	TABLE 8.72: LINEAR REGRESSION RESULTS FOR THE DETERMINANTS OF SELF-EMPLOYMENT INCOME BY RACE AND GENDER FOR FULL SAMPLE	8-79
TABLE 8.63: Q10: IS AT LEAST 51% OF YOUR FIRM OWNED AND CONTROLLED BY ONE OR MORE WOMEN?	8-63	TABLE 8.73: LINEAR REGRESSION RESULTS FOR THE DETERMINANTS OF SELF-EMPLOYMENT INCOME BY RACE AND GENDER FOR CONSTRUCTION ONLY.....	8-80
TABLE 8.64: Q11: IS AT LEAST 51% OF YOUR FIRM OWNED AND CONTROLLED BY A MEMBER OF ONE OF THE FOLLOWING RACIAL/ETHNIC/GENDER GROUPS?	8-64	TABLE 8.74: LINEAR REGRESSION RESULTS FOR THE DETERMINANTS OF SELF-EMPLOYMENT INCOME BY RACE AND GENDER FOR NON-PROFESSIONAL SERVICES ONLY	8-80
TABLE 8.65: FINAL DESIGNATION	8-64	CHAPTER 9: ANECDOTAL COMMENTS FROM THE MARKETPLACE	
TABLE 8.66: “ODDS RATIO” FOR SELF-EMPLOYMENT FOR MINORITY GROUPS RELATIVE TO NON-MINORITY MALES CONTROLLING FOR ECONOMIC AND DEMOGRAPHIC FACTORS.....	8-74	TABLE 9.1: 1-ON-1 IN-DEPTH INTERVIEW AND FOCUS GROUP PARTICIPANTS BY RACE	9-1
TABLE 8.67: RESULTS OF THE BINARY LOGISTIC REGRESSION ANALYSIS FOR FULL SAMPLE.....	8-75	TABLE 9.2: 1-ON-1 IN-DEPTH INTERVIEW AND FOCUS GROUP PARTICIPANTS BY PROCUREMENT TYPE	9-2
TABLE 8.68: “ODDS RATIO” FOR SELF-EMPLOYMENT FOR MINORITY GROUPS RELATIVE TO NON-MINORITY MALES CONTROLLING FOR ECONOMIC AND DEMOGRAPHIC FACTORS – CONSTRUCTION ONLY	8-75	CHAPTER 10: MARKETPLACE ANALYSIS	
		TABLE 10.1: TOTAL POPULATION 16 YEARS AND OLDER BY RACE AND HISPANIC ORIGIN, CENSUS 2020	10-2
		TABLE 10.2: CIVILIAN LABOR FORCE TOTAL POPULATION 16 YEARS AND OLDER BY RACE AND HISPANIC ORIGIN, CENSUS 2020	10-5

List of Tables (cont'd)

TABLE 10.3:
EMPLOYMENT IN SELECTED APPRENTICABLE EEO
CONSTRUCTION OCCUPATIONS, BY HISPANIC ORIGIN AND
RACE, 2014-2018, TENNESSEE 10-8

TABLE 10.4:
EMPLOYMENT IN SELECTED APPRENTICABLE EEO
CONSTRUCTION OCCUPATIONS, BY HISPANIC ORIGIN AND
RACE, 2014-2018, KNOXVILLE, TN METRO AREA 10-9

TABLE 10.5:
EMPLOYMENT IN SELECTED APPRENTICABLE EEO
CONSTRUCTION OCCUPATIONS, BY HISPANIC ORIGIN AND
RACE, 2014-2018, KNOXVILLE CITY, TENNESSEE 10-10

TABLE 10.6:
EMPLOYMENT IN SELECTED APPRENTICEABLE EEO
PROFESSIONAL OCCUPATION, BY HISPANIC ORIGIN AND
RACE, 2014-2018, TENNESSEE 10-12, 13

TABLE 10.7:
EMPLOYMENT IN SELECTED APPRENTICABLE EEO
PROFESSIONAL OCCUPATION, BY HISPANIC ORIGIN AND
RACE, 2014-2018, KNOXVILLE, TN METRO AREA .. 10-14, 15

TABLE 10.8:
EMPLOYMENT IN SELECTED APPRENTICABLE EEO
PROFESSIONAL OCCUPATION, BY HISPANIC ORIGIN AND
RACE, 2014-2018, KNOXVILLE CITY, TENNESSEE 10-16, 17

TABLE 10.9:
COUNTS AND PROJECT VALUE OF UNIQUE PROJECTS, BY
PROJECT OWNER, STATE OF TENNESSEE, 2021 10-18

TABLE 10.10:
FIRMS AVAILABILITY BY ROLE, STATE OF TENNESSEE,
FY 2021..... 10-19, 20

TABLE 10.11:
DISTRIBUTION OF M/WBES BY BIDDER RANKING, BY
PROJECT OWNER: PUBLIC, STATE OF TENNESSEE,
FY 2021 10-21

TABLE 10.12:
DISTRIBUTION OF SM/WBES BY BIDDER RANKING, BY
PROJECT OWNER: PRIVATE, STATE OF TENNESSEE,
FY 2021..... 10-22

TABLE 10.13:
CITY OF KNOXVILLE BUSINESS LICENSE DATA,
FY 2017 – FY 2021 10-24, 25

CHAPTER 12: CONCLUSIONS AND RECOMMENDATIONS

TABLE 12.1:
INFERENCE OF DISCRIMINATION BASED ON FINDINGS
OF STATISTICALLY SIGNIFICANT DISPARITY, BY
RACE/ETHNICITY/GENDER, BY PROCUREMENT TYPE 12-2

TABLE 12.2:
CATEGORIES FOR RACE/ETHNICITY/GENDER-CONSCIOUS
AND RACE/ETHNICITY/GENDER NEUTRAL MEANS OF
ADDRESSING DISPARITY, BY PROCUREMENT TYPE..... 12-16

TABLE 12.3:
INFERENCE OF DISCRIMINATION BASED ON FINDINGS
OF STATISTICALLY SIGNIFICANT DISPARITY BY
RACE/ETHNICITY/GENDER 12-17

TABLE 12.4:
M³ CONSULTING’S SIX ESSENTIAL SMWBE AND SBE
PROGRAM ELEMENTS..... 12-23

TABLE 12.5
RWASM AND DISPARITY ANALYSIS EQUIVALENT 12-34

List of Figures

EXECUTIVE SUMMARY

FIGURE E.1:
RWASM AVAILABILITY MODEL E-9

FIGURE E.2:
CITY OF KNOXVILLE SPECIFIC RWASM
AVAILABILITY LEVELS E-10

FIGURE E.3:
DISPARITY RATIO INDICATING AREAS OF SIGNIFICANT
AND NON-SIGNIFICANT DISPARITY AND
OVERUTILIZATION E-12

CHAPTER 3: PROCUREMENT ANALYSIS

FIGURE 3.1:
TEN COMPONENTS OF AN INCLUSIVE AND SUSTAINABLE
PROCUREMENT SYSTEM 3-3, 4

FIGURE 3.2:
M³ CONSULTING SIX ESSENTIAL S/MOB/WOB/DBE
PROGRAM ELEMENTS 3-5

FIGURE 3.3:
CITY OF KNOXVILLE ORGANIZATIONAL CHART 3-8

FIGURE 3.4:
CITY OF KNOXVILLE PURCHASING DIVISION
ORGANIZATIONAL CHART 3-10

FIGURE 3.5:
CITY OF KNOXVILLE DEPARTMENTAL STAFF
RESPONSIBILITIES 3-12, 13, 14, 15

FIGURE 3.6:
AUTHORIZATION TO AWARD CONTRACTS 3-15

FIGURE 3.7:
ITB CONTRACT REQUIREMENTS MATRIX 3-17

FIGURE 3.8:
ANALYSIS OF POLICIES AND PROCEDURES 3-18

FIGURE 3.9:
CITY OF KNOXVILLE INFORMAL PURCHASING DOLLAR
VALUE THRESHOLDS 3-22

FIGURE 3.10:
CITY OF KNOXVILLE FORMAL PURCHASING DOLLAR
VALUE THRESHOLDS 3-26

CHAPTER 4: STATISTICAL METHODOLOGY

FIGURE 4.1:
RWASM AVAILABILITY MODEL 4-10

FIGURE 4.2:
CITY OF KNOXVILLE SPECIFIC RWASM
AVAILABILITY LEVELS 4-11

FIGURE 4.3:
RWASM AVAILABILITY ESTIMATE VENN DIAGRAM 4-11

FIGURE 4.4:
DISPARITY RATIO INDICATING AREAS OF SIGNIFICANT
AND NON-SIGNIFICANT DISPARITY AND
OVERUTILIZATION 4-18

CHAPTER 5: STATISTICAL ANALYSIS OF M/WBE AVAILABILITY

FIGURE 5.1:
RWASM AVAILABILITY MODEL 5-7

FIGURE 5.2:
KNOXVILLE-SPECIFIC RWASM AVAILABILITY LEVELS 5-8

FIGURE 5.3:
KNOXVILLE BIDDER FREQUENCY 5-8

Glossary of Terms

Actual availability—firms that have affirmatively shown interest in doing business with the City of Knoxville in one or more of the following ways: Bidding for a City contract, being awarded a City contract, or being included on the City’s vendor or plan holder’s list. The difference between “actual availability” and “potential availability” may help identify and narrow down the area of availability that may be affected by discrimination, lack of outreach, lack of interest, lack of specific expertise required by the public entity, and lack of capacity.

Active discrimination—any action by a government entity which has directly discriminated against minority- and women-owned businesses through its contracting and procurement activities, or any other of its activities (e.g. employment).

Anecdotal Interview—interview conducted with a business owner within a particular industry, or who has contracted with a public entity, to ascertain his/her personal experiences in doing business within that industry or with that public entity.

Annual Aspirational Goal or Annual Goal—non-mandatory annual aspirational percentage goal for overall DBE prime and subcontract participation established by a public entity each year for the public entity’s identified industry categories.

Annual Survey of Entrepreneurs—a Census database that provides annual data on select economic and demographic characteristics of employer businesses and their owners by gender, ethnicity, race, and veteran status.

Architecture & Engineering —professional services of an architectural or engineering nature that are associated with research, planning, development, design, construction, alteration, or repair of real property. For the purposes of this Disparity Study, Construction Management services are included in Construction and Construction-Related Services.

Availability—the percentage of firms by race and gender in an industrial category and available to do business with a government entity.

Awardees—firms that receive a contract award from the City as reflected through contract awards, purchase orders, and payments data.

Bidders—firms that submitted a bid or sub-bid on a City formal purchasing opportunity or submitted a quote for City informal procurement opportunities.

Capacity—a measure of additional work a firm can take on at a given point in time.

Census—a complete enumeration, usually of a population, but also of businesses and commercial establishments, farms, governments, and so forth.

Certification—process of qualifying a firm as being at least 51 percent owned, managed, and controlled by minorities and/or females.

Compelling Governmental Interest—compelling reasons by a public entity to remedy past discriminatory treatment of racial or ethnic groups.

Construction and Construction-Related Services— Capital construction projects and contracts that cover general construction trade services.

Contract Award Data—data gleaned from the City’s bid history data and contract logs that were provided to M³ Consulting in a shared folder. Access to the shared folder was provided by the City’s point of contact. The contract logs represent the universe of formal competitive contracts in which the City is engaged.

Croson Requirements—guidelines which govern any state or local political body’s attempt to enact a minority/female business enterprise program that uses set-asides, preferences, goals, or other race-conscious measures on condition that a compelling government interest exists and that the program elements are narrowly tailored.

Data Axle—offers comprehensive and accurate business and consumer databases with almost 400 distinct attributes across businesses and consumers in the United States and Canada.

Glossary of Terms (cont'd)

DBE— a minority-owned business, a woman-owned business, a service-disabled veteran-owned business or a small business, as defined in the City of Knoxville's Procurement Manual.

Disadvantaged Business—new, small, local, or any other business that is at least 51% owned, controlled, and whose daily operations are managed by one or more socially disadvantaged individuals. Applies to sole proprietorships, partnerships, corporations, or other business entities.

Disparate Impact—a policy or practice that, although neutral on its face, falls more harshly on a protected group. This impact may be viewed as discriminatory behavior in certain instances. The statistical analysis seeks to determine if there is any disparate impact of an agency's policies or practices, intended or unintended, on protected classes.

Disparity Ratio—ratio of the percentage of receipts received by M/WBEs from a particular public entity in a specific category of work (e.g. construction) to the percentage of firms that are M/WBEs available to do business with that public entity. The public entity's M/WBE utilization is divided by M/WBE availability.

Dodge Construction Data—a construction market data resource that tracks construction activity by project and location. The data set also provides project-specific information which includes owner of the project, value of project, type of project, general contractor, etc.

Factual Predicate—an analysis to determine whether there are any identified instances of past discrimination that must be particularized in a manner that provides guidance for the legislative body to determine the precise scope of the injury it seeks to remedy. It is utilized to determine whether a compelling governmental interest exists to support the utilization of race and gender-conscious remedies. The disparity study is utilized to develop the factual predicate.

Formal Purchases—competitive purchasing is required for contracts over \$60,000. Formal purchasing at the City is done using Invitations for Bid and Requests for Proposals.

Goods and Supplies—those traditional purchases that are “non-service” based (computers, food, parts, equipment, furniture, fixtures, etc.)

Informal Procurement—purchases not requiring advertising and valued at less than \$60,000.

Intermediate Scrutiny—is applied to gender and age distinctions and requires the public entity to prove there is a fair and substantial relationship between the classification and the objective of the legislation.

Knoxville Small Business and Diversity Outreach Office (SBDO) — The office within the COK Procurement Division that assists Small, Minority-owned, Woman-owned, and Service-Disabled Veteran-owned businesses in navigating COK's Procurement Processes and how to do business with the City of Knoxville

Local Business—any entity with its headquarters' office or principal place of business within the city boundaries and in the tax year preceding application for certification has (1) earned at least 25% of its gross receipts from work performed on construction projects within the city boundaries; or (2) employed a workforce of which at least 25% were economically disadvantaged individuals or were residents of a targeted business development area within the city boundaries.

Local Business Preference—a preference given to the lowest responsive and responsible vendor that has a principal place of business in the City.

Marketplace Availability—all firms available in the City's marketplace, as measured by Data Axle and Dodge Construction data.

Master S/M/W/DBE List—list of certified SBEs, MBEs, WBEs and DBEs from the City of Knoxville, and State of Tennessee.

Glossary of Terms (cont'd)

Matchmaking—efforts to bring together potential DBEs, Non-DBEs and City personnel on specific opportunities that encourages an environment of relationship building.

Metropolitan Statistical Area (MSA)—an area, defined by the U.S. Census Bureau which is an integrated economic and social unit with a population nucleus of at least 50,000 inhabitants. Each MSA consists of one or more counties meeting standards of metropolitan character.

Minority Business Enterprise (MBE)—firms that are at least 51% owned and controlled by minority individuals. Minority individuals are defined as African Americans, Asian Americans, Native Americans, and Hispanic Americans.

Multivariate Regression—analyzes whether multiple variables, including race and gender, impact an outcome.

Narrowly Tailored—a law must be written to specifically fulfill only its intended goal. Race and gender-conscious remedial action be “narrowly tailored” to identify past or present discrimination. At least three characteristics were identified by the court as indicative of a narrowly tailored remedy:

The program should be instituted either after, or in conjunction with, race-neutral means of increasing minority business participation. A governmental entity does not have to enact race-neutral means if they are not feasible or conducive to remedying past discrimination

The plan should avoid the use of rigid numerical quotas

The program must be limited in its effective scope to the boundaries of the governmental entity

Non-DBEs—for computation of availability, utilization, and disparity tables. Represents all other firms, exclusive of DBEs.

Non-M/W/SBES—for computation of availability, utilization, and disparity tables. Represents all other firms, exclusive of M/W/SBES.

Other Minority-owned Business—firms certified as a Minority-owned business without specific race or ethnic designations.

Outreach—any effort to communicate with minority- or female-owned businesses regarding procurement or contracting opportunities.

Passive Discrimination—participating in the discriminatory or exclusive actions of other agents in the public and private sectors.

Passive Participant—refers to any government entity that has indirectly discriminated against minority or female businesspersons by doing business with an industry or business that directly engages in discriminatory practices.

Potential Availability—refers to firms present in the City’s market beyond those “actually available” to include those that have not bid on the City work or taken other affirmative steps toward doing business specifically with the City (as opposed to other public and private sector clients) during the study period. This availability includes firms identified under both public-sector availability and marketplace availability.

Practical Significance—the most-used practical significance measure in the EEO context is the 4/5th or 80% rule, which indicates how large or small a given disparity is. An index less than 100% indicates that a given group is being utilized less than would be expected based on its availability, and courts have adopted the Equal Employment Opportunity Commission’s “80%” rule, that is, that a ratio less than 80% presents a prima facie case of discrimination.

Procurement—the acquisition of any goods or services in the categories of A&E, construction, professional services, other services, and procurement.

Procurement Forecasting—an organization and its departments determine their procurement needs for a set period.

Glossary of Terms (cont'd)

Public Sector Availability—includes lists of available firms known to various public sector agencies, including, but not limited to, the City in the relevant market region. These firms are closer to RWASM, having expressed an interest in contracting opportunities with other public sector agencies with similar standards and limitations as the City.

PUMS (Public-Use Microdata Samples)—contains records for a sample of housing units with information on the characteristics of each unit and each person in the unit. Files are available from the American Community Survey and the Decennial Census.

Pure Prime Utilization—the value of prime contracts net of subcontract value.

Purchase Order—a procurement vehicle used by a government entity to acquire goods or services by opening an order for the goods and services for a specified amount.

Race- and Gender-Conscious—any business development plan or program that uses race and gender as criteria for participation.

Race- and Gender-Neutral—any business development plan or program in which race and gender is not among the criteria for participation.

Rational Basis Standard—tests economic programs that do not make distinctions based on race, ethnic origin, or gender. Under this standard, the moving party is required to show that the classification is not rationally related to a valid state purpose.

Ready, Willing and Able Availability Estimate (RWASM Estimate)—the number of DBEs ready and willing to perform a particular scope of work and with the ability to expand (or contract) to do the type of work required. Derived from the U.S. Supreme Court's statement that:

Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors engaged by the locality or the locality's prime

contractors, an inference of discriminatory exclusion could arise.¹

The first component of the model, "ready", simply means a business exists in the market area. The second component, "willing", suggests a business understands the requirements of the work being requested and wants to perform the work. The third component, "able", defines the group of firms with the capacity to do the job.

Reed Construction Data—a construction market data resource that tracks construction activity by project and location. The data set also provides project-specific information which includes project owner, value, and type, as well as general contractor, etc.

Relevant Market—the geographic area reflecting a preponderance of commercial activity pertaining to an entity's contracting activity based on where bidders, vendors, or awardees are located. A typical range fitting this definition is approximately 70%.

Regression Analysis—a statistical method that analyzes how a single dependent variable may change or vary based on values of one or more independent variables. For example, the contract dollars awarded to DBEs vary based on characteristics such as race, gender, years of experience, and gross annual receipts.

Services—includes any provider of services, both professional and non-professional (attorney, consultant, training, landscaper, security, transportation, etc.).

Service-Disabled Veteran Enterprise Program—A race- and gender-neutral program designed to benefit service-disabled veteran businesses.

Set-Aside—government policy in which competition for certain contracts/bid opportunities is restricted to certain firms.

Small Business Enterprise—an entity that has had less than \$500,000 of gross revenues in each of its last two fiscal years.

¹City of Richmond v. J.A. Croson, 109 S.Ct. 706, at 729 (1989).

Glossary of Terms (cont'd)

Small Woman Minority Business Enterprise—any contractor, subcontractor, manufacturer or service company (a) that has been doing business under the same ownership or management and has maintained its principal place of business in the City, for a period of at least one (1) year immediately prior to the date of application for certification under this section, (b) that had annual gross revenues not exceeding the thresholds identified in this policy for each industry, and (c) at 51% of the ownership of which is held by a person or persons who exercise operational authority over the daily affairs of the business and have the power to direct the management and policies and receive the beneficial interests of the company.

State Preference—State law requires the City to award a preference to the lowest responsive and responsible vendor that has a principal place of business in the State of Tennessee.

Statistical Significance—how large or small the disparity ratio is in comparison with the observed percentages based on the statistical confidence level. Also, the likelihood that a statistic will vary from a given value by more than a certain amount due to chance.

Strict Scrutiny Standard—is evoked if the classification is one that is suspected to be based on race, ethnic, or alien distinctions, or infringements upon fundamental rights. The strict scrutiny test is the most rigorous of the three, requiring the public entity to show compelling governmental interests for making such classifications.

Sunset Clause—a legal or regulatory provision that stipulates the periodic review of a government agency or program to determine the need to continue its existence. For race and gender-conscious programs, this can involve: a) a graduation program; b) a definite date to end the program; or c) an annual review of DBE program efficacy, goals, and utilization.

Systemic Barrier—entrenched discriminatory practices or policies that effectively prevent participation in economic opportunities.

Technical Assistance—the transfer of skills or information from one party or entity to another, through on-site consultation, conferences, brokering of services, training, or general dissemination of information.

T-Test—assesses whether the means of two groups are statistically different from each other.

Unknown DBE—Firms certified as a DBE business without specific race or ethnic designations.

Utilization—the percentage of receipts in an industrial category that is spent with a given class of firms (e.g., M/WBEs).

Vendor—any person or business entity who has come forth to a governmental entity and registered with the entity identifying the products and services they would like to supply/render.

Veteran Business Enterprise Program—A race- and gender-neutral program designed to benefit veteran-owned businesses.

Woman-owned Business—firms that are at least 51% owned and controlled by female individuals.

E.1 INTRODUCTION

E.1.1 Purpose of Disparity Study

On February 24, 2022, the City of Knoxville (COK) commissioned Miller³ Consulting, Inc. (M³ Consulting) to conduct a Disparity Study (the Study). In conducting the Study, M³ Consulting collected and developed data to determine disparities, if any, between the availability and utilization of small-, minority-, and women-owned businesses for all procurement opportunities offered by the COK. This Disparity Study contains the results of M³ Consulting’s research and provides conclusions based on the analyses. The purpose of the study was to determine if there is evidence showing that there is disparity among ready, willing and able Diversity Businesses Enterprises (DBEs) in Architecture and Engineering (A&E), Construction and Construction-Related Services, Professional Services, Non-Professional Services, and Goods & Supplies procurement and contracts issued by the City. The study period covers fiscal year (FY) 2017 to FY 2021.

E.1.2 Overview of the City of Knoxville’s Current Race and Gender-Conscious and Race and Gender-Neutral Programs

If COK chooses to continue to utilize race and gender-conscious techniques, it will need to meet the U.S. Supreme Court’s requirements in *City of Richmond v. Croson*. The U.S. Supreme Court established a two-pronged test: (1) that a governmental entity had to show a compelling governmental interest to utilize race-conscious remedies and (2) that any such remedies must be narrowly tailored. A factual predicate or disparity study is utilized to show if there is a compelling governmental interest. Narrow tailoring is the crucial element in crafting appropriate *Croson* remedies.

Courts, for failure of local jurisdictions to narrowly tailor their remedies, have struck down many DBE programs. Once a factual predicate has been established, post-*Croson* case law presents several broad guidelines for crafting recommendations for MBE programs by a public entity, based on the factual predicate findings:

- Race and gender-conscious MBE programs should be instituted only after, or in conjunction with, race and gender-neutral programs.

- MBE programs should not be designed as permanent fixtures without regard to eradicating bias. Consequently, each MBE program should have a sunset provision, as well as provisions for regular review. Additionally, there is the implication that reform of procurement systems should be undertaken.
- MBE programs should have graduation provisions for the MWBEs themselves.
- Rigid numerical quotas run a greater risk of being overturned by judicial review than flexible goals.
- Race and gender-conscious goals, if any, should be tied to MWBE availability and to addressing identified discrimination.
- MBE programs should limit their impact on the rights and operations of third parties.
- MBE programs should be limited in scope to only those group(s) that have suffered from discrimination within public entity’s legislative jurisdiction enacting the program.

Croson requirements were extended to federal programs in *Adarand v. Peña*.

E.1.3 *Croson* and Sixth Circuit Standards

In *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 109 S.Ct. 706 (1989), the U.S. Supreme Court established a two-pronged “strict scrutiny” test for any governmental entity seeking to redress discrimination through race-conscious means:

- The governmental entity must demonstrate that there is a compelling governmental interest supported by a strong basis in evidence that consideration and use of race- and gender-conscious programs or policies is necessary to remedy discrimination.
- Any such race- and gender-conscious program must be narrowly tailored to remedy identified discrimination.

The requirements of the strict scrutiny test can be met by establishing a factual predicate. Disparity study evidence is a key component of such a factual predicate. The COK can use the methodology, findings, conclusions and recommendations of this Study to determine whether it has a basis for using some form of a race- and gender-conscious program consistent with the U.S. Supreme Court requirements of *Richmond v. Croson*.

“Narrow tailoring” is a crucial element in crafting appropriate Croson remedies.¹ Courts have struck down many MWBE programs due to the failure of local jurisdictions to narrowly tailor their remedies. Once government policymakers have established and relied upon a factual predicate in devising MWBE programs, post-Croson case law provides more detailed guidance for crafting MWBE programs:

- Race- and gender-conscious MWBE programs should be instituted only after, or in conjunction with, race- and gender-neutral programs.
- MWBE programs should not be designed as permanent fixtures in a governmental purchasing system without regard to eradicating bias in standard purchasing operations, or in the private sector contracting arena in which the governmental entity is a participant. Consequently, each MWBE program should have a sunset provision as well as provisions for regular review. Additionally, there is the implication that purchasing systems should be reformed.
- MWBE programs should have sensible graduation provisions for MWBEs that have largely overcome the effects of discrimination and are no longer in need of a remedy.
- Rigid numerical quotas are at considerable risk of being overturned by judicial review; flexible, rational, contract-specific goals are more legally defensible.
- Race- and gender-conscious goals should be tied to the relative MWBE availability of qualified firms to perform a given contract and to addressing identified discrimination within an industry.
- MWBE programs should limit their adverse impact on the rights and operations of innocent third parties.

- MWBE programs should be limited in scope to only those group(s) and firms that suffer the ongoing effects of past or present discrimination.

Croson requirements were extended to federal government programs in *Adarand v. Peña*.

The Sixth Circuit has developed several distinctive standards as discussed above. The foundation of current Third Circuit standards was established from the Croson decision in 1989 through 1996 in the *Contractors I, II, III and Independent* cases. The Third Circuit’s relevant standards from *Contractors I, II, III and Independent* are summarized here:

- Contractor associations have standing to challenge set-aside programs.
- Post-enactment evidence may be considered in evaluating the legality of a program preference.
- Any preference for any specified group must be supported by evidence of discrimination or an inference of discrimination against that particular group.
- For equal protection analysis, the party challenging the government action bears the ultimate burden of persuasion.
- Instances where contractors that were awarded government contracts were also members of contractor associations that discriminated against minority contractors did not amount to passive participation in private discrimination by the relevant government actors.
- Post-enactment evidence may be sufficient as a basis for race- and gender-conscious programs but must also address other potential causes for disparity.
- A “narrowly tailored” program must correlate any race-conscious program to the identified discrimination or inferences of discrimination.
- Any numeric goal must be supported by evidence.
- Race-conscious initiatives can only be used after consideration of race-neutral alternatives.

¹Narrow tailoring elements include good faith consideration of race-neutral alternatives for elimination of barriers to M/WBE participation; project-specific goal setting; flexibility in the size of goals based upon the relative availability of qualified, ready and willing M/WBEs; and limiting the scope of such remedies to those specific firms that are significantly underutilized within an industry segment.

E.1 Introduction

- Non-discrimination efforts can include the use and analysis of race/sex information without being subject to *Croson* standards.
- The factual predicate for any constitutional race-conscious relief may consist of proper statistical evidence of disparity and anecdotal evidence:
 - Proper statistical evidence of disparity for any race-conscious relief must assess the “relevant statistical pool”—the percentage of minority businesses engaged in the local construction industry.
 - Availability, for disparity purposes, is defined by the proportion of minority-owned businesses that were available or qualified to perform the contracts or work at issue.
- Proper statistical evidence of disparity includes the “disparity index.” This index consists of the percentage of minority contractor participation in City contracts divided by the percentage of minority contractor availability in the relevant statistical pool.
- Evidence of marketplace or private sector discrimination offered by way of general testimony of discrimination is insufficient as a basis for race-conscious relief. Generalized affidavits will not satisfy the “compelling government interest” required by *Croson*.
- Race-neutral efforts, including any revolving loan fund, technical assistance and training, and bonding assistance, must also be assessed and considered prior to the use of race-conscious relief.



E.2 M³ CONSULTING'S APPROACH AND METHODOLOGY

M³ Consulting's exclusive Study methodology includes 10 analyses, which lead to overall conclusions and recommendations.

E.2.1 M³ Consulting's 10-Part Disparity Study Methodology

M³ Consulting's 10-part Study methodology provides a complete factual predicate consistent with evolving case law and the City's regulatory environment. The statistical analysis—relevant market, availability, utilization, disparity and capacity—conforms with the requirements of *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 109 S.Ct. 706 (1989); *Adarand Contractors, Inc. v. Federica Pena*, 515 U.S. 200, 115 S. Ct. 2097 (1995); and Eleventh Circuit progeny and determines if there are statistically significant disparities from which an inference of discrimination may be drawn. The remaining industry and market analysis assists in determining if organizational factors (active discrimination or exclusion) or private sector and marketplace factors (passive discrimination or exclusion) cause any disparity. Together, these findings allow the COK to determine if there is a compelling governmental interest in using race- and gender-conscious remedies for any statistically significant disparity. The combined analysis also leads to a set of customized recommendations that includes race- and gender-neutral initiatives and narrowly tailored race- and gender-conscious initiatives.

The City of Knoxville Disparity Study Methodology

INDUSTRY ANALYSIS	STATISTICAL ANALYSIS	MARKET ANALYSIS	CONCLUSIONS	RECOMMENDATIONS
<ul style="list-style-type: none"> • Legal Analysis • Procurement and SMWBE Program Operational Analysis 	<ul style="list-style-type: none"> • Relevant Market Analysis • Availability Analysis • Utilization Analysis • Disparity Ratios • Regression and Capacity Analyses 	<ul style="list-style-type: none"> • Anecdotal and Survey Analyses • Race- and Gender-Neutral Analysis • Marketplace Analysis 	<ul style="list-style-type: none"> • Finding of Passive or Active Discrimination, If Any • Identification of Barriers to SMWBE Participation 	<ul style="list-style-type: none"> • Procurement and SMWBE Programmatic Initiatives • Goal-setting • Nondiscrimination Initiatives • Management and Technical Assistance

Description of Disparity Study Components

1. **Legal Analysis** outlines the legal standards of *Richmond v. Croson*, *Adarand v. Peña* and their progeny in the Sixth Circuit as well as around the country. Such a legal analysis provides critical insight to current judicial opinions relevant to both SMWBE program design and Study analysis.
2. **Procurement and DBE Program Operational Analyses** examine the COK’s contracting history to determine the impact of the COK’s policies, procedures, and practices on SMWBES’ ability to do business with the COK and the effectiveness of the DBE operations on increasing SMWBE participation.
3. **Relevant Market Analysis** determines the geographic boundaries within which the COK performs the substantial part (about 70%) of its business activities. The identification of the bounds is also guided by legal criteria that require the COK to refine its efforts to impact SMWBE business activity in its market area.
4. **Availability Analysis** determines the available DBEs and Non-DBEs that are available to do business with the COK within the determined relevant market.
5. **Utilization Analysis** quantitatively examines the COK’s contracting history and determines the number of contracts and levels of expenditures with DBEs.
6. **Disparity Ratios** determine the difference between the availability of DBEs and their utilization by the COK and if any disparity is statistically significant.
7. **Regression and Capacity Analyses** examine differences in capacity of firms based on race and gender, using established statistical methods, and examine if race, gender, and ethnicity still impact the participation decision once a set of variables that represent capacity are controlled for. Further, the survey provides information on business characteristics, such as owner qualifications, years in business, capacity and credit market experiences.
8. **Anecdotal and Survey Analyses** determine the experiences of DBEs and Non-DBEs attempting to do business with the COK and in the business community overall.
9. **Race- and Gender-Neutral Analysis** determines the effectiveness of race- and gender-neutral programs in increasing DBE participation in both public and private sector opportunities.
10. **Marketplace Analysis** determines DBE participation in the marketplace, which consists of both public and private sector opportunities. Factors that impact business formation and self-employment are also analyzed in this analysis.

The methodology components M³ Consulting deploys reflect the continuing development of case law, which has increased the level and sophistication of the statistical analysis necessary to comply with *Croson* and *Adarand* standards.

E.2.2 Statistical Methodology

The statistical methodology discusses availability, utilization, and disparity. It includes a presentation of the two types of availability: “actual availability” and “potential availability”. Also included are various definitions of availability; and M³ Consulting’s “Ready, Willing, and Able” (RWASM) model. M³ Consulting has adapted this model to the specific data

sources available from COK for this study. Also discussed are the types of utilization analyses that were performed. The statistical methodology section concludes by defining the disparity ratio and significance tests, crucial for drawing conclusions regarding any disparity in the COK's recent history of contracting with DBEs.

To conduct the analysis, M³ Consulting collected vendor, bidder, contract award, purchase order (PO) and payments data for years FY 2017 to FY 2021.

A. Relevant Market

The *Croson* statistical analysis begins with the identification of the relevant market. The relevant market establishes geographical limits to the calculation of MWBE availability and utilization. Most courts and disparity study consultants characterize the relevant market as the geographical area encompassing most of a public entity's commercial activity. The *Croson* Court required that an MWBE program cover only those groups that have been affected by discrimination within the public entity's jurisdiction.²

Two methods of establishing the relevant market area have been used in disparity studies. The first utilizes vendor and contract awardee location of dollars expended by an entity in the relevant industry categories. In the second method, vendors and contractors from an entity's vendor or bidder list are surveyed to determine their location. The former is based on approaches implemented under the U.S. Justice Department guidelines for defining relevant geographic markets in antitrust and merger cases. M³ Consulting has developed an alternative method for determining an entity's relevant market by combining the above methods and using an entity's bidder lists, vendor lists, and awardee lists as the foundation for market definition.

By examining the locations of bidders, vendors, and awardees, M³ Consulting seeks to determine the area containing a preponderance of commercial activity pertaining to an entity's contracting activity. While case law does not indicate a specific minimum percentage of vendors, bidders, or awardees that a relevant market must contain, M³ Consulting has determined a reasonable threshold is between 70-75 percent for bidders, vendors, and contract award winners. Further analysis may be necessary if there are "large" differences in the percentages of these three measures.

²*City of Richmond v. J.A. Croson*, 109 S.Ct. 706, at 725 (1989).

³This analysis requires inter-governmental cooperation between public entities providing bidder, vendor, and awardee data, thus is not performed, unless such agreement is developed for individual agencies, or a consortium of agencies conducted a consortium disparity study.

B. Availability Analysis

Availability is the most problematic aspect of the statistical analysis of disparity. It is intrinsically difficult to estimate the number of businesses in the marketplace that are *ready, willing, and able* to perform contracts for or provide services to a specific public entity. In addition to determining an accurate head count of firms, the associated issues of capacity, qualification, willingness, and ability complicate the production of availability estimates.

The fundamental comparison to be made in disparity studies is between firms owned by Minority and Women-Owned Business Enterprises ("MWBEs") and other firms ("Non-DBEs") *ready, willing, and able* to perform a specific service (i.e., are "available"), as well as the number of such businesses being utilized by the locality or its prime contractors. This section presents a discussion of the availability estimates for MWBEs who are *ready, willing, and able* to perform work on contracts for COK.

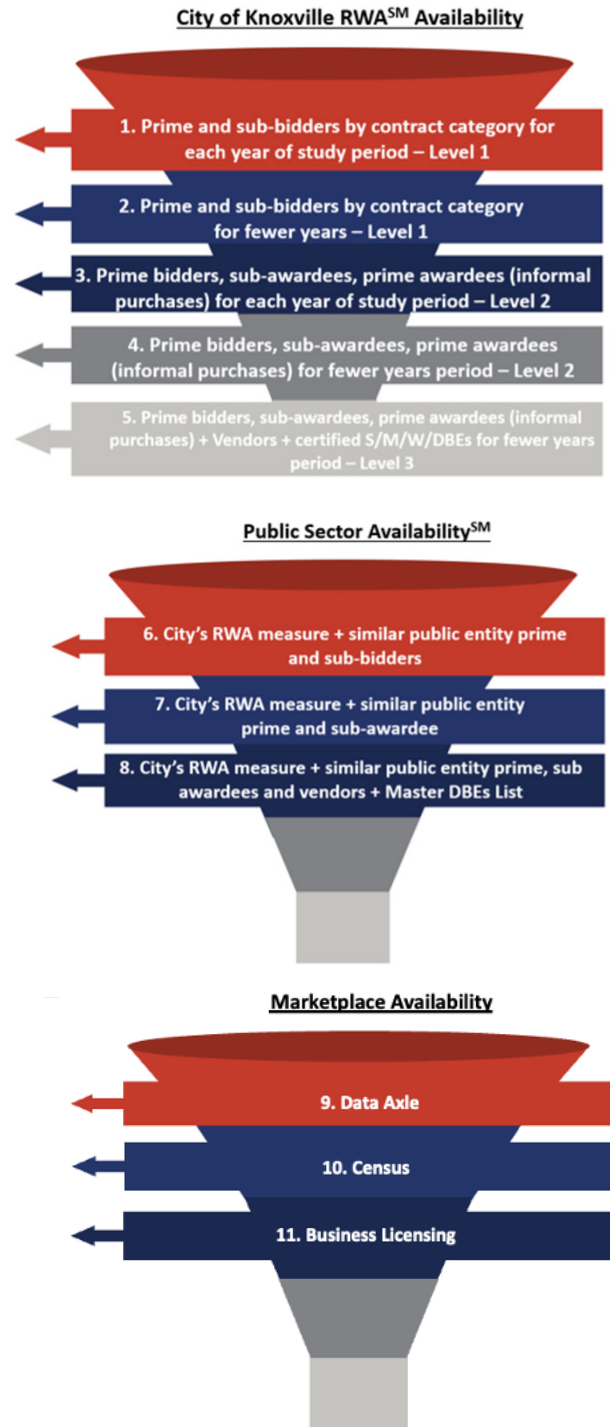
1. M³ Consulting Availability Model

M³ Consulting employs two general approaches to measuring availability: the RWASM model and marketplace availability. The availability measures can fall into the following categories:

- **RWASM**—Those firms who are ready, willing, and able to do business with COK.
- **Public Sector Availability**—Those firms who are ready, willing, and able to do business with similar public sector agencies within the COK's marketplace.³
- **Marketplace Availability**— All firms available in the COK's marketplace, as measured by the U.S. Census Annual Survey of Entrepreneurs, Data Axle or Dun & Bradstreet and Dodge Construction.

Figure E.1 below outlines M³ Consulting's Availability Model. The model starts with the optimum availability measure of those firms "ready, willing, and able" to do business with COK and cascades down to less optimum measures. Factors that determine which level of availability best suits COK's environment include the quality of available data, legal environment, and previous levels of inclusion of MWBEs in bidding and contracting activity.

Figure E.1.
RWASM Availability Model



Source: M³ Consulting, Inc.

M³ Consulting’s RWASM Availability Model is further tailored to the robustness of the City’s specific databases available for analysis. When refined to COK’s data, the RWASM Availability Model levels described in Figure E.1 above are defined as follows:

Figure E.2.
City of Knoxville Specific RWASM Availability Levels

RWA SM Availability Level	
Level 1	City of Knoxville Bidders and Sub-bidders
Level 2	City of Knoxville Bidders and Sub-bidders + AP/PO firms
Level 3	City of Knoxville Vendor Report* + SMWDBE Master List

Source: M³ Consulting; * list with requisite data elements was not available for analysis

C. Utilization Analysis

Utilization represents procurement activity including contracting, payment, purchase order encumbrances and subcontracting history of Non-DBEs and DBEs with COK. In developing the contract database to be used as the basis for determining utilization, there are three alternative measures of utilization that can be taken in each procurement category.

- The number of contracts awarded.
- The dollar value of contracts received.
- The raw numbers of firms receiving contracts.

The report presents the number of contracts awarded and the dollar value of the contract awards. Both dollars and counts are reported to determine if there are any outliers or large single contracts that cause utilization dollar values to be at reported levels. The number and dollar value of contracts are preferred over the number of firms, which is less exact and more sensitive to errors in measurement.

For instance, if a single Non-DBE firm received thirty contracts for \$5 million, and 10 African American-owned firms received one contract each worth \$100,000, measured by the number of firms, African American-owned firms would appear to be overutilized and Non-DBEs underutilized. Using the number of contracts and the dollar value of contracts awarded, the result would reverse (depending on relative availability).

D. Disparity Analysis

A straightforward approach to establishing statistical evidence of disparity between the availability of SMWBEs and the utilization of SMWBEs by the COK is to compare the utilization percentage of SMWBEs with their availability percentage in the pool of total businesses in the relevant market area. M³ Consulting’s specific approach, the “disparity ratio,” consists of a ratio of the percentage of dollars spent with SMWBEs (utilization) to the percentage of those businesses in the market (availability).⁴

Disparity ratios are calculated by actual availability measures. The following definitions are utilized in the M³ Consulting ratio:

- A = Availability proportion or percentage
- U = Utilization proportion or percentage
- D = Disparity ratio
- N_w = Number of women-owned firms
- N_m = Number of minority-owned firms
- N_t = Total number of firms

Availability (A) is calculated by dividing the number of minority and/or women-owned firms by the total number of firms. Utilization (U) is calculated by dividing total dollars expended with minority and women-owned firms by the total expenditures.⁵

⁴See DJMA, A Fact-Finding Study Prepared for the New York Metropolitan Transit Authority (January 1990).

⁵Alternative utilization measures based on number of firms and number of contracts can be calculated in a similar fashion.

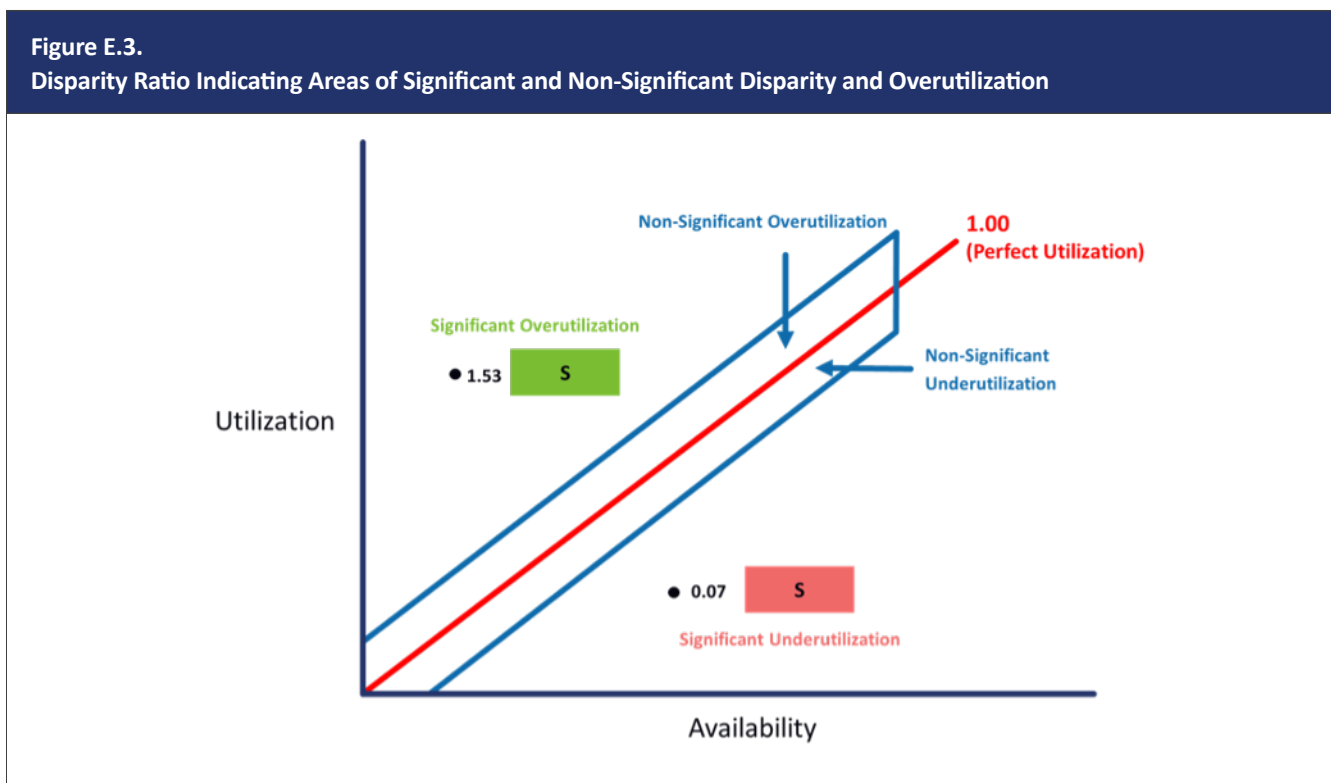
$$A_w = N_w / N_t$$

$$A_m = N_m / N_t$$

$$D = U/A$$

When $D=1$, there is no disparity, (i.e., utilization equals availability). As D approaches zero, the implication is that utilization

is disproportionately low compared to availability. As D gets larger (and greater than one), utilization becomes disproportionately higher compared to availability. Statistical tests are used to determine whether the difference between the actual value of D and 1 is statistically significant, (i.e., whether it can be stated with confidence that the difference in values is not due to chance [see Figure E.3].



Source: M³ Consulting, Inc.

The statistical disparity ratio used in this study measures the difference between the proportion of available firms and the proportion of dollars those firms received. Therefore, as the proportion of contract dollars received becomes increasingly different than the proportion of available MWBEs, an inference of discrimination can be made.

The concept of statistical significance as applied to disparity analysis is used to determine if the difference between the utilization and availability of MWBEs could be attributed to chance. Significance testing often employs the t-distribution to measure the differences between the two proportions. The number of data points and the magnitude of the dispar-

ity affect the robustness of this test. The customary approach is to treat any variation greater than two standard deviations from what is expected as statistically significant.

A statistically significant outcome or result is one that is unlikely to have occurred as the result of random chance alone. The greater the statistical significance, the smaller the probability that it resulted from random chance alone. p-value is a standard measure used to represent the level of statistical significance. It states the numerical probability that the stated relationship is due to chance alone. For example, a p-value of 0.05 or 5% indicates that the chance a given statistical difference is due purely to chance is 1 in 20.



E.3 FINDINGS AND CONCLUSIONS

E.3.2 Statistical Finding Impacting Statistically Significant Disparity

A. Relevant Market

Of the four relevant markets considered for the study, Table E.1 presents the defined relevant market for each procurement category.

Table E.1.
Summary of Relevant Market Determination

	City of Knoxville	MSA*	State of TN	Nationwide
Architecture and Engineering	✓			
Construction and Construction-Related Services		✓		
Professional Services			✓	
Non-Professional Services				✓
Goods & Supplies				✓

Source: M³ Consulting, Knoxville Contracts Data, MUNIS Financial System PO and AP data

*Knoxville, TN MSA (comprising of Anderson, Blount, Campbell, Knox, Loudon, Morgan, Roane, and Union Counties)

B. Availability Analysis

Table E.2 below summarizes the availability estimates for MWBE and SBE firms within the relevant market for COK. It provides the estimates, along with the source of the information. M³ Consulting places emphasis on the availability estimates, based on bidders', sub-bidders', and awardees' data at Level 2 of the RWASM model. The tables and the discussion are presented for the relevant markets by procurement type for all industries.

Marketplace availability measures, based on Data Axle, are presented in Table E.3 as a benchmark of minority- and women-owned firm availability and for COK to consider potentially available firms for outreach purposes.

A total of 58 firms make up the bidders, sub-bidders, and awardees located in the City of Knoxville available to perform Architecture and Engineering procurements during the study period (Table E.2). Of that number, 42 firms (72.42%) are Non-DBEs and SBEs. Among the MWBEs, a total of 16 firms represent 27.59% of availability. Women-owned firms at 22.41%, African American-owned firms at 3.45%, and Asian American-owned firms at 1.72% comprise the MWBE total availability. The Other MBEs and VOBES do not present availability for A&E procurement.

All DBE groups are represented in Level 2 availability for Construction and Construction-Related Services. Non-DBEs at 41.87% and SBEs at 35.29% together account for 77.16% of the 289 available firms. The remaining 22.84% is distrib-

uted across MWBEs and VOBES with women-owned firms at 14.88% followed in order by African American-owned firms at 4.84%, Hispanic American-owned firms at 1.38%, and the other minority-owned firms and VOBES together adding to 1.78%.

Women-owned firms represent 18.17% of the 765 firms that make up the total availability for Professional Services. Minority-owned firms comprise 5.23% with only African American-owned firms exceeding 1% at 2.61% availability. Asian American- and Hispanic American-owned firms are just under 1% at 0.92% each. Native American-owned firms (0.52%), Other MBEs (0.26%) and VOBES (0.26%) together are just under 1% availability.

The number of available firms for Non-Professional Services and Goods & Supplies are of similar magnitude — 1,493 and 1,766 respectively. Likewise, the distribution of availability across the groups is similar with MWBE availability for Non-Professional Services of 15.61% and 15.86% for Goods & Supplies. Women-owned firms sit at 9.98% of Non-Professional Services availability and 10.82% of Goods & Supplies availability are about 65% of MWBE availability for each of these procurement categories. African American-owned firms and Hispanic American-owned firms are the only minority firms with availability above 1% at 2.55% and 1.41%. For Goods & Supplies, African American-owned firms, Asian American-owned firms, and VOBES exceed 1% at 1.30%, 1.64%, and 1.13%.

E.3 Findings and Conclusions

Table E.2.
Summary Table – RWASM Level 2 Availability Percentage Participation
Relevant Market; FY 2017 - FY 2021

Race/Ethnicity/ Gender	Architecture and Engineering ⁴		Construction & Construction Related Services ³		Professional Services ²		Non-Professional Services ¹		Goods & Supplies ¹	
	#	%	#	#	#	%	#	%	#	%
Non-DBE	19	32.76	121	41.87	350	45.75	900	60.28	1,019	57.70
African American	2	3.45	14	4.84	20	2.61	38	2.55	23	1.30
Asian American	1	1.72	1	0.35	7	0.92	13	0.87	29	1.64
Hispanic American	-	0.00	4	1.38	7	0.92	21	1.41	14	0.79
Native American	-	0.00	2	0.69	4	0.52	6	0.40	11	0.62
Other MBEs	-	0.00	1	0.35	2	0.26	6	0.40	10	0.57
<i>Total Minority</i>	<i>3</i>	<i>5.17</i>	<i>22</i>	<i>7.61</i>	<i>40</i>	<i>5.23</i>	<i>84</i>	<i>5.63</i>	<i>87</i>	<i>4.93</i>
Woman-owned (WBEs)	13	22.41	43	14.88	139	18.17	149	9.98	191	10.82
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	2	0.11
Total MWBE	16	27.59	65	22.49	179	23.40	233	15.61	280	15.86
SBE	23	39.66	102	35.29	234	30.59	351	23.51	447	25.31
VOBE	-	0.00	1	0.35	2	0.26	9	0.60	20	1.13
Grand Total	58	100.0	289	100.00	765	100.0	1,493	100.00	1,766	100.0

Source: M³ Consulting; Knoxville Contracts Data; MUNIS PO and AP data; Knoxville Vendor data; Other Minority is a firm identified as MBE with no specific race/ethnicity identified; Unknown DBE is a firm identified as DBE, with no specific race/ethnicity/gender identified.

¹Nationwide

²State of Tennessee

³Knoxville, TN MSA

⁴City of Knoxville

E.3 Findings and Conclusions

Table E.3.
Summary Table – Data Axle Availability
Relevant Market; 2021

Race/Ethnicity/ Gender	Architecture and Engineering ⁴		Construction & Construction Related Services ³		Professional Services ²		Non-Professional Services ¹		Goods & Supplies ¹	
	#	%	#	%	#	%	#	%	#	%
Non-DBE	84	66.14	643	84.94	1,286	59.07	2,492	64.53	1,437	70.80
African American	2	1.57	5	0.66	17	0.78	43	1.11	21	1.03
Asian American	2	1.57	1	0.13	40	1.84	22	0.57	76	3.75
Hispanic American	4	3.15	13	1.72	44	2.02	94	2.43	28	1.38
Native American	-	0.00	-	0.00	3	0.14	4	0.10	1	0.05
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>8</i>	<i>6.30</i>	<i>19</i>	<i>2.51</i>	<i>104</i>	<i>4.78</i>	<i>163</i>	<i>4.22</i>	<i>126</i>	<i>6.21</i>
Woman-owned (WBEs)	35	27.56	95	12.55	787	36.15	1,207	31.25	466	22.97
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	43	33.86	114	15.06	891	40.93	1,370	35.47	592	29.2
SBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
VOBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	127	100.00	757	100.00	2,177	100.00	3,862	100.00	2,029	100.00

Source: Data Axle Firms as of Feb. 2021; M³ Consulting.

¹Nationwide

²State of Tennessee

³Knoxville, TN MSA

⁴City of Knoxville

C. Utilization Analysis

Table E.4 summarizes utilization of MWBEs by the three utilization measures: Purchase Orders, Accounts Payables, and Contract Awards. Table E.5 reflects utilization by relevant market, by race and gender breakdowns.

Utilization across the three measures (Table E.4) range from a low of zero for MBEs participation in A&E contracts as measured by POs and contract dollars to a high of 20.97% for MWBEs for Professional Services contract dollars. Together MBEs, WBEs, and MWBEs show the highest level of utilization in Non-Professional Services, followed by Goods & Supplies. Non-Professional Services utilization rates for MWBEs are 11.12%, 19.06%, and 20.97% as measured by purchase orders, accounts payable, and contract dollars respectively. For Goods & Supplies, the MWBE utilization comes in at 10.14% for purchase orders, 10.51% for accounts payable, and 4.72% for contract dollars. Their participation rates mostly remained below 2.5% for Architecture & Engineering and Construction and Construction-Related Services. For Professional Services MWBE utilization is in the 6% to 8% range for POs and APs but drops significantly to less than 1% for contract dollars.

Table E.5 disaggregates the data in Table E.4 among the minority groups to be used to calculate the disparity ratios. The percentages in this table provide the utilization metrics for the numerator used for the disparity ratios found in Chapter VII. For A&E each of the minority groups and VOBs show zero utilization. SBE utilization is at 48.22%. African American- and Native American-owned firms' utilization in Construction and Construction-Related Services is 0.26 % and 0.01 % respectively. SBE utilization for this procurement category is 42.22%. For Professional Services, minority utilization combines for less than 0.25% at 0.13%, 0.02%, and 0.10% for African American-, Asian American- and Hispanic American-owned firms respectively. SBE firms make up 23.17% of the utilization for Professional Services. The combined minority firm's percentage is highest for Non-Professional Services at 6.36%. The break down ranges from 0.03% for Native American-owned firms to 4.51% for African American-Owned firms. SBE firms' lowest utilization occurs in Non-Professional Services at 7.37%. Total MBE utilization for Goods & Supplies is 1.29% with Asian American-Owned firms comprising most of the utilization at 1.04%. SBEs and VOBs show utilization of 11.9% and 0.17 % respectively.

D. Disparity Analysis

Table E.6 summarizes the disparity ratios for each of the procurement categories at the race/ethnic/gender group level,

for the COK procurements for the period FY 2017-FY 2021. Based on the foregoing analysis and the summary below, findings of statistically significant disparity are made for the following groups in the following procurement categories:

- Architecture and Engineering—WBEs
- Construction and Construction-Related Services—All groups
- Professional Services—African American, WBEs, Total Minority and SBEs
- Non-Professional Services— All groups except Native Americans (African American- and Asian American-owned firms are overutilized)
- Goods & Supplies—All DBE groups.

E. Capacity Analysis

As disparities in procurement and contracting are often attributed to differences in capacity of Non-DBEs and DBEs, the capacity analysis sought to examine if there were any differences in capacity of firms based on race or gender that impact disparity outcomes and that could hinder firms from being actually and potentially available to the COK. The purpose of this analysis is to determine if there are any differences in the capacity of race, gender, and ethnic groups and, after accounting for any differences in the capacity of firms, if race and gender are contributing factors to any disparities found.

Capacity Based on Data Axle

Comparing capacity of firms measured by the number of employees, the number of firms in the lowest range of 1-19 employees are 2,740 MWBE firms, with 2,345 of these as WBEs, 395 MBEs and 5,420 Non-DBE firms. As capacity increases, MWBEs remain lower than the Non-DBE firms, with 53 Non-DBE firms with 100-249 employees compared to 24 MWBE firms. For capacity measured as 250-499 employees, only 5 MWBEs, 4 WBEs compared to 15 Non-DBE firms. Looking at firms with 1,000-4,999 employees, there are 1 Non-DBE firm and 1 WBE firms.

If capacity was to be measured using sales volume, then MBEs, WBEs, and Non-DBEs are represented in all sales ranges up to \$100 million. 9 Non-DBE firms and 3 WBEs are in the capacity range of \$100 million - \$500 million. Most of the firms concentrate in the ranges up to \$10-\$20 million. Consequently, Based on sales volume, differences in capacity are not vast based on race or gender groups, although the number and proportion of MWBE firms is smaller, overall.

Table E.4.
MWBE Utilization in Percent of Dollars of Purchase Orders, Payments, and Contract Awards
Summary of MWBE Utilization; FY 2017 – FY 2021
By Relevant Market

Procurement Category	MWBE Utilization Based on Purchase Orders (in percent)			MWBE Utilization Based on Accounts Payables (in percent)			MWBE Utilization Based on Contract Dollars (in percent)		
	MBE	WBE	MWBE ⁵	MBE	WBE	MWBE ⁵	MBE	WBE	MWBE ⁵
Architecture & Engineering ⁴	0.00	1.54	1.54	0.05	1.33	1.38	0.00	2.24	2.24
Construction and Construction-Related Services ³	0.35	2.44	2.79	0.27	1.64	1.91	0.34	1.92	2.26
Professional Services ²	0.24	5.49	5.73	0.70	6.75	7.45	0.30	0.40	0.69
Non-Professional Services ¹	6.36	4.75	11.12	8.75	10.31	19.06	9.62	11.35	20.97
Goods & Supplies ¹	1.29	8.85	10.14	2.42	8.09	10.51	2.69	2.03	4.72

Source: M³ Consulting; COK Contracts Data, PO and AP data, COK Vendor data; Relevant Market; Other Minority is a firm identified as MBE, with no specific race/ethnicity identified; Unknown MWBE is a firm identified as MWBE, with no specific race/ethnicity/gender identified.

¹Nationwide

²State of Tennessee

³Knoxville, TN MSA

⁴City of Knoxville

⁵Includes unknown Minority Business Enterprises (MBEs)

Table E.5.
Utilization in Dollars of Purchase Orders, Payments, and Contract Awards
Summary of Utilization; FY 2017 – FY 2021
By Relevant Market

Race/ Ethnicity/ Gender	Architecture and Engineering ^{4,5}		Construction & Construction Related Services ^{3,6}		Professional Services ^{2,5}		Non-Professional Services ^{1,5}		Goods & Supplies ^{1,5}	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-DBE	5,858,905	50.24	48,490,788	55.66	31,703,091	71.10	64,951,378	81.44	103,969,115	77.79
African American	-	0.00	223,805	0.26	56,206	0.13	3,594,537	4.51	64,310	0.05
Asian American	-	0.00	-	0.00	9,880	0.02	1,337,993	1.68	1,384,527	1.04
Hispanic American	-	0.00	-	0.00	42,371	0.10	119,181	0.15	125,417	0.09
Native American	-	0.00	9,985	0.01	-	0.00	23,774	0.03	151,153	0.11
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	<i>233,790</i>	<i>0.27</i>	<i>108,457</i>	<i>0.24</i>	<i>5,075,485</i>	<i>6.36</i>	<i>1,725,407</i>	<i>1.29</i>
Woman-owned (WBEs)	180,005	1.54	1,431,713	1.64	2,447,028	5.49	3,788,765	4.75	11,828,920	8.85
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	180,005	1.54	1,665,502	1.91	2,555,485	5.73	8,864,251	11.12	13,554,327	10.14
SBE	5,622,989	48.22	36,956,945	42.42	10,330,092	23.17	5,878,286	7.37	15,900,611	11.90
VOBE	-	0.00	-	0.00	-	0.00	56,376	0.07	228,405	0.17
Grand Total	11,661,899	100.00	87,113,235	100.00	44,588,667	100.00	79,750,291	100.00	133,652,457	100.00

Source: M³ Consulting; the COK Contract Awards Data, PO and AP data, the COK Vendor data; Relevant Market—Relevant Market;
 May not add up because of rounding error.

¹Nationwide

²State of Tennessee

³Knoxville, TN MSA

⁴City of Knoxville

⁵Utilization measure is PO Data

⁶Utilization measure is AP Data

E.3 Findings and Conclusions

Table E.6.
Summary Disparity Ratios by Race, Ethnicity, and Gender
Utilization vs. RWASM Availability Level 2
Relevant Market, FY 2017 - FY 2021

Race/Ethnicity/ Gender	Architecture & Engineering (Purchase Orders)		Construction & Construction- Related Services (Payments)		Professional Services (Purchase Orders)		Non-Professional Services (Purchase Orders)		Goods & Supplies (Purchase Orders)	
	Ratio	Sign.	Ratio	Sign	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-DBE	1.53	S	1.33	S	1.55	S	1.35	S	1.35	S
African American	0.00	NS	0.05	S	0.05	S	1.77	S	0.04	S
Asian American	0.00	NS	0.00	S	0.02	NS	1.93	S	0.63	S
Hispanic American	ND	ND	0.00	S	0.10	NS	0.11	S	0.12	S
Native American	ND	ND	0.02	S	0.00	NS	0.07	NS	0.18	S
Other MBEs	ND	ND	0.00	S	0.00	NS	0.00	S	0.00	S
<i>Total Minority</i>	<i>0.00</i>	<i>NS</i>	<i>0.04</i>	<i>S</i>	<i>0.05</i>	<i>S</i>	<i>1.13</i>	<i>NS</i>	<i>0.26</i>	<i>S</i>
Woman-owned (WBEs)	0.07	S	0.11	S	0.30	S	0.48	S	0.82	S
Unknown MWBE	ND	ND	ND	ND	ND	ND	ND	ND	0.00	NS
Total MWBE	0.06	S	0.09	S	0.24	S	0.71	S	0.64	S
SBE	1.22	NS	1.20	S	0.76	S	0.31	S	0.47	S
VOBE	ND	ND	0.00	S	0.00	NS	0.12	S	0.15	S

Source: COK Contracts Data, PO and AP data; M³ Consulting; .

Significance is S and Ratio is Less than 1—Statistically Significant Underutilization;

Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.

ND – Not Determined (Represents zero RWASM availability).

For Architecture and Engineering, MWBEs, and WBEs are represented in every revenue range to \$20 million. 1 Asian American- and 1 Hispanic American-owned firm is in the range of \$10-\$20 million. 1 African American-owned firm is in the \$1-\$2.5 million sales volume range and 6 Hispanic American- and 1 Asian American-owned firms up to \$10 million. Most of the firms concentrate in the range up to \$2.5 million. For Construction, Non-DBEs occur in all sales volume ranges up to \$50 million. Looking at the range below \$500,000, we can observe a concentration of firms: There are 38 WBEs, 6 Hispanic American-, and 3 African American-owned firms. There are no minority-owned construction firms over the \$10 million range.

Capacity Based on Survey Regressions

M³ Consulting conducted a survey of firms on the COK vendor registry, Data Axle list and the Master SMWBE list, with a focus on gathering capacity data to be used in the regression analysis to examine for differences in capacity based on race/gender/ethnicity, if any. The list includes firms that may never have done business with COK. The process involved creating a questionnaire, sample design, data collection and coding, analysis, and interpretation. Questions were designed with the specific purpose of collecting information about the availability of firms seeking to do business with COK and the private sector and their capacity.

A total of 9,386 firms were sent an online survey invitation with a unique link to the survey on September 7, 2022. The survey was closed on September 28, 2022, with a total of 366 completed responses. Reminders were sent to non-responders four times over the subsequent three weeks.

Utilizing the Blinder-Oaxaca (BO) decomposition method for estimating the extent of discriminating between different groups, we find that Non-DBE received 16.95 (exp (0.1566)-1)% **greater** total gross receipts from all sources in 2021 than they would have if discrimination did not exist. In addition, the MWBE group received 13.04 (exp (-0.1397)-1)% **less than** it would have if prejudice had not occurred.

Capacity Based on Public Use Microdata Sample

Using a binary logistic regression model and the IPUMS 2019 ACS five-year database for the State of Tennessee, M³ Consulting attempted to examine the impact of economic and demographic characteristics on the self-employment decision and whether there are differences in the probability of self-employment among the different race/ethnicities and genders. Additionally, M³ Consulting analyzed the factors that

impact self-employment income and whether self-employment income is impacted by race and/or gender.

- According to their socio-economic characteristics, individuals with Bachelor's degree are significantly more likely to be self-employed relative to individuals with high-school diploma or less. Being Married increases the likelihood of being self-employed in Tennessee relative to being unmarried.
- The coefficients for Property Value and Personal Earned Income are extremely small but positive, consequently a change in these two features will increase in a very small amount the likelihood of being self-employed due to the presence of alternative income to make the decision towards self-employment.
- Working in the Construction sector or Professional Services increases the likelihood of self-employment in the State of Tennessee.

M³ Consulting utilizes a linear regression analysis to estimate the impact of race and gender on self-employment earnings, controlling for economic and demographic characteristics. A summary of the results are as follows:

- All other variables kept constant, a self-employed Hispanic American will earn about \$15,920 less (but this result is only marginally significant), a white female will earn about \$3,912 less.
- An increase in mortgage payments, in property value, or in personal earned income will result in a very small increase in earnings from self-employment within the State. If the person sees an increase in another income source, it will result in a decrease of \$53,288 in self-employment earnings.
- Among the industries, individuals in Construction and Construction-Related Services, Non-Professional Services, and Professional Services will earn less in self-employment.

E.3.3 Qualitative Findings Impacting Statistically Significant Disparity

A. Procurement and DBE Program Analysis

COK has developed detailed procurement and DBE inclusion

E.3 Findings and Conclusions

policies and procedures. Based on findings, M³ Consulting asserts that the COK's Procurement and DBE program policies, procedures and practices contain aspects that may negatively impact the ability of DBEs to participate in the COK's procurement and contracting opportunities. Specific findings include:

- MBE utilization does not reach 5%, except in Non-Professional Services
- Total minority utilization in A&E, Construction and Professional Services is below 1%
- Grant recipients are not required to adhere to COK inclusion efforts as a condition of receiving funding
- Department resource deficits negatively impact post-award contract monitoring and auditing tasks in real time via site visits and desk audits
- There is limited internal and external dissemination of DBE attainment data and reporting
- COK has only one staff person (Small Business Diversity Outreach Manager) charged with working with COK area's MFTA providers and all their various partners, which fosters perceptions of under service and disconnect to the vendor community.

The current COK diverse vendor inclusion goals are established by the Small Business & Diversity Outreach Office which resides within the Purchasing Division. The COK currently sets aspirational goals at 10% of its total procurements to be attained by DBE firms. COK's current goal-setting model allows separate goals for MBEs, WBEs, and SBEs while simultaneously counting them in every category for which they qualify. The COK Contracts Manager produces an annual fiscal year-end report that details DBE spend and percentages for the Goods & Supplies, Construction, and Professional Services procurement types which follows a hierarchy of minority-owned first, then women-owned, then small business designation is followed. Miller³ Consulting recommends leadership rely on and encourage the Contract Manager's reporting format enterprise wide.

Limited Knowledge and Staff Training Related to Inclusive Procurement and SMWBE Program

The Small Business Diversity Outreach Office (SBDO) Manager is seasoned and well versed in inclusion outreach and monitoring protocols. Findings indicate there is no shared ownership of achieving SBDO Office's mission at the depart-

mental level by staff. As a result, there appears to be limited collaboration with the SBDO office and user departments in implementing inclusive procurement strategies. Staff interviews indicated that the COK does not currently offer many technical assistance resources itself but continues to reach out to partner organizations. Staff shared that training regarding the COK's DBE inclusion initiatives was minuscule or nonexistent. The Diversity Business Advisory Council (DBAC) who is charged with advising the COK on strategies aimed at increasing the amount of business being done with COK's DBE community has not achieved its desired outcome.

Repeated Use of Same Vendors at Informal Level

COK staff indicated that many departments engage repeatedly with firms they've previously worked with. The enterprise-wide culture does not incentivize staff with buying authority, to periodically look for new entrants or DBE providers into a product or service area that a department regularly procures. This has resulted in the same companies being awarded the same informal contracting opportunities where staff with buying authority have greater discretion. Limited contract compliance, tracking and reporting significantly decreases the visibility of these practices such that accountability of staff in this area is not elevated.

Enterprise-wide Ownership of DBE Program Policies and Procedures

The COK Procurement manual indicates that all COK departments shall cooperate with the Purchasing Division in the implementation of procedures for the identification of DBEs and the monitoring of procurements from them. Findings indicate departments largely defer the responsibility for the DBE program and its implementation to the SBDO Office. Departmental staff interviews reflected inconsistent views on the department's internal responsibility for DBE program monitoring procedures.

The lack of appropriate accountability mechanisms can result in the COK being challenged in ensuring procurement processes are open, fair, transparent and inclusive. There are no documented policies and procedures that provide operational guidance on DBE program administration which negatively impacts DBEs' ability to successfully navigate the COK's procurement processes.

Vendor Registration

Any firm or organization seeking to conduct business with COK must be registered with the Purchasing Division prior to

the opening of any bid opportunity. COK provides a Vendor List Application Form on its procurement website that prospective vendors are expected to complete. Once a vendor registers, they have an option that will allow them to receive email notifications of bid opportunities commensurate with the types of goods and services the vendor indicated they provide during registration. The COK currently utilizes Bidnet Direct for this notification functionality. Bidnet Direct requires vendors to pay a fee to access the full functionality of its portal to receive bid notifications. This payment requirement can hinder small and minority-owned businesses from registering on the portal.

Inconsistent and Limited Monitoring and Reporting

COK has a Contracts Manager position that is charged with administering activities that are traditionally associated with contract compliance monitoring and reporting. Currently, there are no formal regular reporting requirements of the departments into the SBDO office or other real-time tracking that speaks to the event that an awarded contractor or subcontractor has failed to meet its DBE commitments under the awarded contract. M³ Consulting recommends that the SBDO Office is given the authority to require such real-time reports. In addition to being engaged in the resolution of contractor disputes, funds control tasks, contracts reconciliation tasks, etc., the Contracts Manager's duties include analyzing and tracking contracts to ensure renewals, extensions, amendments, and change orders are executed on time and to COK's standard. When active contracts experience change orders or other amendments that affect the contract value, the Contracts Manager is charged with ensuring that bonds and insurance are appropriately adjusted to meet the change orders, amendments, and/or extensions.

In terms of reporting, the reviewed policy document indicates that the Contracts Manager ensures that all direct recipients of federal grants, grant amendments, and cooperative agreements in excess of \$25,000 are subject to the requirements of the Federal Funding Accountability and Transparency Act of 2006 (FFATA). The policy document identifies the Contracts Manager as the responsible party for submitting sub-recipients' sub-award information to the Federal Funding Accountability and Transparency Act (FFATA) Sub-award Reporting System at the time of award of the sub-grant, in accordance with the requirement to report at the end of the month following the month in which any sub-award under the grant has been made.

Regarding non-federally funded project monitoring however, staff interview feedback suggested that they are "...not doing a very good job..." in terms of monitoring and auditing DBE performance on active contracts in real-time via site visits and desk audits. Staff indicated that would certainly be a place where they would assign any additional staff resources if they became available. In fact, the COK Purchasing Agent had assumed many of the Contracts Manager tasks in addition to her own responsibilities until the position was finally filled in the spring of 2023. Staff also indicates that they are hopeful that the advent of a new contract management system that they will enhance COK's ability to execute an enhanced form of contract compliance and tracking.

Forecasting and Notification of Opportunities

Robust and continuous forecasting has implications for the diverse contracting community's ability to properly prepare to compete for upcoming contracting opportunities. The absence of robust forecasting and notification reduces transparency as it relates to opportunities where SBEs and MWBEs can perform.

Currently, the COK has implemented an annual Business Opportunity Breakfast, participates in the East Tennessee Purchasing Association (ETPA) Annual Business Matching & Tradeshow, hosts an Annual Diversity Business Enterprise Awards Ceremony, and is slated to facilitate a future Diversity Business Expo in the upcoming fiscal year. These efforts seek to inform the community of upcoming opportunities, but the COK currently relies heavily upon the annual Business Opportunity Breakfast event as their primary forecasting vehicle. The annual Opportunity Breakfast event provides the vendor community access to meet-and-greet, talk with City department managers, as well as representatives from Knoxville Area Transit (KAT), Knoxville Utility Board (KUB), Knoxville's Community Development Corporation (KCDC), the Public Building Authority (PBA) and other agencies to be made aware of upcoming bid opportunities. However, there was no indication that budgeting and forecasting is an ongoing coordinated, enterprise-wide process to determine upcoming procurement needs to share with the public regularly throughout the operating year before opportunities are advertised and enter the formal process.

Procurements below \$25,000 are not required to be advertised using any source (e.g., newspaper, website). There is also no indication that the departments engage in any formal efforts to analyze capital project solicitations to break down

the scopes into the different trade categories to support outreach and matchmaking with diverse vendors—including SBEs and DBEs.

Limited Diversity Firm Outreach and Matchmaking

Findings revealed that there is no consistent or enterprise-wide philosophy and approach to DBE firm outreach and matchmaking. Departments report that they rely on the Purchasing Division and their Small Business & Diversity Outreach staff to execute all outreach, departments provide names and contacts of firms they are familiar with to the SBDO Office to include for outreach. The staff reported that there was a precipitous decrease in outreach and in-person “how to do business” engagements with the diverse business community in part due to the Covid-19 pandemic and is only recently beginning to gear up again.

The Nature of the COK’s Centralized Procurement Process and Impact on DBE Participation

M³ Consulting does not advocate for a centralized or decentralized procurement process. We seek to determine the impact of either process on the ability of DBEs to contract with a public entity. Without appropriate infrastructure, management and operational support, an unwieldy bureaucracy can be created that serves as a de facto barrier to DBEs. As it relates to the COK, M³ Consulting’s analysis found that the procurement function for Architecture & Engineering, Construction and Construction-Related Services, Goods & Supplies, Non-Professional Services, and Professional Services are procured mostly in a centralized manner. COK’s Purchasing Division serves as the focal point of their center-led purchasing structure. The Purchasing Division is responsible for developing purchasing policies and standard operating procedures for the entire municipality.

M³ Consulting found that the policies are well organized in their procurement manual and made available throughout the COK. Although not completely centralized their center-led structure still has departments or divisions maintain some purchasing duties and responsibilities independent of the Purchasing Division. In the absence of formal reporting requirements across the enterprise, even the few decentralized procurement activities that occur at the department level can have the impact of decreasing accountability and transparency. Robust infrastructure and integration, coordination, and delegation can help to safeguard against any negative impactors.

M³ Consulting recommends the SBDO Office and the Purchasing Division work more collaboratively with buying departments’ leadership to ensure COK’s DBE policy and practices are adhered to, including the leveraging of technologies that enable regular DBE monitoring and spend reporting to flow from the Departments to the Purchasing Division offices.

B. Anecdotal Analysis

Anecdotal evidence gathered through a series of 20 one-on-one, in-depth interviews and three focus groups led to the following observations that illustrate the possible barriers interviewees perceive to exist for DBE owners when attempting to do business with the COK:

Disconnect Between Buyers/Decision-Makers

The majority of small, minority, and women business owners interviewed agreed that the COK’s targeted outreach activities to DBE firms were very informative and supportive but did not equate to substantial impact for most of the firms. The DBE firms interviewed stated that limited-to-no access to COK’s “Buyers/Decision Makers” prevented them from connecting, fostering relationships, and promoting their capabilities. As a result, those interviewed believe that the non-DBE firms who have previous access, relationships, and a positive past performance track record with COK’s Buyers/Decision-Makers are the firms who continue to receive repeat contacts for contract awards.

Gap in Trust and Confidence

Among vendor community interviewees, there is a strong belief that pursuing COK procurement opportunities is “a waste of time” and that the COK is not serious about implementing new strategies, practices, and policies that eliminate barriers and challenges for DBEs attempting to transact business.

Perceived Inequitable Low Bid Policies

Several interviewees found the COK’s low bid policies to be unfair and to deter DBEs from bidding and winning procurement opportunities. According to these firms, the difference in the economy of scale when larger firms compete against DBEs strictly on low price has made it difficult for small, minority, and women-owned firms to win.

Consider Implementation of Prime Contractor/DBE Matchmaking/Mentor-Protégé Program

Many of the DBE firms interviewed expressed a need to learn and build sustainable relationships with the COK and its Prime Contractors. Additionally, prime contractors communicated a frustration in locating DBE firms and connecting with those DBE's that had the skill-set and capacity to subcontract on COK projects. One of the most successful industry programs to help address this concern by prime and DBEs is the implementation of a prime contractor/DBE Matchmaking/Mentor-Protege Program.

C. Marketplace Analysis

To understand factors that impact the participation of DBEs with COK, it is important to understand the role of the marketplace disparities and the potential opportunities that may limit the participation of DBEs. The demographic configuration may explain in part the differences in the market availability and utilization of DBEs. COK has a large white population, while African Americans make up the second-largest group in terms of participation in the three geographical perspectives.

Taking a gauge of the civilian labor force, 63.2% of whites, 64.0% of African Americans, 63.8% of Hispanic Americans, and 70.6% of Asian Americans are part of the labor force in COK. While whites, African Americans, American Indians, and Hispanic Americans see a drop in the percentage within the Metro Area and the State, African Americans and Hispanic Americans maintain a nearly similar participation in the State and the Metro Area.

The Marketplace Analysis shows there is inequality in the distribution of the labor force by gender and ethnic/racial groups:

- In all construction occupations, white-male workers lead at the city, Metro Area and state levels.
- Under Employment In Selected Apprenticeable EEO Professional Occupations, we can see that males lead in Computer, Engineering, and Science, as well as Protective Service occupations.
- Healthcare Practitioners are predominantly female, as well as Other Professional, and Office and Administrative Support occupations.
- Whites dominate in all occupations, primarily because represent the majority of all groups.

Dodge, which surveys construction-related activity, is used as a source to examine SMWBE participation in marketplace construction activity. Using Dodge data, MWBE participation in marketplace construction activity is examined. For the State of Tennessee, the data indicates that MWBE has limited penetration across all roles.

Comparing bid activity across private and public owners of projects within the State of Tennessee, 2.1% of MWBEs were ranked #1 (winner) in private sector projects, while 6.9% were ranked #1 in public sector projects. Of all private sector bids in the State of Tennessee, about 95.5% were awarded to Non-DBEs, 1.1% to minority-owned firms, and 1% to women-owned firms in FY 2021.

Based on business licenses issued, 94.76% of business licenses are held by Non-DBE firms. Minority-owned businesses held 1.40% and WBEs held 1.23%. Similar disparities are present in other roles. One African American and one SBE each held licenses in Architecture & Engineering. 28 African Americans, 71 WBEs, 30 Hispanic Americans, 2 Asian American and 3 American Indians hold licenses in Construction. 7 African Americans and 7 WBEs hold licenses in Professional Services. 67 WBEs, 65 African American-, 17 Hispanic American-, 5 American Indian-, and 2 Asian American-owned business(es) are licensed in Non-Professional Services. 78 WBEs, 24 African American-, 10 Asian American-, 27 Hispanic American-, and 2 American Indian-owned business hold licenses in Goods & Supplies.

D. Race Neutral

M³ Consulting reviewed the offerings of 27 organizations servicing the Knoxville, Greater Knoxville, and East Tennessee Region. M³ Consulting conducted a series of in-person and Zoom interviews with 20 Executive Management, Departmental Directors, or Program Managers that were all recorded and transcribed. Upon completion of the interview phase, data was extracted from each of the transcriptions to build a comprehensive analysis of the impact race-neutral programs were having in the Knoxville area.

Along with the interviews, publicly available data was collected on each organization. Additional data not publicly available was provided by the organizations researched. That data was then aggregated into the following two sections as represented in the full report:

- 11.3 Organizations: Discussion of Race Neutral Programs and

■ 11.4 Anecdotal Comments from Agency Executives, Managers, and Directors

The executive directors identified the following issues impacting the DBE firms that they service:

- Lack of Government Race-Based Remedies Preventing Growth
- Lack of Capital is a Barrier
- Lack of Meaningful Goals and Requirement Key Cause for Lower Number of Contract Awards in Knoxville
- Lack of Connection and Relationships with Purchasers and Decision-Makers
- Lack of Shared Stakeholder-to-Stakeholder Best Practices and Initiatives
- Lack of Personnel and Capacity

There is a vast race-neutral programmatic ecosystem for DBEs in the Knoxville area. The technical, managerial, and capital organizations provide services from business planning to loans, networking, mentorship, and outreach. Despite the valiant efforts of these race-neutral programs to launch new DBEs and increase the capacity and growth of existing ones to thrive in the Knoxville area, DBEs still face challenges gaining access and being utilized by the COK and other public and private entities. M³ Consulting's analysis of Race Neutral programs revealed that these programs alone have not been effective in increasing availability, capacity or utilization of DBEs.



E.4 RECOMMENDATIONS

In light of the findings discussed above, M³ Consulting is providing the following recommendations to the COK. The recommendations contain both race/gender-neutral and race/gender-conscious elements. These recommendations consist of a listing of pertinent options from which the COK may select in tailoring its efforts to the findings of this report. The options combine agency-specific and best practices recommendations that are legally defensible based on the factual findings of this study. The COK should consider adoption of those recommendations considered most appropriate in terms of cost, resources, likely effectiveness, community acceptance and organizational feasibility.

E.4.1 Identification of Race/Gender-Conscious Goal Possibilities

The actual setting of legally defensible DBE goals is a policy decision that requires action by the COK. The COK can establish overall DBE policy goals that then may be used by employees with buying authority. The COK can then develop an action plan that specifies procedure, program and goal improvements that will be made, and the timeline allocated for those tasks.

Establishment of Race/Gender-Conscious Goals

Based on the statistical findings in the disparity chapter, Table E.7 presents the utilization of qualified firms as reflected by the percentage of contracts for purchase orders awarded and payments made. When compared to the availability of Ready, Willing and Able (RWASM) firms, the utilization appears to be lower than expected. M³ Consulting draws an inference of discrimination against the following race, ethnicity, and gender groups that are illustrated by the blue highlights representing statistically significant underutilization.

Table E.7.
Inference of Discrimination Based on Findings of Statistically Significant Disparity
By Race/Ethnicity/Gender
By Procurement Type For the City of Knoxville

Race/Ethnicity	Architecture & Engineering (Purchase Orders)	Construction & Construction-Related Services (Payments)	Non-Professional Services (Purchase Orders)	Professional Services (Purchase Orders)	Goods & Supplies (Purchase Orders)
African American	Disparity	Disparity*	Disparity*	Disparity*	Disparity*
Asian American	Disparity	Disparity*	Disparity*	Disparity	Disparity*
Hispanic American	ND	Disparity*	Disparity*	Disparity	Disparity*
Native American	ND	Disparity*	Disparity	Disparity	Disparity*
WBE	Disparity*	Disparity*	Disparity*	Disparity*	Disparity*

Source: M³ Consulting
 *Statistically significant
 Light Purple- Underutilization
 Red – Overutilization
 Unshaded – Non-Significant Underutilization
 ND – Not Determined (Zero Availability)

As significant disparity is eliminated in the race and gender-conscious categories, the utilization of race and gender-neutral means in attaining the established goals should be increased. However, in all instances where race and gender-neutral means are utilized, if significant disparity reemerges, then race and gender-conscious techniques can be utilized on a nonpermanent basis to correct identified disparities.

While the COK should utilize race- and gender-neutral means to address participation of groups where there is no statistically significant disparity, that does not mean or condone passive or no outreach to these groups, as significant disparity can emerge (or reemerge) with a lack of focus by the COK to be inclusive. The COK should continuously focus on an inclusive procurement environment that considers MWBEs and SBEs and narrow the focus, when necessary, based on meeting established goals.

Availability, utilization and disparity measures should be tracked on an annual basis and annual goals set as discussed above, as the recommendations below are implemented.⁶ RWASM availability is significantly impacted by bidding patterns and practices. If the bidding patterns of the COK vendors are altered, due to internal adjustments within the COK or

marketplace factors, the impact of those changes should be captured.

E.4.2 Enhancements to Procurement and DEB Procedures and Practices

Below are recommendations to the COK for organizational, cultural, structural and programmatic changes that can lead to sustainable change in the COK’s procurement operations. The recommendations can also assist in bringing the COK into an inclusive procurement environment that ensures regulatory compliance and alignment with best practices.

A. Change Inclusion Focus from Programmatic (Compliance with SMWBE Regulations) to Organizational (Commitment to Inclusive Procurement Environment)

The COK currently sets aspirational goals at 10% of its total procurements to be attained by DBE firms. COK’s current goal-setting model allows separate goals for MBEs, WBEs, and SBEs while counting them in every category for which they qualify.

⁶Annual goals should be set only as benchmarks that provide guidance in assessing how well the program is working on an annual basis, and that help the agency determine whether it needs to be more or less aggressive in the kinds of tools and efforts it is undertaking to remedy the ongoing effects of discrimination

Current programmatic and functional efforts lack impact on the level of procurement and contracting operations that can lead to real and sustained change in organizational culture and practices. Failure to achieve this sustained change can result in barriers for DBEs wanting to do business with the COK. Furthermore, the effectiveness of COK's programmatic efforts will not be maximized until underlying organizational issues, impacting the inclusiveness of COK's procurement operations, are addressed.

Many of the recommendations below focus on city-wide organizational changes that can lead to enhancements to COK's procurement system to allow it to become more inclusive. The recommendations for inclusion do not depend on the COK's decision to employ race- and gender-conscious or race- and gender-neutral programmatic initiatives. When implemented, these recommendations will also enhance the effectiveness of DBE inclusion initiatives. To fully implement these recommendations, the COK should be able to "track" its procurement- and contracting-related decision-making points to more effectively determine if the COK's current practices in any way promote active or passive discrimination or other exclusionary practices.

M³ Consulting recommends COK's leadership commit to enhance the City's effort for DBE inclusion by supporting initiatives carried out by SBDO Office and Purchasing Division and encourage departments to embrace the organization-wide usage of race/gender-conscious and race/gender-neutral strategies. The degree of responsiveness of DBE vendors often correlates to the public entity's degree of commitment to inclusion in which these firms are pursuing contracting opportunities. M³ Consulting recommends the COK develop an implementation plan for the adopted recommendations and share publicly as a demonstration of intentionality.

B. The Nature of the COK's Centralized Procurement Process and Impact on DBE Participation

M³ Consulting does not advocate for a centralized or decentralized procurement process. We seek to determine the impact of either process on the ability of DBEs to contract with a public entity. Without appropriate infrastructure, management and operational support, an unwieldy bureaucracy can be created that serves as a de facto barrier to DBEs.

COK's Purchasing Division serves as the focal point of their mostly center-led purchasing structure. The Purchasing Division is responsible for developing purchasing policies and

standard operating procedures for the entire municipality. M³ Consulting found that the policies are well organized and made available throughout the organization. Some departments and divisions maintain purchasing duties and responsibilities independent of the Purchasing Division.

While the SBDO Office within the Purchasing Division has the responsibility to monitor and report DBE activity across the enterprise M³ Consulting recommends the SBDO Office and the Purchasing Division work more collaboratively with buying departments' leadership to ensure COK's DBE policy and practices are adhered to. This includes leveraging technologies that enable regular DBE monitoring and spend reporting to flow from the Departments to the Purchasing Division offices.

C. Identify Community Economic Development and Inclusive Procurement Objectives

The Purchasing Division and the Office of Small Business & Diversity Outreach (SBDO) Office must operate in a manner that is both consistent with the policy objectives established by the Mayor and City Council and programmatically sound. The COK can do so through striving toward inclusive procurement, which focuses in an ongoing manner on working to ensure that all vendors—regardless of race, ethnicity, gender, national origin, sexual orientation or disability—have the opportunity to bid – and win - the COK's procurement and contracting prime and subcontracting opportunities. Vendors should have a defined formal process and opportunity to learn from COK staff how to become more effective when unsuccessful in pursuing opportunities, thereby participating in the economic prosperity of the Knoxville Metropolitan Statistical Area. In demonstrating best practices, M³ Consulting recommends developing an inclusive procurement environment that incorporates the following elements:

- **Mission Driven**—The procurement and DBE objectives are tied directly to the overall Vision, Mission and Goals of the COK.
- **Opportunity Driven**—The SBDO Office, along with the Purchasing Division, is driven by the COK's opportunities—identifying them, understanding them, managing them and communicating them.
- **Relationship Driven**—With the foundation that being opportunity driven provides, the COK will be in the relationship development business. The SBDO Office and the Purchasing Division will know

E.4 Recommendations

its businesses that can do the COK's work and ask the business community to share its goal of inclusive economic development.

- **Data Driven**—Sound data and fully integrated systems will provide senior management with the information it needs to report on successfully meeting its objectives and maximizing economic development, equity and organizational performance, along with the other objectives established by the Mayor and City Council.

D. Training and Development

Organizations typically engage their staff in diversity training and sensitivity training. However, skills-based training is needed to create an inclusive procurement environment. We must emphasize that inclusivity is an integral part of an efficient procurement process. As such, to create a baseline of knowledge, M³ Consulting recommends that the following training should occur:

- All SBDO Office, Purchasing Division and other appropriate department staff should be provided with opportunities to pursue enhanced, ongoing training beyond standard procurement operations to include SMWBE engagement. M³ Consulting noted that the COK has staff who are members of the National Institute of Governmental Purchasing (NIGP) and hold CPP, CCPB, and CPPO certifications. M³ Consulting recommends that staff should also seek to obtain accreditation as certified compliance officers through organizations such as the American Contract Compliance Association.
- All COK staff engaged in procurement activity should attend a seminar on the components of a DBE program and collaboratively make strategies for achieving established objectives.

With appropriate training, the Purchasing Manager and SBDO Office Manager are then positioned to train on higher-level negotiating strategies and tactics in the various procurement categories consistent with the tenets of sound procurement laws and regulations.

E. Full Implementation of DBE Programmatic Initiatives

The responsibility for DBE participation is shared by both the COK and the vendor community. The COK should take steps to ensure that DBEs are involved in COK procurement opportuni-

ties at the prime level. Based on PO data, below the formal procurement threshold of \$25,000 where capacity is not an issue, the COK had prime MBE participation levels of less than 6%. The only exception to this was in Non-Professional Services where MBE participation was at 12.27%, driven mainly by Asian American-owned firms at 9.71%. WBEs fared slightly better with participations levels ranging from 4.54% in Non-Professional Services to 15.69% in Construction and Construction-Related Services.

M³ Consulting recommends the following for consideration as efforts the COK can undertake:

- Identify prime-level procurement opportunities where a significant pool of DBEs are available based on the NAISC code of the dominant trade area in the procurement;
- Establish prime-level DBE participation targets to ensure that the COK is focused on securing participation at the prime level, as well as subcontracting level;
- Consider the utilization of Small/Micro Business and sheltered market opportunities, where the availability of these firms supports doing so;
- Provide advance notice of specific small business opportunities the Knoxville vendor community (below the COK's formal procurement threshold of \$25,000) and ensure that DBEs are included in pool of firms being solicited;
- Consistently review pool of DBEs sub-bidders and subcontractors to determine those that have done a significant level of subcontracting with the COK and/or other public agencies, thereby building a track record to support prime level awards;
- Seek opportunities to unbundle larger contracts into smaller commercially viable contracting opportunities, where feasible and practicable;
- Consider the use of joint ventures on applicable contracting opportunities.
- Develop and encourage mentor/protégé program opportunities and recognize prime opportunities for distributors;
- Review and revise all technical specifications to exclude proprietary language that discourages DBEs from bidding; and,

- Develop evaluation mechanisms for measuring the COK's staff's efforts toward DBE participation in the COK's contracting opportunities. This evaluation should extend across the COK enterprise.

F. Culture Audit

M³ Consulting recommends that the COK conduct a culture audit to assist the COK in moving toward an organizational culture that will more readily support the Mayor and City Council's Vision and Mission, as well as a more inclusive procurement environment. The culture audit will allow examination and explanation of the common rules of behavior and underlying beliefs of the COK that drive its organization and the way people approach their work. It also will assist in determining whether the COK's current organizational culture is an asset or liability in achieving its Vision and Mission and provides actual evidence for establishing the appropriate direction for the COK.

G. Address Data Capture Issues

Critical to creating an inclusive procurement operation for the COK is an efficient and integrated procurement data infrastructure. M³ Consulting recommends that the COK address the following data issues outlined below to support transparent monitoring, tracking, and reporting. Once these changes are implemented, M³ Consulting recommends that the COK update the statistical portion of the Study to capture FY2017–FY2021 data to provide both a more accurate reflection of DBE utilization at prime and subcontractor levels and as a test case for its SMWBE data capture process.

1. Expand data capture on vendor portal by classifying the entry of NIGP and NAICS codes as a required field during vendor registration
2. Mandatory completion of all applicable DBE forms during the bid solicitation process
3. Assign commodity codes to bids.
4. Consider removal of monthly charge and further utilization of e-procurement or online bid portal to capture bid and quote information
5. Consider activating subcontractor modules in Oracle or utilizing an off-the-shelf DBE tracking system
6. Develop computerized formats for evaluation score sheets

7. Track awards, commitments, and payments separately
8. Develop real-time performance dashboards to support data-driven decisions.

H. Budgeting, Forecasting and Scheduling

While COK currently engages in a number of outreach efforts that seek to notify and inform the vendor community, on a quarterly basis, the COK should develop a forecasting process appropriate for each procurement category that provides project information necessary for planning its activities as it relates to DBE participation. With budgeting and forecasting information, the COK can begin to (a) project the impact of the COK's purchases on economic, business and employment growth in the Knoxville, TN Metropolitan Statistical Area (MSA), (b) conduct networking and matchmaking sessions, and (c) identify areas where increases in local capacity is needed among both DBEs and Non-DBEs to begin capacity building efforts well ahead of when the contraction opportunities come to fruition.

E.4.3 Long-Term Availability and Capacity-Building Initiatives

The recommendations in this section are focused on how the COK can utilize both its resources and opportunities to contribute to the growth and development of SMWBEs. To increase opportunities for SMWBEs, the COK must start with the consideration of available firms.

A. Increasing Pipeline of SMWBEs

1. The Starting Point: Youth Entrepreneurship

Entrepreneurship requires a certain skill set that is cultivated over time. Young people with no access to education and training are less likely to obtain these skill sets on their own. By the time these young people may have an opportunity to obtain these skills, they are close to adulthood and well behind young people who have access to parents with entrepreneurial and/or managerial skill sets.

The COK is in an invaluable position to impact values, behaviors and attitudes toward discrimination and bias, and cultivate a culture of youth entrepreneurship. Collaborating with local school systems to work to invest in students early allows communities previously excluded based on race and gender to expand social capital. Furthermore, it allows the Knoxville community to begin to change the narrative of the historical,

E.4 Recommendations

social and economic factors that have ultimately stunted the natural growth and development of entrepreneurs in these communities.

Efforts can include:

- Youth entrepreneurship and financial literacy programs;
- Mentorship and apprenticeship programs with COK and other public and private sector vendors/contractors/consultants;
- Targeted entrepreneurship career tracks, in conjunction with local technical colleges; and
- Expanded access to entrepreneurship and financial literacy programs to students' parents/family members.

Ultimately, these efforts will provide graduates of local school systems who become entrepreneurs access to the City's opportunities through Small/Micro programs, such as set-asides, sheltered markets and mentor/protégé. As long as they are available to all students, initiatives focused on students that have matriculated in schools in the Knoxville area would be considered race/gender-neutral, with a desired outcome of promoting economic and social development.

These initiatives should be combined with strong diversity initiatives. The focus should not simply be on anti-bias, but multiculturalism efforts that build social capital as well.

2. Refocus Certification and Pre-Qualification Efforts to Identification of Qualified Firms

As a general observation, a certification process focuses on identifying and verifying the race/gender/ethnicity of firms eligible to participate in race/gender-conscious programs. Pre-qualification processes involve pre-screening competing suppliers/contractors/vendors against a pre-determined set of criteria. The pre-qualification process itself can be exclusive and limit the number of available firms.

As such, in Construction, pre-qualification can be a contributory factor to low DBE attainment at the prime contractor level. This generally results in higher levels of DBE participation at the subcontractor level. The contract awards data analyzed during the study period for the COK indicates DBE participation deficits at both the prime and subcontractor levels.

Although, the COK rarely utilizes prequalification, when it is a necessary part of the COK procurement processes, the SBDO Office should work to ensure that pre-qualification and certification processes are not counter-productive to promoting inclusion.

The COK currently does not administer its own certification process but accepts certificates from other certifying bodies. Firms that opt to pursue the certificates indicate that they struggle to see the linkage between obtaining the certifications and successfully securing contracting opportunities.

Certification of firms as minority- or woman-owned is part of narrow tailoring, designed to ensure that only firms discriminated against have access to race/gender-conscious goal-based remedies. Because of a few non-DBEs that have attempted to illegally access these programs, over time, the certification application process has become increasingly burdensome to the DBEs that public entities are trying to reach. As a result, the certification process is increasingly seen as a bar that Minority and Women-owned Businesses should reach to gain access to these race and gender-conscious "benefits." Goals are a remedy, not a benefit. This framing of goals and how the certification process supports the "remedy" should be included in the COK's training protocols. Furthermore, a burdensome certification process can reduce the number of available MWBEs.

As a matter of practice, when the COK staff and prime vendors search for available Minority and Women-owned businesses, they should have the benefit of the largest pool of MWBEs that are available. Firms that may be capable of executing the work, may not be considered because they cannot be counted toward goal attainment. The SBDO Office should work collaboratively with MFTA providers and others, to provide the vendor community with resources to assist with preparing for and navigating the processes for COK's accepted certifying bodies.

M³ Consulting supports inclusion efforts by providing the master directory of DBE firms compiled for the study. While all the firms appearing on the lists may not meet the RWASM standard, the firms on these lists represent a starting point for the curation of the COK's pipeline of available firms. M³ Consulting recommends, the SBDO office:

- Review the compiled list of community organizations, Chambers of Commerce and Management and Technical Assistance (MFTA) providers in the study to determine whether the list is comprehensive. To construct the most exhaustive list of firms, organiza-

tions with private membership lists should also be encouraged to participate.

- For vendors/contractors on the provided Master DBE list that are not certified, COK could outreach to them or conduct survey to obtain data on type of goods and services they provide and further gauge their interest in doing business with the COK.
- Create and institute measures of the COK's progress toward increasing the number of certified and prequalified firms.
- For those available firms that do not meet DBE inclusion policy and pre-qualification requirements, work to include as many available firms as possible on the COK vendor registry and in the COK's race- and gender-neutral programs, and then collaborate with MFTA provides to develop targeted race and gender-neutral initiatives aimed to grow these firms' capabilities accordingly.

B. Expanding Competition

Modeling federal statute 49 CFR Part 26.33, the COK should monitor its contracts to ensure that DBEs are not overly concentrated in certain procurement areas as a means of the COK meeting its DBE goals. Contracts should be continuously reviewed to ensure that (1) the same Non-DBEs and DBEs are not securing a significant percentage of the COK contracts and that (2) the same DBEs are not accounting for a significant percent of the COK's MBE, WBE and SBE participation. Concentration can be addressed in the following ways:

- Ensure that there is no steering of contracts at the prime or subcontractor levels;
- Expand pool of available firms;
- Expand capacity of available firms; and
- Ensure that firms repeatedly submitting low bids are not requesting change orders post-award or providing substandard work.

M³ Consulting recommends the COK to constantly monitor its contracting activity to determine whether contract awards are concentrated among a small group of firms and design strategies to increase the level of competition on the COK procurement and contracting opportunities.

1. Deeper Dive of Bid, Request for Proposal and Selection and Evaluation Process

The COK should consider a deeper dive into bid, request for proposal (RFP), and selection and evaluation results to ensure that the outcomes reflected in the Availability and Utilization chapters reflect a procurement process that is open, fair, transparent and inclusive. This deeper dive to review actual practices would include a review by an independent party of bid and award documents for individual opportunities. These documents include vendor solicitation, bid tabulations, inclusiveness of persons chosen for selection committee, evaluation score sheets, GMP negotiation documents (if utilized), prime contractor selection and evaluation score sheets for subcontractors, and/or prime contractor solicitation list for subcontractors. This deeper dive would also provide greater insight into the competitiveness of different race/gender/ethnic groups and provide the SBDO Office with additional information on which group to target and customize specific outreach and support efforts.

2. Goal Setting and Other DBE Tools Applied by Threshold

M³ Consulting's threshold utilization analysis suggests that, where capacity is not an issue, certain race/ethnic/gender groups are still reflecting disparity. The threshold utilization analysis was based on PO data.

In conducting this spend analysis, the COK should obtain a greater understanding of the individual opportunities and the dollar values associated with them. The spend analysis allows the COK to review individual opportunities by size. This process is different from unbundling, where the organization starts with the larger contracts and attempts to unbundle them. For example, for projects under \$100K, there would be no need to unbundle contracts because there likely would not be multiple trades and work scopes tied to the relatively small contract amount. Instead, the COK should utilize other techniques, such as small business sheltered markets, to increase participation levels of DBEs.

When individual opportunities are sorted by size, appropriate programmatic efforts by the SBDO Office can be established. Furthermore, there is more transparency in contracts awarded, particularly on contracts where more firms are fully capable of competing.

3. Assess Performance of Personnel with Buying Authority

At the end of the day, increasing SMWBE participation in the COK falls to the COK personnel making the buy decision. When new e-procurement systems are implemented, the COK should be able to track the performance of individuals with buying authority to determine the degree to which they are making inclusive purchasing decisions. The individual track record can be considered in annual or semiannual performance evaluations as a means to achieve organizational goals not as a determinant for continued employment.

E.4.4 Expanded DBE Initiatives

Based on the outcomes of the disparity analysis, the procurement analysis and anecdotal/race-neutral testimony, the SBDO Office should consider the following:

- A. Promoting DBE participation at the prime contractor level
- B. Develop DBE program that addresses requirements of large construction and development projects
- C. Implement small business set-asides and sheltered market projects
- D. Address concerns about slow payments
- E. Remove barriers related to bonding and insurance program requirements
- F. Track joint ventures, mentor/protégé programs, and distributorships participation
- G. Facilitate effective matchmaking and outreach programs
- H. Institute monitoring and tracking reporting for overall and project-by-project activities
- I. Define and socialize post-award compliance responsibilities
- J. Leverage technical assistance providers services and members
- K. Consider working with financial institutions to assist DBEs with access to capital.



E.5 SUMMARY

In summary, M³ Consulting, Inc. found that COK's purchasing activities suggest that DBEs continue to have some difficulties obtaining significant contracts with the COK. In submitting specific findings within the Study for the COK, M³ Consulting formulated recommendations that allow the COK to rely upon race/gender-conscious means when necessary to address ongoing hindrances to eliminate disparities, while also addressing DBE participation through race/gender-neutral efforts. Our economic and statistical utilization analyses could serve as part of the policy- and procedure-making decisions needed to ensure enhanced and legally defensible DBE participation in the COK's purchasing processes and opportunities.

1.1 SCOPE OF THE DISPARITY STUDY

February 24, 2022, the City of Knoxville (COK) commissioned Miller³ Consulting, Inc. (M³ Consulting) to conduct a Disparity Study (the Study). In conducting this Study, M³ Consulting collected and developed data to determine disparities, if any, between the availability and utilization of small-, minority-, and women-owned businesses for contracts awarded by COK. The Study involved the following areas of analysis:

- Collection and analysis of historical purchasing, contracting records, and levels of S-M-WBE participation in the procurement categories of Architecture and Engineering, Construction and Construction-Related Services, Professional Services, Non-Professional Services, Goods and Supplies from FY 2017 through FY 2021.
- Compilation of bidder, vendor, S-M-WBE certification and other lists to determine relative availability of contractors and vendors.
- A market survey analysis to determine capacity.
- An assessment of procurement and S-M-WBE policies and procedures that included the following: An analysis of the organizational structures of COK; a review of past and present purchasing, as well as S-M-WBE laws, policies, procedures and practices; and interviews with the Division of Purchases and Contracts (Purchasing), Departmental and Minority and Women-owned Business Enterprise Program (S-M-WBE) personnel.
- Anecdotal interviews and surveys of minority, women, and Non-S-M-WBE business owners.
- Examination of Non-S-M-WBE and S-M-WBE participation in the private sector in Knoxville's market areas.
- Analysis of race- and gender-neutral alternatives to minority and women business goal-based programs.

This Disparity Study contains the results of M³ Consulting's research and provides conclusions based on our analyses.

1.2 ORGANIZATION OF THE DISPARITY STUDY

This report consists of two volumes. Volume I includes the Executive Summary and twelve chapters. Volume II contains additional statistical tables and relevant appendices. A brief description of each chapter is outlined below.

A. Introduction

Chapter I – Introduction includes a synopsis of the contents of each chapter.

B. Industry Analysis

Chapter II – Legal Analysis presents a discussion of the *City of Richmond v. J.A. Croson* decision and lower court cases interpreting and applying the *Croson* decision, including a discussion of the United States Court of Appeals for the Fourth Circuit’s review of race- and gender-conscious programs.

Chapter III – Procurement Analysis reviews COK’s Procurement and S-M-WBE procedures, policies, and practices in relation to their effect on S-M-WBE participation.

C. Statistical Analysis

Chapter IV – Statistical Methodology provides a detailed discussion of the statistical methods used in the Study for determining the availability and utilization of S-M-WBEs and in calculating disparity. The chapter begins with a brief review of (a) the relevant market; (b) definition of businesses’ *readiness, willingness, ability*, as well as how they affect the measurement of availability; (c) measures of utilization and disparity; and (d) statistical significance. This chapter also reviews the task of data collection and includes a summary of data sources relied upon for relevant market, availability, utilization, and capacity determinations.

Chapter V – Statistical Analysis of Relevant Market and S-M-WBE Availability presents data on S-M-WBE availability in the relevant market based on the *Ready, Willing and Able (RWASM) Model* and Data Axle data.

Chapter VI – Statistical Analysis of S-M-WBE Utilization presents data on S-M-WBE, SBE, and SDV/VOBE utilization in awards and payments during FY 2017-FY 2021 based on contract awards, accounts payable and purchase order data.

Chapter VII – Statistical Analysis of S-M-WBE Disparity in Contracting presents disparity ratios, which are a comparison of the availability measures in Chapter V and the utilization measures in Chapter VI.

Chapter VIII – Capacity and Regression examines if firm capacity contributed in any way to the observed disparities. The purpose of this analysis is to determine if, after accounting for any differences in the capacity of firms, race and gender are contributing factors to any disparities found. In addition, access to financing is also analyzed in this chapter through survey data.

D. Market Analysis

Chapter IX – Anecdotal Analysis includes a description of anecdotal data collected and a synopsis of comments during interviews made by minority women and Non-S-M-WBE business owners. The interviews focus on personal experiences in conducting business within a specified industry or with COK.

Chapter X – Marketplace Analysis examines S-M-WBE participation in public/private sector opportunities and factors impacting their growth and development. It includes U.S. Bureau of Census Self-Employment and Apprenticeship data, Census EEO data, Dodge Construction data, COK’s building permits data and local business license data.

Chapter XI – Race-Neutral Alternatives analyzes race and gender-neutral programs to determine if they stimulate the utilization of S-M-WBEs without reliance upon characteristics of race, ethnicity, or gender.

E. Recommendations

Chapter XII – Recommendations presents policy and program recommendations that flow from the findings presented in the report. These recommendations range from race and gender-conscious initiatives for COK to substantive suggestions that pertain to the enhancement of inclusive procurement operations and S-M-WBE programs.

The findings in each of the report’s chapters are interdependent. This statistical analysis, when viewed in totality, provides COK with a picture of S-M-WBE participation in contracting and procurement activity involving prime contracts and subcontracts during FY 2017-FY 2021.

2.1 INTRODUCTION

The purpose of this chapter is to review the legal standards and principles of law governing the City of Knoxville’s (“COK”) efforts to include minority and women-owned firms in its procurement and contracting opportunities. The analysis is intended to be a comprehensive overview of the requirements of *City of Richmond v. J.A. Croson Company* and its progeny¹ and their application to the COK.

The chapter is divided into three sections, with the following subsections.

2.2. Constitutionality of Race and Gender-Conscious Programs

- 2.2.1 *City of Richmond v. J.A. Croson Company* Analysis
 - *Adarand v. Peña*—strict scrutiny applied to federally-funded programs
- 2.2.2 Judicial review of Croson Cases in the Sixth Circuit

2.3 Factual Predicate Standards (Conducting the Disparity Study)

- 2.3.1 Relevant Market vs. Jurisdictional Reach
- 2.3.2 Availability
- 2.3.3 Utilization
- 2.3.4 Disparity Ratios
- 2.3.5 Capacity and Regression
- 2.3.6 Anecdotal
- 2.3.7 Marketplace and Private Sector Analysis
- 2.3.8 Race-Neutral Alternatives

2.4 Conclusions

- 2.4.1 *Croson* Standards
- 2.4.2 Sixth Circuit Standards
- 2.4.3 Elements of Factual Predicate

This legal construct is instrumental in not only defining the parameters for a constitutionally-defensible disparity study, but also analyzing the constitutionality of COK’s current race- and gender-conscious initiatives.

¹ Progeny is a legal case that follow an original opinion setting legal precedent.

2.2 CONSTITUTIONALITY OF RACE AND GENDER-CONSCIOUS PROGRAMS

2.2.1 *City of Richmond v. J. A. Croson Analysis*

The legal basis for the adoption and application of a government race-conscious program was considered by the U.S. Supreme Court in the precedent-setting case *City of Richmond v. J.A. Croson Company (Croson)*.² The following sections of this chapter discuss the *Croson* case and both the United States Court of Appeals for both the Fourth Circuit and the State of North Carolina courts' interpretation of the Supreme Court's constitutional analysis of government-sponsored race and gender-conscious programs.

Background

In 1983, the City of Richmond, Virginia enacted an ordinance that established a minority business enterprise utilization plan (MBE plan) requiring non-minority-owned prime contractors awarded city contracts to subcontract at least 30% of the dollar amount to minority-owned business enterprises. According to the MBE plan, minority business enterprises were defined broadly as companies with at least 51% ownership and control by U.S. citizens who were "Black, Spanish-speaking, Asian, Indian, Eskimo, or Aleut." Under this definition, the MBE plan had no geographic boundaries, in that the MBEs eligible to participate in the plan could be located anywhere in the United States. The MBE plan was touted as a solution for promoting greater participation by minority business in construction contracting. The operation of the MBE plan included a waiver for contractors who demonstrated to the director of the Department of General Services that the plan's set-aside requirements could not be achieved. There was no administrative appeal of the director's denial of a waiver.

The MBE plan was adopted after a public hearing at which no direct evidence was presented that: 1) the city had discriminated based on race in awarding contracts, or that 2) prime contractors had discriminated against minority subcontractors. In the creation of its program, the City Council relied upon a statistical study indicating that, in a city where the population was 50% Black, less than one percent of the contracts had been awarded to minority-owned businesses in recent years.

In 1983, the same year the MBE plan was adopted, J.A. Croson Company lost a contract to install plumbing fixtures in the city jail because of a failure to satisfy the 30% set-aside requirement. Croson determined that to meet the City's requirements, an MBE would have to supply fixtures that would account for 75% of its contract price. After contacting several MBEs on two separate occasions, only one MBE expressed interest, but was unable to submit a bid to Croson due to credit issues. Upon bid opening by the City of Richmond, Croson was the only bidder. Post bid-opening, Croson provided additional time for the MBE to submit a bid to no avail. Croson then requested a waiver from the city, which was denied.

² 488 U.S. 469 (1989).

Croson sued the City of Richmond in the U.S. District Court for the Eastern District of Virginia, alleging the plan was unconstitutional because it violated the Equal Protection Clause of the Fourteenth Amendment. The district court upheld the plan which was affirmed by the Court of Appeals for the Fourth Circuit in reliance on *Fullilove v. Klutznick*, 448 U.S. 448 (1980). Croson sought reversal from the U.S. Supreme Court, who granted the writ of certiorari, vacated the Court of Appeal opinion, and remanded for further consideration. This action was based the decision in *Wygant v. Jackson Board of Education*, 476 U.S. 267 (1986) in which it applied the “strict scrutiny test” in invalidating the local school board’s race-conscious layoff policy. On remand, the Court of Appeals struck down Richmond’s set-aside program as violating both prongs of the strict scrutiny under the Equal Protection Clause.³ The U.S. Supreme Court, in an opinion in which Justice O’Connor was joined by four other Justices, affirmed the Fourth Circuit’s opinion, holding that the Equal Protection Clause of the Fourteenth Amendment of the U.S. Constitution was violated by the City of Richmond’s set-aside ordinance because:

- 1) Richmond failed to demonstrate a compelling governmental interest in apportioning public contracting opportunities based on race; and,
- 2) The plan was not narrowly tailored to remedy the effects of prior or present discrimination.⁴

The Supreme Court stated there was no proof in the record upon which to base a *prima facie* (meaning: based on first assumption) case of a constitutional or statutory violation by any contractors in the Richmond construction industry. The Supreme Court further held that the inclusion of “Spanish-speakers, Asians, American Indians, Alaskans, and Aleuts,” where there was absolutely no evidence of past discrimination against such persons in the Richmond construction market, demonstrated that the city’s purposes were not, in fact, to remedy past discrimination. Finally, the Supreme Court held that the 30% set-aside was not narrowly tailored to remedy the past effects of any prior alleged discrimination.

Standard of Scrutiny Analysis

The *Croson* case falls under the protection of the Equal Protection Clause of the Fourteenth Amendment, which prohibits states from denying any person within its jurisdiction the equal protection of the laws and is usually invoked when a state makes distinctions or classifications. There are three levels of scrutiny under which a state statute, regulation, policy, or practice can be examined: Strict scrutiny, intermediate scrutiny, or rational basis.

- 1) The **strict scrutiny** standard is evoked if the classification is suspect, in particular, one based on race, ethnic or alien distinctions, or infringements upon fundamental rights. The strict scrutiny test is the most rigorous of the three, requiring the state to show that the subject legislation is narrowly tailored to meet a compelling governmental interest.

³ *Id.* at 485.

⁴ *Id.* at 470.

- 2) **Intermediate scrutiny** is applied to gender and age distinctions and requires the state to prove there is an important governmental interest and substantial relationship between the classification and the objective of the legislation.⁵
- 3) The **rational basis** standard tests economic programs that do not make distinctions based on race, ethnic origin, or gender. Under this standard, the moving party is required to show that the classification is not rationally related to a valid state purpose.

Croson and Strict Scrutiny

In reviewing the Richmond ordinance, the Supreme Court applied the analysis used to evaluate an affirmative action program which made distinctions based on race. Although the court was deeply divided, the majority opinion in *Croson* interpreted the Equal Protection Clause as providing the same protection against discrimination and unequal treatment provided to Blacks and other minorities as to non-minority individuals.⁶ The court reasoned that protection of the individual rights guaranteed by the Equal Protection Clause requires strict judicial scrutiny of the facts and circumstances surrounding the adoption of race-based preferences to expose possible illegitimate motivations such as simple race politics or racial stereotyping.⁷

Justice O'Connor, writing the majority opinion, favored this heightened scrutiny of race-conscious programs, basing her opinion on Justice Powell's opinions in *University of California Regents v. Bakke*⁸ and *Wygant v. Jackson Board of Education*⁹. These opinions applied the strict scrutiny standard to race-based preferences related to student admissions and employment, respectively. The use of a heightened scrutiny was necessary, O'Connor reasoned, because the majority Black population in the City of Richmond raised the concern of the court that a political majority will more easily act to the disadvantage of a minority based on "unwarranted assumptions or incomplete facts..."¹⁰ Although Justice O'Connor relied on *Wygant* to define the strict scrutiny standard for *Croson*, it is important to note that her concurring opinion in *Wygant* acknowledges the lack of consensus among the members of the court regarding the appropriate interpretation of the strict scrutiny standard. Four members of the court dissented on the standard set forth in the O'Connor opinion.

While the majority in *Croson* subjected race-based preferences adopted by state and local governments to the most stringent test of constitutionality, the court apparently did not intend to sound a complete retreat from attempts by state and local governments to remedy racial injustice. In her opinion, Justice O'Connor stated:

"It would seem equally clear, however, that a state or local subdivision (if delegated the authority from the State) has the authority to eradicate the effects of private discrimination within its own legislative

⁵ Lower courts have not agreed upon the standard to be applied to physical and mental handicaps; however, intermediate and rational basis have been employed.

⁶ *Croson*, 488 U.S. at 493.

⁷ *Id.*

⁸ *University of California Regents v. Bakke*, 438 U.S. 265 (1978).

⁹ *Wygant v. Jackson Board of Education*, 476 U.S. 267 (1986).

¹⁰ *Croson*, 488 U.S. at 495-496.

jurisdiction. This authority must, of course, be exercised within the constraints of § 1 of the Fourteenth Amendment.”¹¹

Justice Kennedy, in his concurring opinion, went further, stating that a government, upon intentionally causing wrongs, has an “absolute duty” to eradicate discrimination.¹² Even so, the court concluded that, in the enactment and design of its MBE plan, the City of Richmond failed both prongs of the strict scrutiny standard: The program must be justified by a compelling governmental interest and it must be narrowly tailored to achieve that compelling goal or interest.

Compelling Governmental Interest

In some instances, public entities have compelling reasons to remedy past discriminatory treatment of racial or ethnic groups. In *Croson*, the court noted that a municipality has a compelling interest in redressing discrimination committed by the municipality or private parties within the municipality’s legislative jurisdiction if the municipality in some way perpetuated the discrimination to be remedied by the program.¹³ The court makes clear that a state or local government may use its legislative authority in procurement policies to remedy private discrimination, if that discrimination is identified as “particularity required by the Fourteenth Amendment.”¹⁴

In *Grutter v. Bollinger*,¹⁵ the U.S. Supreme Court further expounded on the compelling governmental interest test, stating that, “[we] have never held that the only governmental use of race that can survive strict scrutiny is remedying past discrimination...Not every decision influenced by race is equally objectionable and strict scrutiny is designed to provide a framework for carefully examining the importance and the sincerity of the reasons advanced by the governmental decision-maker for the use of race in that particular context.”¹⁶

Factual Predicate (Findings of Discrimination or Disparate Treatment Prior to Adoption of Race-Conscious Solutions)

Race-conscious measures may be adopted when a governmental entity establishes, through a factual predicate, identified instances of past discrimination. There must be documentation of specific past instances of discrimination to provide guidance for the “...legislative body to determine the precise scope of the injury it seeks to remedy.”¹⁷ A factual predicate is required before a government has a compelling interest in race-conscious programs.¹⁸ Justice O’Connor opined that “where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors

¹¹ *Croson*, 488 U.S. at 491-492.

¹² See *id.* at 518.

¹³ *Id.* at 492.

¹⁴ *Id.*

¹⁵ *Grutter v. Bollinger*, 539 U.S. 306, 123 S. Ct. 2325 (2003).

¹⁶ *Grutter*, 539 U.S. at 2339. See *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F. 3d 964 (8th Cir. 2003) and *Hershell Gill Consulting Engineers v. Miami-Dade County*, 333 F.Supp.2d 1305 (S.D. Fla. 2004).

¹⁷ *Croson*, 488 U.S. at 498.

¹⁸ *Id.* at 497.

actually engaged by the locality or the locality’s prime contractors, an inference of discriminatory exclusion could arise.”¹⁹

The City of Richmond justified its enactment of its plan based on five factors: (1) the plan declared its purpose to be “remedial”; (2) at public hearings in connection with enacting the plan, proponents stated there had been past discrimination in the construction industry locally, throughout the state and the country; (3) based on a study conducted for the city, minority businesses received 0.67% of prime contracts from the city, while minorities constituted 50% of Richmond’s population; (4) minority contractors were grossly under-represented in local contractors’ associations; and (5) U.S. Congressional studies have concluded that minority participation in the construction industry nationally was stifled by the present effects of past discrimination.²⁰

The *Croson* court rejected the foregoing factors as inadequate to establish a “strong basis in evidence” to justify Richmond’s plan for the following reasons:

- *Remedial Purpose Recitation*: The mere recitation of a “remedial” purpose for a racial classification is insufficient, particularly where an examination of the history of the legislation and its legislative scheme suggests that its goal was other than its asserted purpose.²¹
- *Statements Regarding Past Discrimination*: The generalized assertions of plan proponents that there had been past discrimination in the construction industry were highly conclusive in nature and of no sufficient evidence or probative value in establishing past discrimination by anyone in the construction industry in the City of Richmond.²²
- *Disparity in Contracts Awarded*: Where special qualifications were required, the comparisons to the general population, rather than to the special smaller group of qualified individuals, may have little probative value. Thus, the relevant statistical pool for demonstrating discriminatory exclusion was the number of MBEs qualified to undertake the task, as opposed to the percentage of minority individuals in the general population. While the plan contemplated minority subcontractor participation, the city did not know how many MBEs in the local area were qualified to do the work or the percentage of MBE participation in city projects.²³
- *Low Participation in Contractors’ Association*: A low percentage of minorities in the local contractors’ associations did not provide sufficient evidence without proof that this low percentage was due to

¹⁹ *Croson* at 730.

²⁰ *Id.* at 499. It is important to note that the City of Richmond attempted in part to predicate its program on the studies cited by the Supreme Court in *Fullilove v. Klutznick*, 448 U.S. 448 (1980). The Court in *Fullilove* noted that the Equal Protection component of the Fifth Amendment was not violated when Congress established a set-aside program since it was substantially related to the achievement of an important national goal of remedying the past acts of racial discrimination in the area of public contracts. The Congressional authority to establish a set-aside program is greater than that of a state and is subjected to less judicial scrutiny by the courts. However, the Court in *Adarand Constructors, Inc. v. Federico Peña* held that “...all racial classifications, imposed by whatever federal, state, or local government actor, must be analyzed under strict scrutiny.” 515 U.S. 200, 227 (1995).

²¹ *Croson*, 488 U.S. at 500.

²² *Croson*, 488 U.S. at 500.

²³ *Id.* at 501-502.

discrimination against, as opposed to the free choice, of Blacks to pursue alternate employment or interests.²⁴

- *Congressional Findings*: The finding by Congress that past discrimination accounted for the low number of minority contractors in the country had little or no probative value with respect to establishing discrimination in the City of Richmond. A more particularized showing of past discrimination by the city was required, such as a pattern of discrimination in the local industry that the city could act to eradicate, or discrimination in which the city was a “passive participant.”²⁵

The court concluded that a more specific inquiry and discovery would be required to support a constitutionally permissible set-aside program. The factual inquiry must be local in nature and the statistical analysis must address a relevant comparison. In *Croson*, Justice O’Connor relied heavily on her opinion and that of Justice Powell’s in *Wygant*, when specifying the requirement that “judicial, legislative or administrative findings of constitutional or statutory violation” must be found before a government entity has a compelling interest in favoring one race over another.²⁶

For example, in *Wygant*, the U.S. Supreme Court considered the validity of a collective bargaining agreement, which provided special protection for minority teachers from layoffs. The school board argued that the board’s interest in providing minority teacher role models for its minority students, as an attempt to alleviate societal discrimination, was sufficiently important to justify the use of a racial classification embodied in the layoff provision.²⁷ The Justices rejected the role model theory and held that it could not be used to support a remedial measure, such as a layoff provision. The disparity between teachers and students, according to the court, had no probative value in demonstrating discrimination in hiring and promotion, which necessitated corrective action. Substantially, the same conclusion had been reached by the Supreme Court in 1978 in *Bakke*.²⁸

In its failure to show particularized instances of discrimination, the *Croson* court decided that the factual predicate offered by the City of Richmond suffered the same flaws as the factual predicate presented in *Wygant*. The factual predicate presented by the City of Richmond depended upon generalized assertions, which could lead to an attempt to match contract awards to MBEs to the minority population. In analyzing the *Croson* factual predicate, the U.S. Supreme Court did not provide a set of standards or guidelines describing a constitutional MBE plan. It simply provided a stringent burden of proof for proponents of MBE laws to meet. The court also did not give legislatures much guidance on the parameters of a factual predicate that would show evidence of discrimination. That said, there are some indications of the measures the Court will accept:

- 1) A pattern of discrimination shown through an appropriate disparity analysis may raise an inference of discrimination.
- 2) A relevant market in which the public entity conducts business must be established; and

²⁴ *Id.* at 503-504.

²⁵ *Id.* at 504.

²⁶ *Id.* at 497.

²⁷ See *Wygant*, 476 U.S. at 274.

²⁸ *Cone Corp. v. Hillsborough County*, 908 F.2d 908, 913 (11th Cir. 1990). See *University of California Regents v. Bakke*, 438 U.S. 265 (1978).

- 3) Qualitative evidence of discrimination, such as identified anecdotal accounts of past discrimination, may also be acceptable.

The court, however, leaves a great deal of room for interpretation in the development of models to satisfy these standards.

Because the *Croson* court left the task of further establishing a factual predicate to the lower courts, the lower courts have experienced difficulties in navigating the complexities in this area of constitutional law. To address these complexities, state and local governmental entities are using independent consultants to assess if they have the factual predicate or a statistically significant disparity necessary to justify remedial race-conscious and/or gender-conscious programs in accordance with the standards established by *Croson*.

Narrowly Tailored

The court in *Croson* made it clear that the second prong of the “strict scrutiny” test demands that remedial action be “narrowly tailored” to remedy past or present discrimination. At least three characteristics were identified by the court as indicative of a narrowly tailored remedy:

- 1) The program should be instituted either after, or in conjunction with, race-neutral means of increasing minority business participation; a governmental entity does not have to enact race-neutral means if they are not feasible or conducive to remedying past discrimination;²⁹
- 2) The plan should avoid the use of rigid numerical quotas;³⁰ and
- 3) The program must be limited in its effective scope to the relative market of the governmental entity.³¹

Croson found the 30% quota in Richmond to be a rigid numerical quota without justification.³² Given that the city considered bids and waivers on a case-by-case basis, the court found no need for the rigid quotas.³³ In creating a plan, a public entity cannot employ quotas simply to avoid “...the bureaucratic effort necessary to tailor remedial relief to those who truly have suffered the effects of prior discrimination.”³⁴

Yet, based on the discovery of a significant statistical disparity “...between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors,” the public entity can then institute measures to end the “discriminatory exclusion.”³⁵ In fact, in some showings of discrimination, goals, quotas or set-asides could be employed. “...In the extreme case, some form of narrowly tailored racial preference might be necessary to break

²⁹ See *Croson*, 488 U.S. at 507-508.

³⁰ *Id.*

³¹ *Id.* at 504.

³² *Id.* at 471-472, 499.

³³ *Id.* at 508.

³⁴ *Id.*

³⁵ *Id.* at 509.

down patterns of deliberate exclusion.”³⁶ Any plan of action containing racial preferences should be grounded in the statistical assessment of disparity.

Several lower courts have sought to expound upon the components of narrow tailoring dictated by the Supreme Court. In doing so, the following findings have been made:

- 1) Flexible and aspirational goals should be demonstrated by being tied to availability, set project-by-project and achieved through good faith efforts.³⁷ Goals can be set for small minority groups where discrimination may have negatively impacted their numbers causing the inability to reach statistical significance.³⁸ Race-conscious goals within federal contracts should be utilized to achieve the portion of DBE participation that cannot be achieved through race and gender-neutral means.³⁹
- 2) Waivers and good faith efforts should be an integral component of the program. If MBEs are not available, or submit unreasonably high price quotes, the prime contractor should be granted a waiver.⁴⁰
- 3) A sunset clause is also a component of a narrowly tailored MBE program. This can involve: a) a graduation program,⁴¹ b) a definite date to end the program;⁴² or c) an annual review of Minority and Women Business Enterprise (hereinafter M/WBE) program efficacy, goals, and utilization. M/WBE programs should not be designed as permanent fixtures in a purchasing system without regard to eradicating bias in standard purchasing operations or in private sector contracting.
- 4) Additionally, any race-conscious program or other remedial action should not extend its benefits to MBEs outside the political jurisdiction’s relevant market, unless the MBEs can show that they have suffered discrimination within the locale.⁴³ M/WBE programs should be limited in scope to group(s) and firms that suffer the ongoing effects of past or present discrimination.⁴⁴

³⁶ *Id.*

³⁷ *Cone Corp. v. Hillsborough County*, 908 F.2d 908 (11th Cir. 1990), *Associated General Contractors of Ohio v. Drabik*, 214 F. 3d 300 (6th Cir. 2000).

³⁸ *Concrete Works v. County of Denver (Concrete Works I)*, 823 F. Supp. 821, 843 (D. Colo. 1993).

³⁹ *Western States Paving Co. v. Washington DOT*, 407 F.3d 983 (9th Cir. 2005).

⁴⁰ *Associated General Contractors of Ohio v. Drabik*, 214 F. 3d 300 (6th Cir. 2000), *Hershell Gill Consulting Engineers v. Miami-Dade County*, 333 F.Supp.2d 1305 (S.D. Fla. 2004), *Western States Paving Co. v. Washington DOT*, 407 F.3d 983 (9th Cir. 2005)

⁴¹ *Associated General Contractors of California, Inc. v. Coalition for Economic Equality*, 950 F.2d 1401,1417 (9th Cir. 1991), *Associated General Contractors of Ohio v. Drabik*, 214 F. 3d 730 (6th Cir. 2000), *Hershell Gill Consulting Engineers v. Miami-Dade County*, 333 F.Supp.2d 1305 (S.D. Fla. 2004).

⁴² *Associated General Contractors v. San Francisco*, 748 F. Supp. 1443, 1454 (N.D. Cal. 1990), *Associated General Contractors of Ohio v. Drabik*, 214 F. 3d 730 (6th Cir. 2000).

⁴³ *Concrete Works I*, 823 F. Supp. at 843. This was true even if the statistical evidence shows discrimination by contractors in cities in other locales. *Coral Construction Company v. King County*, 941 F.2d 910, 925 (9th Cir. 1991).

⁴⁴ In *Jana-Rock Construction v. N.Y. State Department of Economic Development*, 438 F.3d 195 (2nd Cir. 2006), the Second Circuit considered the issue of under-inclusiveness regarding N.Y. State Department of Economic Development’s exclusion of Portuguese and other European Spanish speaking persons from its definition of Hispanic in its affirmative action programs. While the court found that strict scrutiny and narrow tailoring required that programs not be over-inclusive, the Court of Appeals did not believe that Croson intended to subject under-inclusiveness to the strict scrutiny standard.

- 5) Race and gender-conscious M/WBE programs should be instituted only after, or in conjunction with, race and gender-neutral programs.⁴⁵
- 6) M/WBE programs should limit their impact on the rights and operations of third parties.⁴⁶

In *Grutter v. Bollinger*⁴⁷ and *Gratz v. Bollinger*⁴⁸, which address the standards for utilizing race-conscious measures in public education, the U.S. Supreme Court reviewed the utilization of goals in affirmative action cases. The utilization of race should allow for individualized consideration, and be applied in a flexible, non-mechanical way. The court appears to conclude that race can be used as more of a “plus” factor, rather than a defining feature of the application.

In *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation* and *Gross Seed Company v. Nebraska Department of Roads*,⁴⁹ the Eighth Circuit U.S. Court of Appeals has interpreted these two cases “in light of” the U.S. Supreme Court’s decision in *Croson*. The court found that the DOT’s goal programs were consistent with the requirements of *Gratz* and *Grutter*, as they were flexible and individualized and emphasized race-neutral means.

⁵⁰

In *Western States Paving Co., Inc. v. Washington State Department of Transportation*,⁵¹ the Ninth Circuit U.S. Court of Appeals reached a similar conclusion in finding that Washington DOT met the compelling governmental interest test; specifically, the Ninth Circuit concluded that it was unnecessary for Washington DOT to establish that its program was premised on a compelling interest independent of Congress’s nationwide remedial objective. However, the Ninth Circuit found that Washington failed the narrow tailoring test because Washington DOT did not present any evidence of discrimination within the state’s transportation construction market. In order to be narrowly tailored, “...a minority preference program must establish utilization goals that bear a close relationship to minority firms’ availability in a particular market.”⁵² The Ninth Circuit stated that (1) a statistical analysis that considered capacity of disadvantaged firms within Washington DOT’s market, and (2) anecdotal testimony was missing.⁵³

Overconcentrated

The federal District Court of Minnesota considered whether a Disadvantaged Business Enterprise (hereinafter DBE) Program was “...unconstitutional because the impact of curing discrimination in the construction industry is

⁴⁵ *Associated General Contractors of America, Inc. v. California Department of Transportation (Caltrans)*, 713 F. 3d 1187,1195 (9th Cir. 2013); *Engineering Contractors Association of South Florida Inc. v. Metropolitan Dade County*, 122 F. 3d 895, 928-929 (11th Cir. 1997).

⁴⁶ *Adarand VII*, 228 F. 3d 1147, 1176-1178, *Geyer Signal, Inc. v. Minnesota Department of Transportation*, Civil No. 11-321 (JRT/LIB) (D. Minn. 2014).

⁴⁷ *Grutter v. Bollinger*, 539 U.S. 306 (2003).

⁴⁸ *Gratz v. Bollinger*, 539 U.S. 244 (2003).

⁴⁹ *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964 (8th Cir. 2003) (the two cases were combined and heard together).

⁵⁰ *Id.* at 973. (Court stated that race was made relevant in the program, but it was not a determinative factor).

⁵¹ *Western States Paving Co., Inc. v. Washington State Department of Transportation*, 407 F.3d 983 (9th Cir. 2005)

⁵² *Id.* at 994.

⁵³ *Id.* at 1000-1001.

overconcentrated in particular sub-categories of work” in *Geyer Signal, Inc. v. Minnesota DOT*.⁵⁴ In this case, Geyer sought a permanent injunction of Minnesota DOT’s DBE Program, arguing the DBE Program was unconstitutional on its face and as applied. A major argument made by Geyer was that the DBE program was not narrowly tailored because DBE goals were only satisfied through a few areas of work on construction projects (i.e., overconcentrated), burdening non-DBEs in those sectors and not addressing problems in other areas.⁵⁵ Under the federal requirements, DBE programs are required to monitor and address issues of overconcentration. The court in *Geyer* first held that plaintiffs failed to establish that the DBE Program will always be fulfilled in a manner that creates overconcentration, as is required under a facial challenge.⁵⁶ Examining whether the DBE program was narrowly tailored, the court reviewed the goals set for DBE participation based on DBEs that are ready, willing, and able to participate, thus accounting for work that DBEs are unable to perform. Furthermore, the Minnesota DOT Program established mechanisms to address any issues of overconcentration through the following mechanisms:

- Flexible contract goals that allow Minnesota DOT to change focus from over-concentrated areas.
- Ability of prime contractors to subdivide projects that would typically require more capital and equipment than a DBE can acquire.
- Waivers.
- Incentives, technical assistance, business development programs, mentor-protégé programs, and other measures to assist DBEs to work in other areas where there is not overconcentration.⁵⁷

The as-applied challenge failed as well.⁵⁸ On the issue of overconcentration, the district court held that there is “no authority for the proposition that the government must conform its implementation of the DBE Program to every individual business’ self-assessment of what industry group they fall into and what other businesses are similar.”⁵⁹ Because Geyer did not demonstrate that identifying businesses using the North American Industry Classification System (“NAICS”) code was unreasonable or that overconcentration exists in its type of work, it did not show that Minnesota DOT’s program was not narrowly tailored by failing to identify over-concentration or failing to address it.⁶⁰

Race-Neutral Alternatives

The court in *Croson* held that the MBE program should be instituted either after, or in conjunction with, race-neutral means of increasing minority business participation.⁶¹ The *Croson* court stated that, in Richmond, there did “not appear to have been any consideration of the use of race-neutral means to increase minority business

⁵⁴ *Geyer Signal, Inc. v. Minnesota Department of Transportation*, Civil No. 11-321 (JRT/LIB) (D. Minn. 2014).

⁵⁵ *Id.* at *11.

⁵⁶ *Id.* at *12 (Challenger must establish that no set of circumstances exists under which the DBE program would be valid).

⁵⁷ *Id.* at 16-17.

⁵⁸ *Id.* at 17-18.

⁵⁹ *Id.* at 20.

⁶⁰ *Id.* at 40-41.

⁶¹ *Croson* at 729, citing *U.S. v. Paradise*, 480 U.S. 149, 171 (1987).

participation in city contracting.”⁶² The Court further stated that, in upholding the federal set-aside in *Fullilove*,⁶³ the Court found that “Congress had carefully examined and rejected race-neutral alternatives before enacting the MBE set-aside.”⁶⁴ This was because “...[b]y the time Congress enacted [the MBE set-aside] in 1977, it knew that other remedies had failed to ameliorate the effects of racial discrimination in the construction industry.”⁶⁵

While *Croson* does not define race-neutral programs or what explicitly constitutes consideration of race-neutral programs, other passages in *Croson* do shed some light on the Court’s opinion on these two issues. The Supreme Court noted that the City of Richmond had at its disposal a wide array of race-neutral measures that could “increase the accessibility of city contracting opportunities to small entrepreneurs of all races. Simplification of bidding procedures, relaxation of bonding requirements, and training and financial aid for disadvantaged entrepreneurs of all races would open the public contracting market to all those who have suffered the effects of past societal discrimination or neglect.”⁶⁶

The court also suggested that the city may “[a]ct to prohibit discrimination in the provision of credit or bonding by local suppliers and banks. Business as usual should not mean business pursuant to the unthinking exclusion of certain members of our society from its rewards.”⁶⁷ Thus, wherein there are private industries awarded city contracts, cities can attempt to thwart discrimination against minority contractors in the subcontracting associated with such city contracts.⁶⁸

What constitutes an adequate consideration of race-neutral programs is more elusive. In *Fullilove*, although overturned by the Court in *Adarand v. Peña*⁶⁹, the Court held that Congress made a thorough investigation of the inadequacy of race-neutral measures to promote MBEs. While *Croson* held that Richmond could not rely on the congressional findings referred to in *Fullilove*, presumably, Richmond could have relied on a similar amount of evidence that Congress relied upon in *Fullilove*. However, congressional findings in *Fullilove* were remarkably thin with no hearings held to document the discrimination that the statute in *Fullilove* set out to rectify.⁷⁰ While *Fullilove* has been in large part superseded by *Adarand v. Peña*, *Adarand* was also largely silent on what constituted an adequate consideration of race-neutral alternatives.

Subsequent federal case law has provided some illumination on the question of what constitutes adequate consideration of race-neutral measures.

⁶² *Croson* at 729 (1989).

⁶³ In *Fullilove v. Klutznick*, 448 U.S. 448 (1980), the U.S. Supreme Court found that the United States government could use its spending power to remedy past discrimination in the construction industry by establishing that 10% of federal funds could go to minority-owned firms under a set-aside program. *Fullilove v. Klutznick* was overruled by *Adarand Constructors, Inc. v. Peña (Adarand III)*, 515 U.S. 200 (1995), bringing federal programs in line with *Croson*.

⁶⁴ *Croson* at 729.

⁶⁵ *Id.* at 729 (quoting *Fullilove*).

⁶⁶ *Id.* at 730.

⁶⁷ *Id.*

⁶⁸ However, the court did not say whether this influence should be exercised through legislative enactment.

⁶⁹ 515 U.S. 200, 115 S. Ct. 2097 (1995).

⁷⁰ *Id.*

- 1) As stated previously, a governmental entity does not have to enact race-neutral means if they are not feasible or conducive to remedying past discrimination.⁷¹
- 2) If race-neutral programs and legislation were in place prior to the establishment of a race-conscious program and had been attempted in good faith, and yet M/WBE participation in public procurement remains low relative to availability, then an inference is created that race-neutral programs were inadequate to relieve the impact of past discrimination.⁷²

Scrutiny Applied to Federally Funded Programs

Background of Adarand v. Peña

In *Adarand Constructors, Inc. v. Peña*⁷³ (“Adarand III”) the U.S. Supreme Court analyzed the constitutionality of a federally funded race-conscious DBE program. In 1989, the Central Federal Lands Highway Division (CFLHD), which is part of the United States Department of Transportation, awarded the prime contract for a highway construction project in Colorado to Mountain Gravel & Construction Company. Mountain Gravel then solicited bids from subcontractors for the guardrail portion of the contract. Petitioner Adarand, a Colorado-based highway construction company that specialized in guardrail work, submitted the lowest bid. Gonzales Construction Company also submitted a bid to complete the guardrails.⁷⁴ Gonzales was a certified Disadvantaged Business Enterprise (DBE), however Adarand was not.⁷⁵ Mountain Gravel awarded the subcontract to Gonzales, even though Adarand had the lowest bid.⁷⁶

Federal law requires a subcontracting clause be inserted in most federal agency contracts, which states “that [the] contractor shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans, and other minorities, or any other individual found to be disadvantaged by the [Small Business] Administration pursuant to section 8(a) of the Small Business Act.”⁷⁷ Adarand filed suit in the United States District Court for the District of Colorado against various federal officials, claiming that the race-based presumptions involved in the use of subcontracting compensation clauses violated Adarand’s right to equal protection. In addition to its general prayer for “such other and further relief as to the court seems just and equitable,” *Adarand* specifically sought declaratory and injunctive relief against any

⁷¹ *General Contractors of California v. Coalition of Economic Equity*, 950 F. 2d 1401,1417 (9th Cir. 1991), *Engineering Contractors v. Dade County*, 122 F. 3d. 895 (11th Cir. 1997), *Concrete Works of Colorado, Inc. v. City and County of Denver (Concrete Works I)*, 823 F. Supp. 821 (D. Colo. 1993), *Western States Paving Co., Inc. v. Washington State Department of Transportation*, 407 F.3d 983 (9th Cir. 2005).

⁷² *Concrete Works I*, 823 F. Supp. 821 at 841.

⁷³ *Adarand Constructors, Inc. v. Peña (Adarand III)*, 515 U.S. 200 (1995).

⁷⁴ *Id.* at 205.

⁷⁵ *Id.*

⁷⁶ *Id.* Note that in *Western States Paving*, the Ninth Circuit concluded that a DBE program is not rendered unconstitutional because it sometimes results in bids by non-DBE firms being rejected in favor of higher bids from DBEs. “Although this places a very real burden on non-DBE firms, this fact alone does not invalidate TEA 21. If it did, all affirmative action programs would be unconstitutional because of the burden on non-minorities.” 407 F.3d at 995.

⁷⁷ *Adarand III*, 515 U.S. at 205. *USC section has been replaced by newly enacted legislation.

future use of subcontractor compensation clauses.⁷⁸ The federal district court ruled against Adarand, (*Adarand I*) granting the government’s motion for summary judgment. The court of appeals affirmed. (*Adarand II*)⁷⁹

Discussion of U.S. Supreme Court Ruling

Before the U.S. Supreme Court could decide on the merits of the case, it had to determine if *Adarand* had standing to seek forward-looking relief. For *Adarand* to have standing, it would have to allege that the use of subcontractor compensation clauses in the future constitutes “an invasion of a legally protected interest which is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical.”⁸⁰ The court determined that *Adarand’s* claim met this test. The court further stated that *Adarand* need not demonstrate that it has been, or will be, the low bidder on a government contract.⁸¹ The injury in cases of this kind is that a “discriminating classification prevent[s] the plaintiff from competing on an equal footing...”.⁸² The aggrieved party “need not allege that he would have obtained the benefit but for the barrier in order to establish standing.”⁸³ The question for the Court was whether or not Adarand made an adequate showing that sometime in the near future it would bid on another government contract that offered financial incentives to a prime contractor for hiring disadvantaged subcontractors.⁸⁴

The next issue the court addressed was the standard of review for federal racial classifications in determining the viability of programs to address discrimination. The court concluded “that any person, of whatever race, has the right to demand that any governmental actor subject to the Constitution justify any racial classification subjecting that person to unequal treatment under the strictest judicial scrutiny,”⁸⁵ thereby holding “that all racial classifications, imposed by whatever federal, state, or local governmental actor, must be analyzed by a reviewing court under strict scrutiny.”⁸⁶ Such classifications are constitutional only if they have narrowly tailored measures that further compelling governmental interests.⁸⁷ The court’s decision recognized the persistence of the practice and lingering effects of racial discrimination against minority groups and the government’s ability to act in response to it.⁸⁸ Further, the court wanted to dispel the notion that strict scrutiny is “strict in theory, but fatal in

⁷⁸ *Id.* at 210. A subcontractor compensation clause gives a prime contractor a financial incentive to hire subcontractors certified as small businesses controlled by socially and economically disadvantaged individuals and requires the contractor to presume that such individuals include minorities or any other individuals found to be disadvantaged by the Small Business Administration (SBA)

⁷⁹ *Id.*

⁸⁰ *Adarand III*, 515 U.S. at 211.

⁸¹ *Id.*

⁸² *Id.* (Citing *Northeastern Fla. Chapter, Associated Gen. Contractors of American v. Jacksonville*, 508 U.S. 656, 667, 113 S. Ct. 2297, 2304 (1993)).

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.* at 224.

⁸⁶ *Id.* at 227.

⁸⁷ *Id.*

⁸⁸ *Id.* at 202.

fact.”⁸⁹ Therefore, when race-based action is necessary to further a compelling interest, such action will be found to be constitutional so long as it satisfies the “narrow tailoring” test set forth by the Supreme Court.⁹⁰

Adarand on Remand to the Lower Courts

The court remanded the case to the Tenth Circuit U.S. Court of Appeals to address several issues⁹¹:

- To determine if the governmental interests served using subcontractor compensation clauses are properly described as “compelling.”
- To address the question of narrow tailoring in terms of strict scrutiny cases by exploring the use of race-neutral means to increase minority business participation in government contracting.
- To determine if the program is appropriately limited, so it “will not outlive the discriminatory effects it was designed to eliminate.”⁹²
- To review the discrepancy between the definitions of which socially disadvantaged individuals qualify as economically disadvantaged for the 8(a) as compared to 8(d) programs under the Small Business Act.
- To determine if 8(d) subcontractors must make individualized showings, or if the race-based presumption applies to both socially and economically disadvantaged businesses.

The Tenth Circuit U.S. Court of Appeals remanded the case to the district court for action on the issues raised by the U.S. Supreme Court.⁹³ The federal district court in *Adarand* (“*Adarand IV*”) accepted the federal government’s evidence of compelling interest, but rejected the federal DBE program as applied in Colorado as not being narrowly tailored.⁹⁴ The court, although acknowledging the U.S. Supreme Court’s pronouncement that strict scrutiny is not “fatal in fact”, found it “difficult to envisage a race-based classification” that would ever be narrowly tailored, thereby effectively pronouncing strict scrutiny fatal in fact.⁹⁵

Following *Adarand IV*, the Tenth Circuit U.S. Court of Appeals, in *Adarand V*, considered subsequent events that the court deemed to have rendered the case moot.⁹⁶ During the course of the litigation, *Adarand* applied for and was granted DBE certification by the Colorado Department of Transportation.⁹⁷ The appellate court concluded that *Adarand* could no longer demonstrate an injury stemming from the Subcontractors Compensation Clause (a federal subcontracting program) and, therefore, the case was moot.⁹⁸

⁸⁹ *Id.* at 237 (citing *Fullilove*, 448 U.S. at 519).

⁹⁰ *Id.*

⁹¹ *Id.* at 237-238.

⁹² *Id.* at 238 (citing *Fullilove*, supra at 519).

⁹³ *Adarand Constructors, Inc. v. Peña (Adarand IV)*, 965 F. Supp. 1556 (D. Colo. 1997).

⁹⁴ *Id.* Similarly, a Texas District court, in *Rothe Development Corp v. U.S. Department of Defense*, 499 F.Supp.2d 775 (W.D. Tex. 2007), upheld the federal government benchmark study as an adequate factual predicate for the small, disadvantaged business program of the U.S. Department of Defense. See also *Concrete Works of Colorado, Inc. v. City and County of Denver, Co.*, 86 F.Supp.2d 1042 (D. Colo. 2000).

⁹⁵ See *Adarand IV*, 965 F. Supp. at 1580 (D. Colo. 1997).

⁹⁶ See *Adarand Constructors, Inc. v. Slater (Adarand V)*, 169 F.3d 1292 (10th Cir. 1999).

⁹⁷ *Id.* at 1296.

⁹⁸ *Id.* at 1296-1297.

In the U.S. Supreme Court’s review of the court of appeals decision in *Adarand VI*, the court reversed the lower court, holding that “it was ‘far from clear’” that federal DOT would not initiate proceedings to revoke *Adarand*’s status and because “it is impossible to conclude that respondents have borne their burden of establishing that it is ‘absolutely clear that the allegedly wrongful behavior could not reasonably be expected to recur... petitioner’s cause of action remains alive.’”⁹⁹ The Supreme Court remanded the case back to the appellate court for consideration on the merits.

On remand, the appeals court found that the government’s evidence more than satisfied the compelling interest prong of the strict scrutiny test, affirming the district court’s holding in *Adarand IV*.¹⁰⁰ The appeals court then considered if the programs before the court were narrowly tailored using the following factors, in order: (1) the availability of race-neutral alternative remedies, (2) limits on the duration of the subcontractors’ compensation clause program and the DBE certification program, (3) flexibility, (4) numerical proportionality, (5) the burden on third parties, and (6) over- or under-inclusiveness.¹⁰¹ Taking all these factors into consideration, the appeals court found the amended and revised federal subcontracting program and DBE certification programs to be narrowly tailored.¹⁰² On November 27, 2001, in *Adarand Constructors v. Mineta*, the U.S. Supreme Court dismissed the writ of certiorari on the Tenth Circuit’s decision as improvidently granted.¹⁰³

Intermediate Scrutiny

The courts examine programs that give preference to women-owned businesses under a different standard than race-conscious programs. A gender-conscious program created by a governmental entity is examined under the intermediate scrutiny test, rather than the strict scrutiny test employed for racial classifications.¹⁰⁴ Under intermediate scrutiny review, the actions of the state are valid if they are “substantially related” to important governmental objectives, supported by sufficiently probative evidence or exceeding persuasive justification.¹⁰⁵

In *Coral Construction Company v. King County*,¹⁰⁶ the Ninth Circuit employed the intermediate scrutiny test to review King County’s Women Business Enterprise (WBE) program by examining the validity of a sex-based preference.¹⁰⁷ Under the test, the court noted that the gender classification must serve an important governmental objective, and there must be a “direct, substantial relationship” between the objective and the

⁹⁹ *Adarand Constructors, Inc. v. Slater*, 538 U.S. 216, 120 S.Ct. 722, 726 (2000) (“*Adarand VI*”).

¹⁰⁰ *Adarand Constructors, Inc. v. Slater* 228 F.3d 1147, 1178. (10th Cir. 2000).

¹⁰¹ *Adarand VII*, 228 F.3d at 1176-1178.

¹⁰² *Id.* at 1187.

¹⁰³ *Adarand Constructors v. Mineta*, 534 U.S. 103 (2001). See also *Gratz v. Bollinger*, 539 U.S. 244 (2003) and *Grutter v. Bollinger*, 539 U.S. 306 (2003).

¹⁰⁴ See e.g., *City of Cleburne, Texas v. Cleburne Living Center*, 473 U.S. 432, 440-441 (1985).

¹⁰⁵ *Id.* at 441. See also *Associated General Contractors of America, Inc. v. California Department of Transportation (Caltrans)*, 713 F.3d 1187, 1195 (9th Cir. 2013); *Western States Paving*, 407 F.3d at 990 n. 6; *Eng’g Contractors Ass’n*, 122 F.3d at 905, 908, 910; *U.S. v. Virginia*, 518 U.S. 515, 532 and n. 6 (1996) (“exceedingly persuasive justification.”).

¹⁰⁶ *Coral Construction Company v. King County*, 941 F.2d 910 (9th Cir. 1991).

¹⁰⁷ See *Coral Construction Company v. King County*, 941 F.2d 910, 931 (9th Cir. 1991); *Contractors Ass’n. Eastern Pennsylvania, Inc. v. City of Philadelphia*, 6 F.3d 990 (3rd Cir. 1993). The Sixth Circuit Court of Appeals employed the intermediate scrutiny review in *Michigan Road Builders Ass’n. v. Milliken*, 834 F. 2d 583 (6th Cir. 1987), *aff’d* 49 U.S. 1061 (1989). However, after *Croson*, the Sixth Circuit seemingly applied a strict scrutiny test when considering a gender-based affirmative action program.

means chosen to accomplish that objective.¹⁰⁸ A governmental entity may use gender-based preferences “only if members of the gender benefited by the classification actually suffered a disadvantage related to the classification.”¹⁰⁹ According to the court of appeals, unlike the strict standard of review applied to race-based programs, intermediate scrutiny does not require any showing of governmental involvement, active or passive, in the discrimination it seeks to remedy.¹¹⁰

The Ninth Circuit revisited this issue and seemingly reversed itself in *Western States Paving v. Washington State*¹¹¹, where it essentially applied the intermediate scrutiny standard to gender discrimination.¹¹² The court determined that conducting a separate analysis for sex discrimination under intermediate scrutiny was not necessary. “[I]n this case, intermediate scrutiny would not yield a different result than that obtained under strict scrutiny’s more stringent standard.”¹¹³

The U.S. Court of Appeals for the Third Circuit noted that the Supreme Court’s gender discrimination cases are inconclusive and that the Supreme Court has never squarely ruled on the necessity of statistical evidence in gender discrimination cases.¹¹⁴ However, the court of appeals found that the City of Philadelphia, in *Contractors Association of Eastern Pennsylvania, Inc. v. City of Philadelphia*, must be able to rely on less evidence in enacting a gender preference than a racial preference, because the intermediate scrutiny standard is less stringent than the strict scrutiny test applied in *Croson*.¹¹⁵

In support of its gender preference program for construction, as described in *Contractors Association of Eastern Pennsylvania, Inc. v. City of Philadelphia*, the City of Philadelphia relied only on general statistics and one affidavit from a woman in the catering business.¹¹⁶ Because there was not a disparity index for women-owned construction businesses in the Philadelphia market and given the absence of anecdotal evidence establishing discrimination in the construction industry in the Philadelphia market, the court of appeals affirmed the grant of summary judgment to the Contractors Association, invalidating the City of Philadelphia’s gender preference for construction contracts.¹¹⁷

In *Engineering Contractors Association of South Florida Inc. v. Metropolitan Dade County (Engineering Contractors)*, the Eleventh Circuit U.S. Court of Appeals held that the intermediate scrutiny standard remains the applicable constitutional standard in gender discrimination cases.¹¹⁸ The level of evidence that is sufficient to meet

¹⁰⁸ *Coral Construction*, 941 F.2d at 931.

¹⁰⁹ *Id.* at 931.

¹¹⁰ *Id.* at 932.

¹¹¹ *Western States Paving v. Washington State*, 407 F.3d 983 (9th Cir. 2005).

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Contractors Association of Eastern Pennsylvania, Inc. v. City of Philadelphia*, 6 F.3d 990, 1010 (3rd Cir. 1993).

¹¹⁵ *Id.* Another example of this double standard was in *RGW Construction v. San Francisco BART*, Case No. C92-2938 TEH (N.D. CA). In this case, an injunction was issued against the race-conscious but not the gender-conscious program area of BART’s DBE program for non-federally funded contracts because of the lack of a factual predicate for the program. The injunction was later partially lifted based on evidence in two disparity studies in counties where BART operated.

¹¹⁶ *Contractors Association of Eastern Pennsylvania*, 6 F.3d 990 at 1010.

¹¹⁷ *Id.* at 1010-1011.

¹¹⁸ *Engineering Contractors Association of South Florida Inc. v. Metropolitan Dade County*, 122 F.3d 895 (11th Cir. 1997).

the intermediate scrutiny test is “one of degree, not of kind.”¹¹⁹ This test requires less evidence than a race-conscious constitutional review.¹²⁰ The Eleventh Circuit U.S. Court of Appeals, however, noted that the difficulty in determining the adequacy of evidence in gender-conscious cases is determining how much evidence is permissible.¹²¹ In an attempt to resolve this issue, the Eleventh Circuit looked to the Third Circuit U.S. Court of Appeals’ review of the City of Philadelphia’s gender-conscious program in *Contractors Association of Eastern Pennsylvania, Inc. v. City of Philadelphia* for guidance. The court applied the same analysis to its review of the Dade County WBE program.¹²²

Citing case law from other jurisdictions, the Fourth Circuit U.S. Court of Appeals, in *HB Rowe Co., Inc. v. Tippett*¹²³, also adopted the intermediate scrutiny standard for gender. The court recognized that the showing of evidence was lower than the strict scrutiny standard that requires a strong basis in evidence.

what constitutes "something less" than a "strong basis in evidence," the courts, though diverging in their choice of words, also agree that the party defending the statute must "present [] sufficient probative evidence in support of its stated rationale for enacting a gender preference, i.e., ... the evidence [must be] sufficient to show that the preference rests on evidence-informed analysis rather than on stereotypical generalizations." *Eng'g Contractors*, 122 F.3d at 910; *Concrete Works*, 321 F.3d at 959 ("[T]he gender-based measures ... [must be] based on `reasoned analysis rather than [on] the mechanical application of traditional, often inaccurate, assumptions.'" (quoting *Hogan*, 458 U.S. at 726, 102 S.Ct. 3331)); *Contractors Ass'n I*, 6 F.3d at 1010; *Coral Constr.*, 941 F.2d at 932; see also *Mich. Rd. Builders Ass'n, Inc. v. Milliken*, 834 F.2d 583, 595 (6th Cir.1987).¹²⁴

Rationally Related Standard of Scrutiny

Race-neutral economic development and local business programs are evaluated under the rationally related test.¹²⁵ That is, a legitimate state interest must exist, and the means employed to further the interest must be rationally related to the legislation’s purpose.¹²⁶

In the 1987 case of *Associated General Contractors of California Inc. v. City and County of San Francisco*,¹²⁷ in reviewing the City’s Local Business Enterprise (LBE) preference, the Ninth Circuit U.S. Court of Appeals held that the City of San Francisco had a legitimate governmental interest in encouraging businesses to locate and remain in the city.¹²⁸ The court stated that “the city may rationally allocate its own funds to ameliorate disadvantages suffered by local business, particularly where the city itself creates some of the disadvantages.”¹²⁹ Two factors were used to substantiate the city’s legitimate governmental interest. First, the court noted the higher

¹¹⁹ *Id.* at 909.

¹²⁰ *Id.*

¹²¹ *Id.*

¹²² *Id.* at 909-910.

¹²³ *HB Rowe Co., Inc. v. Tippett*, 615 F. 3d 233 (4th Cir. 2010).

¹²⁴ *Id.* at 242.

¹²⁵ See e.g., *City of New Orleans v. Dukes*, 427 U.S. 297, 303 (1976).

¹²⁶ *Id.*

¹²⁷ *Associated General Contractors of California Inc. v. City and County of San Francisco*, 813 F. 2d 922 (9th Cir. 1987).

¹²⁸ *Id.* at 943.

¹²⁹ *Id.* at 943.

administrative costs of doing business within the city, such as higher rents, taxes, and wages incurred by local businesses.¹³⁰ Second, the court noted that the public interest was best served by encouraging businesses to be located within the city.¹³¹ The court also noted that foreign businesses could be locally-owned business enterprises (LBEs) by acquiring offices within the city and paying permit and license fees from a city address.¹³²

In *Gary Concrete Products, Inc. v. Riley*¹³³ the Supreme Court of South Carolina held that an LBE bid preference was constitutional, as South Carolina has a legitimate interest in directing the benefits of its purchases to its citizens.¹³⁴ The Supreme Court of South Carolina concluded that bid preferences for residents encourage local industry, which increases the tax base and helps the state economy.¹³⁵ The statute was held to be rationally related to the legitimate interest of supporting the state's economy, even though non-residents could qualify for the preference if they maintain an office in the state, as well as a representative inventory, and pay all assessed taxes.¹³⁶

In *CS-360, LLC v. U.S. Department of Veterans Affairs*,¹³⁷ the U.S. District Court for the District of Columbia upheld the Veteran Administration's denial of CS-360's application for verification as a Service-Disabled Veteran Owned Business. CS-360 worked closely with a non-service-disabled veteran company and the Administration wanted to contract with service-disabled veterans.¹³⁸ The court found that the standard of law was very "deferential" and that the decision was not "arbitrary or capricious, unsupported by substantial evidence or otherwise contrary to law."¹³⁹ The court further found precedent for a "rational connection between the facts found and the choice made."¹⁴⁰

Burden of Proof

Under the *Croson* strict scrutiny analysis, the governmental entity has the initial burden of showing that there was a "strong basis in evidence" supporting its race-conscious program.¹⁴¹ This burden is met by satisfying *Croson*'s two-pronged test of showing both a compelling governmental interest and narrow tailoring.¹⁴² *Croson* established that a factual predicate consisting of statistically-significant disparity and anecdotal interviews was important to show a compelling governmental interest in enacting race-conscious remedial contracting programs.¹⁴³ Several

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.* at 943-944.

¹³³ *Gary Concrete Products, Inc. v. Riley*, 331 S.E.2d 335 (1985).

¹³⁴ *Gary Concrete Products*, 331 S.E.2d at 339.

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ *CS-360, LLC v. U.S. Department of Veterans Affairs*, 101 F. Supp. 3d 29, 32-33 (D. Ct. DC 2015).

¹³⁸ *Id.* at 32-34.

¹³⁹ *Id.* at 35.

¹⁴⁰ *Id.* at 33.

¹⁴¹ See *Croson*, 488 U.S. at 500.

¹⁴² See *Croson*, 488 U.S. at 485-486.

¹⁴³ See *Croson*, 488 U.S. at 509.

lower courts have since held that disparity studies are important to establishing the factual predicate that supports *Croson's* two-pronged test.¹⁴⁴

Once the governmental entity has met the *Croson* two-pronged test, the burden of proof shifts to the plaintiff to rebut the showing.¹⁴⁵ The plaintiff cannot simply state that the evidence submitted by the governmental entity is insufficient or flawed. According to the Eleventh Circuit, the plaintiff has the ultimate burden of persuading the court that the defendant's evidence "did not support an inference of prior discrimination and thus a remedial purpose, or that the plan instituted on the basis of this evidence was not sufficiently 'narrowly tailored.'"¹⁴⁶ The court stated that the plaintiff could rebut the inference of discrimination with a neutral explanation by showing that the government's statistics were flawed, that the disparities are not significant or actionable, or by presenting contrasting data.¹⁴⁷

In *Rowe v. Tippett*, the Fourth Circuit held that:

Those challenging race-based remedial measures must "introduce credible, particularized evidence to rebut" the state's showing of a strong basis in evidence for the necessity for remedial action. See *Concrete Works of Colorado v. City & County of Denver (Concrete Works III)*, 321 F.3d 950, 959 (10th Cir. 2003) (internal quotation marks omitted). Challengers may offer a neutral explanation for the state's evidence, present contrasting statistical data, or demonstrate that the evidence is flawed, insignificant, or not actionable. See *Eng'g Contractors*, 122 F.3d at 916; *Contractors Ass'n of E. Pa, Inc. v. City of Philadelphia*, 6 F.3d 990, 1007 (3d Cir. 1993) (*Contractors Ass'n I*); *Coral Constr. Co. v. King County*, 941 F.2d 910, 921 (9th Cir. 1991). However, mere speculation that the state's evidence is insufficient or methodologically flawed does not suffice to rebut a state's showing. See *Concrete Works III*, 321 F.3d 950 at 991.¹⁴⁸

2.2.2 JUDICIAL REVIEW OF *CROSON* CASES IN THE SIXTH CIRCUIT

Below are cases considering equal protection challenges to state and local contracting programs using racial and gender classifications that have been decided by and within the United States Court of Appeals for the Sixth Circuit. In these decisions, the Sixth Circuit and its lower courts have held that:

- A disparity study must account for the number of MBEs and WBEs that are qualified and able to do the work.
- Post-enactment evidence may be considered in determining the extent of discrimination.
- Preferences must be granted based on evidence of discrimination against specific groups.
- Payment of tax dollars to firms participating in discriminatory associations does not constitute passive discrimination.

¹⁴⁴ See *Caltrans*, 713 F.3d at 1195-1200; *Concrete Works of Colorado, Inc. v. City and County of Denver (Concrete Works II)*, 36 F.3d 1513, 1522 (10th Cir. 1994).

¹⁴⁵ *Engineering Contractors Association of South Florida Inc. v. Metropolitan Dade County*, 122 F.3d 895, 916 (11th Cir. 1997).

¹⁴⁶ *Engineering Contractors Association*, 122 F.3d at 916.

¹⁴⁷ *Id.*

¹⁴⁸ *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233, 241-242, (4th Cir. 2010).

- Participation goals must track evidence of past discrimination.
- The government must present evidence that it considered race-neutral alternatives prior to instituting any program using racial classifications.
- Non-discrimination efforts can include the use and analysis of race/gender information without being subject to *Crosby* standards.

The following is a summary of cases in the Sixth Circuit that have considered the constitutional permissibility of MWBE programs after the *Crosby* decision was rendered.

Tennessee Asphalt Co. v. Farris

In *Tennessee Asphalt Co. v. Farris*¹⁴⁹, the Tennessee Road Builders Association and seven companies appealed to the Sixth Circuit Court of Appeals a grant of summary judgment by the district court upholding a DBE preference program administered by Tennessee DOT (TDOT). In this case, the court of appeals was considering the constitutionality of a federal statute and federal regulations granting preferential treatment to DBEs as applied by TDOT in the award of federally aided highway construction contracts.¹⁵⁰

Section 105(f) of the Surface Transportation Act of 1982 and its implementing regulations, 49 CFR Part 23 requires recipients of federal funds to set annual DBE goals.¹⁵¹ For those bidders who fail to meet the required goal, TDOT may award a contract if the bidder is able to demonstrate good faith efforts to obtain DBE participation.¹⁵² TDOT implemented Section 105(f) through TN Special Provision 1247, establishing a ten percent goal and good faith efforts. As part of its good faith efforts, in response to the Federal Highway Administration recommendations, TDOT added Factors 6 and 7, which included:

- Consideration of whether bidders achieved a percentage of DBE participation equal to or greater than competing bidders who submitted reasonable bids.
- Consideration of whether the bidder submitted all quotations received from DBEs. For quotations not accepted, an explanation of why the DBE was not accepted, including price comparisons (receipt of a lower quote from a non-DBE would not, standing alone, excuse any bidder's failure to meet contract goals).¹⁵³

Plaintiffs, Tennessee Road Builders, conceded to the facial validity of Section 105(f) and its regulations and limited its challenge to TDOT's program as applied.¹⁵⁴ Plaintiffs argued that TDOT's ten percent goal for DBE subcontractor participation in federal-aid highway contracts was unconstitutional. Further, they argued that the good faith requirements under TN Special Provision 1247 violated Tennessee competitive bidding laws.¹⁵⁵

¹⁴⁹ *Tennessee Asphalt Co. v. Farris*, 942 F.2d 969 (6th Cir. 1991)

¹⁵⁰ *Id.*

¹⁵¹ *Id.* at 971.

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.* at 972.

¹⁵⁵ *Id.*

Defendants asserted that it acted as an agent of the United States when carrying out congressionally-mandated requirements on its federally-funded construction projects.¹⁵⁶ In addition, defendants argued the bidder's compliance with Factors 6 and 7 were matters of interpretation and the factors did not impose any new obligations on bidders. Thus they were of no constitutional significance and did not violate competitive bidding laws.¹⁵⁷

The parties agreed that *Fullilove v. Klutznick* and *Croson* were the most applicable. As described by the court, *Fullilove* dealt with a federal set-aside, instituted by Congress, while *Croson* dealt with a political subdivision of the state, a city program.¹⁵⁸ Defendants argued that the two cases presented different standards according to whether Congress or a local/state body is the initiating governing body, and that *Fullilove* was controlling in this case.¹⁵⁹ Plaintiffs, on the other hand, argued that *Croson* and *Fullilove* were not in conflict and that *Croson* was a refinement of *Fullilove*, requiring TDOT to make independent findings of discrimination.¹⁶⁰

The Sixth Circuit Court of Appeals agreed with Defendants, holding that *Fullilove* was indeed controlling and that the DBE program was constitutional, noting that Congress inherently had broader power to address discrimination through legislative action than the states.¹⁶¹ According to court, Congress could require state and local compliance with any such set-asides pursuant to Congress' power to enforce the Fourteenth Amendment.

“The fundamental question raised by this appeal is answered by our determination that the Supreme Court has carefully distinguished between the limitations on efforts of states and their political subdivisions to employ race-conscious remedies to overcome the effects of past and present discrimination and the broader power of Congress to address such problems on a nationwide basis.”¹⁶²

Michigan Road Builders Association v. Michigan Department of Transportation

In *Michigan Road Builders Association v. Michigan Department of Transportation*¹⁶³, Michigan Road Builders challenged MDOT's DBE program which established a 15% goal on all contracts containing federal funds, of which 1.32% was set-aside exclusively for DBEs. In defending its program, MDOT relied upon its implementation of a federal construction statute which “authorized state recipients of federal funds to utilize set-asides.” Michigan Road Builders did not challenge the constitutionality of the federal statute.¹⁶⁴

The court first found that the plaintiff did not have standing. “For the court to assume that members of Road Builders exist who would be discriminated against based upon their race and sex would be pure conjecture.”¹⁶⁵

The court then went on to hold that even if the plaintiffs had standing, they failed to show that MDOT had acted unconstitutionally. Plaintiff had argued that MDOT's program was unconstitutional because a state-sponsored

¹⁵⁶ *Id.* at 972.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.* at 973.

¹⁵⁹ *Id.* at 972.

¹⁶⁰ *Id.*

¹⁶¹ *Id.* at 973.

¹⁶² *Id.* at 976-977.

¹⁶³ *Michigan Road Builders Association v. Michigan Department of Transportation*, 761 F. Supp. 1303 (W.D. Mich. 1991)

¹⁶⁴ *Id.* at 1305.

¹⁶⁵ *Id.* at 1311.

program, subject to *Croson*, had been struck down in *Michigan Road Builders Association, Inc. v. Milliken*, 834 F.2d 583 (6th Cir.1987), *aff'd*, 489 U.S. 1061, 109 S. Ct. 1333, 103 L. Ed. 2d 804 (1989) (*Road Builders I*).¹⁶⁶ However, the district court found *Fullilove* to be controlling in this case. Accordingly,

At issue in the present case, then, is a state agency's implementation of a Congressionally authorized federal program. No relevant authority not STURAA itself, not the federal regulations, not *Fullilove*, and not *Croson* requires the state recipient of federal funds to conduct any inquiry to determine the existence of prior discrimination in the state construction industry in implementing STURAA. Instead, the federal regulations direct the state recipient to follow a number of steps to determine an appropriate goal. The state has followed those steps and plaintiffs do not object to the outcome defendants reached in following the steps.¹⁶⁷

In finding that defendants had acted constitutionally, the court stated that all those defendants did in this case was to “conscientiously follow an undisputedly constitutional federal statute.”¹⁶⁸

Arrow Office Supply Co. v. City of Detroit

In *Arrow Office Supply Co. v. City of Detroit*¹⁶⁹, the City of Detroit instituted a Sheltered Market Program in 1983 which required the City to award 40% of contract dollars under the Sheltered Market Program and the Minority Business Enterprise subcontractor utilization program.¹⁷⁰ In enacting its program, the City relied primarily on anecdotal testimony gained from public hearings and a statistical study of 105 contracts covering the period from 1968 through 1982.¹⁷¹ The court found that the information relied upon did not show a compelling governmental interest in remedying discrimination, as:

- The anecdotal testimony showed societal discrimination, but had not shown a single instance of discrimination against any candidate for a city contract.¹⁷²; the anecdotal testimony reflected “complexity of procurement procedures; excessively slow receipt of payments; bonding problems; inadequacy of information from the government; the contracts were too large; there was no requirement for large contractors to solicit bids from small and minority subcontractors; excessive pre-award costs and bonding costs; financing problems; lack of capital; and the inability to buy or sell in volume. Most of these problems were noted to be the disadvantages of size which a small business faces in an occupied market.”¹⁷³
- The statistical analysis was insufficient because (1) the data is contradicted by the City’s procurement agent’s data, (2) the basis of the sample size and the total pool from which the sample was drawn are

¹⁶⁶ *Id.* at 1313.

¹⁶⁷ *Id.* at 1314.

¹⁶⁸ *Id.* at 1315.

¹⁶⁹ *Arrow Office Supply Co v. City of Detroit*, 826 F. Supp. 1072 (E.D. Mich. 1993)

¹⁷⁰ *Id.* at 1073.

¹⁷¹ *Id.* at 1075.

¹⁷² *Id.* at 1080.

¹⁷³ *Id.* at 1078.

both unknown and (3) as reflected in *Croson*, the comparison of minority contractors to the population is unsound.¹⁷⁴

- Evidence against women was “non-existent”, thus the intermediate scrutiny test was not met.¹⁷⁵

The court closed by holding that the City had not met the strict scrutiny or intermediate scrutiny standards. Furthermore, the City of Detroit’s Sheltered Market program had kept the Plaintiff from bidding on a City project for two years and reflected unjust discrimination because of its impact on a non-minority contractor.¹⁷⁶

Buddie Contracting v. Cuyahoga Community College District

In *Buddie Contracting v. Cuyahoga Community College District*¹⁷⁷, Cuyahoga Community College District (CCC) implemented goals of 10% to MBEs and 25% to FBEs.¹⁷⁸ Buddie Contracting (Buddie) submitted the lowest bid with 3.7% MBE participation and 21% FBE participation.¹⁷⁹ Buddie applied for a waiver on the MBE participation, however both its waiver and bid were rejected for failure to comply with the MBE participation policy.¹⁸⁰ The district court held that CCC’s MFBE program was unconstitutional.

After a lengthy discussion of the evolution of MBE decisions in the U.S. Supreme Court and the Sixth Circuit, the district court sought to determine whether CCC had met the requirements of *Croson*. The court turned to two disparity studies commissioned by five entities, not including CCC, but relied upon by CCC. The court found the studies to be insufficient to show a compelling governmental interest for CCC because:

- The study did not show MBEs qualified and willing to undertake CCC construction contracts. Instead, the studies rely on “disparity between all MBEs and the distribution of contract dollars to show discrimination”¹⁸¹; and
- CCC did not take part in the studies.¹⁸²

The court also found that CCC’s program failed the narrow tailoring test, as there was no evidence that CCC had considered race-neutral alternatives.¹⁸³ Additionally, there was no requirement for demonstration of past discrimination against specific MBEs or minority groups in employing race-conscious techniques.¹⁸⁴

¹⁷⁴ *Id.* at 1080.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ *Buddie Contracting v. Cuyahoga Community College District*, 31 F. Supp. 2d 571 (N.D. Ohio 1998)

¹⁷⁸ *Id.* at 574.

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ *Id.* at 582-583.

¹⁸² *Id.*

¹⁸³ *Id.* at 583.

¹⁸⁴ *Id.* at 583-584.

Associated General Contractors of America v. City of Columbus

The City of Columbus' MWBE program and disparity study were reviewed in *Associated General Contractors of America et.al. v. City of Columbus, et al.*¹⁸⁵ The City of Columbus had an affirmative action program for minority- and women-owned businesses (collectively "MWBEs") since 1975 with subcontracting goals of ten percent for minority business enterprises and two percent for female business enterprises.¹⁸⁶ In January 1989, the City raised these goals to 21% and ten percent respectively.¹⁸⁷ Prior to enactment of the new goals, no research was conducted concerning past discrimination in City contracting, the number of qualified minority contractors, or the amount of City construction dollars MBEs had received.¹⁸⁸ The program goals were challenged in district court. In January 1991, the city agreed its actions were unconstitutional and consented to an order enjoining it from enacting any laws containing race- or gender-based preferences without court review of the legitimacy of the new legislation.¹⁸⁹

After *Croson*, the City immediately began efforts to find evidence of discrimination that would support new affirmative action legislation under the new law. It hired consultants and held public hearings. In December 1993, the City enacted the Equal Business Opportunity Code of 1993 ("EBO Code"). The legislation provided a variety of race- and gender-based preferences and programs in City contracting, including subcontracting goals, publicly funded bonding, financing, and technical assistance programs for MWBEs.¹⁹⁰

In February 1994, the City asked the district court to dissolve the injunction and permit the EBO Code to take effect.¹⁹¹ At trial, statistical and anecdotal evidence was presented. The court conducted an extensive analysis of the evidence presented by the City and counter arguments raised by the plaintiffs. The court found the studies upon which the City was basing its motion to release the public entity to be flawed and lacked the necessary probative value to demonstrate a compelling interest.¹⁹²

The statistical evidence focused on the rates of availability and utilization of MWBEs. The City's data showed that, while the rate of utilization of MBEs declined steadily after the suspension of the set-aside program, it remained above MBEs' relative rate of availability.¹⁹³ WBEs relative share fluctuated extensively but averaged about 9.2%.¹⁹⁴ The City argued that this decline in participation since the program suspension was evidence of discrimination. The plaintiffs, however, contended that the decline simply represented the artificial inflation of MWBEs' share of subcontracting dollars over their relative rate of availability and was indicative of a market freed from set-aside requirements. The court agreed with the plaintiffs.¹⁹⁵ The court further noted that there was no evidence that the

¹⁸⁵ *Associated General Contractors of America v. City of Columbus*, 936 F. Supp. 1363 (S.D. Ohio 1996)

¹⁸⁶ *Id.* at 1371.

¹⁸⁷ *Id.*

¹⁸⁸ *Id.*

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

¹⁹² *Id.* at 1372.

¹⁹³ *Id.*

¹⁹⁴ *Id.*

¹⁹⁵ *Id.*

City ever failed to award a prime contract to a minority firm that was the lowest bidder in the competitive process.¹⁹⁶ In addition, the court found:

- The statistical analysis failed to consider subcontracting.¹⁹⁷
- The data failed to consider the relative availability of MWBEs that are qualified to bid as prime contractors.¹⁹⁸ It also incorrectly combined two sources of Census data for construction availability.¹⁹⁹
- The City's bidder registration file, from which the available contractors were identified for certain procurement types, was found to be useless. The data was not verified, did not limit the list of firms to those located in the relevant market area, and was not an indication of whether the firm was qualified.²⁰⁰
- The statistical analysis failed to separate the disparity analysis of prime and subcontract awards.²⁰¹
- There were errors in the data calculations upon which supposed program goals were developed.²⁰²
- The comparison of availability relative to contract awards is an inappropriate comparison. There is no basis for the assumption that the award of contracts on a nondiscriminatory basis will result in equal distribution of dollars.²⁰³
- The court also took issue with the standard deviation test used to ascertain the significance of the disparity found.²⁰⁴

Regarding anecdotal evidence, the City gathered anecdotal evidence from minority and female business owners at public hearings. The court found this evidence to be lacking as it was not always focused on the relevant timeframe and lacked essential details. No efforts were made to verify reports of discrimination and the emphasis was on perceived (not actual) discrimination. The Court suggested that the consultants themselves were not independent fact-finders, but vocal advocates of affirmative action. In addition, there was no evidence of formal complaints of discrimination being filed against any of the City's prime contractors.²⁰⁵

Further, the court held that the City did not give serious consideration to race- and gender-neutral remedies.²⁰⁶ The assistance that the EBO Code provided was limited to firms owned by Blacks and women, and hence not race-neutral, according to the Court.²⁰⁷

¹⁹⁶ *Id.*

¹⁹⁷ *Id.* at 1385. (Beatty & Roseboro Report)

¹⁹⁸ *Id.* (Beatty & Roseboro Report)

¹⁹⁹ *Id.* at 1386. (Beatty & Roseboro Report)

²⁰⁰ *Id.* at 1390. (The Predicate Study)

²⁰¹ *Id.* at 1391. (The Predicate Study)

²⁰² *Id.* at 1391 and 1439. (The Predicate Study)

²⁰³ *Id.* at 1400. (The Predicate Study)

²⁰⁴ *Id.* at 1387 (Bradford Report) and 1401 (The Predicate Study)

²⁰⁵ *Id.* at 1427-1431. (Beatty & Roseboro Report and The Predicate Study)

²⁰⁶ *Id.* at 1436.

²⁰⁷ *Id.*

Based on the foregoing, the district court held that the City's EBO program did not serve a compelling governmental interest and was not narrowly tailored.²⁰⁸

Ritchey Produce Company, Inc. v. State of Ohio, Department of Administrative Services

In *Ritchey Produce v. State of Ohio*²⁰⁹, the Ohio Supreme Court found the state's race-based preference program to be constitutional, and that the state's decision to deny certification to a Lebanese business owner was consistent with established regulation. The plaintiff, a Lebanese business owner, challenged the program after being denied certification as an MBE. The Ohio Supreme Court found that the evidence relied upon by the state in enacting its MBE legislation was sufficient to show a compelling governmental interest.²¹⁰ While the Ohio Supreme Court does not specifically outline the evidence, it states that:

"Prior to the enactment of the legislation, the General Assembly and other state governmental entities and officials had examined and had attempted to redress the nearly nonexistent minority participation in public contracting opportunities. The General Assembly knew that these prior efforts had not been sufficient to remedy the problem. The General Assembly was aware of judicial and executive findings of discrimination in state contracting, the state's involvement, and acquiescence in a pattern of discriminatory practices, and the debilitating effects that such discriminatory practices had on the ability of MBEs to compete in the state contracting system. The General Assembly considered the task force report and a vast array of statistical evidence showing a severe numerical imbalance in the amount of business engaged in between the state and minority contractors. The evidence before the General Assembly showing the gross statistical imbalance is precisely the type of evidence that may give rise to an inference of discriminatory exclusion and that may justify a finding that remedial action was necessary. Obviously, the General Assembly's factfinding process is entitled to a presumption of regularity and deferential review by this court, not blind judicial deference, but deference nonetheless."²¹¹

Additionally the court found that the program was narrowly tailored because it applied to those groups where the state has been able to document past racial discrimination against the group.²¹² "Further, to accept appellee's interpretation of the statute would essentially require us to rewrite it and to enact a new MBE program that benefits all disadvantaged businesses, thereby changing the MBE program into a disadvantaged-business-enterprise program. However, Ohio's MBE program was clearly designed to serve a far different purpose from the one appellee suggests it should now serve."²¹³ The court limited its holding to state procurement contracting in order to avoid conflicting with the federal court's ruling on state construction contracts in *AGC v. Drabik*.²¹⁴

²⁰⁸ *Id.* at 1441.

²⁰⁹ *Ritchey Produce Company, Inc. v. State of Ohio, Department of Administrative Services*, 85 Ohio St. 3d 194 (1999).

²¹⁰ *Id.* at 260-263.

²¹¹ *Id.* at 260-261.

²¹² *Id.* at 263-270.

²¹³ *Id.* at 206.

²¹⁴ *Id.* at 274.

Associated General Contractors of Ohio v. Drabik

In *Associated General Contractors v. Drabik*²¹⁵, the district court found that *Ritchey* was wrongly decided and refused to stay its order striking down Sec. 123.151.

The court's holding in *Drabik* was based on the following reasons²¹⁶:

- *Ritchey* did not apply strict scrutiny to the Ohio program.
- The Ohio program did not satisfy the requirements of strict scrutiny because it relied on inaccurate, twenty-year old data²¹⁷ that did not compare the availability of firms “Ready, Willing and Able” to pursue state contracting opportunities to their utilization by the state.²¹⁸
- The Ohio program was not narrowly tailored because it was not truly limited in duration,²¹⁹ the goals were not tied to MWBE availability, the state did not adequately consider race-neutral alternatives, the program in practice “bunched” MWBE set-asides in a few areas that seriously impact the rights of non-minorities, and minority groups were randomly included in the program²²⁰.

Associated General Contractors of America v. City of Columbus

The Sixth Circuit found in *Associated General Contractors of America v. City of Columbus*²²¹ that the district court lacked jurisdiction in this case. After the parties and the district court agreed in 1991 that the City's program was unconstitutional, the district court held continuing jurisdiction requiring the City to submit evidence that would support a race-conscious program prior to the court amending its order enjoining the program. The court vacated the district court's holding in the City of Columbus case finding that:

- There was no case or controversy. The parties and the district court agreed in 1991 that the set-aside program was unconstitutional and the ordinance that created the program was removed. Once the program was eliminated, the remedy was complete. Thus, by enjoining the City from enacting any new set-aside legislation without first obtaining its approval, the district court attempted to eliminate a condition that did not exist.²²²
- Plaintiffs did not have standing. Without a set-aside program, they were incurring no injury in fact.

²¹⁵ *Associated General Contractors of Ohio v. Drabik*, 50 F. Supp. 2d 741 (S.D. of Ohio Eastern Div. 1999)

²¹⁶ *Id.* at 745.

²¹⁷ A race-conscious program cannot be supported by outdated and old evidence of discrimination. Evidence of past discrimination must be reasonably current and not too remote to support a compelling governmental interest.

²¹⁸ *Id.* at 747, 755.

²¹⁹ During the twenty years that the program was in place, the state did not attempt to determine whether there was a continuing need for a race-based program.

²²⁰ *Id.* at 745, 768, 771.

²²¹ *Associated General Contractors of America v. City of Columbus*, 172 F. 3d 411 (6th Cir. 1999)

²²² *Id.* at 8.

- The case was moot. The judgement declaring the program unconstitutional was final. Thus, the City could not re-enact the set-aside ordinance unless it was sufficiently altered to present a substantially different controversy from the one already decided by the district court.²²³

West Tenn. Chap. of ABC v. Board of Educ. of Memphis

In *West Tenn. Chap. of ABC v. Board of Educ. of Memphis*²²⁴, the West Tennessee Chapter of the Associated Builders and Contractors, Inc. and several of its members sued the Board of Education of Memphis City Schools and the City of Memphis for the use of racial preferences in the award of construction contracts. They argued that the use of evidence gained after enactment of the program including racial preferences rendered the program unconstitutional.²²⁵

The Defendants each adopted MWBE programs that included goals for minority sub-contractor participation in construction contracts and the ability to declare bidders who failed to meet those goals unresponsive. The Defendants also commissioned a disparity study, which found that the defendants and other government actors actively participated in discrimination against MWBEs in the past. Furthermore, they passively participated in current discrimination against MWBEs.²²⁶ The court expressed concerns regarding study methodology and had issued injunctive relief to prevent the Board of Education from implementing its MWBE preferences.²²⁷

During the discovery process, Defendants supplemented the disparity study findings with other information to support the MWBE program. The district court held that strict scrutiny requires the government to have compelling evidence of government discrimination before it enacts any race conscious measures.

“[E]xcluding post-enactment evidence is appropriate because that evidence provides no insight into whether the governmental body was actually acting to remedy a problem ... where a governmental entity establishes a strong basis in evidence of the need for remedial action prior to enacting a racially based program, the court can fairly infer that the actual purpose of the program is remedial.”²²⁸

Associated General Contractors of Ohio v. Drabik

The Sixth Circuit Court of Appeals affirmed the district court’s decision in *Associated General Contractors of Ohio v. Drabik*²²⁹. The Court made the following findings:

- The evidence, which extended back to the 1970s, relied upon by the state was too remote to support a finding of compelling governmental interest.²³⁰

²²³ *Id.* at 9.

²²⁴ *West Tenn. Ch. of ABC v. Board of Educ. of Memphis*, 64 F.Supp.2d 714 (W.D. Tenn. 1999)

²²⁵ *Id.* at 716.

²²⁶ *Id.*

²²⁷ *Id.*

²²⁸ *Id.* at 719-720.

²²⁹ *Associated General Contractors of Ohio v. Drabik*, 214 F. 3d 730 (6th Cir. 2000)

²³⁰ *Id.* at 735.

- The data did not identify MBEs that were ready, willing, and able to perform state construction contracts of any particular size.²³¹
- A program could not be narrowly tailored without the support of findings from a recent study.²³² Other reasons that the state’s program failed the narrow tailoring test were the lumping together of different MBE groups, the lack of an expiration date on a program that had already run twenty years, and the lack of statistics on the actual use of MBE firms.²³³
- The district court did not abuse its discretion to deny the state a continuance. The state had produced no information that indicated it would be able to supplement existing statistical data within the six months requested by the state.²³⁴
- The Ohio Supreme Court’s decision in *Ritchey* is not reconcilable with the federal court’s opinion in *Drabik*, despite the Ohio Supreme Court’s attempt to distinguish the cases.²³⁵

Drabik established the Sixth Circuit’s foundation for consideration of post-enactment evidence. The court asserted that “the state must have had sufficient evidentiary justification for a racially conscious statute in advance of its passage; the time of a challenge to the statute, at trial, is not the time for the state to undertake factfinding.”²³⁶ Furthermore, the court held that the state had been lax in maintaining the data necessary to support its affirmative action program. “The proper maintenance of current statistics is relevant to the requisite narrow tailoring of such a program, in order to judge its appropriate limits.”²³⁷

In Re City of Memphis

In *In Re City of Memphis*²³⁸, the Sixth Circuit Court of Appeals considered the City of Memphis’ application to appeal the district court ruling that the City could not rely on post-enactment evidence to show a compelling governmental interest for its MWBE Program.²³⁹ The City had enacted its MWBE program in 1996 based on a 1994 disparity study. Plaintiff challenged the City’s program in 1999. The City, in response to the litigation, proposed to conduct an updated study and to submit the results of the study as part of its evidence of a compelling governmental interest.²⁴⁰ Relying on *AGC v. Drabik*, 214 F.3d 730 (6th Cir. 2000), the Sixth Circuit Court of Appeals held that pre-enactment evidence was required to justify the City of Memphis’ MWBE Program.

The City argues that the court in *Drabik* did not find that postenactment evidence was inadmissible. Rather, the City asserts that the court did not allow the state to gather the postenactment evidence because it had not satisfied the requirement that there be sufficient preenactment evidence. Although *Drabik* did not

²³¹ *Id.* at 736.

²³² *Id.*

²³³ *Id.* at 737-738.

²³⁴ *Id.* at 738.

²³⁵ *Id.* at 740.

²³⁶ *Id.* at 748.

²³⁷ *Id.* at 748-749.

²³⁸ *In Re City of Memphis*, 293 F.3d 345 (6th Cir. 2002)

²³⁹ *Id.* at 247.

²⁴⁰ *Id.* at 248.

directly address the admissibility of postenactment evidence, it held that a governmental entity must have preenactment evidence sufficient to justify a racially conscious statute. It also indicates that this circuit would not favor using postenactment evidence to make that showing.²⁴¹

Applying this holding to the current case, the Sixth Circuit stated that a government must have had such evidence sufficient to justify a racially conscious statute before that statute is passed.²⁴² The Sixth Circuit denied the City's application for an appeal on the district court's order and refused to grant the City's request to appeal this issue.²⁴³

West Tenn. Chap. of Assoc. Builders v. Memphis

In *West Tenn. Chap. of Assoc. Builders v. Memphis*²⁴⁴, each of the parties filed motions for summary judgment as to the legality of the City of Memphis' MWBE program, which established participation goals for MWBEs within construction contracts let by the City of Memphis. The plaintiffs argued that they should be granted summary judgment because the disparity study commissioned by the City of Memphis, and other Memphis government entities, was not unsound. They alleged the ready, willing and able methodology was flawed, incomplete contractor and bid data, and incorrect calculations.²⁴⁵ The plaintiffs also argued that the extension of the program past its sunset provision proved that the program was not 'narrowly tailored' as required by *Croson*.

The City of Memphis argued that it was entitled to summary judgment because the plaintiffs produced no information to dispute the findings of past discrimination of the disparity study.

The court held that the disparity study created a genuine issue of material fact that was disputed and that the plaintiffs were not entitled to summary judgment. The court also found that the plaintiffs' arguments against the disparity study presented a genuine issue of material fact and denied summary judgment to the City of Memphis.²⁴⁶

Vitolo v. Guzman

*Vitolo v. Guzman*²⁴⁷ involved a challenge by a white male-owned business to the Small Business Association's (SBA) prioritization of women-owned, veteran-owned, and socially or economically disadvantaged small business concerns during the first 21 days in its 'Restaurant Revitalization Fund' portion of the American Rescue Plan Act of 2021 ("ARPA"), which is otherwise distributed on a first come, first serve basis.²⁴⁸ The ARPA was enacted in response to the Covid-19 pandemic. Federal regulations state that there is a rebuttable presumption that many racial categories of persons including Black Americans, Hispanic Americans, Native Americans, are 'socially disadvantaged' and that economically disadvantaged persons were defined as socially disadvantaged individuals

²⁴¹ *Id.* at 351.

²⁴² *Id.*

²⁴³ *Id.*

²⁴⁴ *West Tenn. Chap. of Assoc. Builders v. Memphis*, 302 F.Supp.2d 860 (W.D. Tenn. 2004)

²⁴⁵ *Id.* at 864.

²⁴⁶ *Id.* at 865.

²⁴⁷ *Vitolo v. Guzman*, 999 F.3d 353 (6th Cir. 2021)

²⁴⁸ *Id.* at 357.

whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged.²⁴⁹

Plaintiff filed for a temporary restraining order that would stop the SBA from paying any grants under the ‘Restaurant Revitalization Fund’ unless it did so without regard to race or gender; a preliminary injunction requiring the SBA to process applications and pay grants without regard to race or gender; declare that any use of race and gender based classifications under the ARPA was unconstitutional; and an order permanently enjoining the SBA from using race and gender based classifications in determining eligibility and priority for grants awarded under the ARPA. The request for injunctive relief was denied by the District Court, but that decision was reversed by the Sixth Circuit.²⁵⁰

The court of appeals applied strict scrutiny to this case, which meant that the SBA had to show that there was a compelling governmental interest in using race and gender in its administration of funds and that its program was narrowly tailored to identified discrimination. The court found that the “plaintiffs [were] entitled to an injunction pending appeal”²⁵¹, reasoning that there was not a compelling government interest, as SBA had not targeted a specific episode of past discrimination, had not presented evidence of intentional discrimination, and had not shown evidence of the government being an active or passive participant in the discrimination.²⁵² The court stated that the government interest asserted reflected societal discrimination against minority business owners, that there was no recorded evidence of any past discrimination, and that the government had not shown that it participated in the discrimination that “it seeks to remedy”.²⁵³

The court also held that the program was not narrowly tailored because there was no consideration of workable race-neutral alternatives and that the program was overbroad as to its use of racial classifications.

“For example, the government contends that minority-owned businesses disproportionately struggled to obtain capital and credit during the pandemic. But an obvious race-neutral alternative exists: The government could grant priority consideration to all business owners who were unable to obtain needed capital or credit during the pandemic ... Or consider another of the government’s arguments. It contends that earlier coronavirus relief programs “disproportionately failed to reach minority-owned businesses.” But a simple race-neutral alternative exists again: The government could simply grant priority consideration to all small business owners who have not yet received coronavirus relief funds”.²⁵⁴

The court also found the sex-based preferences to be invalid, ruling that there was no “exceedingly persuasive justification” for the preferences.²⁵⁵ To meet this burden, the government must demonstrate that the classification serves important government objectives and that the classification is substantially and directly related to the government’s objectives.²⁵⁶

²⁴⁹ *Id.*

²⁵⁰ *Id.* at 358.

²⁵¹ *Id.* at 365.

²⁵² *Id.* at 361-362.

²⁵³ *Id.*

²⁵⁴ *Id.* at 363.

²⁵⁵ *Id.* at 364.

²⁵⁶ *Id.*

The court said that the program lacked proof of intentional discrimination against women.²⁵⁷ It also said that since women-owned restaurants that were not economically disadvantaged could be prioritized, the program was not tailored to any legitimate government interest.²⁵⁸

Thus, the court of appeals required Vitolo’s application to be immediately funded, if approved, without regard to process time or race and gender. While priority based on race and gender was struck, priority based on veterans status was allowed to continue.²⁵⁹

²⁵⁷ *Id.* at 364.

²⁵⁸ *Id.* at 365.

²⁵⁹ *Id.* at 366.

2.3 FACTUAL PREDICATE STANDARDS (CONDUCTING THE DISPARITY STUDY)

The factual predicate is utilized to determine if a compelling governmental interest exists to support the utilization of race-conscious remedies. A disparity study is utilized to develop the factual predicate. Below is a discussion of the courts' review of the sufficiency of several components of the disparity study in establishing a factual predicate.

2.3.1 RELEVANT MARKET VS. JURISDICTIONAL REACH

Relevant market establishes geographical limits to the calculation of M/WBE availability and utilization. Most courts and disparity study consultants characterize the relevant market as the geographical area encompassing most of a public entity's commercial activity. Relevant market can be different from jurisdictional reach, which defines the reach of the race and gender-conscious program implemented. Relevant market has been litigated sparsely.

In *Croson*, the U.S. Supreme Court did not provide specific guidance on the estimation of relevant market for the purposes of conducting a factual predicate study. While *Croson* did not provide particularized guidance on the estimation of the relevant market, the *Croson* court did require that an M/WBE program cover only those groups that have been affected by discrimination within the public entity's jurisdiction.²⁶⁰ A similar position was taken by the U.S. District Court for the District of Colorado. In *Concrete Works I*, the consultant found that over 80% of Denver's construction and design contracts were awarded to vendors located in the Denver MSA.²⁶¹ The federal district court found the Denver MSA to be relevant to determining the jurisdiction of Denver's contract awards. The district court cited the Ninth Circuit opinion in *Coral Construction Company v. Kings County*:

Concrete Works also overlooks the fact that the court of appeals found even the ultimately rejected Pierce County evidence to be probative, even though it was from a separate jurisdiction, because:

"It is, however, immediately adjacent to King County and is part of the same metropolitan area. Likewise, the world of contracting does not conform itself neatly to jurisdictional boundaries. In this regard, contracting differs markedly from a school system, which conducts its business in relative isolation from other school systems."²⁶²

We conclude that Denver is not acting outside its jurisdiction but is applying a policy to those contractors who have been found to choose to enter Denver's boundaries to seek work and win Denver's tax dollars.²⁶³

²⁶⁰ *Croson*, 488 U.S. at 505-506.

²⁶¹ *Concrete Works v. City and County of Denver*, 823 F. Supp. 821, 836 (D. Colo. 1993).

²⁶² *Id.*

²⁶³ *Id.* The district court also cited *AGC v. City of San Francisco*. See *Associated General Contractors of California v. City and County of San Francisco*, 813 F.2d 922, 934 (9th Cir.1987) ("*AGCC I*") (noting that any plan that extends race-conscious remedies beyond territorial boundaries must be based on very specific findings that actions the city has taken in the past have visited racial discrimination on such individuals).

2.3.2 AVAILABILITY

Availability calculations determine the number of firms who are ready, willing, and able to do business with a public entity. Disparity ratios are determined by comparing availability to actual utilization. Availability measures are the most frequently-questioned and litigated portions of a disparity study. This is due to challenges in developing an accurate head count of firms in the marketplace, accounting for issues of capacity, qualification, willingness, and ability. As such, this section explores the evolution of judicial opinions on availability.

We note that the judiciary’s view of availability within a jurisdiction is heavily influenced by the disparity methodology utilized to justify the DBE or M/WBE program under review. In many cases, the judge determines the validity of a particular methodology without declaring it as the only acceptable methodology.

The *Croson* decision did not turn on the evaluation of data in a disparity study. Consequently, *Croson* did not provide a detailed discussion of permissible data sources. Instead, the court admonished local agencies to compare contract awards to M/WBEs to the number of “available” and “qualified” minority firms seeking public sector work, and not to the minority population of each such jurisdiction.²⁶⁴ The source of this availability data was never addressed. Early case law following *Croson* did not cover the issue of competing measures of M/WBE availability. Several cases did not cite the sources of availability data.²⁶⁵

In the mid-1990s, cases applying *Croson* began to address the use of Census data as a measure of M/WBE availability. The basic criticism the courts had of Census data is that Survey of Minority-owned Business Enterprises (SMOBE) and Survey of Women-owned Business Enterprises (SWOB) data did not indicate which firms were seeking public sector work.²⁶⁶ For example, in *Engineering Contractors Association of South Florida v. Metropolitan Dade County*,²⁶⁷ the federal district court stated:

“The census [SMOBE] data used in both [disparity] studies simply represent individuals or firms located in Dade County, which list themselves as being in the business of construction. The census data do not identify whether these entities have ever done work specifically for the county, or to what degree their reported sales or income stems from private sources versus public sources, much less whether the earnings are primarily the result of work done for Dade County versus Broward County, Palm Beach County, or some other Florida locale, or even sites outside of Florida. This lack of specificity makes it difficult, if not impossible, to draw accurate conclusions concerning whether Dade County is itself a participant in gender, racial or ethnic discrimination to the extent that it justified its use of race, ethnicity, and gender-conscious remedies.”²⁶⁸

The Census Bureau’s Public Use Micro Sample (PUMS) data has been criticized for similar reasons. One of Miami’s disparity studies used PUMS data to study business formation amongst minorities. The federal district court concluded that, because PUMS did not look at public sector contracting, the PUMS “is not the type of particularized evidence that is required to provide a strong basis in evidence for the County’s race- and ethnicity-

²⁶⁴ *Croson*, 488 U.S. at 505-506.

²⁶⁵ See e.g., *Cone Corp. v. Hillsborough County*, 908 F.2d 908 (11th Cir. 1990).

²⁶⁶ Census no longer produces these sources of data.

²⁶⁷ *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County*, 943 F. Supp. 1546 (S.D. Fla. 1996).

²⁶⁸ *Id.* at 1572-1573.

conscious contract award process, which is aimed at M/WBEs which are already in business and qualified to perform work.”²⁶⁹

The U.S. District Court for the Southern District of Ohio had similar criticisms of the use of Census data. The court stated, “it is apparent, however, that not all construction firms in the Columbus MSA are qualified, willing and able to bid on City construction contracts.”²⁷⁰ The court went on to state that “Census data probably overstates the proportions of available [M/WBEs] . . .”²⁷¹ Nevertheless, the court still preferred Census data to study disparities among subcontractors. The court concluded that, “[w]hile the Census total industry data have limitations, it appears to be the best data considered by [the disparity study consultant] for use in determining availability of M/WBEs as subcontractors.”²⁷² In fact, the federal district court in Ohio rejected the use of the bidder registration file list because it was not consistent with the SMOBE data.²⁷³

The U.S. District Court for the Eastern District of Pennsylvania in Philadelphia also had similar criticisms of SMOBE and SWOB data. In its review of the evidence of disparity presented, the court stated:

[The evidence of disparity] never measured the number of contractors actually engaged by the City to perform particular services...Without measuring the number of contractors actually engaged by the City to perform particular services, it is impossible to determine whether Black firms were excluded from performing these services. In addition, it is impossible to determine whether Black companies even existed to perform these services required by the City. Without examining this information, it is impossible to draw any conclusions about discrimination in City public works contracting. In sum, the court finds that [the disparity study consultant] failed to measure the “relevant statistical pool” necessary to perform an accurate disparity study in accordance with the standards set forth in *Croson*.²⁷⁴

Upon review of the lower court decision, the Third Circuit U.S. Court of Appeals was more lenient on the use of SMOBE and SWOB data. The appeals court rejected the argument that Census data did not measure those willing to undertake public sector contracting. The court stated: “[I]n the absence of some reason to believe otherwise, one can normally assume that participants in a market with the ability to undertake gainful work will be ‘willing’ to undertake it.”²⁷⁵ The court went so far as to state “the Census data offer a reasonable approximation of the total number of firms that might vie for City contracts.”²⁷⁶ The Third Circuit further suggested that Census data might *understate* MBE availability, because “past discrimination in a marketplace may provide reason to believe the minorities who would otherwise be willing are discouraged from trying to secure this work.”²⁷⁷

The general criticism of SMOBE and SWOB data is the lack of detail and specificity in qualifications. For example, in criticizing the disparity study in Miami, the U.S. District Court for the Southern District of Florida stated “[t]he

²⁶⁹ *Id.* at 1574.

²⁷⁰ *Associated General Contractors of America v. City of Columbus*, 936 F. Supp. 1363, 1390 (S.D. Ohio 1996) (This case was overturned on jurisdictional grounds).

²⁷¹ *Id.* at 1391.

²⁷² *Id.* at 1396.

²⁷³ *Id.*

²⁷⁴ *Contractors Association of Eastern Pennsylvania, Inc. v. City of Philadelphia*, 893 F. Supp. 419, 433 (E.D. Pa. 1995).

²⁷⁵ *Contractors Association of Eastern Pennsylvania, Inc. v. City of Philadelphia*, 91 F.3d 586, 603 (3rd Cir. 1996).

²⁷⁶ *Id.* at 604.

²⁷⁷ *Id.* at 603.

major drawback of this analysis [disparity ratios] is that the SMOBE data relied upon do not include information such as firm size, number of employees, etc., thus the Brimmer Study does not contain regression analyses to control for neutral variables that could account for these disparities.”²⁷⁸ The district court did not suggest an alternative data source to provide the specificity it was seeking. This omission was not unusual because courts generally did not provide guidance in determining valid or invalid sources of M/WBE availability data.

Similarly, geographical mismatching of the data sets raised concerns for some courts about the use of SMOBE data. A federal district court in Ohio criticized mixing SMOBE data with *County Business Patterns* because of the different geographical scopes. One covers seven counties and the other covers one county. Likewise, one is a measure of firms and the other is a measure of establishments.²⁷⁹

Other courts have not been concerned with the absence of such detail in Census data. For example, the Third Circuit U.S. Court of Appeals was not concerned by the lack of qualification data in the SMOBE data set. The appeals court noted that “[t]he issue of qualifications can be approached at different levels of specificity, however, and some consideration of the practicality of various approaches is required. An analysis is not devoid of probative value simply because it may theoretically be possible to adopt a more refined approach.”²⁸⁰ The appeals court accepted the mixture of Census data with city purchasing data, although the data differed in geographical scope.²⁸¹ Similarly, the Tenth Circuit, in which Denver is located, stated, “[w]e agree with other circuits which have interpreted [that] *Croson* implied to permit a municipality to rely, as does Denver, on general data reflecting the number of MBEs and WBEs in the marketplace to defeat the challenger’s Summary Judgment motion or request for a preliminary injunction.”²⁸²

The principal alternative to using Census data to measure M/WBE availability in *Croson* factual predicate studies is using lists of marketplace participants, primarily vendor, bidders, pre-qualification, and certification lists. The *Ready, Willing and Able* (RWASM) approach is a list-based approach to the estimation of M/WBE availability. In the late 1990s, partly in response to the *Engineering Contractors v. Metropolitan Dade County* case, list-based approaches were utilized.²⁸³ As such, courts began to focus on these types of availability analysis.

In 2007, in *Northern Contracting, Inc. v. Illinois Department of Transportation*,²⁸⁴ the Seventh Circuit U.S. Court of Appeals found that a valid statistical methodology was presented to justify that a DBE program was narrowly tailored.²⁸⁵ This methodology included six steps: (1) identified the geographic market for contracting as the State of Illinois; (2) identified the product markets (i.e. highways, housing, etc.); (3) identified all available contractors in each product market regardless of race, using Dun & Bradstreet; (4) identified the number of DBE contractors in each product market and broke the numbers down by geographical location; (5) corrected errors by updating

²⁷⁸ *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County*, 943 F. Supp. 1546, 1573 (S.D. Fla. 1996).

²⁷⁹ *Associated General Contractors of America v. City of Columbus*, 936 F. Supp. 1363, 1386 (S.D. Ohio 1996) (This case was overturned on jurisdictional grounds). A firm is an enterprise that may have several establishments at various locations.

²⁸⁰ *Contractors Association of Eastern Pennsylvania, Inc. v. City of Philadelphia*, 91 F.3d 586, 603 (3rd Cir. 1996).

²⁸¹ *Id.*

²⁸² *Concrete Works v. City and County of Denver (Concrete Works II)*, 36 F.3d 1513, 1529 (10th Cir. 1994).

²⁸³ *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d 895, 921 (11th Cir. 1997). D.J. Miller & Associates, Inc. (now Miller³ Consulting, Inc.) has used a Ready, Willing and Able list-based approach from its inception in 1988.

²⁸⁴ *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007).

²⁸⁵ *Id.* at 717.

the qualified DBE firm list to eliminate firms that are no longer qualified; and (6) corrected errors by accounting for DBE firms that were not listed on the qualified directory.²⁸⁶

The availability analysis in *Northern Contracting* represented what is commonly called “custom census” availability. A similar methodology was employed in the Caltrans disparity study. In *Caltrans*, the Ninth Circuit U.S. Court of Appeals, citing *Northern Contracting*, held that federal guidelines state the availability analysis should not separate contracts by construction and engineering and by prime and subcontractor because there was already substantial overlapping in these areas.²⁸⁷ Furthermore, the appeals court found the consultant had adjusted availability for the capacity of firms to do the work.²⁸⁸

Conversely, the Federal Circuit Court in *Rothe Development Corp. v. U.S. Department of Defense* found the appropriate measure of availability is to determine those firms “ready, willing, and able” to do business with the government.²⁸⁹ The circuit court found the following sources as tending to establish a business’ qualifications—awardees, bidders, and certification lists.²⁹⁰ The reliance on lists compiled by local business associations, by community outreach, from vendor lists and from self-affirmation of qualification and ability is more questionable.²⁹¹

In *H.B. Rowe Co., Inc. v. Tippett*,²⁹² the Fourth Circuit U.S. Court of Appeals found acceptable an availability analysis that depended on the following variables: “a vendor list comprising (1) subcontractors approved by the Department [of Transportation] to perform subcontract work on state-funded projects; (2) sub-contractors that performed such work during the study period; and (3) contractors qualified to perform prime construction work on state-funded contracts.”²⁹³ The appeals court agreed with the consultant’s explanation of why prime and subcontractors were not separated.²⁹⁴

2.3.3 UTILIZATION

Utilization analysis measures the actual dollars awarded and paid to firms doing business with the public entity by race and gender. The utilization analysis is rather straight-forward, thus there is limited discussion in case law on standards for utilization. The *Croson* decision specifically mentions the number of qualified firms “willing and able to perform... and the number of such contractors actually engaged.”²⁹⁵

²⁸⁶ *Id.* at 718-719.

²⁸⁷ *Associated General Contractors of America, Inc. v. California Department of Transportation (Caltrans)*, 713 F.3d 1187 (9th Cir. 2013). See also *Mountain West Holding v. State of Montana*, CV 13-49-BLG-DLC (D. Mont. Jan. 30, 2018); *Geyer Signal, Inc. v. MnDOT*, Civil No. 11-321 (JRT/LIB) (D. Minn. 2014)

²⁸⁸ *Caltrans*, 713 F.3d at 1199.

²⁸⁹ *Rothe Development Corp v. U.S. Department of Defense*, 545 F.3d 1023, 1042 (Fed. Cir. 2008).

²⁹⁰ *Id.*

²⁹¹ *Id.*

²⁹² *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233 (4th Cir. 2010).

²⁹³ *Id.* at 244.

²⁹⁴ *Id.* at 244-245.

²⁹⁵ *Croson*, 488 U.S. at 509.

In *Concrete Works III*, the Tenth Circuit stated that the presentation of both goal and non-goal contracts provided a clearer picture of MBE participation.²⁹⁶ In fact, the appeals court found that “non-goal projects were a better indicator of discrimination in City contracting.”²⁹⁷

The Illinois Department of Transportation (IDOT), in *Northern Contracting*, tried to test for the impact of race-conscious programs on DBE participation with its Zero-Goal Program. This program dropped the DBE goal from select construction contracts to see if there would be a decrease in the number of DBE participants compared to those projects with a DBE goal.²⁹⁸ However, the Seventh Circuit suggested the experiment was flawed because the State of Illinois did not provide the number of DBEs that actually bid on these projects or the dates during which these experiments took place.²⁹⁹ As such, the appeals court was unable to conclude that the drop in DBE participation was due to the lack of an affirmative action program.³⁰⁰

In *Caltrans*, the Ninth Circuit noted that the disparity consultant utilized state-funded contracts, which did not have goals, to determine if the affirmative action program for federally-funded contracts skewed the data.³⁰¹ The appeals court further found that the consultant appropriately accounted for women by combining minority women with the requisite minority group, thus the women category only included white women.³⁰²

2.3.4 DISPARITY RATIOS

The most important part of the statistical analysis is the disparity ratio, which is a comparison of availability to utilization. An inference of discrimination can be drawn from statistically significant disparity. The courts agree on the calculation of disparity and statistical significance, as discussed below.

In *Adarand VII*, the Tenth Circuit U.S. Court of Appeals noted that “the disparity between minority DBE availability and market utilization in the subcontracting industry raises an inference that the various discriminatory factors the government cites have created that disparity... Of course, it would be ‘sheer speculation’ to even attempt to attach a figure to the hypothetical number of minority enterprises that would exist without discriminatory barriers to minority DBE formation. *Croson*, 488 U.S. at 499. However, the existence of evidence indicating that the number of minority DBEs would be significantly (but unquantifiable) higher, but for such barriers is nevertheless relevant to the assessment of whether a disparity is sufficiently significant to give rise to an inference of discriminatory exclusion.”³⁰³

In *Rowe*, the Fourth Circuit U.S. Court of Appeals noted that several courts have followed a similar methodology:

After *Croson*, a number of our sister circuits have recognized the utility of the disparity index in determining statistical disparities in the utilization of minority- and women- owned businesses. See, e.g., *Rothe II*, 545

²⁹⁶ *Concrete Works III*, 321 F. 3d 950, 988 (10th Cir. 2003).

²⁹⁷ *Id.*

²⁹⁸ *Northern Contracting*, 473 F.3d at 719.

²⁹⁹ *Id.*

³⁰⁰ *Id.*

³⁰¹ *Caltrans*, 713 F.3d at 1198.

³⁰² *Id.*

³⁰³ *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10th Cir. 2000).

F.3d at 1037-38; *Concrete Works*, 321 F.3d at 962-63; *W.H. Scott*, 199 F.3d at 218; *Eng'g Contractors*, 122 F.3d at 914; *Contractors Ass'n I*, 6 F.3d at 1005; *Associated Gen. Contractors of Cal., Inc. v. Coal. for Econ. Equity*, 950 F.2d 1401, 1413-14 (9th Cir. 1991). Generally, courts consider a disparity index lower than 80 as an indication of discrimination. See *Rothe II*, 545 F.3d at 1041; *Eng'g Contractors*, 122 F.3d at 914; see also 29 C.F.R. § 1607.4(D) (2010) (directing federal agencies to regard a "selection rate" of lower than 80% as evidence of disparate impact employment discrimination).³⁰⁴

Further, the appeals court found that the application of a t-test³⁰⁵ was appropriate, as a standard deviation test allows a determination of whether any disparity found is merely due to chance or due to some other reason.³⁰⁶ The court supported its argument by citing a mid-90s case, *Engineering Contractors*, 122 F.3d at 914.³⁰⁷

In finding the disparity study sufficient in *Caltrans*, the Ninth Circuit U.S. Court of Appeals noted that the disparities were assessed across a variety of contracts based on funding source (state or federal), type of contract (prime or subcontract) and type of project (engineering or construction).³⁰⁸

2.3.5 CAPACITY AND REGRESSION

Parties seeking to explain what the U.S. Supreme Court meant in *Crosson* usually raise the capacity issue of qualified minorities. A Capacity and Regression analysis seeks to determine the factors, including size, race, and gender among others, that are contributing to any disparity found as a result of comparing availability and utilization.

In *Concrete Works I*, the federal district court in Colorado reviewed the challenged availability/utilization analysis submitted by the City and County of Denver. The Concrete Works Company challenged the use of availability measures and suggested that the appropriate standard was capacity.³⁰⁹ The district court provided a lengthy discussion of the capacity arguments:

Capacity, as Concrete Works' expert economist points out, is ideally measured by the total amount of business that could be handled by MBEs. There are typically three measures used to predict the amount of business that W/MBEs can handle: the number of W/MBE companies relative to the total number in the industry (also known as 'availability'), W/MBE revenue as a percent of industry revenue, and the number of W/MBE employees as a percent of the industry total . . . [A]s evidenced both by Concrete Works' failure to suggest an alternative way to measure capacity and the admission of its expert that availability is more often used in actual practice, the ability of a firm to handle any given amount of business is exceedingly difficult to define and even more difficult to quantify. Capacity is a function of many subjective, variable factors. Second, while one might assume size reflects capacity, it does not follow that smaller firms have less capacity; most firms have the ability and desire to expand to meet demand. A firm's ability to break up a contract and subcontract its parts make capacity virtually meaningless . . . Finally, Concrete Works can

³⁰⁴ *H.B. Rowe Co., Inc. v. Tippet*, 615 F.3d 233, 243-244 (4th Cir. 2010).

³⁰⁵ T-test determines statistical significance of any disparity found. The t-test assesses whether two groups are statistically different from each other.

³⁰⁶ *Rowe*, 615 F.3d at 244-246.

³⁰⁷ *Rowe*, 615 F.3d at 244.

³⁰⁸ *Caltrans*, 713 F.3d at 1192.

³⁰⁹ *Concrete Works I*, 823 F. Supp. 821, 837 (D. Colo. 1993).

cite no authority for its assertion that its amorphous, ambiguous conception of capacity is required. No court to date has required a comparison of a firm’s ‘ability to handle work’.³¹⁰

In *Concrete Works III*, the Tenth Circuit U.S. Court of Appeals reviewed those variables that Concrete Works Company alleged the disparity studies had not controlled for and made the following findings:

- a. **Size and experience:** CWC did not conduct its own disparity study that controlled for firm size and experience.³¹¹ “Denver is permitted to make assumptions about capacity and qualification of M/WBEs to perform construction services if it can support those assumptions. The assumptions made in this case are consistent with the evidence presented at trial and support the city’s position that 1) a firm’s size does not affect its qualifications, willingness, or ability to perform construction services and 2) that the smaller size and lesser experience of M/WBEs are, themselves, the result of industry discrimination.”³¹²
- b. **Specialization:** CWC offered no support for its view that M/WBEs are clustered in certain construction specialties and did not demonstrate that disparities are eliminated when there is control for firm specialization.³¹³ On the other hand, the disparity study consultant controlled for Standard Industrial Classification (“SIC”) code subspecialty and still showed disparities.³¹⁴
- c. **Bidding:** Disparity studies must make the same assumptions about availability for *all* firms. It is unnecessary to consider only those firms bidding on Denver’s projects because it does not indicate qualification.³¹⁵

The Ninth Circuit has also discussed the issue of capacity. In *Western States Paving v. Washington State (Western Paving)*,³¹⁶ the Ninth Circuit found Washington DOT’s capacity analysis to be flawed because:

- 1) It considered contracts that had affirmative action components and thus, did not reflect “the performance capacity of DBEs in a race-neutral market.”³¹⁷
- 2) While Washington DOT could only rely on a comparison of the proportion of State DBE firms/percentage of awards to DBEs on race-neutral contracts, this “oversimplified statistical evidence is entitled to little weight, however, because it does not account for factors that may affect the relative capacity of DBEs to undertake contracting work.”³¹⁸
- 3) The State’s analysis does not control for any capacity factors, such as size and experience.³¹⁹

The Ninth Circuit noted that under 49 CFR Part 26, the U.S. DOT has established that availability can be adjusted upward or downward, based on the capacity of DBEs to perform work, as measured by the volume of work

³¹⁰ *Id.*

³¹¹ *Concrete Works III*, 321 F. 3d 950, 982 (10th Cir. 2003).

³¹² *Id.*

³¹³ *Id.*

³¹⁴ *Id.* at 983.

³¹⁵ *Id.*

³¹⁶ *Western States Paving v. Washington State*, 407 F.3d 983 (9th Cir. 2005).

³¹⁷ *Id.* at 1000.

³¹⁸ *Id.*

³¹⁹ *Id.* at 1000-1001.

allocated to DBEs in recent years.³²⁰ While it disagreed with the manner in which Washington DOT relied on capacity information to defend its DBE program, the appeals court did find that Washington DOT had closely tracked U.S. DOT regulations.³²¹

The Ninth Circuit contrasted the analysis performed by the Washington DOT and that performed by the California DOT in the *Caltrans* case.³²² In *Caltrans*, the Ninth Circuit found the statistical analysis valid, as the California DOT in *Caltrans* had adjusted availability for capacity and controlled for previously administered affirmative action programs.³²³

As discussed earlier, in *Engineering Contractors*, the Eleventh Circuit U.S. Court of Appeal found Census data showing that non-MBE/WBE firms were larger on average than MBE/WBE firms as a valid explanation for disparities.³²⁴ It found the data submitted by Metropolitan Dade County to explain disparities unreliable.³²⁵ The County presented an analysis of a sample of 568 firms out of 10,462 that had filed a certificate of competency with Dade County as of January 1995. The County's expert collected data on these firms related to race, ethnicity, and gender, as well as total sales and receipts. The expert also sought to determine if there was a meaningful relationship between the two pools of data. The expert conducted a regression analysis, using number of employees as a proxy for size.³²⁶

The Eleventh Circuit found the statistical pool of firms relied upon by the County was significantly larger than the actual number of firms willing, able and qualified to do the work, particularly given that the firms represented were simply licensed as construction contractors.³²⁷ Further, the appeals court held that, after controlling for firm size, neither BBE nor WBE data revealed statistically significant disparities and that the federal district court was not required to assign any disparities controlling weight.³²⁸

In *Rothe*, the Federal Circuit Court found the most reliable way to account for firm size without changing the disparity-ratio methodologies was to employ "regression analysis to determine whether there was a statistically significant correlation between the size of a firm and the share of contract dollars awarded to it."³²⁹

In *Rowe*, the Fourth Circuit also found the State of North Carolina's regression analysis useful.³³⁰ In that study, the State of North Carolina studied the impact of certain business characteristics on a firm's gross revenues.³³¹ These characteristics included company age, number of full-time employees, owners' years of experience, level of

³²⁰ *Id.* at 989.

³²¹ *Id.* at 999.

³²² *Associated General Contractors of America, Inc. v. California Department of Transportation (Caltrans)*, 713 F.3d 1187, 1196 (9th Cir. 2013).

³²³ *Caltrans*, 713 F.3d at 1196.

³²⁴ *Engineering Contractors*, 122 F. 3d at 917.

³²⁵ *Id.* at 919.

³²⁶ *Id.* at 920.

³²⁷ *Id.* at 921.

³²⁸ *Id.*

³²⁹ *Rothe*, 545 F.3d 1023 at 1044.

³³⁰ *Rowe*, 615 F.3d at 245-246.

³³¹ *Id.* at 246.

education, race, ethnicity and gender.³³² The State of North Carolina supported the capacity analysis by reviewing the participation of minorities at different contract thresholds.³³³

2.3.6 ANECDOTAL

The U.S. Supreme Court in *Croson* did not directly address or provide a clear picture on the scope of anecdotal evidence that could support a finding of discrimination. However, many lower courts have reviewed and assessed the quality and quantity of anecdotal evidence submitted. In *Concrete Works I*, the federal district court in Colorado accepted the testimony of twenty-one people at a public hearing and the interview results of 38 M/WBEs as enough anecdotal evidence for *Croson* purposes.³³⁴

In *Caltrans*, the consultant included twelve public hearings, received letters from business owners and trade associations, and interviewed seventy-nine owners/managers of transportation firms. The Ninth Circuit in that case found that “the statistical evidence from the disparity study is bolstered by anecdotal evidence supporting an inference of discrimination.”³³⁵

The Federal Circuit court in *Rothe* criticized the disparity analysis because it did not include direct testimony from MBEs regarding their experience with the U.S. Department of Defense (DOD) or its prime contractors.³³⁶ The court sought anecdotal testimony that demonstrated some link between the DOD’s spending practices and discrimination.³³⁷

Opponents have long argued that anecdotal testimony should be verified. However, more and more circuits are concluding as the Tenth Circuit did in *Concrete Works III*:

“Anecdotal evidence is nothing more than a witness’ narrative of an incident told from the witness’ perspective and including the witness’ perceptions. In this case, the anecdotal evidence was not subject to rigorous cross-examination...Denver was not required to present corroborating evidence and CWC was free to present its own witnesses to either refute the incidents described by Denver’s witnesses or to relate their own perceptions on discrimination in the Denver construction industry.”³³⁸

In *Caltrans*, the Ninth Circuit made it clear that anecdotal testimony did not need to be verified, particularly considering case law in the Fourth and Tenth Circuits.³³⁹ Additionally, the appeals court rejected the Associated General Contractor’s argument that Caltrans needed to show that every minority-owned business is discriminated against; “[i]t is enough that the anecdotal evidence supports Caltrans’ statistical data showing a pervasive pattern of discrimination.”³⁴⁰

³³² *Id.* at 246.

³³³ *Id.* at 247.

³³⁴ *Concrete Works I*, 823 F. Supp. 821, 833-834.

³³⁵ *Caltrans*, 713 F.3d at 1192.

³³⁶ *Rothe*, 545 F.3d 1023 at 1048.

³³⁷ *Id.*

³³⁸ *Concrete Works III*, 321 F. 3d at 989. See also *Rowe*, 615 F.3d at 249, and *Caltrans*, 713 F.3d at 1197.

³³⁹ *Caltrans*, 713 F.3d at 1197.

³⁴⁰ *Caltrans*, 713 F.3d at 1198.

In *Engineering Contractors*, the Eleventh Circuit considered the sufficiency of the anecdotal evidence submitted, which consisted of interviews with two county employees responsible for the M/WBE program, twenty-three M/WBE prime and subcontractors and a survey of Black-owned construction firms. While the appeals court found “the picture painted by the anecdotal evidence is not a good one,” the anecdotal evidence could not overcome the deficiencies of the statistical analysis and cannot alone support findings of discrimination sufficient to support the implementation of race and gender-conscious programs.³⁴¹ “While such evidence can doubtless show the perception and, on occasion, the existence of discrimination, it needs statistical underpinnings or comparable proof to show that substantial amounts of business were actually lost to minority or female contractors as the result of the discrimination.”³⁴²

The U.S. District Court for the Northern District of Georgia, in *Webster v. Fulton County*,³⁴³ examined anecdotal evidence presented by Fulton County. In that case, consultants for Fulton County conducted seventy-six one-on-one interviews, public hearings, and a random survey of 183 M/WBEs. Like *Engineering Contractors*, the federal district court found that while the anecdotal evidence “reflects the honest and concerned beliefs of many in the Atlanta and Fulton County area that they have been or are the victims of discriminatory practices,” anecdotal evidence was “insufficient to offset the weaknesses of Fulton County’s statistical evidence.”³⁴⁴ Furthermore, much of the anecdotes referred to the firms’ experiences in the private sector, and not with Fulton County.³⁴⁵

Per *Rowe*, in the Fourth Circuit, statistical evidence of racial discrimination must be “corroborated by significant anecdotal evidence of racial discrimination.”³⁴⁶ The 2004 Disparity Study relied on three sources of anecdotal data: A telephone survey, interviews, and focus groups.³⁴⁷ *Rowe* challenged the methodology utilized to gather anecdotal evidence, arguing that the anecdotal data was unverified and that the consultant oversampled for MBEs.³⁴⁸ The Fourth Circuit found *Rowe*’s contention regarding unverified anecdotal comments to be unwarranted.³⁴⁹ *Rowe* offered no rationale as to why a fact finder could not rely on the State’s “unverified” anecdotal data. Indeed, a fact finder could very well conclude that anecdotal evidence need not — and indeed cannot — be verified because it “is nothing more than a witness’ narrative of an incident told from the witness’ perspective and including the witness’ perceptions.” *Concrete Works*, 321 F.3d at 989.³⁵⁰ The Fourth Circuit also found *Rowe*’s second argument to be without merit, stating that its precedent demonstrates that anecdotal evidence simply supplements statistical evidence.³⁵¹ In reviewing the anecdotal data in detail, the court opined:

“Here, however, majorities of African American and Native American respondents agreed that prime contractors have higher standards for minority subcontractors, view minority subcontractors as being less competent than nonminority businesses, change their bidding practices when not required to hire minority

³⁴¹ *Engineering Contractors*, 122 F.3d at 925-926.

³⁴² *Id.*

³⁴³ *Webster v. Fulton County, Ga.*, 51 F.Supp.2d 1354 (N.D. Ga. 1999).

³⁴⁴ *Id.* at 1379.

³⁴⁵ *Id.*

³⁴⁶ *Rowe*, 615 F.3d at 241 (quoting *Md. Troopers Ass’n, Inc. v. Evans*, 993 F.2d 1072 (4th Cir. 1993)).

³⁴⁷ *Id.* at 248.

³⁴⁸ *Id.* at 249.

³⁴⁹ *Id.*

³⁵⁰ *Id.*

³⁵¹ *Id.*

subcontractors, and drop minority subcontractors after winning contracts. Together, these responses suggest strongly that the underutilization of African American and Native American subcontractors is more than a mere byproduct of misguided yet color-blind cronyism. Rather, they indicate that racial discrimination is a critical factor underlying the gross statistical disparities presented in the 2004 study.”³⁵²

2.3.7 MARKETPLACE AND PRIVATE SECTOR ANALYSIS

The Marketplace and Private Sector Analysis seeks to determine if there are discriminatory practices or disparity in the private marketplace and if the public entity is a passive participant in any such discrimination found. The decision in *Croson* speaks to the importance of the effects of private sector disparities for justifying M/WBE programs. In *Croson*, the U.S. Supreme Court suggested several ways that a public entity might be involved in private sector discrimination:

1. **Discrimination in subcontracting opportunities:** “If the City of Richmond had evidence before it that non-minority contractors were systematically excluding minority businesses from subcontracting opportunities it could take action to end the discriminatory exclusion.”³⁵³
2. **Discrimination in the construction industry:** “[I]f the city could show that it had essentially become a ‘passive participant’ in a system of racial exclusion practiced by elements of the local construction industry, we think it clear that the city could take affirmative steps to dismantle such a system.”³⁵⁴
3. **Discrimination in professional trade organizations:** “In such a case, the city would have a compelling interest in preventing its tax dollars from assisting [those] organizations in maintaining a racially segregated construction market.”³⁵⁵
4. **Discrimination in the provision of credit or bonding by local suppliers and banks:** “[a]ct to prohibit discrimination in the provision of credit or bonding by local suppliers and banks. Business as usual should not mean business pursuant to the unthinking exclusion of certain members of our society from its rewards.”³⁵⁶

The *U.S. Supreme Court in Croson* also implied that evidence of employment discrimination or discrimination in subcontracting would also strengthen the argument for an MBE program: “The city points to no evidence that its prime contractors have been violating the [city race discrimination] ordinance in either their employment or subcontracting practices.”³⁵⁷

*Webster v. Fulton County*³⁵⁸ suggests, however, that a connection must exist between private sector discrimination and the public agency.³⁵⁹ Per the federal district court in the Northern District of Georgia, the

³⁵² *Id.* at 251.

³⁵³ *Croson*, 488 U.S. at 509.

³⁵⁴ *Id.* at 492.

³⁵⁵ *Id.* at 503.

³⁵⁶ *Id.* at 510.

³⁵⁷ *Id.* at 511, fn. 3.

³⁵⁸ *Webster v. Fulton County, Ga.*, 51 F.Supp.2d 1354 (N.D. Ga. 1999).

³⁵⁹ *Id.* at 1369.

County’s study “does not show that the County's spending practices are exacerbating identified discrimination in the private sector. The County may rely upon a showing of discrimination in the private sector if it provides a linkage between private sector discrimination and the County's contracting policies. *Concrete Works*, 36 F.3d at 1529. No such linkage is provided by the data in the Brimmer-Marshall Study.”³⁶⁰

In *Concrete Works III*, the Tenth Circuit found that Denver could meet its burden by showing marketplace or private sector discrimination and linking its spending practices to the private discrimination. This could be done through:

- 1) Anecdotal evidence of city contractors subject to Denver’s goals who are not using M/WBEs on private sector contracts.
- 2) Evidence of discriminatory barriers to business formation by M/WBEs and fair competition.
- 3) Evidence of lending discrimination.³⁶¹

In *Rowe*, the Fourth Circuit found that the State of North Carolina failed to establish any correlation between public road construction subcontracting and private general construction subcontracting, thereby severely limiting the private data’s probative value.³⁶²

Standards for demonstrating private sector discrimination must be viewed considering the U.S. Supreme Court’s ruling in *Texas Department of Housing and Community Affairs v. Inclusive Communities Project, Inc.*³⁶³ The U.S. Supreme Court indicated that private developers should be given “leeway to state and explain the valid interest served by their policies” and that disparate impact liability must be sure not to “displace valid governmental and private priorities, rather than solely ‘remov[ing]...artificial, arbitrary, and unnecessary barriers.’”³⁶⁴

2.3.8 RACE NEUTRAL

As part of narrow tailoring, public entities are required to consider the efficacy of race neutral measures in addressing any disparity or discrimination. The race neutral analysis seeks to determine the ability of existing race neutral efforts in eliminating disparity in the marketplace.

Lower courts have considered what constitutes adequate consideration of race-neutral measures. In *Concrete Works I*, the city had already enacted several race-neutral measures, including breaking down projects to facilitate small business participation; outreach; a prompt payment ordinance; good faith measures; seminars on procurement procedures; bond guarantee; and contractor mentor and pre-apprenticeship programs. Certain race-neutral measures could not be implemented because of state requirements for bonds, lowest bidder, and

³⁶⁰ *Id.* at 1369.

³⁶¹ *Concrete Works III*, 321 F. 3d at 976-978.

³⁶² *Rowe*, 615 F.3d at 256.

³⁶³ *Texas Department of Housing and Community Affairs v. The Inclusive Communities Project, Inc. (Inclusive Communities Project)*, 576 U.S. 519 (2015).

³⁶⁴ *Id.* at 541 and 544.

prevailing wages.³⁶⁵ The federal district court in Colorado noted, however, “strict scrutiny requires only good faith, not exhaustion of all alternatives.”³⁶⁶

The Ninth Circuit in *Caltrans* stated that narrowly tailoring, only requires “serious, good faith consideration of workable race-neutral alternatives[.]” *Grutter v. Bollinger*, 539 U.S. 306, 339 (2003). The court found that the Caltrans program considered an increasing number of race-neutral alternatives, starting at forty-five in 2008 and reaching 150 in 2010.”³⁶⁷

In contrast, in *Engineering Contractors*, the Eleventh Circuit expressed concern that Dade County had not considered race-neutral alternatives. The types of initiatives that the appeals court believed that the County was obligated to attempt included:

- a) Adjusting its procurement processes and seeking instances of discrimination within its own contracting process, as well as taking steps to “inform, educate, discipline, or penalize its own officials and employees responsible for the misconduct.”³⁶⁸
- b) Passage of ordinances outlawing discrimination by local contractors, subcontractors, suppliers, bankers, or insurers.³⁶⁹
- c) Serious efforts at management, financial, and technical assistance programs and evaluations of their effectiveness.³⁷⁰

According to the Eleventh Circuit, “The first measure every government ought to undertake to eradicate discrimination is to clean its own house and to ensure that its own operations are run on a strictly race- and ethnicity-neutral basis... Instead of turning to race and ethnicity-conscious remedies as a last resort, the County has turned to them as a first resort.”³⁷¹

In summary, the case law suggests:

- 1) If race-neutral programs and legislation were in place prior to the establishment of a race-conscious program, and yet M/WBE participation in public procurement remains low relative to availability, then an inference is created that race-neutral programs were inadequate to relieve the impact of past discrimination.
- 2) All race-neutral programs do not have to be considered.
- 3) Low participation by M/WBEs in race-neutral programs is evidence that the race-neutral programs do not provide an adequate remedy for past discrimination.

³⁶⁵ *Concrete Works I*, 823 F. Supp. 821, 841 (D. Colo. 1993).

³⁶⁶ *Id.* at 841.

³⁶⁷ *Caltrans*, 713 F.3d at 1199.

³⁶⁸ *Engineering Contractors Association of South Florida Inc. v. Metropolitan Dade County*, 122 F.3d 895, 928-929 (11th Cir. 1997).

³⁶⁹ *Id.* at 929.

³⁷⁰ *Id.* at 928.

³⁷¹ *Id.* at 929.

These standards have been supported in cases such as *Western Paving v. Washington State Department of Transportation*, *Concrete Works of Colorado v. City and County of Denver*, and *Associated General Contractors of America, Inc. v. California Department of Transportation (Caltrans)*.

2.4 SUMMARY OF FINDINGS

2.4.1 CROSON STANDARDS

If COK chooses to continue to utilize race and gender-conscious techniques, it will need to meet the U.S. Supreme Court's requirements in *City of Richmond v. Croson*. The U.S. Supreme Court established a two-pronged test: (1) that a governmental entity had to show a compelling governmental interest to utilize race-conscious remedies and (2) that any such remedies must be narrowly tailored. A factual predicate or disparity study is utilized to show if there is a compelling governmental interest. Narrow tailoring is the crucial element in crafting appropriate *Croson* remedies.

Courts, for failure of local jurisdictions to narrowly tailor their remedies, have struck down many MBE programs. Once a factual predicate has been established, post-*Croson* case law presents several broad guidelines for crafting recommendations for MBE programs by a public entity, based on the factual predicate findings:

- Race and gender-conscious MBE programs should be instituted only after, or in conjunction with, race and gender-neutral programs.
- MBE programs should not be designed as permanent fixtures without regard to eradicating bias. Consequently, each MBE program should have a sunset provision, as well as provisions for regular review. Additionally, there is the implication that reform of procurement systems should be undertaken.
- MBE programs should have graduation provisions for the M/WBEs themselves.
- Rigid numerical quotas run a greater risk of being overturned by judicial review than flexible goals.
- Race and gender-conscious goals, if any, should be tied to M/WBE availability and to addressing identified discrimination.
- MBE programs should limit their impact on the rights and operations of third parties.
- MBE programs should be limited in scope to only those group(s) that have suffered from discrimination within public entity's legislative jurisdiction enacting the program.

Croson requirements were extended to federal programs in *Adarand v. Peña*.

2.4.2 SIXTH CIRCUIT STANDARDS

The Sixth Circuit has developed several distinctive standards, as discussed above. The foundation of current Sixth Circuit standards was established from the *Croson* decision in 1989 through 2021 in the cases previously discussed.

In these decisions, the Sixth Circuit and its lower courts have held that:

- A disparity study must account for the number of MBEs and WBEs that are qualified and able to do the work.
- Post-enactment evidence may be considered in determining the extent of discrimination.
- Preferences must be granted based on evidence of discrimination against specific groups.
- Payment of tax dollars to firms participating in discriminatory associations does not constitute passive discrimination.
- Participation goals must track evidence of past discrimination.
- The government must present evidence that it considered race-neutral alternatives prior to instituting any program using racial classifications.
- Non-discrimination efforts can include the use and analysis of race/gender information without being subject to *Croson* standards.

2.4.3 ELEMENTS OF A FACTUAL PREDICATE

While *Croson* did not speak directly to the requirements of the factual predicate, lower courts interpreting *Croson* have suggested the following elements should be included:

- Relevant market
- Availability
- Utilization
- Disparity with statistical significance
- Capacity and regression
- Anecdotal evidence
- Private sector collaboration
- Consideration of Race Neutral Efforts

As COK considers the findings of this disparity study and develops race and gender-conscious and race and gender-neutral programmatic initiatives in response to these findings, COK should ensure that the above legal parameters established by *City of Richmond v. Croson* and its progeny are fully considered.

3.1 INTRODUCTION

Miller³ Consulting, Inc. (M³ Consulting) was commissioned to perform an analysis of the provided City of Knoxville (COK) procurement procedural documents as part of our disparity study engagement with COK. The analysis was designed to determine if there are any systemic barriers within Knoxville’s procurement policies, procedures, and processes that impact a qualified vendor’s access to opportunities based on that vendor’s race, ethnicity, and/or gender. This assessment will assist in determining if there is inherent, systemic, or purposeful discrimination as a result of the way COK administers its procurement programs and how it manages certain contracts, including but not limited to architecture and engineering, construction and construction-related services, goods and supplies, non-professional services, and commodities.

In performing this analysis, the foundational doctrine, mission, and impact of Knoxville’s current procurement practices on all prospective bidders was considered. To that end, a tri-pronged analysis and review was performed:

1. Consideration of public sector procurement best practices.
2. A review of COK’s procurement policies and procedures, which yielded a summary of the key points of emphasis from the provided documents.
3. A review of the possible impacts of Knoxville’s procurement structure, policies, procedures, and practices on the ability of Small, Minority, Women Owned, and Disadvantaged Business Enterprise (S/MOB/WOB/DBE) firms to do business with Knoxville.

Operational characteristics within the procurement process that hinder the involvement of S/MOB/WOB/DBEs in Knoxville Procurement opportunities may necessitate fundamental changes to the overall procurement and contracting activities in COK to ensure inclusiveness, transparency, accountability, and efficiency as it relates to S/MOB/WOB/DBE participation and consistent with COK’s strategic mission and vision. M³ Consulting may recommend changes in **Chapter 12: Conclusions and Recommendations**.

3.2 BEST PRACTICES IN PUBLIC SECTOR PROCUREMENT

3.2.1 INCLUSIVE AND SUSTAINABLE PROCUREMENT

Best practices in public sector procurement begin with inclusive and sustainable procurement processes. Public procurement represents anywhere between 10-45% of a nation's Gross Domestic Product (GDP), with the average percentage in developed countries around 15-20%. This percentage only represents public sector procurement. When private sector procurement is added to the equation, institutional purchasing then accounts for over 30-60% of a nation's GDP. That means that our economies are significantly driven by the decisions made by purchasing agents¹.

Public sector procurement systems are responsible to the citizens within their jurisdiction. Prier, McCue, and Bevis² state that the public entity, through its procurement process, is responding to the "Triple Bottom Line – the simultaneous delivery of economic, environmental, and social policies that facilitate an integrated community development strategy."³ Within this focus, the procurement team is also responsible for the efficient and cost-effective procurement of goods and services. However, cost-effectiveness should not be achieved to the detriment of certain groups within a public entity's jurisdiction. Prier, McCue, and Bevis state "continued participation by these targeted groups [small and historically underutilized business] is a necessary precursor to a robust community economic development strategy that leads to prosperity."⁴

The objective of the procurement operation, therefore, is one of inclusive and sustainable procurement and economic development (SPED).⁵ The execution and implementation of a public entity's community economic development objectives commence with the procurement process. M³ Consulting asserts that the degree to which the public entity achieves its community economic development objectives through procurement depends on whether the public entity starts with a public policy approach, supported by project execution.

¹ "Playing the Game", Sherry J. Williams, Esq., MBE Magazine, July/August 2013.

² "Making It Happen: Public Procurement's Role In Integrating Economic Development And Sustainability Strategies For Local Governments In The U.S.A.," Eric Prier, Clifford P. McCue and Michael E. Bevis*, 3rd International Public Procurement Conference Proceedings, 28-30 August 2008; Eric Prier, Ph.D., is an Associate Professor, Department of Political Science, Florida Atlantic University. Clifford P. McCue, Ph.D., is Associate Professor, and Director, Public Procurement Research Center, School of Public Administration, Florida Atlantic University. Michael E. Bevis, CPPO, C.P.M., PMP, is Chief Procurement Officer, City of Naperville, Illinois, USA.

³ *Ibid.* at 639.

⁴ *Ibid.*

⁵ *Ibid.* at 642.

3.2.2 COMPREHENSIVE PROCUREMENT SYSTEMS

M³ Consulting has reviewed numerous public sector procurement operations and has developed an overview of best practices as it relates to creating an inclusive and sustainable procurement environment that promotes the participation of all firms in a nondiscriminatory manner. A comprehensive procurement system includes the ten components detailed as follows:

Figure 3.1. Ten Components of an Inclusive and Sustainable Procurement System

<p>1. Organizational Structure</p>	<p>Effective Organizational Structure provides for checks and balances and encourages collaboration and broad input from a variety of perspectives. An organizational analysis provides an assessment of the open and competitive nature of the procurement system. To make this determination, M³ Consulting gauges the degree of centralization or decentralization of the procurement process, the sufficiency and interrelationship of the written policies and procedures, and the transparency of the procurement process.</p>
<p>2. Budgeting and Forecasting</p>	<p>Effective budgeting and forecasting are essential elements in the development of successful procurement programs that enhance bidder participation and utilization of S/MOB/WOB/DBEs. Budgeting and forecasting allow greater and more in-depth planning for the inclusion of S/MOB/WOB/DBEs in a public entity’s opportunities at the prime and subcontractor levels. M³ Consulting reviews the degree to which an agency engages in procurement forecasting and determines how forecasting is utilized to promote inclusion.</p>
<p>3. Informal Procurement</p>	<p>Informal Procurement provides the greatest opportunity for procurement personnel to impact the choice of vendors selected. These purchases are below a certain dollar threshold and are not subject to a formal contracting process or an advertised competitive bid process. M³ Consulting reviews the manner in which buyers or procurement agents utilize their discretion in the identification of those vendors from whom they will solicit quotes and who will be selected to receive the final award.</p>
<p>4. Formal Procurement</p>	<p>Formal purchases usually allow procurement personnel less discretion in vendor selection, particularly in jurisdictions that must select the lowest bidder. Some discretion, however, typically does exist within formal purchasing processes, such as when a selection criterion, like the “lowest bidder,” can be modified to include terms such as the “lowest responsive and responsible” bidder. M³ Consulting reviews the formal procurement process to determine how available discretion is exercised.</p>
<p>5. Bid Opening and Evaluation</p>	<p>Objective and thorough bid opening and evaluation procedures ensure the fair and fully vetted consideration of bid and proposal submittals. Analysis of these procedures allows M³ Consulting to determine whether there is any subjectivity in the selection of contractors and vendors.</p>
<p>6. Post Award Contract Administration</p>	<p>Effective contract administration includes comprehensive and consistent management of the contract, payment practices, contract life cycle, and</p>

Figure 3.1. Ten Components of an Inclusive and Sustainable Procurement System

	<p>reviews of contractor performance. A considerable amount of vendor contact occurs at this phase of the procurement process. A review of contract administration procedures allows M³ Consulting to determine overall fairness and consistency as well as how inspectors, engineers, and other personnel interact with prime and subcontractors while the contract is being performed.</p>
<p>7. Non-competitive Purchases</p>	<p>In some instances, non-competitive purchases are warranted for very specialized goods or services. However, in an effective procurement system, these instances are limited. M³ Consulting reviews sole source, emergency purchases, change orders, and contract amendment policies to determine whether this component of the procurement process is being used appropriately or whether competitive bidding procedures are being avoided inadvertently or intentionally.</p>
<p>8. Bonding and Insurance</p>	<p>Bonding and insurance are contract requirements that protect the interest of the owner. These contract requirements ensure that the owner can complete the project regardless of nonperformance by a contractor and provide protection against site accidents and other mishaps that may occur during construction and/or during the provision of services. M³ Consulting reviews rules and regulations regarding bonding and insurance to ensure that they are not overly burdensome to S/MOB/WOB/DBEs.</p>
<p>9. Comprehensive and Efficient Enterprise Systems</p>	<p>Enterprise systems are critical to monitoring and tracking organizational performance. Without effective enterprise systems, the public entity cannot effectively monitor and evaluate organization procurement operations and decision-making, particularly in a decentralized procurement environment. M³ Consulting reviews these enterprise systems to ensure that procurement systems capture data to the degree necessary to not only track levels of participation but also to determine areas of disparity in real time.</p>
<p>10. Race/Gender-Focused Initiatives</p>	<p>See Figure 3.2.</p>

Source: M³ Consulting

3.2.4 BEST PRACTICES FOR SBE, M/WOB, AND DBE PROGRAMS

In addition to the aforementioned components of a comprehensive procurement system, the components detailed in Figure 3.1 above represent the essential program elements of successful and comprehensive diversity/inclusion programs. These program elements should be fully integrated and work in collaboration with the overall procurement system while supporting the tenets of the organization’s Mission and Strategic Plan, as well as its community economic development objectives. M³ also identifies the six essential elements for effective S/MOB/WOB/DBE Program implementation, detailed in Figure 3.2.

Figure 3. 2. M³ Consulting Six Essential S/MOB/WOB/DBE Program Elements

1. Outreach and Matchmaking	Efforts to increase the business community’s awareness of an entity’s procurement and contract opportunities and match S/MOB/WOB/DBEs to specific contract opportunities at prime and subcontracting levels.
2. Certification	Eligibility criteria for S/MOB/WOB/DBEs participants.
3. Technical Assistance	Informational and strategic support of businesses to meet the entity’s S/MOB/WOB/DBEs plan objectives.
4. S/MOB/WOB/DBE Inclusion in Bid Opportunities	The mechanism by which the entity assures that material consideration of S/MOB/WOB/DBE participation is given in the award of a contract.
5. Contract Compliance	Ensuring adherence to S/MOB/WOB/DBE plan goals on all contracts after execution of the contract.
6. Organizational Performance Evaluation	A comparison of performance results to the entity’s goals to determine policy successes, strengths and weaknesses, and performance improvement areas.

Source: M³ Consulting

3.3 THE CITY'S ORGANIZATIONAL STRUCTURE AND PROCUREMENT PROCESS

In our effort to conduct a thorough analysis, M³ Consulting reviewed the following procurement policy and procedure documents, Knoxville planning documents, as well as the applicable referenced laws and regulations of the State of Tennessee:

- Knoxville Procurement Policy and Procedures Manual (Effective 01/20/22)
- Knoxville Purchasing/City/Finance Organizational Charts
- Knoxville M/WOB Policy Documents (Amendment to Title 6 - Chapter 56 & Title 12- Chapter 3)
- Knoxville M/WOB Summary Reports (FY2017, 2018, 2019, 2020, and 2021)
- Tennessee Code Title 62 - Professions, Businesses, And Trades /CHAPTER 6 GENERAL CONTRACTORS /PART 1 GENERAL PROVISIONS
- Knoxville Citizen Participation Plan
- Knoxville FY21 Strategic Plan
- Knoxville FY21 Performance Report
- City of Knoxville Insurance Transfer of Risk Guide
- Purchasing Division Business Brochure
- Web Resources
 - Annual Procurement Spend⁶
 - Knoxville Vendor Registration⁷
 - Knoxville Community Development Vendor Registration (KCDC)⁸
 - Knoxville Bid/Contracting Opportunities⁹
 - Knoxville Vendor Payment Portal¹⁰
 - East Tennessee Purchasing Association's (ETPA) Diversity Business Alliance Committee Small & Diversity Outreach Portal¹¹

In addition to considering the organizational structure, written policies and procedures, and web resources referenced above, M³ Consulting interviewed stakeholder departments across COK's operational structure, including but not limited to Procurement, Civil Engineering Division, Small Business & Diversity Outreach Office (SBDOO), Law, Parks & Recreation, Public Works, and other departments that have Capital Improvement Program (CIP) expenditure responsibilities.

⁶ https://www.knoxvilletn.gov/government/city_departments_offices/purchasing

⁷ https://www.knoxvilletn.gov/government/city_departments_offices/purchasing/vendor_registration

⁸ <https://www.kcdc.org/procurement/>

⁹ <https://www.knoxvilletn.gov/cms/One.aspx?portalId=109562&pageId=177206>

¹⁰ https://www.knoxvilletn.gov/government/city_departments_offices/purchasing/payment_portal

¹¹ https://www.knoxvilletn.gov/government/city_departments_offices/purchasing/small_business_and_diversity_outreach

These interviews assist M³ Consulting to determine if actual day-to-day practices are consistent with written policies and procedures and if written policies are unclear. This review of policies, procedures, and practices provides an understanding of procurement operations in order to determine the impact of Knoxville’s current operations on the inclusion of Small, Minority, Women-owned, and Disadvantaged Businesses Enterprises (S/MOB/WOB/DBEs). This analysis is not intended to be a procurement audit or personnel performance review. Rather, the following analysis reflects the results of our review as compared to the best practice comprehensive ten components outlined above.

3.3.1 Organizational Analysis

A. Knoxville’s Strategic Mission and Vision

COK has communicated to its citizenry that the overarching purpose of Knoxville’s City Administration is to provide a stable foundation for safety, health, and the common good. COK has identified five key focus areas: Public Safety, Healthy and Connected Neighborhoods, a Clean and Resilient Future, Thriving Businesses/Good Jobs, and Good Governance. These key focus areas fold into Knoxville’s mission and values as stated on the webpage of COK’s Office of the Mayor.¹²

Knoxville Mission

To provide essential services, build and maintain infrastructure, facilitate solutions, and create opportunities.

Knoxville Values

Knoxville’s values include Integrity, Stewardship, Service, Respect, Collaboration, Learning & Improving, Equity, and Diversity & Inclusion.

Knoxville’s adopted FY21 Strategic Plan was heavily influenced by COK’s desire to focus on responding to some of the needs of low to moderate-income Knoxville residents who may have been impacted by the COVID-19 pandemic. These impacts include, among others, threats of eviction/foreclosure, utility cut-offs, debt accumulation, and food insecurity. Knoxville’s annual action plan seeks to translate their mission and values into an actionable strategy that guides the organization’s focus, work, and resource alignment, and intends to provide a detailed description of how funds were used to address community needs during the pandemic.

The Knoxville FY21 Strategic plan also connects to the Procurement Department’s objectives: The Purchasing Agency seeks to achieve open, free market competition when soliciting pricing and/or proposals to the highest degree possible. This aligns with Knoxville’s mission and values. The construct of

¹² See https://www.knoxvilletn.gov/government/mayors_office

Knoxville’s Architecture & Engineering, Construction and Construction-Related Services, Goods & Supplies, Non-Professional Services, and Professional Services contract acquisition strategies is to ensure that all solicitations and proposals receive equal, fair, and non-preferential treatment throughout the entire procurement process consistent with their strategic plan objectives.

The best interest of COK shall be the final determining factor for the basis of any award with award evaluation criteria. This includes consideration of factors such as price, service, delivery time, specifications, prior history, and any other pertinent information. Overarching key focus areas and underlying objectives, initiatives, and performance measures communicate an effort to be transparent about their goals, focused in their efforts, and accountable for the results that arise from the plan’s execution. Each fiscal year, City staff is required to produce various action plans and performance reports which are made available to the public. These reports document progress on addressing the Strategic Plan objectives. Snapshot views of progress are available for public scrutiny via Knoxville’s Reports and Plans web page¹³.

The Strategic Plan provides a solid foundation on which Knoxville hopes to continue to build an intentional, inclusive, and prosperous future for COK. Furthermore, Knoxville’s Strategic Plan, Mission, and Goal Areas recognize that policies and procedures are admirable guides, but the ultimate measure of effectiveness lies in the extent to which they are executed. To that end, a mission and value-driven workforce must understand their individual roles in carrying out the Knoxville mission/vision; be accountable for accomplishing them in a manner consistent with Knoxville’s values; and provide recognition and reward for those employees who excel.

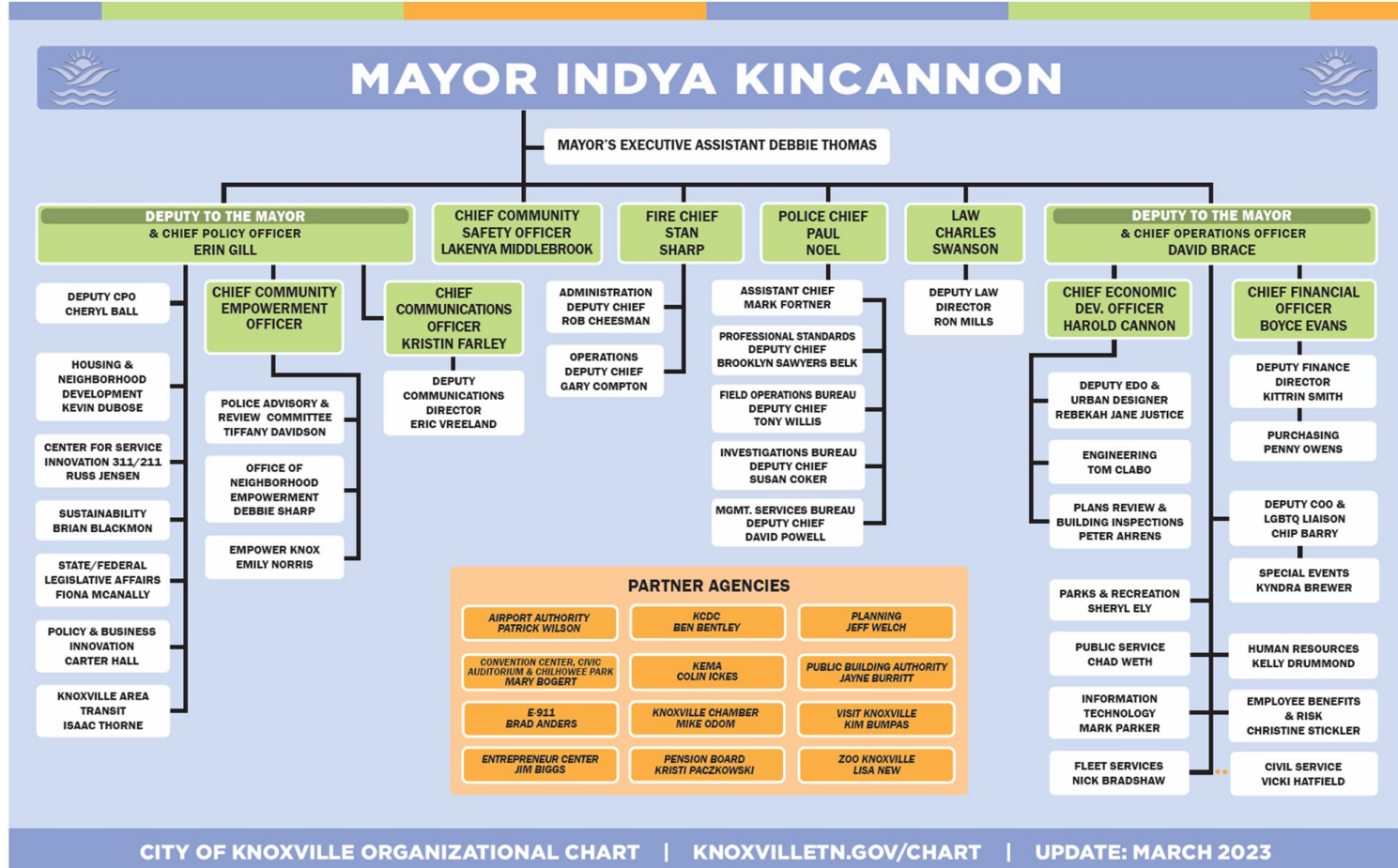
M³ Consulting overlaid the current Knoxville procurement policies, procedures, and actual practices on the mission and value commitments as expressed in Knoxville’s Strategic Plan as part of the overall analysis to determine to what extent procurement policies can be effective strategies in facilitating inclusive community economic development. This was done in part by promoting the inclusion of all firms in the region into the various Knoxville procurement and contracting opportunities in a non-discriminatory manner.

An effective Strategic Plan with a clearly stated Mission and Vision provides structure to an organization and should lead to a practice that includes, not only internal workforce diversity but also integrated planning nodes and collaborative departmental efforts that enhance the diversity of vendor/contractor awards and inclusion to reduce and/or eliminate the risk of discrimination.

¹³ https://www.knoxvilletn.gov/government/city_departments_offices/housing_and_neighborhood_development/reports_and_plans

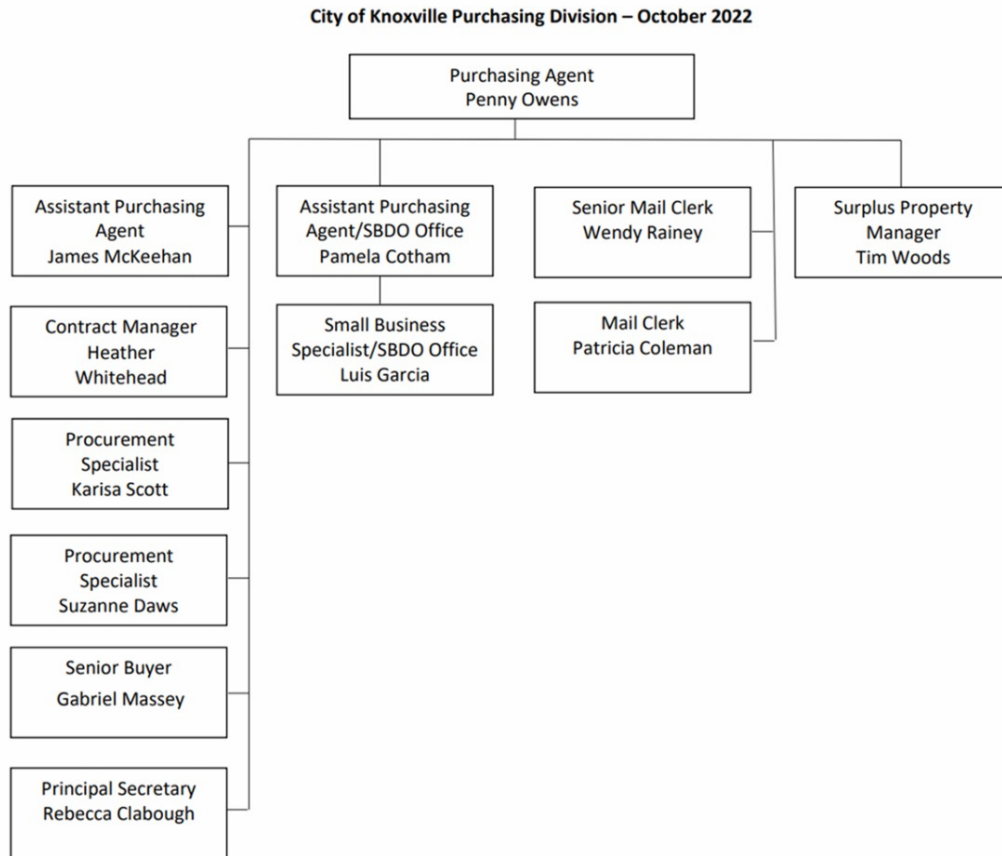
Organizational Structure

Figure 3.3. City of Knoxville Organizational Chart



Source: City of Knoxville

Figure 3.4 City of Knoxville Purchasing Division Organizational Chart



Source: City of Knoxville

M³ Consulting was provided with the above Organizational Structure Charts for COK (Figure 3.3), the Knoxville Procurement Division (figure 3.4).¹⁴ Upon review and examination of the provided organizational charts referenced above, M³ Consulting found it particularly noteworthy that:

- Given the prominent role that Procurement Departments typically play in municipal funds expenditures, the Knoxville Purchasing/Procurement Department only recently (March 2023) began reporting directly to the COK CFO after previously reporting to a deputy finance director.
- The procurement department currently has five active staff personnel. The Small Business Development Office (SBDOO) has only two staff personnel charged with administering policy/procedure and monitoring \$71.7 million dollars in expenditures across 21 departments.¹⁵

¹⁴ M³ Knoxville Document Requests Provision

¹⁵ Knoxville FY21 DBE Master Report

B. Procurement Functionality

The procurement function for architecture and engineering, construction and construction-related services, goods & supplies, non-professional services, and professional services are procured mostly in a centralized manner: Knoxville Purchasing Division serves as the focal point of their center-led purchasing structure. The Purchasing Division is responsible for developing purchasing policies and standard operating procedures for the entire municipality. The policies are well organized in their procurement manual and made available throughout COK. The purchasing department orchestrates the procurement activities for every department or division. Although not completely centralized, their center-led structure still has departments or divisions that maintain some purchasing duties and responsibilities. The functionality of the Knoxville procurement processes begins with a review of the responsibilities of the Purchasing Division, which is responsible for the procurement of all City supplies, equipment, and services and for the disposal of all surplus property in accordance with the COK Charter. Additionally, Purchasing oversees property management services for real estate sales and disposals. The Knoxville Purchasing Division maintains a warehouse for all surplus equipment and has oversight of the mail services to all City departments. According to the provided procurement manual, there is no other entity within COK that has the responsibility of procuring equipment, materials, services, and real property for the City.

COK's Purchasing Division uses an automated procurement system to direct the flow of paperwork and enable City departments to execute procurements to meet their respective operational requirements.

An Oracle-based software system is employed and is referred to within COK as the "ORBIT system." COK maintains and makes available electronic versions of the ORBIT system user manuals on their intranet site.¹⁶ All purchases made by COK are governed by both state and local laws.

As is usually the case with municipal procurement processes, the first step in procuring products or services in Knoxville's system is the submission of a requisition to the Purchasing Division. The requisitioning department must use the iProcurement module in ORBIT. Once the requisition is prepared and sent to the departmental authorizer(s) for approval, it is then sent to the Purchasing Division via ORBIT. The Purchasing Agent reviews the requisition for completeness. If completed properly, the Purchasing Agent assigns it to a buyer for action or returns it to the requisitioning department for correction. The provided procurement manual included all the appropriate terms and definitions in support of the Knoxville procurement processes.

Knoxville Departmental Staff Responsibilities

The individual roles and responsibilities of the various staff and departmental units in the Knoxville purchasing process as outlined in the provided Procurement Policy manual are summarized in Figure 3.5:

¹⁶ <http://insideknoxville.knx/default.aspx>

Figure 3. 5. City of Knoxville Departmental Staff Responsibilities

<p>Knoxville Purchasing Agent Responsibilities</p>	<ul style="list-style-type: none"> • Ensures all competitive bidding is fair and open. • Reviews requisitions and (if completed properly) assigns them to a buyer for action. • Oversees and directs the activities of four other buyers in addition to the purchasing Manager’s own unlimited purchasing authority. • Has the authority to waive technicalities, irregularities, and/or abnormalities concerning bid submissions. • Makes the final decision concerning the time required for ITB issuance (at least 14 calendar days before the date that the bids are scheduled to open). • Serves on the Procurement Advisory Board. • Issues revisions and deletions to the Knoxville Procurement Manual document. • Disseminates/communicates revisions. Departments desiring to update or adjust the Procurement Policies and Procedures should send a memorandum to the Purchasing Division requesting such changes with supporting rationale establishing and enforcing specifications. • Follows up with individual organizations after the bid opening to obtain bid documents, obtain clarifications regarding bid pricing, product specifications, or other information pertinent to the bid when it is in the best interest of COK. • Determines whether or not to cancel an ITB (Finance Director shares this responsibility). • Provides the semi-annual DBE reports to the Director of Finance.
<p>Knoxville Purchasing Division Responsibilities</p>	<ul style="list-style-type: none"> • Leads COK procurements and executes processing of requisitions submitted by user departments for the procurement of all City supplies, equipment, and services. • Disposal of all surplus property in accordance with the COK Charter. • Property management services for real estate sales and disposals. • Maintains a warehouse for all surplus equipment. • Oversees mail services to all City departments. • Facilitates the flow of paperwork to enable City departments to execute purchases and meet their operational requirements using the ORBIT system. • Processes requisitions. • Issues addendums to modify or clarify solicitations prior to the due date.
<p>User Department Responsibilities</p>	<ul style="list-style-type: none"> • Cooperates with departmental purchasers, City agent purchasers, and the Purchasing Division in the procurement of all City supplies, equipment, and services. • Ensures adherence to the policies and procedures as detailed in the Knoxville procurement manual.

Figure 3. 5. City of Knoxville Departmental Staff Responsibilities

	<ul style="list-style-type: none"> • Allows ample lead time for the Purchasing Division to process submitted requisitions and issue requested Purchase Orders. • Prepares a complete and accurate description of the materials to be purchased. • Advises the Purchasing Division of defective merchandise or dissatisfaction with vendor performance. • Promptly receives requisitioned items • Processes payment requests promptly in the ORBIT system as applicable.
<p>Small Business Development Office (SBDOO) Responsibilities</p>	<p>Specific Responsibilities of the SBDOO were not delineated in the provided documents. However, staff interviews revealed that SBDOO staff are responsible for:</p> <ul style="list-style-type: none"> • Assists COK with increasing its DBE/MOB/WOB spending via internal interface with Knoxville department staff or external outreach. • Connects P-card holders with DBE/MOB/WOB businesses that may be able to provide goods and services. • Facilitates one-on-one meetings with diverse businesses to try to guide and assist businesses to learn how to do business with Knoxville. • Produces a quarterly newsletter that is sent to DBE/MOB/WOB businesses. • Facilitates outreach events to connect the community. • The SBDOO Manager serves as Chairperson of the 12-member Diversity Business Advisory Council. • Collaborates with the East Tennessee Purchasing Association Diversity Business Alliance. • Annual Utilization Tracking
<p>Community Empowerment Department (Formerly Community Relations Department) Responsibilities</p>	<ul style="list-style-type: none"> • The Community Empowerment Department consists of 4 separate offices all within the Mayor’s office. • Title VI, Equity and Inclusion Office – Oversees compliance with Title VI of the 1964 Civil Rights Act. This Office includes an Internal Equity Committee made up of city employees who ensure that best practices to guard against discrimination are being followed. • The Empower Knox Initiative – Works with youth-serving organizations throughout Knoxville to ensure investment in the enrichment of Knoxville youth. This office coordinates summer youth internship programs, directs the activities of a newly formed Youth Council, manages empowerment grants, and oversees the roundtable of organizations in collaborations and sharing areas of concern with COK. • The Police Advisory and Review Committee (PARC) - Provides civilian oversight of law enforcement and facilitates the investigation of citizens’ assertions that their rights were violated/infringed upon when interacting with officers. PARC consists of 7 citizens nominated by the

Figure 3. 5. City of Knoxville Departmental Staff Responsibilities

	<p>Mayor and approved by the City Council. PARC reviews all of the Internal Affairs Unit’s investigations and Use of Force cases where bodily injuries were caused.</p> <ul style="list-style-type: none"> • The Office of Neighborhood Empowerment (ONE) – Provides coordination of Knoxville’s approximately 200 neighborhood organizations, associations, groups, watches, etc. ONE Ensures that they have an access point to city government and services as well as provide mediation between neighborhoods/departments or developers when something is progressing or being built in communities. Additionally, this office works with COK’s Engineering Department to install traffic calming measures in neighborhoods and communities. There is a 15-member Neighborhood Advisory Council that connects with ONE to help ensure recognition and ample communication of opportunities throughout COK. • The department also operates a number of special projects including the African American Equity Restoration Taskforce which seeks to generate \$100M over a ten-year period to be allocated for expenditure in areas impacted by urban renewal during the 1950s and 60s.
<p>City Of Knoxville Contract Manager Responsibilities</p>	<ul style="list-style-type: none"> • Serves as a supporting member of the Purchasing Division where the position resides. • Analyzes and tracks contracts to ensure renewals, extensions, amendments, and change orders are executed on time and to standard. • Adjusts bonds and insurance to meet change orders, amendments, and extensions. • Conducts variance analysis to facilitate stewardship of funds and quality control. • Production of DBE/MOB/WOB-related reports, PowerPoints, and presentations as required. • Trains departmental contract administrators concerning their responsibilities. • Identifies contractors not performing to standard. • Executes contract reconciliation by de-obligating funds that are no longer needed. • Assists departments, when necessary, in tracking and documenting all required clauses, qualifications, certifications, and reports/forms for federally funded contracts. • Resolves contract and purchase order disputes. • Ensures that all direct recipients of federal grants, grant amendments, and cooperative agreements in excess of \$25,000 are subject to the requirements of the Federal Funding Accountability and Transparency Act of 2006 (FFATA).

Figure 3. 5. City of Knoxville Departmental Staff Responsibilities

- Submits sub-recipients’ sub-award information to the FFATA Sub-award Reporting System at the time of award of the sub-grant, in accordance with the requirement to report at the end of the month following the month in which any sub-award under the grant has been made.

Source: Knoxville Procurement Manual

Contract Authority

The policy documents reveal that the Purchasing Agent (PA) or designee is authorized to negotiate the terms of a contract with the individual or firm that has been deemed the most responsive bidder or proposer. However, beyond the procurement manual’s declaration that only specific employees are authorized to contractually bind COK in a contractual agreement, no additional written detail regarding who has contract-binding signature authority was available.

Below in Figure 3.6 is the Authorization Matrix for Contract Awards.

Figure 3.6. Authorization to Award Contracts

Expense Type	Documents Required	Authorization Limit	Required Approvers
Procurement Cards (P-Cards)	Department Discretion	Up to 5000	Dept. Heads
Small Purchases (Micro-Purchases)	Requisition Three Quotations P.O.	\$5,000 to \$24,999	Procurement/Dept. Heads
Quick Purchase Orders	Non-Collusion P.O.	Up to \$4,999 (11,999 per Competitive Threshold)	Procurement/Financial Analyst/Dept. Heads
Standard & Blanket POs	Non-Collusion P.O.	Unlimited (PA) Up to \$25K (Buyers)	Procurement PA/Buyers
State and Third-Party Contracts	Originating Contract P.O.	Unlimited (PA) Up to \$25K (Buyers)	Procurement PA/Buyers
ITBs RFPs & RFQs	Non-Collusion Drug Free EBO Contract P.O.	\$25,000 and Above	Procurement/Dept. Heads/Council

Source: Knoxville Procurement Manual

The way purchases are executed within the COK system is governed in large part by the cost of the good/commodity/service/construction scope. The procurement manual includes a decision “matrix” that depicts the manner in which the decision to enter competitive bidding or whether other procurement mechanisms should be employed. Figure 3.7 (below) represents the Contract Documents Requirement Matrix. When reviewing the matrix, it should be noted it provides that:

- POs issued in amounts below \$25,000 do not require bids or for Law to craft a contract. (The need for Law to craft a contract for services below \$25,000 is determined case-by-case in consultation with Procurement).
- POs over \$25,000 must be publicly solicited unless they meet the criteria established for non-competitive bidding.
- Professional Services do not have to be bid but normally require a contract.
- POs with values between \$5,000 and \$25,000 will be publicly solicited and may or may not require a contract, depending on the item(s) involved and defined on a case-by-case basis. (If a contract is not required, the PO will serve as the contract document).
- If a PO is a combination of goods and services, it is classified as a service PO.
- The term "Perhaps" in the matrix below implies that a decision is made case-by-case by the Purchasing Agent.
- Some contracts require Council approval and are detailed in the Procurement Manual
- Vendors must be licensed in their industry unless they have a court-approved document stating they are exempt from such licensure requirements.
- Vendors do not have to necessarily be licensed to conduct business in the State of Tennessee except in the case of professional services and construction services where such licensure within the state is required by law.

Figure 3.7. ITB Contract Requirements Matrix

Document Requirements	Ins.	Bid Period	Perf bond	Payment bond	EBOP Form I or II	Business Lic.	License Info	Non-Coll	Counc. App	Drug Free Aff.	Law Cont.
Goods, under \$5,000	No	No	No	No	No	Yes	No	Yes	No	No	No
Goods, \$5,000 to \$24,999	No	No	No	No	No	Yes	No	Yes	No	No	No
Goods, \$25,000 and above	No	No	No	No	No	Yes	No	Yes	No	No	Perhaps
Services, under \$5,000	Perhaps	Perhaps	Perhaps	No	No	Yes	Perhaps	Yes	No	No	Perhaps
Services, \$5,000 to \$24,999	Perhaps	Perhaps	Perhaps	Perhaps	Yes	Yes	Perhaps	Yes	No	No	Perhaps
Services, \$25,000 and above	Yes	Perhaps	Perhaps	Perhaps	Yes	Yes	Yes	Yes	Yes	No	Yes
Construction	Yes	Perhaps	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Knoxville Procurement Manual

Enterprise Systems Supporting the Procurement Functions

There were no provided documents that spoke to Enterprise Systems supporting the procurement and project management functions available for this analysis.

3.3.2 POLICIES AND PROCEDURES

In reviewing the Knoxville Procurement Division Policies and Procedures to determine their consistency with the attributes of well-written policies, M³ made the following observations (See Figure 3.8 below):

Figure 3.8. Analysis of Policies and Procedures

<p>1. Clearly defined functions of all personnel involved in procurement decisions</p>	<p>A procurement manual entitled “City of Knoxville Procurement Policies & Procedures” (Effective July 24, 2015) was provided as the most recent written handbook document. The workbook contained the purpose, mission, objectives, and various procurement processes. The extensive manual also included overviews of bonding, bid evaluation, tie breaker process, vendor notification, contract prep, certification, contract admin, and reporting among other subjects. However, process workflows and involved personnel are not fully delineated in the provided documents.</p>
<p>2. Clear protocol for how & when to utilize various procurement methods</p>	<p>The above-referenced procurement manual includes clear protocols and processes for various procurement methods, but it is not evident that the 2015 document is current and is used enterprise-wide as the standard. The Knoxville website contains postings that detail additional procurement information.</p>
<p>3. Clear definitions of procurement terms</p>	<p>The provided documents contained sufficient definitions for procurement, contract, and diversity inclusion terms generally used in the profession such as vendor list, bid, bidder, certified minority business (M/WBE), DBE, buyer, bid agent, affiliate, exempt contract, purchase order, bidder, proposer, responsible and responsive bidders, among others.</p>
<p>4. Criteria for selection and evaluation of bidders by the major categories of procurement</p>	<p>Bidder selection, evaluation criteria, and evaluation process were defined in the provided documents and included a scoring matrix and vendor notification protocol.</p>
<p>5. Criteria for evaluation of vendor/contractor performance after contract award</p>	<p>Criteria for vendor performance evaluation post-award was outlined in the provided documents including the role of the Procurement Advisory Board.</p>
<p>6. Clear delineation of the sources of procurement definitions, particularly if municipal, state, or federal codes are involved</p>	<p>The provided procurement manual contained procurement term definitions but did contain clear delineations of approval process workflows and event mapping.</p>

Source: M³ Consulting and Knoxville Procurement Manual

3.3.3 BUDGETING AND FORECASTING

The documents provided did not detail the Knoxville forecasting and budgeting processes. Although Knoxville does engage in an annual budgeting process, there was also no indication from the documents as to whether procurement forecasting is an official component of Knoxville’s annual budgeting process. Additionally, there was no indication of a regularly recurring time period for any procurement opportunity forecasting activity. Staff indicated that there are currently no public-facing forecasting documents shared with the bidding community in advance of contracting opportunity advertisement except for some look-ahead information which is shared during the annual business breakfast.

3.3.4 VENDOR REGISTRATION, NOTIFICATION, SOLICITATION, AND BID OPENING

A. Vendor Registration

Any firm or organization seeking to conduct business with COK must be registered with the Purchasing Division prior to the opening of any bid opportunity. COK provides a Vendor List Application Form on COK’s procurement website¹⁷ that prospective vendors are expected to complete. COK reserves the right to reject any quotes, bids, proposals, and qualifications submitted by businesses that are not registered. Once a vendor registers, they can receive email notifications of bid opportunities commensurate with the types of goods and services that the vendor provides. Moreover, the registration portal allows vendors to select the free registration process to get bid opportunities for COK only and opt for two additional tiers of paid bid opportunity access (through a 3rd party firm, Vendor Registry): State opportunities (\$42.00 per month) and National opportunities (\$158.00 per month). There are also links on the Purchasing site that allow vendors to:

- Access the Knoxville's Community Development Corporation (KCDC) Vendor Registration process
- Access “How to Do Business with Knoxville” information
- View Bid/Contracting Opportunities
- Access the Payment Portal
- Access Small Business & Diversity Outreach Information and Small Business Newsletters
- Get information regarding purchasing surplus City property and vehicle Auctions
- Access Procurement Staff contacts

¹⁷ www.knoxvilletn.gov/purchasing

B. Specification Development

Specification development was not specifically detailed in the provided policy documents. Discussions with various Knoxville staff members indicated that User Department engineers or requesting agencies that submit requisitions work in coordination with the COK Purchasing Agent and consultants to develop and provide the specifications that are placed in bid documents.

C. Notification and Solicitation

The notification process commences once a requisition is received from a User Department, the solicitation methodology is determined, and the bid document is crafted. The Purchasing Division then provides notification of ITB, RFP, or RFQ using the following methods:

- Posts the solicitation document on the Purchasing Division's website.
- May notify prospective vendors, including any prospective proponents suggested by the submitting department.
- Posts an advertisement for solicitation in the local newspaper for public notification. The reviewed documents did not detail what triggers the decision whether to use the newspaper as an advertisement vehicle.
- Send automated emails to those vendors who are registered with COK as providing the solicited goods/services when they advertise an ITB, RFP, or RFQ.

It is noted that COK holds that the only legal means of public notification is COK's procurement website¹⁸, and it is the sole responsibility of all potential bidders to view COK's website to determine whether or not opportunities have been posted for which they are interested in bidding. Select solicitations require proponents to attend a mandatory pre-bid conference. If a pre-bid meeting is deemed to be mandatory, it will be stated clearly in the RFP or an addendum.

When a decision is made to hold a pre-proposal conference, it is intended to ensure the scope of work is clearly communicated and to answer questions by potential proposers. A representative from the Purchasing Division will lead the conference and ensure that the key points of the solicitation are covered. A representative from Knoxville's Small Business Development Office (SBDOO) also attends applicable pre-proposal conferences. The key points are also posted as an addendum to the solicitation so that all proponents have access to equal information. Failure to attend a mandatory pre-proposal meeting is grounds for rejecting a proposal. However, the determination of which contracting opportunities would require mandatory pre-bids could not be determined from the provided documents.

¹⁸ See: www.knoxvilletn.gov/purchasing

3.3.5 PROCUREMENT LEVELS AND METHODOLOGIES

According to the supplied documentation, COK procures goods, commodities, construction, and professional services utilizing the following methodologies:

- Procurement Cards
- Purchase Orders
- Small Purchases
- Purchasing Contracts
- State and Third-Party Contracts

3.4 INFORMAL PROCUREMENT

The procurement method varies based on the threshold value of the purchase. Figure 3.9 summarizes Knoxville’s contract thresholds and requirements for solicitations that do not require a formal ITB/RFP/RFQ request to prospective vendors/contractors/service providers to respond or provide price quotations.

Figure 3.9. City of Knoxville Informal Purchasing Dollar Value Thresholds

TOTAL AMOUNT OF PURCHASE	PROCUREMENT METHOD	SOLICITATION REQUIREMENTS
Up to \$4,999	Departmental Discretion	Department calls the vendor and places an order. (The department is responsible for the due diligence in researching the price of items to ensure the price is fair and reasonable before placing an order. Department submits QPO Payment Request to Purchasing for approval. Purchasing approves QPO Payment Request and forwards it to Accounts Payable for payment. Alternatively, a requisition is issued by the User Department, and the PO is issued by the Purchasing Division.
\$5,000.01 to \$24,999	Three Quotes Required	User Department creates and submits requisition to Purchasing. Purchasing obtains three written quotes. Purchasing posts requests for quotes on the bid website. If the Procurement Division allows a department to gather the quotes (with Purchasing Agent’s approval), The Procurement Division encourages them to obtain a quote from at least one DBE. Purchasing issues P.O to selected vendor

Source: City of Knoxville Procurement Manual

Procurement Cards

P-card purchases are governed by monthly credit limits and single purchase limits. When planning a purchase for COK, employees must consider established purchasing thresholds. P-cards are issued at the request of department directors and division chiefs for employees who have responsibilities that require them to make purchases on behalf of their departments. P-card users are encouraged to direct their purchases toward small businesses whenever appropriate, with special consideration given to minority- and women-owned businesses. However, there is no written mandate to underpin this “organizational culture” encouragement.

Bank of America is the issuing bank for Knoxville’s P-cards. Charges for purchasing cards are paid on a monthly basis, by the due date, to avoid late charges. According to the provided policy document, p-card purchases are exempt from state and local sales taxes. The procurement manual also mentions that transaction reviews are conducted routinely to ensure standard procurement rules are followed and that inappropriate purchases/split purchases are not made. M³ will speak with select staff to verify that p-card reviews/audits are indeed routinely conducted. Prohibited P-card purchases include but are not limited to,

personal care services, ATMs, entertainment providers, financial services, professional services, pawnshops, liquor stores, and all purchases from international companies. P-card split purchases are also prohibited Knoxville maintains various types/levels of P-card purchases.

Standard P-cards have a Single Purchase Limit (SPL) as well as a monthly credit limit. They can be used at any store except those categorized as “restricted.” Knoxville’s typical SPL range is from \$300 to \$500, with monthly credit limits of \$3,000 to \$5,000. The Purchasing Division may adjust limits at the request of a cardholder’s department head. Some standard P-cards may be designated as travel cards as a payment mechanism for authorized travel; these cards are embossed with a "Travel" designation. A travel card holder may use the card to make flight or hotel reservations for employees within their department. Other travel expenses, such as food or incidentals, are not charged to City P-cards and instead are reimbursed to the traveling staffer upon returning. Knoxville also has Uniform P-cards which differ from standard P-cards in that they are declining balance cards which are funded at the beginning of Knoxville’s fiscal year with specific monetary limits. That monetary limit represents the total uniform allowance for that department for the year. The allowance is depleted as purchases are made and is not renewed until the beginning of the next fiscal year. Uniform P-cards are designated for the use of uniformed police officers and other approved employees. In the past, uniformed police officers were directed to use their allowance at a specified list of merchants and that requirement is stated in the provided procurement policy documents. However, staff feedback clarified that as indeed a past practice, and currently Knoxville does not have an established list of suppliers for uniforms. The officers have the autonomy to purchase from all suppliers of uniforms.

Purchase Orders (Quick, Standard, & Blanket)

The Procurement Division issues Purchase Orders (POs) for the procurement of equipment, supplies, and some services. A requisition is submitted by a department using the ORBIT system which confirms that funds are available for the purchase. COK employs various PO types. Although COK’s P-Card serves as the preferred method of payment when purchasing low-dollar products and services, a Quick PO (QPO) can be used in situations where rapid delivery of a purchase demands a quicker response than the standard requisition/ purchase order process typically affords, and/or where a City p-card cannot be used. QPOs are for purchases of less than \$5,000. Purchases of \$5,000 or greater are processed as a Standard Purchase Order and are initiated by submitting a requisition to the Purchasing Division. Once delivery of a QPO purchase is accepted, the department making the purchase forwards the vendor's invoice with the Payment Form (marked "Y" Quick PO) to the Accounting Department for processing. All QPOs must be signed by the requisitioner and appropriate approving authority and must contain a description and/or explanation of the purchase. The Purchasing buyers (i.e. Asst. Purchasing Agent, Contract Manager, or Procurement Specialists) review the QPO Payment Form. If there are no questions regarding the purchase or the method of payment, the QPO is initialed as "approved" by the buyers and forwarded to Accounts Payable for payment.

The more prevalent PO - A Standard PO - is issued as a binding agreement after the Purchasing Division has reached an agreement with the supplier regarding price and delivery. A Standard PO is also issued for every contract, thereby providing the requisitioning department with a mechanism by which they can pay invoices. Departments must plan for required purchases and submit requisitions in time to allow the Purchasing Division to secure competitive bids and to obtain delivery of the item(s) at the time needed. When it becomes necessary to make any required changes to a PO, the buyer must complete the necessary steps in the ORBIT purchasing system.

Knoxville determined that at times it is appropriate for the Purchasing Division to reach an agreement with a supplier for an undefined quantity of goods that the department can use routinely. Knoxville uses “Blanket” POs for items such as auto parts, office supplies, maintenance items, boots, uniforms, and similar goods. In the case of Blanket POs, the Purchasing Division will seek discounts and fixed pricing for a specific period of time with the targeted supplier. After vendor selection, discounts, and fixed price negotiations are complete, a Blanket PO is issued to the supplier and posted in the ORBIT system for all City departments to use. In order to achieve the best price/value for COK, all City departments are required to purchase items on the Blanket PO as applicable. Payment is initiated with a blanket release requisition in ORBIT.

Small Purchases (Micro-Purchases)

If the Purchasing Division (or user department) solicits and receives quoted prices below \$5,000, the purchase may be made on a Quick PO, or if limits and approvals allow, a City P-Card. The small/micro-purchase limit for most City-funded purchases is \$5,000 or below. However, when using federal dollars such as Housing and Urban Development (HUD), Department of Justice (DOJ), or Federal Transportation Authority (FTA) funds, the micro-purchase limit is \$3,000. However, if a purchase's estimated price is between \$5,000 (\$3,000 when using federal funds) and \$24,999, a minimum of three quotes is required. Solicited quotes may be submitted in writing or may be gathered over the telephone with written documentation of the phone quotation made by the COK staff recipient (indicating date, vendor, and quoted price).

In cases where the department gathers the quotes, written documentation must be forwarded to the Purchasing Division for review and confirmation prior to issuing a PO and the Purchasing Division will retain the written quotes for its records. Small/micro-purchases may be made without obtaining competitive quotes, it is prohibited to split up the value of a purchase to keep it under the threshold and avoid competition. If the estimated price is \$25,000 or more, a competitive sealed bid is required. A prohibition is also in place such that Departments may not split requisitions into estimated amounts of less than \$25,000 in order to evade Knoxville's competitive bidding procedures.

3.5 FORMAL PROCUREMENT

Purchasing Contracts

All Knoxville contracts will include a standard indemnification clause, holding COK harmless for liabilities, defenses, and judgments. All agreements, contracts, and subcontracts contain all necessary affirmative action and nondiscrimination requirements provided by federal, state, or local laws and regulations. Knoxville policy dictates that no contract for the purchase of materials, supplies, equipment, or services can be awarded unless funds have been encumbered and are available for the purchase. Each contract is subject to the availability of funds. If a contract extends beyond an operating fiscal year, the contract must specifically include the right to terminate if funds are not appropriated. A revenue contract is used to formalize an agreement between COK and any individual, team, business, non-profit agency, or other agency that grants money to COK. COK Procurement Code permits only certain contracts to exceed three (3) years. The provided documents state that unless specifically provided for in the COK Ordinance, a contract cannot exceed three (3) years unless a longer term is recommended by the Purchasing Agent and approved by Council as pursuant to §2-894 of COK's Procurement Code. When option years are included in a contract, the Purchasing Division will try to remind departments regarding when they need to request a contract renewal but the ultimate responsibility to execute renewals rests with the User Departments.

The Purchase Agent or designee is authorized to negotiate the terms of a contract with the individual or firm that has been deemed the most responsive bidder or proposer. The Purchasing agent has the latitude to include price, scope of work/services, delivery, schedule, quality, and similar matters, as negotiation points so long as such negotiations do not materially alter the terms of the original solicitation. Procurement documents provided detail that liquidated damages clauses may be used in contracts where COK may reasonably expect to suffer any damages, where COK would encounter difficulty in finding another firm to remedy the loss, and where the extent or amount of such damages would be difficult or impossible to determine. The damages are listed at a specific per-day rate for each day of the overrun in the contract consistent with the anticipated harm caused by the contract breach and the damages are structured to function as damages rather than as a penalty.

Any COK solicitation or contract related to federally funded procurements for Knoxville Area Transit (KAT) must contain appropriate Federal Transportation Administration (FTA) clauses and protest procedures along with proposers/bidders prequalification criteria. The provided Procurement manual includes three (3) appendix documents that serve as an FTA-Funded Procurement Checklist, Federally-Funded contract requirements advisory, and a Protest Procedures instructional for FTA-Funded Contracts. The provided Knoxville Procurement policy manual indicates that contracts may not be amended or extended if the termination date has passed. Once the contract has expired, there is no legal document to either amend or extend the contract, so it is required that the contracting opportunity must be re-bid.

Formal ITB, RFP, and RFQ Contracts – Most Invitations to Bid (ITB), Requests for Proposals (RFP), and Request for Qualifications (RFQ) solicitations valued over \$25,000 are posted on the Purchasing Division's

website¹⁹. The only exception is for professional services, which may or may not be posted. Prospective proponents are invited to visit the web posting location for solicitations routinely to see if any of the posted documents are projects for which they would be interested in submitting a bid or proposal. The provided procurement manual included an ITB/RFP/RFQ Contract matrix appendix to provide guidance with respect to when contracts may require the approval of the Knoxville City Council. City Council approval is required for all proposed service or construction contracts valued at \$25,000 or greater. Modifications, change orders, or amendments to existing contracts resulting in an increase in the base contract value of \$10,000 or more (whether a single change or aggregate changes) also require council approval. Additionally, Council approval is required for the following:

- Acceptance of grants from the federal and/or state governments.
- Proposed contracts or agreements wherein funds have not been appropriated or which require new or additional appropriations for their funding.
- All proposed contracts for the sale or lease of real property of COK, regardless of value.
- Gifts/Donations to COK in excess of \$10,000.
- Sales of surplus property, equipment, or supplies to other government entities.

Figure 3.10 summarizes COK’s contract requirements for solicitations that require a formal ITB/RFP/RFQ request to prospective vendors/contractors/service providers to respond or provide price quotations.

Figure 3.10. City of Knoxville Formal Purchasing Dollar Value Thresholds

TOTAL AMOUNT OF PURCHASE	PROCUREMENT METHOD	SOLICITATION REQUIREMENTS
\$25,000 and greater	Sealed Bid/RFP Required	User Department creates and submits requisition to Purchasing. Purchasing creates ITB, RFP, or RFQ solicitation document as applicable. Procurement receives Sealed Bids/Proposals from solicitation responders. In the event of solicitation for goods, the selection result has the Purchasing Dept. issue a Purchase Order. For services, Purchasing will issue either a PO, or a contract with a PO attached. Invoices are sent by the User Department to Accounts Payable with a PO Payment Request.

Source: City of Knoxville Procurement Manual

Bid Evaluations and Responsiveness Determination

COK’s Procurement manual details that their bid evaluation, responsiveness, and responsibility determination process have two steps. The Purchasing Division is charged with determining whether a bid is deemed responsive. Responsive bids are defined as bids that conform to the specifications that were included in the advertised solicitation document. If a bid respondent’s submission fails to meet these specifications, the submission is considered non-responsive and may be discarded in its entirety.

¹⁹ <http://www.knoxvilletn.gov/purchasing>

Alternative bid responses from a particular proponent will not be considered unless specified as allowable in the advertised solicitation document.

Responsible bids are defined in the manual as bids which are submitted by firms/entities that are clearly capable of providing the products or services described in the solicitation. In the instance of an Invitation to bid (ITB), the Purchasing Division is responsible for determining the lowest bid. Examples of aspects that COK defines as objective and measurable criteria used to evaluate bid price submissions include but are not limited to: Base cost of the item or service, transportation costs, and warranties. Any offered discounts are not normally considered until the winning bid is selected. If there is a case where a successful proponent's price exceeds the amount budgeted for that product or service the user department has, the Purchasing Division is authorized to contact the bidder to negotiate to a lower price. However, when the successful bid is within budget, award of the contract will be made based on price and price related factors alone. Analysis of the provided documents revealed that evaluation committees evaluate proposals to determine which proponent will do the best job at the best value for COK. Evaluations are based on a 100-point scale that rank orders the selection criteria in relative importance. The provided document identified a typical break down for the point rating evaluation system is as follows:

Price	XX points/percent
Experience/Qualifications of the proposing entity	XX points
Feasibility of Plan	XX points
Experience/Qualifications of firm's project manager	XX points
Delivery Schedule	XX points
Total	100 points* ²⁰

²⁰ *The Knoxville Procurement manual notes that actual point allocations are adjusted to fit the requirements of COK and each RFP solicitation. Also, the points allocated to price/cost on any RFP solicitation cannot exceed 49 points per state law.

Insurance and Bonding Requirements

Knoxville communicates to its' bidding community that it is in the best interests of COK to promulgate insurance requirements that balance the protection of COK with the need to encourage legitimate government and business contracting pursuits, and responsible personal and recreational activities within the COK. Knoxville recognizes that insurance requirements exist to protect COK's human and physical assets and to enforce reasonable and satisfactory transfer of financial risk to third parties during the execution of their municipal contracting opportunities. Knoxville identifies the following areas as appropriate for most routine solicitations and contracts to have specific minimum insurance requirements be a part of the solicitations²¹ :

- Construction
- Fireworks
- Janitorial Services
- Mover Services
- On-site Equipment
- Plumbing
- Paving
- Professional Services
- Event Promoters
- Tow Services
- Road Maintenance
- Tree Maintenance
- Security Services

COK solicitation documents include minimum limits for most situations. Higher limits are required for hazardous activities, such as blasting, or where the activity has a severe loss potential, such as construction close to highways, utility lines, or high-valued property.

In the solicitation of construction services, a bid bond or other form of bid guarantee satisfactory to COK is required. Knoxville requires that the bond be provided by a surety company authorized to conduct business in Tennessee. When delineated in the solicitation documents, performance and payment bonds are required in an amount equal to 100% of the contract price. These bonds are required for all construction contracts that are equal to or greater than \$25,000 in value. Successful proponents are required to submit such bonds to COK, when required, before the construction contract is signed. In the event of an additive change order that increases the overall contract value, both bonds will be increased. These bond requirements are standard, but the major differences between construction contracting and other Knoxville purchases are as follows:

- A required pre-bid meeting (usually at the construction site).
- The requirement that each bid contains a bid bond equaling five percent (5%) of the contract price when the contract price equals \$100,000 or more.
- The requirement for a performance bond from the successful bidder for an amount equal to 100% of the contract.
- The requirement for a payment bond from the successful bidder for an amount equal to 100% of the contract price/cost.

²¹ City of Knoxville Insurance Transfer of Risk Guide Effective 04-01-2014

A revisit to Figure 3.7 (ITB Contract Requirements Matrix) above will indicate which types of procurements have insurance and bonding requirements. Feedback from various COK staff highlight a concession that COK’s insurance requirements present a major impediment to participation by diversity contractors. When asked about any efforts COK is considering to address the vendor community’s insurance concerns, staff responded “ I would love to... Based on talking to all my colleagues, I mean, across the country, we (Knoxville) have very high limits. Our standard insurance limits are 2 million general liability, 3 million aggregate...” Further inquiries during staff interviews related to any efforts to relax those requirements yielded a response that further bench marking is needed against the insurance levels being required for similar contracting opportunities in comparable municipalities. Staff interview feedback also expressed that M³’s study effort should include some benchmarking on municipal bonding and insurance requirements for public sector contracting. When executing this type of benchmarking, M³ holds that it is generally understood that contractors may need a construction bond when working on a specific type of project — particularly with large projects. The purpose of the bond is to act as an agreement between the contractor and project owner assuring the contractor will fulfill all the terms. Contractors are charged for the bond based on their company’s financial health as well as their past job performance record. Furthermore, bonds are required on all federal projects over \$150,000. All government projects that fall under the Federal Miller Act or state Little Miller Acts²² will require payment and performance bonds at a minimum. State and local public entities have some latitude to set their own thresholds for when bonds are required. M³ has found that standard municipal insurance limits are found to be in the range of 1 million dollars of general liability and 2 million dollars aggregate which would make COK’s requirements at the upper end of the spectrum.

Contract Administration

COK has identified a specific staff person to assume the role of Contracts Manager, but the expectation is that some aspects of contract administration and management are executed as a shared, cross-departmental responsibility. The policy document identifies a particular City of Knoxville’s Contract Manager who resides with and is a member of the Purchasing Division team. The Procurement manual indicates that the intent of the role of the Contract Manager position is to positively impact the speed of the contract award process, including the enhancement of the timeliness of extensions, amendments, and change orders. The position is also expected to work to reduce the volume of unneeded contracts and related costs and analyze contracts to identify potential challenges before they become actual problems.

Specific Contracts Manager tasks include: 1) Analyzing and tracking contracts to ensure renewals, extensions, amendments, and change orders are executed on time and to Procurement Department standards. 2) Ensuring that bonds and insurance are adjusted as necessary to meet change order, amendment, and/or extension impacts. 3) Conducting variance analyses to ensure proper stewardship of allocated funds and some quality control functions. The Contracts Manager also has a role in training

²² Federal Miller Act Guide: <https://www.levelset.com/miller-act/>

departmental contract administrators regarding their contract administration responsibilities as well as identifying contracted businesses not performing to standard. Furthermore, this position executes contract reconciliation by de-obligating funds that are no longer needed but are still assigned to a contract, assisting departments, when necessary, to track and document all required clauses, qualifications, certifications, and reports/forms for federally funded contracts. Finally, this position has a role in the resolution of contract and purchase order disputes, ensuring that all direct recipients of federal grants, grant amendments and cooperative agreements in excess of \$25,000 are subject to the requirements of Federal requirements, as well as submit sub-recipients' sub-award information to the Federal Reporting System. No document provided other than the procurement manual addressed contract administration roles and responsibilities.

Change Orders and Contract Amendments

Provided procurement documents state that only specific employees are authorized to contractually bind COK in a contractual agreement. Any City staff person who executes agreements, contracts, or subcontracts containing clauses that violate federal, state, or local laws may be subject to personal liability and those contracts will be deemed null and void by COK. Once a contract has been executed, any significant change in contract work (products or services) that causes a major deviation from the original purpose of the work or the intended method of achievement or causes a revision of the contract work so extensive, significant, or cumulative that, in effect, the contractor is required to perform very different work from that described in the original contract, is considered a cardinal change and is prohibited. The process to execute contract change orders that do not cause a major deviation from the original purpose and result in either a decrease (deductive change order) or increase in the contract value was not detailed in the provided documents. However, the policy documents did indicate that performance bonds are amended as part of contract modifications and change orders to ensure that performance bonds are always properly defined and aligned. The Purchasing Division has the responsibility to review each contract modification, change order, or amendment for compliance with performance bond requirements.

Contractor Substitutions and Reporting

COK policy documents provided for this review did not identify a department, division, or agency that had the responsibility to review contractor substitution/termination requests. M³'s review could not find any policy verbiage that speaks to the conditions under which a Prime Contractor may terminate, replace, or reduce the work of any S/MOB/WOB/DBE firm that the Prime Contractor has counted toward its committed diversity subcontracting inclusion goal. Furthermore, there is no indication that the Procurement Division, SBDOO, or Contracts Manager position has any role in vetting any subcontractor substitution process.

In terms of attainment reporting, the provided policy documents indicate that reports shall be submitted by the Purchasing Agent to the Finance Director. Knoxville's Community Relations Office also receives

copies of the attainment reports, but this review could not determine an exhaustive account of all agencies/departments that contribute data, receive, and/or review the attainment reports. There is a semi-annual report that details transactions with S/MOB/WOB/DBE firms every six months (July-December and January-June) as well as an annual report. The attainment report is due to the Finance Director 30 calendar days after the end of each period. The intent of the report is to provide information on whether COK is achieving its aspirational 10% goal. This attainment report includes:

- Total amount of business (dollar value/percentages) done with minority-owned businesses for the period.
- Total amount of business done (dollar value/percentages) with woman-owned businesses for the period.
- Total amount of business done (dollar value/percentages) with small businesses (including Knoxville SBEs) for the period.
- Total amount of business done with minority-owned businesses and woman-owned businesses (dollar value/percentages) during the same period of the preceding fiscal year.
- The “EBOP” report from the Small Business Administrator to the Purchasing Agent summarizing how much money was provided by prime contractors to minority-owned businesses and woman-owned businesses subcontractors as retrieved from Knoxville’s forms I, II, and III is also included in the semi-annual and annual reports.

3.6 NON-COMPETITIVE PROCUREMENT

A. Cooperative Purchase Agreements—State and Third-Party Contracts

The procurement manual indicates that the State of Tennessee has contracts for many items and that local governments (including Knoxville) may purchase from these contracts if so desired. There is no mandate for Knoxville to purchase from a state contract. Once a sealed bid is opened, the policy indicates that the COK buyer should consult the state's website to determine if the state contract provides a better value to COK than the responding vendors. If the state contract provides a better value to COK than the lowest bid received, the PO should be issued to the awarded vendor specified on the state contract and a notation made that the purchase is through a state contract. Feedback from Knoxville staff however reveals that in practice, Knoxville procurement staff does not compare bids to the State nor do they award to the current active State contractor in lieu of their competitive award. Knoxville staff indicated that the Manual needs to be updated to reflect their actual practice. The vendor's invoice must be carefully examined to ensure that COK is charged at the state contract rate. The COK buyer also has the option to purchase items directly from a state contract, without using the bid process. COK is a Federal Grant funding recipient. As part of the Federal grant recipient's obligation to maintain adequate technical capacity to carry out its project and comply with the Grant Rules, COK's third-party contracting capability must be adequate and efficient in compliance with applicable Federal, State, and local requirements. Common Grant Rules require Knoxville to maintain a contract administration system to ensure that it and its third-party contractors comply with the terms, conditions, and specifications of their contracts or purchase orders and applicable Federal, State, and local requirements.

If COK does not have sufficient internal staffing to assign federally required contracting duties to its own technical, financial, or management personnel (duties such as drafting specifications, evaluating contracts, or performing internal audits), COK is expected to acquire the necessary services from sources outside of its organization. The procurement policy manual indicates that when using outside sources to execute required contracting duties on its federally assisted projects, COK must take appropriate steps to prevent or mitigate any organizational conflicts of interest that would result in conflicting roles that might bias a contractor's judgment or would result in unfair competitive advantage. The Knoxville Procurement Division has an "FTA-Funded Procurement Checklist" which is intended to ensure compliance with all FTA requirements from the inception of the solicitation through the life of the contract. The Common Grant Rules require any third-party contractor to maintain and make available to FTA written records detailing the history of each procurement, as outlined in and required by COK's Purchasing Policies and Procedures.

ITBs dealing with federally funded procurements for Knoxville Area Transit (KAT) must contain appropriate Federal Transportation Administration (FTA) clauses and protest procedures. Proposers/bidders also must meet prequalification criteria, and COK must acquire and record all appropriate certifications. The Provided

Procurement manual includes appendices that include a clear and concise requirements overview and checklist.²³

B. Emergency Purchases

In the event of an emergency condition, a department needing a contract for a product or service due to that declared emergency will send a request (verbal requests are accepted in extreme cases) to the Purchasing Agent requesting that COK enter a non-competitive contract due to the emergency situation. The request must specify the nature of the service or product that is being requested, the estimated cost, the time period (not to exceed five months), the nature of the emergency situation, and why COK does not have the time to execute the normal competitive bid procurement process. Once the Purchasing Agent approves the request, a request is sent to the Law Department asking for a contract to be prepared. If the contract value is \$25,000 or more, the requesting department must send an Agenda Information Sheet (AIS) with the request for Council review and approval at the earliest opportunity. During the declaration of the emergency and the Council's approval of the contract, the Purchasing Agent may direct the requisitioning department to enter into the requested agreement with the company and request invoicing as the work is completed. Payment disbursement is done using the QPO process.²⁴

C. Sole Source

The provided COK Procurement Manual includes specific details regarding Sole Source procurement procedures and provides that sole source purchases can only be initiated when items are unique and possess specific characteristics that can be filled by only one source, or when purchasing from only one source is clearly in the best interest of COK. The process begins with the department requesting the sole source procurement sending a sole source justification memorandum to the Purchasing Agent. The memorandum must explain why the requesting department believes there is sufficient rationale for procuring the items/services as a sole source. The procurement manual details that acceptable factors that are considered in the approval of sole source purchases include:

- Whether the item is a proprietary product. (A proprietary product is one that is manufactured and marketed by a person or persons having the exclusive right to manufacture and sell the product).
- Whether the vendor possesses exclusive or predominant capabilities, or the items contain a patented feature providing superior utility not obtainable from similar products.

The Purchasing Agent will either approve or disapprove the sole source justification memo based on an evaluation of the criteria. Sole Source Procurements are only valid for a three-year duration. In other words, at least every three years, the Purchasing Agent must re-evaluate and determine whether a sole source procurement is still valid. If the Purchasing Agent determines the sole source procurement is no longer valid, the procurement shall be completed via an ITB, RFP, or RFQ solicitation. As detailed in the provided COK Procurement manual, Knoxville's Procurement Advisory Board is responsible for ruling on

²³ Knoxville Procurement Manual

²⁴ *Ibid.*

disagreements between the Purchasing Division and the departments regarding sole source procurements.²⁵

²⁵ Knoxville Procurement Manual

3.7 ANALYSIS OF KNOXVILLE’S DIVERSITY INCLUSION AND ASSISTANCE INITIATIVES

3.7.1 REVIEW OF COK’S S/MOB/WOB/DBE PROGRAMS

COK currently has a race and gender-neutral aspirational goal to conduct 10% of its business with minority-owned businesses and women-owned businesses. The 10% goal is further defined as “10% in construction, 10% in goods and services, and 10% in professional services.” The provided document also highlights the various procurement dollar value thresholds, gives examples of the products and services COK buys each year, describes the vendor registration process, and gives contact information for office personnel. Additionally, the Small Business & Diversity Outreach Office (SBDOO) which resides within the Purchasing Division, has a web page²⁶ where they provide resources such as the brochure, quarterly newsletters, short “how to business” YouTube videos (in English and Spanish), upcoming diversity inclusion-related events, and other information.

According to Knoxville’s Procurement manual, all Purchasing Division Buyers and departmental purchasing cardholders are required to actively solicit bids and proposals for equipment, supplies, personal services, professional services, consulting services, and construction contracts from S/MOB/WOB/DBE firms. Previously, the amount of “fair proportion” of contracting engagement with these firms was recommended annually by the Community Relations Office, but that office is now defunct. The functionality of the Community Relations Office folded into their Diversity Business Advisory Committee (DBAC). The key part of the DBAC’s mission is to advise COK in the development of — and provide assistance with — the implementation of initiatives that increase the amount of business COK does with diverse businesses. COK states in their policy document that nothing in their S/MOB/WOB/DBE inclusion initiatives shall be construed as COK establishing any mandatory quota or “set aside program” with respect to minority-owned or woman-owned business engagement. Moreover, M³ Consulting was provided with a judicial opinion from the Tennessee Office of the Attorney General²⁷ with respect to the question: “May a municipality that is subject to the Municipal Purchasing Law of 1983 implement a policy that grants a preference to local businesses bidding on municipal contracts?” The opinion answered no, citing the case of Metropolitan Air Research Testing Auth. v. Metropolitan Gov’t of Nashville, 842 S.W.2d 611, 616-17 (Tenn. Ct. App. 1992) and asserts that participating bidders have the right to have their bids considered honestly and fairly, competing on the same footing as all other bidders. As such, COK does not have a local business preference program. Knoxville does however currently include separate definitions/revenue

²⁶ https://www.knoxvilletn.gov/government/city_departments_offices/purchasing/small_business_and_diversity_outreach

²⁷ Opinion No. 13-92, November 25, 2013

thresholds for general SBEs and Knoxville area SBEs in their procurement manual. Their annual report also delineates the two SBE categories separately.

Aspects of Knoxville’s S/MOB/WOB/DBE inclusion initiatives include reviewing compiled directories of S/MOB/WOB/DBEs, placing procurement notices in newspapers of general circulation or through electronic media, and inviting S/MOB/WOB/DBEs to submit bids or to obtain information pertaining to the submission of bids. If a procurement agreement is made with an entity that would otherwise qualify as a DBE but is owned by or is under the controlling interest of another business that is not a minority-owned, woman-owned, or small business, COK will not designate the entity as a minority-owned, woman-owned, or small business. Finally, in reviewing Knoxville’s existing inclusion initiatives, the provided SOP documents did not speak to any organizational performance evaluation that holds City staff responsible and/or rewards them based on goal achievement, improvements, successes, strengths, and weaknesses. Staff feedback detailed that with respect to accountability, COK does conduct annual DBE mid-year review meetings with the appropriate decision makers to discuss DBE inclusion performance and make recommendations regarding strategies to meet End of Year (EOY) inclusion goals. The previously referenced Annual DBE Award program provides a forum and opportunity to internally recognize COK Departments whose inclusion performance aligns with those associated with DBE advocates.

A. Outreach and Matchmaking

Outreach and Matchmaking were not specifically detailed in the provided Knoxville procurement documents. However, staff feedback from interviews indicated that COK’s Small Business and Diversity Outreach Office (SBDOO) has a staff person (Small Business Diversity Outreach Manager) assigned to work with various partners, including the East Tennessee Purchasing Association (ETPA) – an organization that was founded by COK in 2016. Other partners include the Tennessee Department of Transportation (T-DOT), the Knoxville Area Urban League (KUAL), and others to provide outreach to the diverse vendor community. Staff relayed that the SBDOO works both internally with dept decision makers, P-card holders, requisitioners, account techs COK warehouse clerks, and externally with Knoxville’s DBE community to assist them with accessing some COK contracting opportunities. SBDOO efforts include cross-agency collaboration on an annual DBE Expo event. The assigned SBDOO staff person does specific marketing to the diverse vendor community to solicit attendance at the annual event. The DBE Expo event is structured in a “reverse trade show” format. The event includes staff from the SBDOO and personnel from other Knoxville departments who are involved in driving small purchases. Knoxville itself hosts an annual business breakfast event in June of each year. Knoxville has two SBDOO staff members who attend various third-party-sponsored outreach events. Notices for various events also appear on the SBDOO webpage which is contained within the Purchasing webpage on COK’s website. The SBDOO webpage features a link to their newsletter (“Small Business Connections” -- a quarterly that they also send out to their DBE community). The page also includes information regarding various upcoming events they host and/or participate in such as their Diversity Business Expo, an annual Business Opportunity Breakfast, and the annual Diversity Business Enterprise Awards Ceremony. During staff interviews, the Purchasing Agent also indicated that

Knoxville intends to try some new workshops regarding bonding and insurance to help small businesses learn what they need to have to effectively compete.

The Small Business Diversity Outreach Manager serves as the chair of COK's Diversity Business Advisory Committee (DBAC). The DBAC replaced the now defunct Equal Business Opportunity Program (EBOP) which used to spearhead a number of technical assistance-related workshops such as GSA Schedule Contract Training, Bid Estimating, and How to Do Business With Knoxville Utilities Board (KUB). The Diversity Business Advisory Committee meets quarterly and focuses on advising Knoxville as it relates to the development and implementation of various initiatives that increase the amount of business COK does with diverse business enterprises. The Small Business Diversity Outreach Manager and one staff member also conduct one-on-one meetings with diverse businesses to try to guide and assist businesses with learning how to do business with COK and getting them prepared for some of the upcoming procurement opportunities.

B. Certification

Any firm or organization seeking to conduct business with COK must be registered with the Purchasing Division prior to the opening of any bid opportunity. COK provides a Vendor List Application Form on its procurement website²⁸ that prospective vendors are expected to complete. Once a vendor registers, they can receive email notifications of bid opportunities commensurate with the types of goods and services the vendor provides.

In past years, COK's Community Relations Office was responsible for certifying businesses as minority, woman-owned, and small businesses enterprises. However, the Community Relations Office is now defunct and the most recent COK Procurement Policy and Procedures Manual provided to M³ indicates that COK does not currently administer its own business certification process for DBE firms. Instead, COK allows for self-certification of DBE status or accepts certification from a number of other certifying agencies as detailed in their Diversity Business Directory page²⁹. Although COK no longer certifies DBE's, its website communicates that vendors must be certified under the authority of an entity recognized by COK or self-certify as part of their registration with COK in order to be established as a DBE business. The COK website also provides links to all the DBE certifying bodies that perform certifications and issue certificates that are recognized by the City. It must be noted that both COK officials and the Knoxville vendor community emphasize the existence of State Law that prohibits any preferential treatment or set-asides for any bidders under any circumstance. During interviews specific reference was made to granting preferences for local businesses under the Municipal Purchasing Law of 1983. Interviewees recount the legal opinion that "gives a preference to local businesses bidding on municipal contracts would violate the competitive bidding provisions of Tenn. Code Ann. § 6-56-304..." [REDACTED] This has bred apathy toward the certification and

²⁸ www.knoxvilletn.gov/purchasing

²⁹ https://www.knoxvilletn.gov/government/city_departments_offices/purchasing/small_business_and_diversity_outreach/diversity_business_directory

bidding processors of a certification process with no benefit and furthermore don't care for the feelings of "hurt and disappointment over losing the bid by "pennies" to a large out of town firm..."

Technical Assistance

COK does attempt to provide some vendor technical assistance by way of "how-to" videos and links to other resources at their Procurement and SBDOO websites, as well as the efforts by the SBDOO staff referenced above in the section related to Outreach. Staff feedback indicates that the majority of contractor technical assistance is accomplished via referrals to partnering assistance programs. Also, in reviewing existing inclusion initiatives, the provided SOP documents did not speak to any organizational performance evaluation protocols that hold City staff responsible and/or reward them based on their technical assistance outcomes, aspirational inclusion goal achievement, improvements, successes, strengths, or areas in need of improvement.

C. S/MOB/WOB/DBE Inclusion in Bid Opportunities

COK applicable solicitations include a Subcontractor Information Form which requires bidders/proposers to provide information for all sub-contractors that are proposed to be utilized if the proponent is awarded the procurement project being solicited. If no sub-contractors are being utilized, the proponents have the ability to indicate such by writing "N/A" within the appropriate information fields. The Subcontractor Information Form asks for the business name of the subcontractor and contact information, a contact name, phone number, and email, a brief description of work that the subcontractor(s) are proposed to perform, and the dollar value of the subcontractor's scope as represented within the bid/proposal. The form is not included for the following solicitations where good faith efforts for M/WOB participation inclusion are not required:

- Goods – Not required at any value
- Services – Not required at values below \$5,000

The Subcontractor Information Form is required for Services Solicitations valued at \$5,000 or greater and all Construction solicitations regardless of dollar value. The SBDOO assumes the responsibility of promoting and increasing Knoxville's DBE/MOB/WOB spending via internal interface meetings with the various COK user department staff and/or external outreach efforts. The SBDOO also serves as a resource for City P-card holders to identify and possibly engage DBE/MOB/WOB businesses that may be able to provide goods and services eligible for P-card purchase. The SBDOO's quarterly newsletter supplements one-on-one meetings with diverse businesses to guide and assist businesses in learning how to do business with Knoxville. The SBDOO Manager serves as Chairperson of the 12-member Diversity Business Advisory Council (DBAC) that meets quarterly and whose mission is to advise COK in the development of — and assistance with — the implementation of various initiatives that are aimed to increase the amount of business COK does with Knoxville's DBE/MOB/WOB community.

D. Contract Compliance

COK has a Contracts Manager position that is charged with many of the activities that are traditionally associated with contract compliance tasks. In addition to being engaged in the resolution of contractor disputes, funds control tasks, contracts reconciliation tasks, etc., as referenced earlier, the Contracts Manager's duties include analyzing and tracking contracts to ensure renewals, extensions, amendments, and change orders are executed on time and to COK's standard. When active contracts experience change orders or other amendments that affect the contract value, the Contracts Manager ensures that bonds and insurance are appropriately adjusted to meet the change orders, amendments, and/or extensions.

In terms of reporting, the policy document indicates that the Contracts Manager ensures that all direct recipients of federal grants, grant amendments, and cooperative agreements in excess of \$25,000 are subject to the requirements of the Federal Funding Accountability and Transparency Act of 2006 (FFATA).

The policy document identifies the Contracts Manager as the responsible party for submitting sub-recipients' sub-award information to the FFATA Sub-award Reporting System at the time of award of the sub-grant, in accordance with the requirement to report at the end of the month following the month in which any sub-award under the grant has been made. Staff interview feedback strongly suggested that they are "...not doing a very good job..." in terms of monitoring and auditing MOB/WOB performance on active contracts in real-time via site visits and desk audits. Staff indicated that would certainly be a place where they would assign any additional staff resources if they became available. In fact, the COK Purchasing Agent has assumed many of the Contracts Manager tasks in addition to her own responsibilities until the position was finally filled in the spring of 2023.

E. Organizational Performance Evaluation

COK Procurement policy documents did not detail staff evaluation criteria or processes related to the execution of procurement activities but were very descriptive in terms of criteria and policy regarding contractor performance.

With respect to contractor/vendor performance evaluation, the Purchasing Agent is empowered to consider the past performance of a bidding company when evaluating the best value for COK. The provided policy document includes examples of factors that may reflect negatively on a company seeking to enter into a new agreement with COK:

- A history of insurance shortfalls, lapses, or other inadequacies in insurance coverage.
- A demonstrated lack of good faith in resolving prior contract disputes short of litigation.
- Past failure to meet specifications as codified in an executed contract agreement.
- Delivery of poor service or poor-quality merchandise in past engagements.
- Failure to make timely delivery of goods or services in past engagements.
- A history of seeking numerous (three or more) change orders or contract amendments from COK when such change orders or contract amendments have been denied in the past.

The policy document also indicates that COK is under no obligation to notify businesses of poor past performance prior to receiving their bids, quotes, or proposals. However, the Purchasing Agent must document the rationale, based on departmental input, and include the rationale in the proponent's bid, quote, or proposal file. When vendor performance evaluation results in a determination of poor performance, COK's Procurement Advisory Board has the authority to bar organizations from doing business with the City. Their standard includes a recurring pattern of two or more instances of poor performance. This may result in suspension from doing business with COK. After the first confirmed incident, the Purchasing Division is required to contact the company to detail and discuss the problem and require that the problem not be repeated in the future. A repeated occurrence of a performance problem may trigger the above referenced suspension for up to 18 months. To be reinstated after a suspension period, the firm must make a written request for reinstatement.

3.8 Summary of Findings and Conclusions

M³ Consulting asserts that the execution and implementation of a public entity's community economic development objectives commences with the procurement process. Public entity achievement of its community economic development objectives through procurement begins with a public policy approach to procurement and community economic development that extends beyond Mission, Value, and Strategic Plans to everyday actionable policy and procedures supported by project execution. Often this stands in contrast to purely employing a cost, schedule, and project efficiency-based approach. M³ Consulting's review of the supplied documents leads us to assert that some operational characteristics within the procurement structure as referenced in this document hinder the optimal involvement of COK's DBE firms.

This procurement analysis considered public sector procurement best practices by reviewing the policies, procedures, and practices of Knoxville's procurement operations to determine if they are consistent with best-practice policies and procedures and if COK's written policies are unclear. The review of policies, procedures, and practices provides an understanding of procurement operations to determine the impact of Knoxville's current operations on the inclusion of Small, Service Disabled Veteran-owned, Minority, Women-owned, and Disadvantaged Businesses Enterprises whom COK collectively refers to as Diversity Business Enterprises (DBEs).

This analysis revealed that the COK does some very good and forward-looking things regarding their DBE community's engagement and notification. M³ Consulting believes, however, COK's procurement processes will still have exposure in terms of the level of community awareness of its complete contracting opportunities inventory and the DBE community's level of training for competitiveness until comprehensive and ongoing forecasting, training, and education plans are devised for public dissemination. COK's forecasting efforts must extend beyond COK's major development and Capital Projects arenas. COK needs to partner with educational and training resources that will help them to close gaps in available competitive vendors in procurement types where the COK struggles to receive multiple viable bids. This would mitigate the possibility of COK user departments' over reliance on a small subset of capable and available firms to execute the majority of their contracting needs across various procurement types. As some specific larger or higher profile opportunities get closer to solicitation, the COK should consider hosting "Industry Day" events that allows potential prime bidders and subcontracting participants the opportunity to network, interface, and meet the Trade Responsible Engineers (TREs) or other Subject Matter Experts (SMEs) associated with the upcoming opportunity -- well before the commencement of advertising and the formal bidding process.

The COK has a reasonable overall organizational structure and several reasonable policies and procedures in place. It has also implemented many of the best practices found in the procurement industry for large institutions. However, if the areas of exposure in its current policies, procedures and practices are not augmented, the Knoxville vendor community will continue to perceive barriers to their ability to participate in Knoxville's contracting and procurement opportunities. Addressing these areas will assist the COK to minimize any risk of inherent, unintentional and/or intentional exclusionary/discriminatory practices in their procurement program.

M³ Consulting conducted a comprehensive analysis of the COK’s procurement policies and procedures. The purpose of the analysis is to determine if there are any systemic barriers that negatively impact qualified vendors based on their race, ethnicity, and/or gender. Our analysis finds that there are disparities in the City's procurement process that disproportionately affect small, minority, and women-owned businesses in specific ethnicities and trade areas identified in the study. Specifically, these businesses are less likely to receive contracts and are awarded smaller contracts than their non-DBE counterparts. The possible impacts of Knoxville’s procurement structure, policies, procedures, and practices on the ability of DBE businesses to compete for COK contracts include continued allegations of hindering the involvement of DBEs in Knoxville procurement opportunities. These perceptions combined with community sentiments associated with Knoxville's urban renewal efforts may necessitate fundamental changes to the overall procurement and contracting activities in COK to ensure inclusiveness, transparency, accountability, and efficiency as it relates to DBE participation and to be consistent with COK’s strategic mission and vision. The study recommends several steps that the COK can take to address these disparities.

The key points of emphasis highlighted during the review of COK's procurement policies and procedures documents include the need to adequately staff the SBDO Office and give the office the authority to more completely execute the tasks associated with comprehensive DBE Program monitoring and compliance assurance. Other key points include an emphasis on the need for more vendor technical assistance, the perceived lack of transparency in the procurement process, and the need for more specialized outreach to specific DBE groups.

Additionally, COK should consider the roles, level of interactivity and reporting between SBDO Office staff and the responsible user department personnel to increase, monitor and audit the participation of DBEs on applicable COK contracts. Effective application of the COK’s DBE Inclusion Programs should include a marked increase in outreach and education efforts. Furthermore, COK should consider race-conscious goal administration approach to augment ongoing race-neutral efforts. The COK should consider instituting SBE “Sheltered Market” procurement approaches for select contracting opportunities.

Finally, M³ Consulting recommends that the City of Knoxville fully leverage existing data collection and reporting elements within their MUNIS system and/or engage additional technology to create a comprehensive system to track the participation of SMWBEs on COK contracts. This system should include data on the number of SMWBE certified firms within their vendor database that are actively awarded/participating on contracts in a given fiscal year, the number and value of contracts awarded to these businesses, as well as information on the volume and outcomes associated with the City's various annual outreach and education efforts. This data should be made publicly available to increase transparency and accountability. These recommendations provide a roadmap for the COK to increase the participation of small, minority, and women-owned businesses in COK contracts. This will allow Knoxville to address the disparities identified in the study for the specific procurement types, ethnicities, and gender in a narrowly tailored fashion.

4.1 INTRODUCTION

This chapter discusses the statistical methodology employed by M³ Consulting in the City of Knoxville (COK) Disparity Study in two parts:

- 4.2 Statistical Methodology** — The first part is a conceptual discussion of the statistical methodology for the analysis of Minority and Women-Owned Business Enterprises (M-WBEs).
- 4.3 Data Sources Utilized in Statistical Analysis for the City of Knoxville** — The second part is a discussion of data sources, data collection procedures, data gaps, and implications of the gaps on the statistical analysis for COK.

4.2 STATISTICAL METHODOLOGY

The statistical methodology discusses availability, utilization, and disparity. It includes a presentation of the two types of availability: “*Actual availability*” and “*potential availability*”. Also included are various definitions of availability and M³ Consulting’s “*Ready, Willing, and Able*” (RWASM) model. M³ Consulting has adapted this model to the specific data sources available for this study from COK. Also discussed are the types of utilization analyses that were performed. The statistical methodology section concludes by defining the disparity ratio and significance tests crucial for drawing conclusions regarding any disparity in COK’s recent history of contracting with M-WBEs.

4.2.1 Disparate Impact Analysis

The statistical analysis conducted in this Disparity Study is a key component of the Disparate Impact Analysis to determine if there is any discrimination against M-WBEs by a public entity. Under a *Croson* Disparate Impact Analysis, a public entity may be involved in “active discrimination”, which is caused by its own direct action, or “passive discrimination”, which involves participating in the discriminatory or exclusive actions of other agents in the public and private sector.

Disparate Impact is defined as a policy or practice that, although neutral on its face, falls more harshly on a protected group. This impact may be viewed as discriminatory behavior in certain instances. The statistical analysis seeks to determine if there is any disparate impact of an agency’s policy(ies) or practice(s), intended or unintended, on protected classes.

In response to *Croson*, statistical methodologies related to the analysis of procurement and contracting policies/practices continue to evolve as litigation occurs. Because the legal cases are fact-specific and the courts can only review evidence put before them, it is useful to review *Croson* statistical methodologies against the well-tested and even more extensively litigated disparate impact analysis established under EEO law, from which the disparate impact and disparate treatment tests and analysis evolved. The comparison will reveal the course that the two disparate impact analyses have taken.

- EEO Disparate Impact Analysis requires a deeper analysis and testing of an institution’s specific EEO policies, procedures, and practices, with emphasis on active participation in discrimination.
- *Croson* Disparate Impact Analysis is moving toward broader analysis, with ever-increasing focus on passive participation, as opposed to active participation in discrimination, therefore with a lesser focus on the actual decision-making policies, procedures, and practices of the public entity itself and its vendors.

M³ Consulting’s statistical methodology includes an analysis of active and passive participation. The methodology is compared to the more evolved active participation requirements of EEO analysis.

A. Brief Overview of EEO Disparate Impact Analysis

A disparate impact analysis under EEO involves three distinct analyses. Below is a brief overview of the analysis as stated in “The Role of Two Statistical Approaches in EEO Cases,” and a comparison to methodologies deployed under Croson disparate impact analysis.

In the first burden of a disparate impact analysis, up to three tests are performed to determine adverse impact:

1. The "threshold" analysis (also called the initial inquiry) to see if gender and racial composition (i.e., percentages) of the at-issue job is underutilized compared to the composition of the qualified population in the relevant labor market.
2. A "barriers" analysis to see if there are barriers or practices that disproportionately deter gender or racial group members from applying.
3. The "selection" analysis to see if a practice, procedure, or test is disproportionately impacting a gender or racial group, unless the practices, procedures, or tests are not capable of separation for analysis, then the entire decision-making process can be evaluated as one practice.

If a practice, procedure, or test is found to be a "barrier" as defined above, an adverse impact finding could be expected on the cause of the barrier. However, even if the cause of the "barrier" to an at-issue job is not involved in the action, it still can be a "barrier" for statistical purposes. If a barrier is found, a binomial statistical test will be needed in the "selection" analysis and a "proxy" group will be needed in the "selection" analysis. If a barrier is not found (i.e., applicant flow is very similar to availability), then actual applicants can be used in the "selection" analysis and a hypergeometric statistic is used.¹

B. Threshold Analysis

Under a *Croson* Analysis, the EEO threshold analysis is akin to a disparity analysis in contracting. A disparity ratio is computed by comparing available firms, as determined by ready, willing, and able firms to firms utilized by a public entity. This is an important inquiry that sets the stage to determine if there is cause for additional disparate impact analysis to determine if the inference of discrimination resulting from this analysis is remedial. As such, the methodology utilized for the computation of the pool of ready, willing, and able firms takes on significant importance in disparity analysis. Under U.S. DOT 49 CFR Part 26, this threshold analysis could be considered Step 1: Baseline Availability.

¹ Richard E. Biddle, “The Role of Two Statistical Approaches in EEO Cases”, 1995. See also 29 CFR Ch. XIV, Part 1607, §1607.17(2)

While relying on a threshold-type analysis appears straightforward, under *Crososn* analysis, it is not, principally due to the issues of willingness and qualifications of the firms in question. Firms in the marketplace may be ready, but not willing and/or able.

As it relates to Marketplace availability, firms may not be “able”, despite efforts to refine the Marketplace or Custom Census availability to firms in NAICS or NIGP codes representing goods and services procured by the public entity. Regressions and capacity analysis not conducted on the pool of firms bidding with or awarded contracts by the public entity indirectly provides some indication of capacity but does not directly relate to the individual firm’s qualifications or to the determinations of the firm’s qualification by the public entity during the bidding process. Relying solely on Marketplace availability does not adequately reveal a pool of firms that are “ready, willing, and able” to do business with COK. Thus, a comparison of Marketplace availability to the COK’s utilization does not conclusively reveal if COK and its prime vendors’ “policies or practices” are impacting prime and subcontractor selection.

In a *Crososn* disparity analysis, many consultants forego any consideration of bidder data and simply establish a basis for race- and gender-conscious goals on disparity from Marketplace or Custom Census Availability (for M-WBE programs, adjusted under Step 2 of the U.S. DOT’s availability analysis).

The U.S. Supreme Court has shown increasing impatience with this lack of specificity in disparate impact analysis. It is worth repeating here, from Chapter II, Legal Analysis, the Court’s opinion regarding disparate impact claims in the June 2015 U.S. Supreme Court case, *Texas Department of Housing and Community Affairs v. Inclusive Communities Project*.² In upholding the applicability of the disparate impact liability to the Fair Housing Act,

In a similar vein, a disparate-impact claim that relies on a statistical disparity must fail if the plaintiff cannot point to a defendant’s policy or policies causing that disparity. A robust causality requirement ensures that “[r]acial imbalance . . . does not, without more, establish a prima facie case of disparate impact” and thus protects defendants from being held liable for racial disparities they did not create. *Wards Cove Packing Co. v. Antonio*, 490 U. S. 642, 653 (1989), superseded by statute on other grounds, 42 U. S. C. §2000e–2(k).³

...Were standards for proceeding with disparate-impact suits not to incorporate at least the safeguards discussed here, then disparate-impact liability might displace valid governmental and private priorities, rather than solely “remov[ing] . . . artificial, arbitrary, and unnecessary barriers.” *Griggs*, 401 U. S., at 431. And that, in turn, would set our

² 135 S. Ct. 2507 (2015)

³ *Id.* at 2523.

Nation back in its quest to reduce the salience of race in our social and economic system.⁴

The U.S. Supreme Court’s analysis is applicable to the current state of most disparity analysis. However, under EEO, this type of analysis is not normally used for the establishment of race- and gender-conscious EEO goals. The barrier analysis and selection analysis are usually performed prior to that determination.

C. Barrier Analysis

A barrier analysis, using the EEO definition, would result in a comparison between M³ Consulting’s Marketplace Analysis and M³ Consulting’s RWASM analysis. This analysis may also be akin to the elusive “but-for discrimination” analysis pursued and attempted under the *Croson* analysis. While the barrier analysis computation is simple, interpreting the causes of any differences is quite complex.

For example, RWASM Availability often yields higher percentages or proportions of availability than a Marketplace or Custom Census analysis. The differences may be caused simply by the differences in the two sample sizes. For example, for a public entity that used Dun & Bradstreet for Marketplace Analysis, the pool contained 6.88 percent M-WBEs of a total of 28,701 firms after refining the sample to extract relevant NAICS codes and limiting it to the relevant market, while the public entity’s bidder pool (inclusive of awardees for which bid data was not available) consisted of 14.82 percent of M-WBEs in comparison.

Some argue that the cause for larger RWASM availability measures could be the impact of race- and gender-conscious programs on the bidder pool. However, in some instances, public entities with mature race- and gender-conscious programs have discouraged M-WBE bidders due to the continuous and repeated use of the same vendors or continued discriminatory policies and practices, even considering the existence of race- and gender-conscious goals.⁵ M-WBE bidders often view this type of procurement environment as a “closed shop.”

Alternatively, M-WBEs often pursue opportunities in the public sector because public entities can be seen as more inclusive, based on their mission and their diverse make-up of political representatives, and not simply the presence of race- and gender-conscious goals. For example, in reviewing building permit data for a particular public entity, we found that only 8.96 percent of building permits were obtained by M-WBEs in the private sector, as opposed to 19.59 percent of M-WBEs in the public sector for the study period.

⁴ *Id.* at 2524.

⁵ In response to the *Western Paving* case, DOT appears to have addressed this concern by stating that “the study should not rely on numbers that may have been inflated by race-conscious programs that *may not have been narrowly tailored*.” Emphasis added. <https://www.transportation.gov/osdbu/disadvantaged-business-enterprise/western-states-paving-company-case-q-and-a>, Q. What should recipients' studies include? (Posted - 1/12/06)

Additionally, other economic factors can impact firm choices of where to do business. After the Recession of 2008, many large private sector firms around the country, including those who rarely worked in the public sector, turned to the public sector for opportunities. This pushed many M-WBEs out of contention for opportunities in the competitive bidding process.

As such, findings from a barrier analysis under *Croson* necessitate a **deep dive** into the public entity's procurement operation and selection processes to determine whether the barriers are caused by internal or external factors or active vs. passive discrimination. This deep dive also encompasses the public entity's prime vendors who select sub-vendors to participate in the public entity's opportunities. This deep dive into the procurement and contracting activity of prime vendors is a direct means of measuring "passive participation" in private sector discrimination. Under 49 CFR Part 26, a barrier analysis is somewhat anticipated under Step 2: Adjusted Baseline Availability.

D. Selection Analysis

M³ Consulting's RWASM Availability analysis, a primarily bidder-based analysis, is most akin to the Selection Analysis under EEO, established to determine if the public entity's policies and procedures are producing any noted disparity. M³ Consulting draws conclusions of disparity that the public entity may need to address through race- and gender-conscious goals from this analysis, not its Marketplace Analysis. In the EEO environment, if a disparity is found under the Selection Analysis and an employer:

"...has reason to believe that its selection procedures have the exclusionary effect described in paragraph 2 above, it should initiate affirmative steps to remedy the situation. Such steps, which in design and execution may be race, color, sex, or ethnic "conscious," include, but are not limited to, the following: (a) the establishment of a long-term, and short-range, interim goals and timetables for specific job-classifications, all of which should take into account the availability of basically qualified persons in the relevant job market..."⁶

While some would argue that Marketplace or Custom Census represents a proxy group under a Selection Analysis for incomplete bidder data or bidder data impacted by discrimination, these firms may not meet the ready, willing, and able definition. Furthermore, Marketplace Availability can also be impacted by discrimination and exclusion, particularly in the construction industry. M³ Consulting's RWASM Availability Model, discussed supra, is a cascading model, designed to be extended beyond ready, willing, and able firms (actual availability) only when necessary. If earlier levels were deemed completely unreliable, prior to moving to Public Sector or Marketplace Availability augmented by M-WBE lists (firms that are "ready"),

⁶ PART 1607 - UNIFORM GUIDELINES ON EMPLOYEE SELECTION PROCEDURES (1978) 1607.17 Policy statement on affirmative action

M³ Consulting would focus on a public entity’s vendor registration list augmented by its M-WBE lists (firms that are “ready and willing.”). U.S. DOT seeks to address this issue through Step 2: Adjusted Baseline Availability.

Further, when calculating a disparity ratio using RWASM Availability, M³ Consulting is using Actual Utilization compared to Actual Availability. If Potential Availability is utilized instead of Actual Availability, the resulting disparity ratio assumes that, if outreach was done, more available firms would be included in Actual Availability. This could be akin to “but-for-discrimination”, but it could also be “but-for-outreach” and have nothing to do with discrimination. Furthermore, it is possible that they were not included purely due to random chance, which is the essence of the significance tests.

Given that M³ Consulting computes disparity based on RWASM Availability (actual availability reflecting COK’s selection process), if disparity is found using RWASM Availability, COK’s legal staff would then determine if COK may utilize race- and gender-conscious goals to remedy this disparity.

4.2.2 Relevant Market Measurements

The *Croson* statistical analysis begins with the identification of the relevant market. The relevant market establishes geographical limits to the calculation of M-WBE availability and utilization. Most courts and disparity study consultants characterize the relevant market as the geographical area encompassing most of a public entity’s commercial activity. The *Croson* Court required that an MBE program cover only those groups that have been affected by discrimination within the public entity’s jurisdiction.⁷

Two methods of establishing the relevant market area have been used in disparity studies. The first utilizes vendor and contract awardee location of dollars expended by an entity in the relevant industry categories. In the second method, vendors and contractors from an entity’s vendor or bidder list are surveyed to determine their location. The former is based on approaches implemented under the U.S. Justice Department guidelines for defining relevant geographic markets in antitrust and merger cases. M³ Consulting has developed an alternative method for determining an entity’s relevant market by combining the above methods and using an entity’s bidder lists, vendor lists, and awardee lists as the foundation for market definition.

By examining the locations of bidders, vendors, and awardees, M³ Consulting seeks to determine the area containing a preponderance of commercial activity pertaining to an entity’s contracting activity. While case law does not indicate a specific minimum percentage of vendors, bidders, or awardees that a relevant market must contain, M³ Consulting has determined a reasonable threshold is somewhere around 70

⁷ *City of Richmond v. J.A. Croson*, 109 S.Ct. 706, at 725 (1989).

percent for bidders, vendors, and contract award winners. Further analysis may be necessary if there are “large” differences in the percentages of these three measures.

4.2.3 Availability Analysis

The fundamental comparison to be made in disparity studies is between firms owned by Minority and Women-Owned Business Enterprises (“M-WBEs”) and other firms (“Non-M-WBEs”) *ready, willing, and able* to perform a specific service (i.e., are “available”), as well as the number of such businesses being utilized by the locality or its prime contractors. This section presents a discussion of the availability estimates for M-WBEs who are *ready, willing, and able* to perform work on contracts for COK.

Availability is the most problematic aspect of the statistical analysis of disparity. It is intrinsically difficult to estimate the number of businesses in the marketplace that are *ready, willing, and able* to perform contracts for or provide services to a specific public entity. In addition to determining an accurate head count of firms, the associated issues of capacity, qualification, willingness, and ability complicate the production of accurate availability estimates.

A. M³ Consulting, Inc. Availability Model

M³ Consulting employs two general approaches to measuring availability: the Ready, Willing, and Able (RWASM) Model, and Marketplace Availability. In summary, the Availability measures can fall into the following categories:

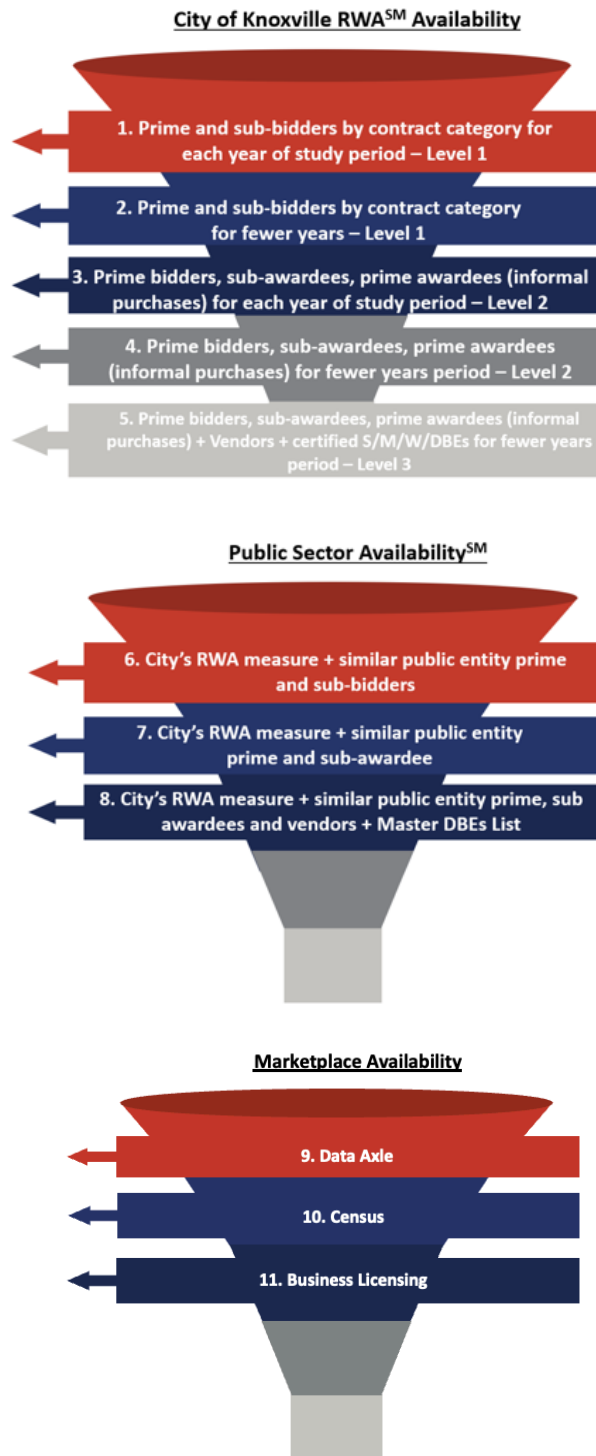
- **RWASM** — Those firms who are ready, willing, and able to do business with COK.
- **Public Sector Availability** — Those firms who are ready, willing, and able to do business with similar public sector agencies within the COK’s marketplace.⁸
- **Marketplace Availability** — All firms available in the COK’s marketplace, as measured by the U.S. Census Annual Survey of Entrepreneurs, Data Axle or Dun & Bradstreet and Dodge Construction.

The Availability matrix below in Figure 4.1 outlines M³ Consulting’s Availability Model. The matrix starts with the optimum availability measure of those firms “ready, willing, and able” to do business with COK and cascades down to less optimum measures. Factors that determine which level of availability best suits

⁸This analysis requires inter-governmental cooperation between public entities providing bidder, vendor, and awardee data, thus is not performed, unless such agreement is developed for individual agencies, or a consortium of agencies conducted a consortium disparity study.

COK's environment include the quality of available data, legal environment, and previous levels of inclusion of M-WBEs in bidding and contracting activity.

Figure 4.1. RWASM Availability Model



Source: M³ Consulting, Inc.

When refined to COK’s data, the RWASM Availability Model levels are defined as follows:

Figure 4.2. City of Knoxville Specific RWASM Availability Levels

RWA SM Availability Level	RWA SM Availability Definition
Level 1	City of Knoxville Bidders and Sub-bidders
Level 2	City of Knoxville Bidders and Sub-bidders + AP/PO firms
Level 3	The City of Knoxville Vendor Registry Listing * + M/W/DBE Master List

Source: M³ Consulting; *List provided did not have complete requisite data elements for analysis

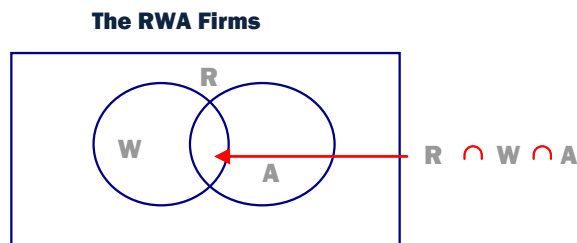
B. Ready, Willing, and Able (RWASM) Model⁹

The concept of the “Ready, Willing, and Able” (RWASM) estimate model is derived from the U.S. Supreme Court’s statement that:

Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors engaged by the locality or the locality’s prime contractors, an inference of discriminatory exclusion could arise.¹⁰

The basic assumption underpinning RWASM estimates is that a business must exist and actively seek to do business with a specific entity and have the capacity to perform contracts of the types that the entity awards, to be included in the pool of businesses “actually available” to perform on the entity’s contracts. The M³ Consulting RWASM estimate is illustrated in Figure 4.3.

Figure 4.3. RWASM Availability Estimate Venn Diagram



Source: M³ Consulting Inc;

The first component of the model, “ready”, simply means a business exists in the market area. The second component, “willing”, suggests a business understands the requirements of the work being requested and wants to perform the work. The third component, “able”, defines the group of firms with the capacity to do the job.

⁹ M³ Consulting developed the RWASM model in 1992.

¹⁰ *City of Richmond v. J.A. Croson*, 109 S.Ct. 706, at 729 (1989).

Readiness

“*Readiness*”, as used in COK’s Disparity Study, is an indication that a firm is present in the market area studied. M³ Consulting uses Census ASE and Data Axle estimates of the number of firms in a specific area to measure firms “*ready*” to do business with COK.

Willingness

“*Willingness*” to engage in procurement opportunities with a public entity, as understood for purposes of this study, is a concept that cannot be observed directly but must be inferred through volitional behavior on the part of a firm. It is possible that not all existing (ready) firms want to contract in the public sector, in general, and with COK, specifically. The “*willing*” requirement reduces the Census ASE and Data Axle estimate to the number of firms interested in doing business with COK, as discussed later in this chapter. Willingness can be affected greatly by the type of service area under which a potential project may be classified, the general level of market demand, previous contracting and management practices utilized by a contracting entity, legal and other administrative requirements that must be adhered to, as well as other factors.

Ability

The third component, “*able*”, defines the group of firms with the capacity to perform the tasks necessary to complete the job. The “*able*” requirement further reduces the number of firms available to do business with an entity. “*Ability*”, as used in this study, is synonymous with “*capacity*,” and refers to the measure of additional work a firm can take on at a given point in time.¹¹ Ability is only imperfectly observable directly and must also largely be inferred through external proxies such as number of employees, size of past revenues, and number of years in business. A firm may have the “*ability*” to perform a contract:

- Either because it already has the staff and resources to perform the work,
- Or because it can readily hire sufficient staff and acquire sufficient resources for that purpose.

Parties who are seeking to explain what the U.S. Supreme Court meant usually raise the capacity issue of qualified minorities. In *Concrete Works v. Denver Fd.* 823 F. Supp. 821 (D.Colo.1993), the Colorado district court reviewed the challenged availability and utilization analysis submitted by the City of Denver and the County of Denver. The Concrete Works Company challenged the use of availability measures and suggested that the appropriate standard was capacity. The court provided a lengthy discussion of the capacity arguments, stating that:

¹¹ The appropriate definition of capacity should be closely related to objective criteria used to determine qualifications, as discussed above. Ideally, one wants to identify and use “discrimination-free” measures of capacity in determining the pool of available firms.

“Capacity is a function of many subjective, variable factors. Second, while one might assume size reflects capacity, it does not follow that smaller firms have less capacity; most firms have the ability and desire to expand to meet demand. A firm’s ability to break up a contract and subcontract its parts make capacity virtually meaningless.”¹²

In *Rothe Development Co. v. U.S. Department of Defense and the U.S. Department of the Air Force*, the Federal District Court found the most reliable way for accounting for firm size, without changing the disparity-ratio methodologies was to employ “regression analysis to determine whether there was a statistically significant correlation between the size of a firm and the share of contract dollars awarded to it.”¹³ Utilizing survey data, M³ Consulting conducts regression analysis to buttress its RWASM Availability and Disparity findings.

M³ Consulting’s RWASM model focuses on firms “actually available” to do business with COK. The overriding consideration for specifying availability estimates for COK’s disparity analysis is to include firms that have actively sought to contract or provide goods and services to COK. “Actual availability” refers to firms that have affirmatively shown interest in doing business with COK in one or more of the following ways: Bidding for a City contract; being awarded a City contract by COK; or, being included on COK’s vendor or plan holder’s list. Additionally, M³ Consulting’s RWASM methodology seeks to define similarly those M-WBEs and Non-M-WBEs to be included in the availability analysis.

The RWASM estimates define availability conservatively and include only those firms that have presented themselves to the COK as *ready, willing, and able* to conduct the work requested by the City.

In the arena of City contracting, based on available data, M³ Consulting conducted an RWASM availability analysis (i.e., an analysis of “actual availability”) using lists of prime bidders, prime awardees, sub-bidders, and sub-awardees for FY 2017 – FY 2021. The databases used in the RWASM availability analysis are further discussed below in Section 4.3.2 - Data Sources for Availability.

C. Potential Availability Calculations

In contrast to “actually available” firms, M³ Consulting also defines firms that may exist in the relevant market and may in the future express an interest in doing business with COK. Hence, we treat these firms as “potentially available.”

“Potential availability” refers to firms present in the COK’s market beyond those “actually available,” including those that have not bid with COK work or taken other affirmative steps toward doing business specifically with COK (as opposed to other public and private sector clients) during the study period.

¹² *Concrete Works v. Denver*, 823 F. Supp. 821 (D.Colo.1993).

¹³ *Rothe Development Corporation v. U.S. Department of Defense*, 545 F.3d 1023 at 1044 (Fed. Cir. 2008).

M³ Consulting discusses two types of “*potential availability*”—“*public sector availability*”¹⁴ and “*marketplace availability*.” These measures may be used as benchmarks in setting targets or in developing outreach initiatives to encourage firms to come forward and express an interest in COK contracting opportunities. M³ Consulting primarily focuses on Marketplace Availability because of the limitations of Public Sector Availability.¹⁵

- **Public Sector AvailabilitySM** – Includes lists of available firms known to various public sector agencies, including but not limited to COK in the relevant market region. These firms are closer to RWASM, having expressed an interest in contracting opportunities with other public sector agencies with similar standards and limitations as COK. This availability measure includes a compilation of:
 - a. Lists of public agencies’ bidders, vendors, and awardees.
 - b. List of M-WBEs certified by other public agencies.
- **Marketplace Availability** – Including these firms in the availability measure expresses the ‘universe’ of all firms in the relevant market. These firms may or may not be considered RWASM. The lists that represent this availability measure are:
 - a. Census Data
 - b. Data Axle Data
 - c. Dodge Data

I. U.S. Census Bureau Potential Availability Data

Measures of “*potential availability*” may be found in data provided by the Bureau of the Census. The standard source of evidence for firms owned by minorities and women is the 2016 Economic Census – Annual Survey of Entrepreneurs (ASE).

M³ Consulting typically develops census-based availability estimates using data provided by the U.S. Census Bureau. The U.S. Census Bureau estimates are determined by firms with paid employees, which are a more conservative estimate of availability than the set of total firms (i.e., including firms without employees) and ensures a better baseline level of firm capacity in comparison to an analysis based upon a total of all U.S. Census Bureau firms. The Census database utilized is the ASE Survey which is broken down by category descriptions into the appropriate industry.¹⁶ The ASE survey has been discontinued by the U.S. Census Bureau and is only available for the top 50 Metropolitan Statistical Areas within the United

¹⁴ M³ Consulting developed the “Public Sector Availability” Model in 2006.

¹⁵ Public Sector Availability requires intergovernmental cooperation; thus, M³ Consulting performs this analysis only upon the request of the client and the proper implementation of appropriate agreements among affected public entities.

¹⁶ M³ Consulting has utilized Census Survey of Business Owners in the past for the Census Availability Analysis. However, this database has been discontinued and the most recent data available is 2012.

States. This does not include the Knoxville, TN MSA. The Annual Business Survey (ABS) replaces the five-year Survey of Business Owners (SBO) for employer businesses, the Annual Survey of Entrepreneurs (ASE), and the Business R&D and Innovation for Microbusinesses (BRDI-M) surveys. The new ABS was not utilized for this study because it does not break down the data to a detailed level as the ASE does. In lieu of both the ASE and ABS data for the Knoxville, TN MSA, M³ Consulting utilized only Data Axle and Dodge Data for potential availability analysis.

II. Data Axle Availability Data

Data Axle is a good alternate source of business data. M³ Consulting analyzes this data set as a potential availability measure that reflects all businesses, inclusive of micro-businesses in Knoxville, TN MSA. The Data Axle data includes capacity data, such as average sales revenues and average full-time employees, and is discussed in Chapter 9, Capacity and Regression Analysis.

We note that small and micro home-based are difficult to identify and are thus somewhat less likely than other businesses to be included in Data Axle listings. Many small and micro, home-based businesses are more likely than large businesses to be minority- or women-owned, which suggests that M-WBEs might be underrepresented in this availability database.

Both the U.S. Census Bureau and Data Axle lists include the “universe” of firms in the Knoxville, TN Metro Area and the Knoxville, TN MSA potentially available to do business with COK.

III. Dodge Availability Data

In addition to the two sources discussed above, Dodge maintains a database of construction activity across the country that includes construction projects in the planning phase, with information on the owner of the project, description, value, and location of the project. If the project goes to fruition, the general contractor, subcontractors, and the architect and engineer that bid are listed with the projects, thus creating an additional list of ‘potentially available’ firms. This analysis is included in Chapter 10: Marketplace Analysis.

IV. Other Lists

Other lists, such as certification lists, chamber of commerce lists, and licensing lists are often not compiled by any statistical technique and are not reliable in the accuracy of the information presented. Therefore, M³ Consulting does not rely upon these lists of availability for calculating disparity.

D. “Actual Availability” vs. “Potential Availability”

In summary, the difference between “*actual availability*” and “*potential availability*” may help identify and narrow down the area of availability that may be affected by discrimination, lack of outreach, lack of interest, lack of specific expertise required by the public entity, and lack of capacity. See also Barriers Analysis *infra*.

4.2.4 Utilization Analysis

A. Numbers of Contracts, Dollar Value of Contracts, or Numbers of Firms

Utilization represents the contracting and subcontracting history of Non-M-WBEs and M-WBEs with COK. In developing the contract database to be used as the basis for determining utilization, there are three alternative measures of utilization that can be taken in each procurement category.

- The number of contracts awarded.
- The dollar value of contracts received.
- The raw numbers of firms receiving contracts.

The current report presents two of the three measures of utilization: The number of contracts awarded and the dollar value of the contract awards. Both dollars and counts are reported to determine if there are any outliers or large single contracts that cause utilization dollar values to be at reported levels. These were preferred over the third measure, the number of firms, which is less exact and more sensitive to errors in measurement.

For instance, if a single Non-M-WBE firm received thirty contracts for \$5 million, and ten African American-owned firms received one contract each worth \$100,000, measured by the number of firms, African American-owned firms would appear to be overutilized and Non-M-WBEs underutilized. Using the number of contracts and the dollar value of contracts awarded, the result would reverse (depending on relative availability).

M³ Consulting’s position regarding percentage estimates of utilization is that discrimination would more likely affect the amount of dollars awarded than the number of contracts awarded to M-WBEs or the number of M-WBEs utilized. This position is particularly true if there are stereotypical attitudes that M-WBEs cannot handle large dollar contracts, and the largest volume of contracts awarded to M-WBEs are small dollar contracts.

B. Prime Contracting and Subcontracting

Because prime contractors, especially in Construction, Construction-Related Services, and Architecture & Engineering Services, often subcontract work to other contractors/consultants and because the utilization of M-WBEs in the absence of a set-aside or goal provision usually occurs at the subcontract level, assembling data on subcontract work is critical to utilization analysis.

In the area of Construction and Construction-Related Services and Architecture & Engineering contracting, the standard presentation of utilization data by M³ Consulting is to show Total “Pure Prime + Subcontractor” utilization and Subcontractor utilization in separate tables, if data allows. “Pure prime utilization” based on the dollar value of contracts is defined here differently from “prime contract award value” due to the necessity to avoid double-counting of subcontract awards when examining subcontractor utilization. “Pure prime utilization” is correctly defined as the value of prime contracts *net of subcontract* value. This magnitude, when added to the value of subcontractor utilization, results in a correct measurement of “total” utilization, by the M-WBE category. The results of the “Pure Prime + Subcontractor” utilization are highly contingent upon the completeness of contract data provided to M³ Consulting. In a situation where the data is not fully available in electronic format, M³ Consulting tries to capture this data through a data collection process. The completeness of this data collection process is also dependent on the hardcopy data available to be collected.

We note that, for this disparity study, COK provided access to hardcopy files containing contracting and subcontracting data, based on the procurement categories under review: Architecture & Engineering, Construction and Construction-Related Services, Goods and Supplies, Non-Professional Services, and Professional Services. This will be discussed further in section 4.3.

4.2.5 Disparity Analysis

A. The Notion of Disparity: The Concept and Its Measurement

A straightforward approach to establishing statistical evidence of disparity between the availability of M-WBEs and the utilization of M-WBEs by COK is to compare the utilization percentage of M-WBEs with their availability percentage in the pool of total businesses in the relevant market area. M³ Consulting’s specific approach, the “Disparity Ratio,” consists of a ratio of the percentage of dollars spent with M-WBEs (utilization), to the percentage of those businesses in the market (availability).¹⁷

¹⁷ See DJMA, A Fact-Finding Study Prepared for the New York Metropolitan Transit Authority (January 1990).

Disparity ratios are calculated by actual availability measures. The following definitions are utilized in the M³ Consulting ratio:

A	=	Availability proportion or percentage
U	=	Utilization proportion or percentage
D	=	Disparity ratio
N _w	=	Number of women-owned firms
N _m	=	Number of minority-owned firms
N _t	=	Total number of firms

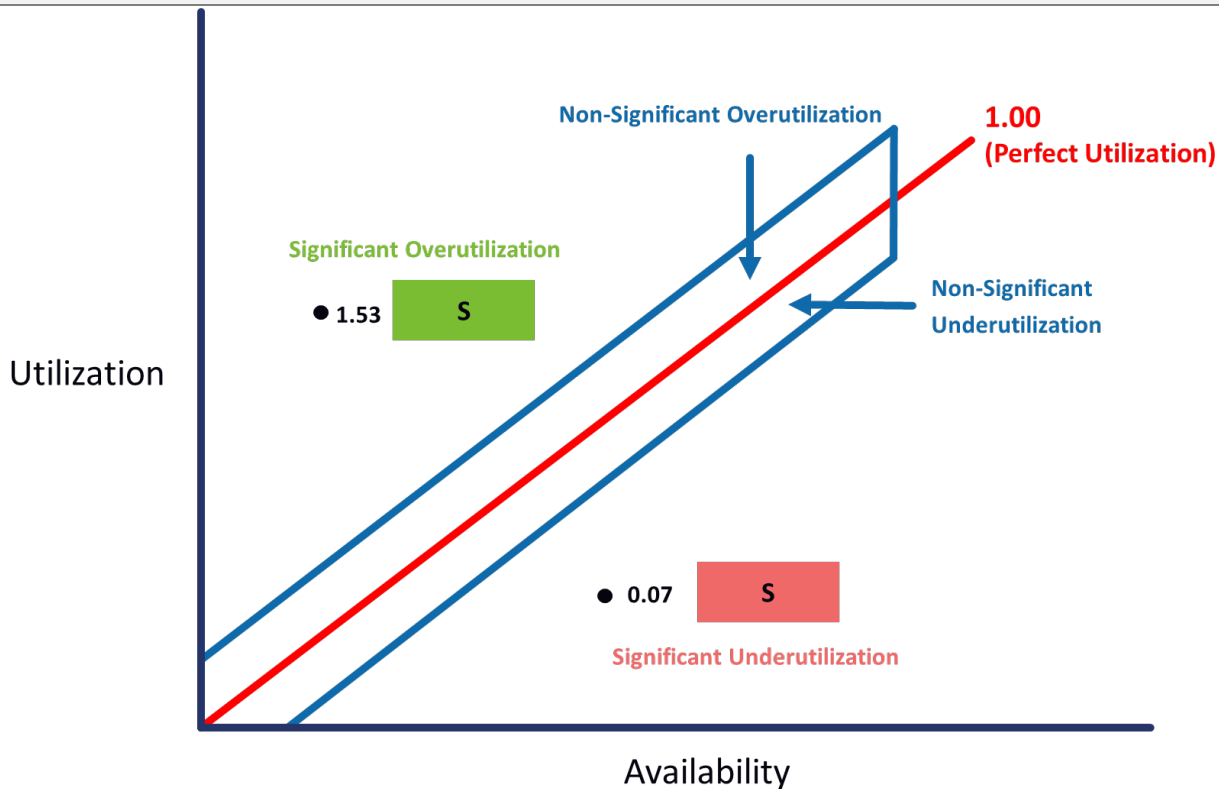
Availability (A) is calculated by dividing the number of minority and/or women-owned firms by the total number of firms. Utilization (U) is calculated by dividing total dollars expended with minority and women-owned firms by the total expenditures.¹⁸

$$\begin{aligned} A_w &= N_w / N_t \\ A_m &= N_m / N_t \\ D &= U / A \end{aligned}$$

When D=1, there is no disparity, (i.e., utilization equals availability). As D approaches zero, the implication is that utilization is disproportionately low compared to availability. As D gets larger (and greater than one), utilization becomes disproportionately higher compared to availability. Statistical tests are used to determine whether the difference between the actual value of D and 1 is statistically significant, (i.e., whether it can be stated with confidence that the difference in values is not due to chance (see Figure 4.4).

¹⁸ Alternative utilization measures based on number of firms and number of contracts can be calculated in a similar fashion.

Figure 4.4. Disparity Ratio Indicating Areas of Significant and Non-Significant Disparity and Overutilization



Source: M³ Consulting Inc;

The statistical disparity ratio used in this study measures the difference between the proportion of available firms and the proportion of dollars those firms received. Therefore, as the proportion of contract dollars received becomes increasingly different than the proportion of available M-WBEs, an inference of discrimination can be made.

I. Statistical Significance

The concept of statistical significance as applied to disparity analysis is used to determine if the difference between the utilization and availability of M-WBEs could be attributed to chance. Significance testing often employs the t-distribution to measure the differences between the two proportions. The number of data points and the magnitude of the disparity affect the robustness of this test. The customary approach is to treat any variation greater than two standard deviations from what is expected as statistically significant.

A statistically significant outcome or result is one that is unlikely to have occurred as the result of random chance alone. The greater the statistical significance, the smaller the probability that it resulted from random chance alone. P-value is a standard measure used to represent the level of statistical significance.

It states the numerical probability that the stated relationship is due to chance alone. For example, a p-value of 0.05 or five percent indicates that the chance a given statistical difference is due purely to chance is one in twenty.

II. Practical Significance

The concept of statistical significance should not be confused with practical significance. According to Mansfield, even if there is a statistically significant difference between a sample value and a postulated value of a parameter, the difference may not really matter.¹⁹ This means disparities not statistically significant are not necessarily caused by chance. It also means that chance cannot be ruled out as a cause.

The most used practical significance measure in the EEO context is the 4/5th or eighty percent rule, which indicates how large or small a given disparity is. An index less than one hundred percent indicates that a given group is being utilized less than would be expected based on its availability, and courts have adopted the Equal Employment Opportunity Commission's "80 percent" rule, that is, that a ratio less than 80% presents a prima facie case of discrimination²⁰.

Under the EEOC's "four-fifths" rule, a disparity ratio is substantively significant if it is 0.8 or less on a scale of zero to one or eighty or less on a scale of one to one hundred (i.e., Group A selection rate divided by Group B selection rate). Codified in the Uniform Guidelines on Employee Selection Procedures (UGESP, section 4D), the rule is described as follows:

"A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact. Smaller differences in selection rate may nevertheless constitute adverse impact, where they are significant in both statistical and practical terms and where a user's actions have discouraged applicants disproportionately on grounds of race, sex, or ethnic group. Greater differences in selection rate may not constitute adverse impact where the differences are based on small numbers and are not statistically significant."

Thus, the 4/5th rule is a measure of the size of the disparity but may need to be interpreted considering context (e.g., sample size, in combination with statistical significance testing). However, case law suggests that the 4/5th rule can be interpreted as adequate stand-alone evidence in some situations, although it is unclear exactly what circumstances warrant such interpretation. The eighty percent rule is a general rule,

¹⁹ Mansfield, Edwin, *Statistics for Business and Economics*, p. 322. Two standard deviations imply 95 percent confidence level which is the norm of the courts.

²⁰ *Engineering Contractors II*, 122 F3d at 914; see 29 C.F.R. § 1607.4(D) ("A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact.")

and other factors such as statistical significance, sample size, discouraged applicants, etc., should be analyzed. The rationale for combining practical and statistical significance results is an intuitive one. In situations where the measures come to identical conclusions, the analyst can usually feel very confident in a finding of meaningful impact or no impact. In other situations, context may play an important role when statistical and practical significance measures produce different conclusions (i.e. when a standard deviation analysis is greater than 2.0 but the 4/5th rule is not violated)²¹.

²¹ See Tables 1 and 2 that explain this in, “A Consideration of Practical Significance in Adverse Impact Analysis,” Eric M. Dunleavy, July 2010, <http://dciconsult.com/whitepapers/PracSig.pdf>

4.3 DATA SOURCES UTILIZED FOR STATISTICAL ANALYSIS FOR THE CITY OF KNOXVILLE

To conduct the statistical analysis, M³ Consulting collected and analyzed data from COK for the period covering FY 2017 through FY 2021. COK's fiscal year extends from July 1 to June 30, so FY 2017 covers a period of July 1, 2016, to June 30, 2017, and FY 2021 covers July 1, 2020, to June 30, 2021. This section discusses the degree of completeness of the data sources, data sources used, and the data collection process including the issues, if any, M³ Consulting encountered with these data sources. For this disparity study, M³ Consulting collected and analyzed electronic and hard-copy files.

M³ Consulting sought to verify the data provided, to the degree possible, within the time constraints of the study. Under employment discrimination law, a finding of adverse impact and inference of discrimination may be issued, if data is not maintained in formats that allow for ongoing analysis of decisions made that may be impacted by race, gender, or ethnicity.²² The question remains if a similar holding of adverse impact and inference of discrimination, based on poor data tracking systems or lack of data required for disparity analysis, may be issued under a *Crososn* analysis.

Contract Log

Relevant Market, RWASM Availability and Utilization data sources primarily come from COK. The exception for RWASM Availability is the Master S/M-WBE list. In addition to this list, data sources include:

- Bidders and sub-bidders on Formal Purchases, along with quotes on informal purchases
- Awardees and sub-awardees
- Vendors

COK provided access to a shared folder where documents for the disparity study were uploaded. To start the data collection process for both bids and awards, M³ Consulting sought to determine the volume of contracts let during the study period, by requesting a contract log from COK.

M³ Consulting received a contract log from the City. The contract log reflects all formal contracts let by COK during the study period year of FY 2020 - FY 2021. It contains contract information such as contract title, contract number, contract value, awarded prime information, corresponding purchase order number where applicable, and requesting department. The contract log contains 997 contracts.

²² 29 CFR §1607.4.D.—“Where the user has not maintained data on adverse impact as required by the documentation section of applicable guidelines, the Federal enforcement agencies may draw an inference of adverse impact of the selection process from the failure of the user to maintain such data, if the user has an underutilization of a group in the job category, as compared to the group's representation in the relevant labor market or, in the case of jobs filled from within, the applicable work force.”

After discussions with COK, M³ Consulting downloaded a spreadsheet containing a list of all expired solicitations from the Purchasing Division's website at: <http://www.knoxvilletn.gov/purchasing>. This was to ensure that all solicitations during the study period were captured. The expired solicitations log contained 847 solicitations at the time of download with information on the type of solicitation, status, deadline for submission, and title which contains a link to viewing solicitation and award information where available. After removing duplicates from both lists, the aggregated solicitation log used for data collection efforts contained a total of 1607 contracts.

In addition to the contract log, the City uploaded a folder called Bid Tabs and DBE Forms which contained bid tabulations for 65 contracts. The majority of contracts in the folder did not have DBE Forms. To get more detailed data for the aggregated log to be reviewed, M³ Consulting spent some time in COK's office collecting bidder and award information from hardcopy files.

4.3.1 Data Sources For Relevant Market

In calculating the relevant market, M³ Consulting sought to determine where about 70% of firms were located. We utilized the following market areas by procurement type to determine inclusively where the bulk of commercial activity by COK occurs.

- City of Knoxville, TN
- Knoxville, TN MSA - consists of the following eight counties: Anderson County, Blount County, Campbell County, Knox County, Loudon County, Morgan County, Roane County, and Union County.
- State of Tennessee
- Nationwide.

Within these market areas, M³ Consulting determined the percentage of firms meeting the 70 percent threshold based on:

- Bidder and Awardees—Counts of bidders, sub-bidders, awardees, and sub-awardees; and,
- PO and AP data—Dollar values and counts of PO and Payments.

While other measures were considered, little weight was placed on these sources of data, as firms in the vendor lists do not meet the ready, willing, and able definition; P-Cards are largely for small informal purchases that do not go through the RWASM litmus test. Contract dollars and counts, while reported, often did not fully represent all the procurement categories for this report, thus making the PO and Payment data more reliable to determine relevant market.

4.3.2 DATA SOURCES FOR AVAILABILITY

As discussed previously, two levels of availability are considered in this disparity study. RWASM Availability (Actual Availability) and Marketplace Availability (Potential Availability). Below is a discussion of the data sources supporting these two measures of availability.

RWASM Data Sources

I. Bidders

By bidding, firms demonstrate that they are “ready”, “willing”, and assert that they are “able.” The COK determines “ability” through its bid review, ranking, and decision-making process of responsive and responsible bidders.

Using the aggregated solicitation log, M³ Consulting searched and collected data on bidder and award activities from hard copy (PDFs and paper) files for 831 contracts. The bid tabulations contained details of bid solicitation, prime bidders, and proposed sub-bidders, along with the identification of the winning bidder (awardee). Some solicitations during this period were either canceled, had their deadlines expired or received no submissions. Data on these bids, where the information was available, was captured to ensure bidder availability robustness. For the remaining contracts for which hardcopy files were not readily available, M³ Consulting was unable to collect any sub-bidder information.

A general observation during the data collection process is that even though COK has DBE forms, it was not a mandatory requirement for bidders to fill these forms in their bid submissions. As a result, many of the bid documents in the hard copy folders did not contain sub-bidder information. Due to the incompleteness of the data collected, M³ Consulting sought to use data from copies of the yearly DBE reports provided by the City. Again, M³ Consulting was unable to extract any substantial subcontractor information from these reports. Within the DBE reports provided, FY 2017 had the subcontractor information aggregated while the latter years had the information at a disaggregated level but only for a few select departments. To gather the required sub-bidder information to supplement what M³ Consulting was able to collect from the hardcopy files, the City’s Point of Contact reached out to some of the departments but was unsuccessful in obtaining subcontractor data from them. As a result of the above nuances, and even though M³ carried out a contract awards analysis based on the available data, it was agreed with the City that because of the incomplete/unreliable nature of the contract awards data, programmatic initiatives would be based on PO and AP data only.

In continuing with the contract data analysis, M³ Consulting assigned procurement categories using the project’s title. Bidder and award activity was defined in the procurement categories of Architecture & Engineering, Goods and Supplies, Construction and Construction-Related Services, Professional Services, and Non-Professional Services. The bidders and sub-bidders were cross-matched against COK’s Diversity

Business Directory (see *infra*), City of Knoxville Vendor Registry Listing (see *infra*), and the Master S/M-WBE list (see *infra*) to identify the race, gender, or ethnicity of firms. In a situation where the bidder or sub-bidder is not available as an M-WBE firm on these lists, M³ Consulting defaulted to assigning such firms as Non-M-WBEs. M³ Consulting included bidders and sub-bidders identified from the DBE Report in availability counts to improve the robustness of the Level 1 availability.

II. Awardees

Awardees satisfy the same RWASM criteria as bidders. However, the availability pool is smaller because it only includes bidders who received an award. The awardees' availability pool was derived from the contract awards data (formal), Purchase Order, and Accounts Payable data (formal and informal).

Awardees collected from contract awards data (winning bidder) are discussed above under Bidders.

Additional awardees were culled from the City's financial management systems. All firms paid by COK were captured in Oracle which tracks informal and formal Purchase Order commitments and payments. M³ Consulting flagged all activity related to non-commercial procurements (i.e., procurements with non-profits, governmental entities, employees, and grants) within the two data sources and did not include these non-commercial activities in the analysis.

M³ Consulting deemed the Purchase Order data in the financial management system as the most comprehensive source of firm award/commitment data at the formal and informal levels. While Payments data is accurate based on actual disbursements, it may not include all firms under contract during the study period if they have yet to be paid and may also include firms contracted outside of the study period.

III. Vendors

M³ Consulting seeks a vendor registry as part of its RWASM Availability analysis. Enrollment as a vendor interested in receiving solicitations from COK is an additional criterion that may be used to measure availability. Companies included on the vendor list ("vendors") are a broader measure of availability than bidders and awardees.

The COK provided two files - a Vendor Registry Listing, and another named "Vendor Data from Oracle". The "Vendor Data from Oracle" consists of vendors in Oracle that have been paid. It has 3,506 records and contains information on vendors such as name, location, and, where available, minority flag, email, and phone number. The Vendor Registry Listing has 5,400 records and contains information on vendors such as name, location, minority flag, email, and phone number. In order to provide a list of goods or services the vendor registered to provide, the City provided a list of vendors and their NIGP codes. The list contained 5,419 unique vendors. Given the registry data was not robust compared to service classification, M³ Consulting was unable to conduct a vendor registry level availability analysis.

IV. City of Knoxville Identified DBE Firms

Although COK does not certify M-WBEs, M³ Consulting was provided with the City's Diversity Business Directory and an Availability Database. The Diversity Business Directory contains a list of 1,049 DBE vendors whom the City identifies as eligible to participate in its M-WBE programmatic efforts. The Availability Database is a combination of DBE databases collated by the City over the years. None of the two databases speak to whether identified DBEs were certified. While certified M-WBEs undergo significant vetting and meet the *"ready, willing, and able"* criteria, only M-WBEs are subject to the certification process. There is no such equivalent listing of Non-M-WBEs. Using the certification list alone to measure availability would cause bias in the availability measurement.

V. Master S/M-WBE List

M³ Consulting sought certified lists from public agencies within the Knoxville, TN MSA business area. Typically, membership lists from non-profits or private organizations are not available to non-members without paying a fee. In compiling the Master S/M-WBE list, M³ Consulting utilized the following directories:

- City of Knoxville Diversity Business Directory
- State of TN_GO DBE Directory
- TN Uniform Certification Program DBE Directory
- Metropolitan Development and Housing Agency (MDHA) DBE Directory
- City of Knoxville Availability Database

Tennessee Uniform Certification Program (TNUCP) Disadvantaged Business Enterprise (DBE) Directory provides a directory of DBE and Airport Concessionaire Disadvantaged Business Enterprise (ACDBE) companies that are certified to conduct business in the state of Tennessee. This is the same list used by the State of Tennessee Department of Transportation.

There was a total of 9,522 firms on the list. When using the Master S/M-WBE list to identify the race, ethnicity, or gender of a business owner, for firms with multiple agency certifications, precedence was given in the order in which the certifying bodies are listed above with COK M-WBE certification taking precedence over all other lists.

This Master S/M/W/DBE List was used to identify the race or gender of firm owners in other databases where such information was missing.

Potential (Marketplace) Availability Data Sources

I. Data Axle

Data Axle provided a list of firms from its database for the Knoxville, TN (CBSA). The database consists of 14,581 discrete firms by SIC and NAICS code, ethnicity, and gender, when available. Of these firms, only 9,067 had defined race/ethnicity. All 14,581 firms were classified into procurement categories using the primary NAICS code provided by Data Axle. M³ Consulting sorted the SIC and NAICS codes into the categories of Architecture & Engineering, Construction and Construction-Related Services, Goods and Supplies, Non-Professional Services, and Professional Services to calculate Marketplace availability. The Data Axle's database also provided data for these same firms on sales volumes and employees. M³ Consulting utilized this data as a measure of firm capacity.

II. Dodge Construction Data

Dodge maintains a database of construction activity across the country. The data includes construction projects for publicly-owned and privately-owned projects:

- Owner of Project with Address
- Description of Project
- Value of Project
- Location of Project

It also includes information on the general contractor, subcontractors, and the architect and engineer that bid on each project. M³ Consulting collected data for FY 2016 – FY 2022, covering construction activity captured by Dodge in bid activity for the State of Tennessee. In terms of the value of the work, the only available information was the overall value of the project. The specific value of work performed by subcontractors was not available.

The project description, prime contractor, subcontractor, bidder, and architect/engineer, when *available*, were all provided in Microsoft Excel spreadsheets, with the common link being a unique Dodge-assigned number for each project in their database. Since Dodge does not track the race or gender of the contractors, such information had to be created into the database by manual comparison of names to the Master S/M/W/BE list.

4.3.3 Data Sources For Utilization

Utilization measures the distribution of dollars and contracts to commercial M-WBEs and Non-M/W/D/SBEs by COK. The sources of data sought from COK on M-WBE utilization for this report were

Contract Awards, Subcontractor Data, Purchase Orders (PO), Accounts Payables (AP), and P-Card data. The following are descriptions of utilization databases.

Contract Awards and Subcontractor Data

M³ Consulting obtained the COK’s prime contract awards data from the aggregated solicitation log, comprising the Solicitation Log and the Expired Contracts Log for the study period of FY 2017 – FY 2021 which included contract title, contract number, contract value, and awarded prime information. As discussed previously, M³ Consulting collected data on 831 Contracts for which hardcopy files were provided.

M³ Consulting searched hard copy bid tabulations from COK’s office, and manually entered additional information on prime bidders, awarded prime bidder, and sub-bidder, where available. For subcontractors, data elements, where available, included subcontractor name, ethnicity, certification status, award status, subcontractor amount, type of work to be performed, subcontractor address, subcontractor email, and phone. Based on the solicitation name, M³ Consulting classified each contract award into the procurement categories of Goods and Supplies, Professional Services, Non-Professional Services, Construction and Construction-Related Services, and Architecture & Engineering. Of the 1489 contracts awarded, 293 were omitted from the analysis because they were deemed non-commercial in nature. The classifications determined the allocation of the contract awards dollars within each procurement category. The distribution across procurement categories, based on this allocation, is shown below in Table 4.1.

Table 4.1. Contract Distribution Across Procurement Types

Procurement Type	Amount		Number of Contracts		Number of Awards*	
	\$	%	#	%	#	%
Commercial	353,752,199	87.30	1,151	80.04	1,196	80.32
Architecture & Engineering	8,687,432	2.46	66	5.73	66	5.52
Construction	232,540,366	65.74	205	17.81	212	17.73
Goods & Supplies	50,002,263	14.13	351	30.50	377	31.52
Non-Professional Services	43,930,026	12.42	403	35.01	415	34.70
Professional Services	18,592,112	5.26	126	10.95	126	10.54
Non-Commercial**	51,483,754	12.70	287	19.96	293	19.68
Grand Total	405,235,952	100.00	1,438	100.00	1,489	100.00

*Some contracts had multiple awards. Each award was counted individually.

**Non-Commercial includes awards to governmental organizations, non-profits, grants etc.

The bid tabulation, when available, was used to confirm the award amount for each solicitation. In a situation where there was a variance, the amount provided by COK in the solicitation log took precedence. The awarded firm will subsequently have a Purchase Order issued for the contracted amount.

As discussed in 4.3.2 above, it is important to note that prime bidder information and sub-bidder information were not available in all cases. As a result, contract award information cannot be said to be robust for any of the procurement categories of Goods and Supplies, Professional Services, Non-Professional Services, Construction and Construction-Related Services, and Architecture & Engineering. The contract analysis for COK can only be considered as a best-effort analysis based on data that was available to be captured and was not depended upon for any programmatic initiatives recommended in this report.

Purchase Orders

Purchase Orders (POs) represent the total value of a specific good or service for which payments may be made against. These are contract commitments representing the actual firm with which COK executed a contract, as compared to contract award, which represents vendors identified as the winning bidder, resulting from the bid and evaluation process. Unless there is a justifiable and legitimate business reason (i.e., negotiations with the winning bidder that may have caused changes in scope and final cost), the winning bidder and winning bid amount (contract award), and contracted firm and contracted amount (POs), should be the same. Differences may necessitate a deeper dive and further analysis to ensure that these differences are not due to discriminatory reasons. M³ Consulting leaned toward relying upon PO data commitments, as it included all change orders, informal purchases commitments, and other procurement opportunities not competitively bid.

M³ Consulting collected Purchase Order data from COK for the study period FY 2017 – FY 2021. The Purchase Order data was uploaded to the shared folder in Excel format. Due to the absence of category codes in the data, account codes were used to allocate procurement types. While carrying out due diligence checks, M³ Consulting noted that some account codes were used as a “dump all” for procurements. An example is the Miscellaneous Professional Services account which included items such as lawn mowing, purchase of goods, repair and maintenance activities. To ensure the records were distributed into the correct procurement buckets, M³ Consulting went through the process of manually assigning about 90% of the cost of these records. Table 4.2 below shows the original allocation based on the use of account codes and the final allocation after the manual distribution.

Table 4.2. Purchase Order Procurement Type Reallocation

	Original Allocation				Final Allocation			
	\$	%	#	%	\$	%	#	%
Architecture & Engineering	7,626,953	1.73	16	0.42	14,669,576	3.34	81	2.14
Construction	50,718,139	11.53	42	1.11	148,031,139	33.66	145	3.83
Goods & Supplies	134,015,085	30.48	2,203	58.14	133,652,457	30.39	2,192	57.85
Non-Professional Services	57,984,660	13.19	947	24.99	79,750,291	18.14	1,019	26.89
OMIT*	6,896,682	1.57	52	1.37	12,235,314	2.78	60	1.58
Professional Services	182,475,974	41.50	524	13.83	51,378,716	11.68	287	7.57
Blank**	26,776	0.01	5	0.13	26,776	0.01	5	0.13
Grand Total	439,744,269	100	3,789	100.00	439,744,269	100.00	3,789	100.00

* OMIT – Awards to non-profits, governmental entities, grants

**Blank – No account code or description of services and goods procured to use for procurement type allocation

The vendors were cross-matched against COK’s Diversity Business Directory, and the Master M-WBE list to identify the race, gender, or ethnicity of firms. In a situation where the awardee is not available as an M-WBE firm on these lists, M³ Consulting defaulted to assigning such firms as Non-M-WBE firms. This allocation served as the basis of Purchase Order distribution presented in the statistical chapters.

Accounts Payable

Accounts Payable data permitted utilization analysis based on actual payments to COK’s vendors. M³ Consulting historically allocates payments using commodity codes, NAICS, SIC, or object codes. The Accounts Payable data did not provide category codes but included the corresponding Purchase Order number. Given each payment by COK must have an underlying Purchase Order, the same classifications used for the Purchase Orders were used to allocate payments in the procurement types. Thus, while account codes and manual distribution were used for the allocation of *POs* into procurement types, the PO number in the Accounts Payable data was utilized for the allocation of *payments* into procurement types.

M³ Consulting requested that all non-commercial payments to vendors be excluded from the analysis. To ensure that the non-commercial transactions were not included, M³ Consulting randomly selected vendors to ensure they were not governmental entities, non-profit entities, or employees to the degree possible.

4.4 SUMMARY OF FINDINGS

This statistical methodology and data collection discussion provides the foundation for subsequent statistical chapters. It details the types of analysis used in disparate impact studies, as well as disparity analysis in contracting. The basic comparison to be made in disparity studies is between Minority and Women-Owned firms (“M-WBEs”) and other firms (“Non-M-WBEs”) *ready, willing, and able* to perform a specific service (or, available firms) and the actual utilization of such businesses within the geographic parameters of both its vendors and the political and legal jurisdiction of COK.

The chapter details the method of defining the geographic market area for COK, outlines the availability model used by M³ Consulting, and provides a detailed explanation of alternate measures of utilization of firms in contracting by COK.

Following the model, a thorough discussion of the data sources used in the study, starting with the data collection process, the issues encountered in the process, and the caveats that presented themselves due to data limitations are laid out. This section discusses the degree of completeness of the data source and the limitation in analysis that result from the same.

5.1 INTRODUCTION

This chapter presents data on SMWBE availability in the City of Knoxville (COK) relevant market. The conceptual issues in measuring availability are discussed in detail in Chapter IV, Statistical Methodology. The accurate calculation of availability is critical in disparity analysis. “*Actual availability*,” as defined by M³ Consulting for purposes of this study, provides the measure of the number of SMWBEs who are *ready, willing and able* to do business with COK. An overcount or undercount of the pool of available SMWBEs can significantly alter findings of disparity. As such, M³ Consulting has developed an availability model that best captures those SMWBEs who are available to COK.

The first section of this chapter discusses the determination of the relevant market for COK. The second section presents the estimates of SMWBE availability for “five” procurement categories: Architecture and Engineering, Construction and Construction-Related Services, Professional Services, Non-Professional Services, Goods & Supplies. The following availability measures are presented for each procurement category:

- **Ready, Willing and Able Availability (RWASM)**
 - Level 1: Bidders and Sub-bidders
 - Level 2: Bidders, Sub-bidders, Formal and Informal Awards from Purchase Order and Payments Data
 - Level 3: Vendor Report + Master SMWBE List
- **Marketplace Availability**
 - **Data Axle**

The chapter summarizes availability findings in the conclusions section.

5.2 RELEVANT MARKET

In the context of disparity studies, the relevant market establishes the geographical boundaries where a bulk of commercial transactions by the agency is conducted. The analysis of MWBE availability and utilization are examined within this defined geographical market area. Based on the U.S. Supreme Court requirement that an MWBE program covers only those groups that have been affected by discrimination within the public entity's jurisdiction,¹ most courts and disparity study consultants characterize the relevant market as the geographical area encompassing the majority of a public entity's commercial activity, commonly determined by a representation of over 70% of an entity's contract dollars.

The Supreme Court's *Croson* decision did not provide specific guidance on the estimation of relevant market for the purposes of constructing a factual predicate study. Based upon lower court rulings, however, there are two requirements for determining the relevant market that have emerged:

1. The boundaries of the relevant market must be geographically close to that of the political jurisdiction enacting the program.
2. The relevant market must include the bulk of the commercial activity of the said political jurisdiction.

Consequently, many disparity studies of local areas have identified the metropolitan statistical area (MSA) as the relevant market.² Certain other entities, however, (*e.g.*, Dallas and Los Angeles) have restricted the relevant market to those firms within their jurisdictional boundaries.

Relevant Market for City of Knoxville

To estimate availability, the marketplace in which COK purchases from vendors needs to be defined. This enables a practical count of "available" firms and facilitates policy implementation.

Based on the data provided for this study, four relevant markets were defined and are presented below in Table 5.1.

- City of Knoxville
- Knoxville, TN MSA
- State of Tennessee
- Nationwide

¹ *Richmond v. Croson*, 488 U.S. 469, 109 S.Ct. 706, 725 (1989).

² See, for example, *Concrete Works v. Denver*, 823 F Supp 821, at 836, n. 11; rev'd on other grounds, 36 F3d 1513 (10th Cir. 1994). Some earlier studies followed antitrust precedent in using an 85% benchmark as the relevant market. See, *e.g.*, DJMA, *Disparity Study for the Orange County Consortium* (1993). The 2nd circuit has not provided any substantive guidance on the calculation of the relevant market for disparity studies.

Table 5.1. Summary of Relevant Market Determination

	City	MSA	State	Nationwide
Architecture and Engineering	✓			
Construction and Construction-Related Services		✓		
Professional Services			✓	
Non-Professional Services				✓
Goods & Supplies				✓

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data;

The relevant market for each industry category is summarized in Table 5.1, for each procurement type by location. The summary table represents the percentage of bidders, vendors, and awardees for each industry category by the relevant market determinations outlined in Tables 5.2 through 5.6.

1. Architecture and Engineering Relevant Market—City of Knoxville

M³ Consulting employs a hurdle rate of 70% to designate the relevant market of a particular procurement category. PO dollars (70.50%), PO counts(74.58%) and payment dollars (70.64%) exceed 70% (Table 5.2). PO counts at 69.14 is just under 70%. Four of the six ways to measure availability are at or near the hurdle rate, thus defining the city as the relevant market for Architecture and Engineering.

**Table 5.2. Relevant Market Summary: Architecture and Engineering
 FY 2017 - FY 2021**

	City %	MSA %	State %	Nationwide
Bidders/Subbidders	56.34	57.75	77.46	71
Bidders/Awardees	51.33	53.10	75.22	113
PO Dollars	79.50	80.12	94.91	\$ 14,669,576
PO Counts	69.14	71.60	90.12	81
Payment Dollars	74.58	75.17	93.99	\$ 13,230,455
Payment Counts	70.64	74.05	95.95	1,730

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data;

2. Construction and Construction-Related Services—Knoxville, TN MSA

Table 5.3 indicates an expanded geography is required to meet the rate for designating the relevant market for Construction and Construction-Related Services. M³ Consulting recommends that payment dollars is the measure of commercial activity for Construction and Construction-Related Services. Payments dollars meet the 70% hurdle rate at 71.94% for the MSA. Therefore, the MSA is designated as the relevant market for Construction and Construction-Related Services.

**Table 5.3. Construction and Construction-Related Services
 FY 2017 - FY 2021**

	City	MSA	State	Nationwide
	%	%	%	
Bidders/Subbidders	43.66	50.94	67.36	481
Bidders/Awardees	45.45	52.55	68.36	550
PO Dollars	50.02	51.84	67.48	\$ 148,031,139
PO Counts	57.93	63.45	81.38	145
Payment Dollars	65.24	71.94	90.30	\$ 121,089,444
Payment Counts	67.75	71.45	92.96	2,273

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data;

3. Professional Services—State of Tennessee

For all the ways to measure availability, the city and the MSA do not meet the hurdle rate with percentages ranging between 24.35% for bidders/subbidders in the city to 65.49% payment counts in the MSA. Five of six satisfy the rate at the state level (Table 5.4). The State provides the relevant market for Professional Services.

**Table 5.4. Professional Services
 FY 2017 - FY 2021**

	City	MSA	State	Nationwide
	%	%	%	
Bidders/Subbidders	24.35	25.91	42.49	193
Bidders/Awardees	47.26	55.67	69.93	1,094
PO Dollars	37.55	40.36	86.78	\$ 51,378,716
PO Counts	42.51	50.17	68.99	287
Payment Dollars	46.89	49.08	85.87	\$ 48,716,393
Payment Counts	55.62	65.49	79.99	12,353

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data;

4. Non-Professional Services and Goods & Supplies Relevant Market—Nationwide

Payment counts surpass the 70% threshold for the MSA and State. However actual dollars received fall below for both. Using payments points to the nation as the relevant market for Non-Professional Services (Table 5.5).

It is not unusual for the nation to serve as the relevant market for Goods & Supplies. This holds true for COK as Table 5.6 shows that nearly all of the measures fall far below the threshold with only payment counts for the state exceeding it. Therefore, the relevant market for this procurement category is nationwide (Table 5.6).

**Table 5.5. Non-Professional Services
 FY 2017 - FY 2021**

	City	MSA	State	Nationwide
	%	%	%	
Bidders/Subbidders	33.65	39.39	53.11	627
Bidders/Awardees	43.34	50.10	62.16	1,493
PO Dollars	53.10	53.93	69.05	\$ 79,750,291
PO Counts	20.51	23.85	30.23	1,019
Payment Dollars	41.47	45.88	51.59	\$ 51,367,557
Payment Counts	61.23	81.86	88.59	35,566

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data;

**Table 5.6. Goods & Supplies
 FY 2017 - FY 2021**

	City	MSA	State	Nationwide
	%	%	%	
Bidders/Subbidders	19.84	24.93	38.87	746
Bidders/Awardees	31.14	36.64	48.87	1,766
PO Dollars	14.89	16.41	53.26	\$ 133,652,457
PO Counts	15.37	17.15	29.52	2,192
Payment Dollars	22.89	25.65	61.49	\$ 129,499,069
Payment Counts	54.21	57.47	80.60	117,016

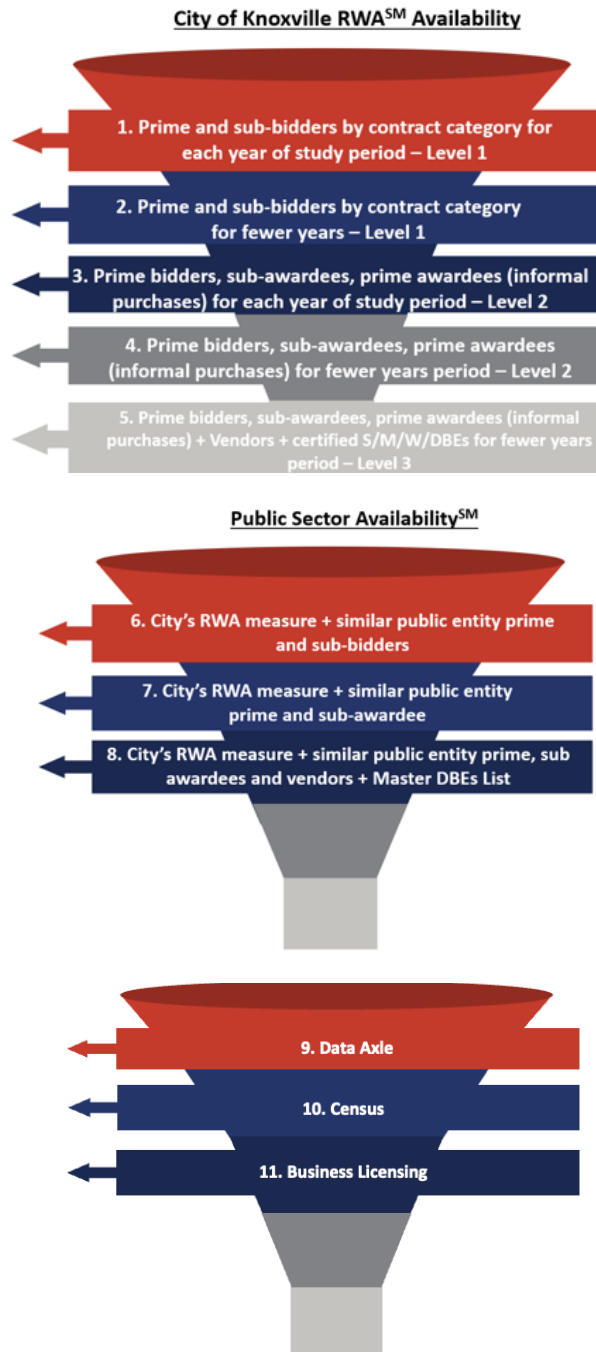
Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data;

5.3 AVAILABILITY DEFINITION

The availability measure is often in dispute and critical to defining disparity. One must be careful not to include all businesses as *ready, willing and able*. Such a calculation could produce a very broad pool of available firms, including those who are not interested or able to provide goods or services purchased by COK. Similarly, a very narrowly tailored measure of availability may exclude some potential bidders, by falsely classifying them as unable to perform the requirements of contracts. A detailed discussion about the availability model and measurement of Availability are provided in **Chapter 4: Statistical Methodology**.

The Ready, Willing and Able (RWASM) Availability Model levels are defined as follows:

Figure 5.1. RWASM Availability Model



Source: M³ Consulting, Inc.

Figure 5.2. City of Knoxville Specific RWASM Availability Levels

RWA SM Availability Level	RWA SM Availability Definition
Level 1	City of Knoxville Bidders and Sub-bidders
Level 2	City of Knoxville Bidders and Sub-bidders + AP/PO Firms
Level 3	City of Knoxville Vendor Report + Master SMWBE List

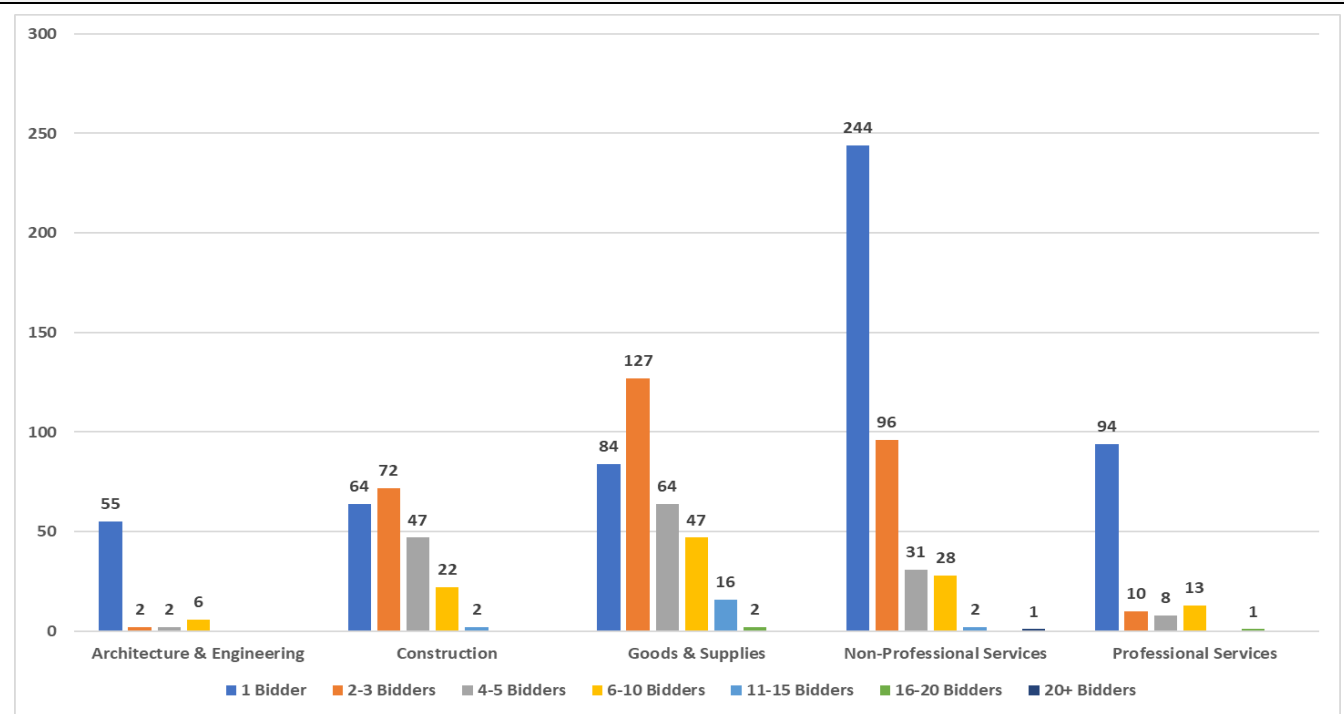
Source: M³ Consulting;

M³ Consulting’s RWASM Availability Model is further tailored to the robustness of COK’s specific databases available for analysis. RWASM availability is defined at Level 2 for the FY 2017 – FY 2021 period and includes prime and sub bidders, informal and non-competitive awardees, and prime and sub awardees to comprise this availability pool. Level 2 RWASM Availability will be compared to utilization when determining disparity in Chapter 7, Statistical Analysis of SMWBE Disparity in Contracting.

Levels 1-2 are presented independently and cumulatively in Figure 5.2, as three measures of RWASM availability, with Level 2 being a combined pool of discrete available firms across these measures and Level 3 further including COK Vendors who may or may not have bid with COK. In addition, the Total Available Firms are presented below, followed by availability by procurement type.

In establishing Level 1, M³ Consulting also recognizes the limited competition on City of Knoxville contract opportunities, which lowers the number of bidders and sub-bidders on its opportunities as shown in Figure 5.3. Approximately 74% of 1,140 solicitations reviewed by M³ Consulting had three or fewer bidders; 47% had only one bidder. This limited competition may lead to the vendor community, particularly MWBEs, viewing the City of Knoxville as a “closed shop” despite the existence of an established DBE program.

Figure 5.3. Knoxville Bidder Frequency



Sources: M³ Consulting; Contract Awards Data

5.4 TOTAL AVAILABILITY

5.4.1 TOTAL RWASM AVAILABILITY

RWASM availability measures are presented in Table 5.7 for the study period.

To form Level 1 availability metrics, data was collected on 1,826 bidders and sub-bidders during the five-year study period (Table 5.7). Of that number 1,099 are Non-SMWBE firms (60.19%), 303 (16.59%) are MWBE firms, 408 (22.34%) are SBEs and 16 (0.88%) are VOBES. Disaggregated, the MWBE pool for Level 1 numbers 48 (2.63%) African American-owned firms, 30 (1.64%) AsianAmerican-owned firms ,18 (0.99%) Hispanic American-owned firms, 10 (0.55%) NativeAmerican-owned firms, 17 (0.93%) other MBE-owned firms. Women-owned firms make up the majority of the pool of MWBE firms, 178, (9.75%). In summary, the Level-1 availability for MWBEs is 16.59%, SBE 22.34%, and VOBES 0.88%.

Expanding the availability pool to Level 2 inclusive of informal and non-competitive awardees and prime and sub-contractors results in a pool of 3,648 firms comprised of 2217 (60.77%) Non-SMWBEs, 574 (15.73%) MWBEs, 831 (22.78%) SBEs, and 26 (0.71%) VOBES. Women-owned firms at 10.47% and African American-owned firms at 2.17% are the two groups whose availability is above 1%. The other minority availabilities are Asian American-owned firms at 1.15%, Hispanic American-Owned firms at 0.93%, Native American-owned firms at 0.41%, and other minority-owned firms at 0.52%.

Level-3 availability consists of vendors on the COK vendor report plus those on the M/W/DBE Master List increasing the total number of available firms to 9,664 with the breakdown as follows: 3,542 Non-SMWBEs, 39.76%, 3,752 MWBEs, 38.82%, 1,852 SBEs, 19.16% and 218 VOBES, 2.26%. Disaggregation of MWBEs availability is comprised of Women-owned firms,15.61%, African American-owned firms, 13.78%, other Minority-owned firms, 3.64%, Hispanic American-owned firms, 2.67%, Asian American-owned firms, 2.22%, and Native American-owned firms, 0.75%.

There is relative consistency of MWBE availability for Levels 1 and 2 at 16.59% and 15.73%, respectively. MWBE availability more than doubles (38.82%) when the pool is expanded to include vendors in Level 3. In fact, the Non-SMWBE and MWBE Level 3 availability are nearly the same (39.76% to 38.82%). This is a result that has rarely if ever been seen in other studies done by M³ Consulting.

**Table 5.7. RWASM Availability: Levels 1-3
Total Availability
Nationwide, FY 2017 - FY 2021**

Race/Ethnicity/Gender	Level 1		Level 2		Level 3	
	#	%	#	%	#	%
Non-SMWBE	1,099	60.19	2,217	60.77	3,842	39.76
African American	48	2.63	79	2.17	1,332	13.78
Asian American	30	1.64	42	1.15	215	2.22
Hispanic American	18	0.99	34	0.93	258	2.67
Native American	10	0.55	15	0.41	72	0.75
Other MBEs	17	0.93	19	0.52	352	3.64
<i>Total Minority</i>	<i>123</i>	<i>6.74</i>	<i>189</i>	<i>5.18</i>	<i>2,229</i>	<i>23.06</i>
Woman-owned (WBEs)	178	9.75	382	10.47	1,509	15.61
Unknown MWBE	2	0.11	3	0.08	14	0.14
Total MWBE	303	16.59	574	15.73	3,752	38.82
SBE	408	22.34	831	22.78	1,852	19.16
VOBE	16	0.88	26	0.71	218	2.26
Grand Total	1,826	100.00	3,648	100.00	9,664	100.00

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data; Other Minority is a firm identified as MBE, with no specific race/ethnicity identified; Unknown MWBE is a firm identified as MWBE, with no specific race/ethnicity/gender identified.

5.4.2 MARKETPLACE AVAILABILITY—TOTAL AVAILABILITY

As a benchmark to RWASM availability in the relevant market and the broadest measure of availability, we present marketplace availability using Data Axle data. The limitation of this dataset is that firms in the Data Axle data do not reflect those that may have necessarily expressed interest in bidding with COK. Based on the marketplace list, as presented in Table 5.8,

Table 5.8 shows a total of 9,122 firms in the Data Axle Database consisting of 6,071 (66.55%) Non-SMWBE-owned firms and 3,051 (33.45%) MWBE-owned firms. Women-owned firms overwhelmingly comprise MWBEs percentage totaling 2,628 (28.81%). Together African American, Asian American, Hispanic American, and Native American-owned firms total 423 representing just 4.64% of data axle availability. This database does not list SBE or VOB-owned firms.

**Table 5.8. Data Axle Availability
 Total Availability
 Nationwide, 2021**

Race/Ethnicity/Gender	#	%
Non-SMWBE	6,071	66.55
African American	89	0.98
Asian American	141	1.55
Hispanic American	185	2.03
Native American	8	0.09
Other MBEs	-	0.00
<i>Total Minority</i>	<i>423</i>	<i>4.64</i>
Woman-owned (WBEs)	2,628	28.81
Unknown MWBE	-	0.00
Total MWBE	3,051	33.45
SBE	-	0.00
VOBE	-	0.00
Grand Total	9,122	100.00

Source: Data Axle Firms as of Feb. 2021; M³ Consulting;

5.5 AVAILABILITY IN ARCHITECTURE AND ENGINEERING

5.5.1 RWASM AVAILABILITY IN ARCHITECTURE AND ENGINEERING

There was limited Architecture and Engineering activity during the study period with a total of 40 bidders and sub-bidders and an additional 18 from the vendor report plus Master SMWBE List. As shown in Table 5.9, there is one (2.5%) Asian American-owned firm and nine women-owned firms contributing to the 25% Level 1 MWBE availability. Non-SMWBE and SBEs in Level 1 each number 15 or 25% of the 40 total firms. There is a slight increase to three minority firms and 13 WBE firms included in the Level 2 availability raising MWBE availability to 27.59%. The largest pool of Level 2 available firms is SBE-owned firms totaling 23 or 39.65%. The highest level of MWBE availability (37.39%) occurs in Level 3 which suggests an available pool of MWBEs on the vendors and master SMWBE list that do not actively bid for COK Architecture and Engineering procurements.

**Table 5.9. RWASM Availability: Levels 1-3
 Architecture and Engineering
 City of Knoxville, FY 2017 - FY 2021**

Race/Ethnicity/Gender	Level 1		Level 2		Level 3	
	#	%	#	%	#	%
Non-SMWBE	15	37.50	19	32.76	71	29.83
African American	-	0.00	2	3.45	12	5.04
Asian American	1	2.50	1	1.72	11	4.62
Hispanic American	-	0.00	-	0.00	10	4.20
Native American	-	0.00	-	0.00	5	2.10
Other MBEs	-	0.00	-	0.00	1	0.42
<i>Total Minority</i>	<i>1</i>	<i>2.50</i>	<i>3</i>	<i>5.17</i>	<i>39</i>	<i>16.39</i>
Woman-owned (WBEs)	9	22.50	13	22.41	50	21.01
Unknown MWBE	-	0.00	-	0.00	-	0.00
Total MWBE	10	25.00	16	27.59	89	37.39
SBE	15	37.50	23	39.66	72	30.25
VOBE	-	0.00	-	0.00	6	2.52
Grand Total	40	100.00	58	100.00	238	100.00

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data; Relevant Market—City of Knoxville; Other Minority is a firm identified as MBE, with no specific race/ethnicity identified; Unknown MWBE is a firm identified as MWBE, with no specific race/ethnicity/gender identified.

5.5.2 MARKETPLACE AVAILABILITY—ARCHITECTURE AND ENGINEERING

Availability computed from the Data axle database (Table 5.10) is based on 127 A& E firms located in the City of Knoxville. There are 84 (66.14%) Non-SMWBE and 43 (33.86) MWBE firms. The MWBE percentage is comprised of 27.56% women-owned firms, 1.57% each for African American and Asian American-owned firms and 3.15% Hispanic American-owned firms. SBEs and VOBes do not appear in this database.

**Table 5.10. Data Axle Availability
 Architecture and Engineering
 City of Knoxville, 2021**

Race/Ethnicity/Gender	#	%
Non-SMWBE	84	66.14
African American	2	1.57
Asian American	2	1.57
Hispanic American	4	3.15
Native American	-	0.00
Other MBEs	-	0.00
<i>Total Minority</i>	8	6.30
Woman-owned (WBEs)	35	27.56
Unknown MWBE	-	0.00
Total MWBE	43	33.86
SBE	-	0.00
VOBE	-	0.00
Grand Total	127	100.00

Source: Data Axle Firms as of Feb. 2021; M³ Consulting;

5.6 AVAILABILITY IN CONSTRUCTION

5.6.1 RWASM AVAILABILITY IN CONSTRUCTION

Level 1 availability in Construction and Construction-Related Services is based on a total of 245 bidders and sub-bidders during the study period. MWBEs among that number total 56 (22.86%) as shown in Table 5.11. Women-owned firms nearly double minority-owned firms, 37 to 19 or 15.10% to 7.76%. A breakdown of minorities shows 11 African American-owned firms (4.49%), 1 Asian American – owned firm (0.41%), 4 Hispanic American–owned firms (1.63%), 2 Native American–owned firms (0.82%) and 1 Other MBE firm (0.41%).

Data for Level 2 total 289 firms which include a slight increase of 44 firms with formal and informal awards from purchase orders and payments added to the Level 1 total. Level 2 total MWBE firms number 65 which equate to 22.49% with Women-owned firms contributing 14.88% and Minority–owned firms are at 7.61%. Among the Minority–owned firms the breakdown is as follows: 4.84% African American-owned firms; 1.38% Hispanic American–owned firms; 0.35% Asian American – owned firms; and 0.69% Native American–owned firms.

Level 3 availability uses the vendor report plus the master SMWBE list to develop its estimates (Table 5.11). The grand total of firms, 651, in this list more than doubles the totals in Levels 1 and 2. MWBE availability is highest in Level 3 at 37.17%. The increase in availability stems from the increases in African American and Hispanic American-owned firms at 11.98% and 4.92% respectively. Women-owned firms contribute 16.10% to this total. SBEs and VOBES make up 28.11% and 2.76% respectively.

**Table 5.11. RWASM Availability: Levels 1-3
 Construction and Construction-Related Services
 Knoxville, TN MSA, FY 2017 - FY 2021**

Race/Ethnicity/Gender	Level 1		Level 2		Level 3	
	#	%	#	%	#	%
Non-SMWBE	103	42.04	121	41.87	208	31.95
African American	11	4.49	14	4.84	78	11.98
Asian American	1	0.41	1	0.35	9	1.38
Hispanic American	4	1.63	4	1.38	32	4.92
Native American	2	0.82	2	0.69	7	1.08
Other MBEs	1	0.41	1	0.35	5	0.77
<i>Total Minority</i>	<i>19</i>	<i>7.76</i>	<i>22</i>	<i>7.61</i>	<i>131</i>	<i>20.12</i>
Woman-owned (WBEs)	37	15.10	43	14.88	110	16.90
Unknown MWBE	-	0.00	-	0.00	1	0.15
Total MWBE	56	22.86	65	22.49	242	37.17
SBE	86	35.10	102	35.29	183	28.11
VOBE	-	0.00	1	0.35	18	2.76
Grand Total	245	100.00	289	100.00	651	100.00

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data; Relevant Market— Knoxville, TN MSA; Other Minority is a firm identified as MBE, with no specific race/ethnicity identified; Unknown MWBE is a firm identified as MWBE, with no specific race/ethnicity/gender identified.

5.6.2 MARKETPLACE AVAILABILITY— CONSTRUCTION

The data axle database includes a total of 9,122 firms (Table 5.8). Among that number 754 firms are in Construction and Construction-Related Services (Table 5.12). Women-owned firms predominate the MWBE total: 95 of the 114 firms (83.3%). MWBEs marketplace availability is lower than Levels 1,2 & 3 availability at 15.06% compared to 22.86% in Level 1, 22.49% Level 2, and 37.17% in Level 3. Women-owned firms represent 12.55% of marketplace availability. Only Hispanic-owned firms among minority firms exceed 1% of marketplace availability at 1.72%. Together African American and Asian American-owned firms represent less than 1% of availability. There are no Native American-owned or SBEs counted in the data axle database for this procurement type.

**Table 5.12. Data Axle Availability
 Construction and Construction-Related Services
 Knoxville, TN MSA, 2021**

Race/Ethnicity/Gender	#	%
Non-SMWBE	643	84.94
African American	5	0.66
Asian American	1	0.13
Hispanic American	13	1.72
Native American	-	0.00
Other MBEs	-	0.00
<i>Total Minority</i>	<i>19</i>	<i>2.51</i>
Woman-owned (WBEs)	95	12.55
Unknown MWBE	-	0.00
Total MWBE	114	15.06
SBE	-	0.00
VOBE	-	0.00
Grand Total	757	100.00

Source: Data Axle Firms as of Feb. 2021; M³ Consulting;

5.7 AVAILABILITY IN PROFESSIONAL SERVICES

5.7.1 RWASM AVAILABILITY PROFESSIONAL SERVICES

Across the three levels of availability for Professional Services, total firm counts range from 82 in Level 1 to 765 in Level 2 and 1,750 in Level 3 (Table 5.13). Women-owned firms make up the bulk of Level 1 MWBE availability at 13.41% of the total 15.85%. African American and Hispanic American-owned firms each at 1.22% add another 2.44% to the MWBE total. SBEs number 19, or 23.17% of available Level 1 Professional Services firms.

Level 2 MWBE availability increases over Level 1 by a little over 7% at 23.40%. The minority count of firms moving from 2 in Level 1 to 40 (5.23%) in Level 2. All minority-owned firms show participation in Level 2. African American-owned firms sit at 2.61%, Asian American-owned firms and Hispanic American-owned firms each hold 0.97%, Native American-owned firms are 0.57%, and other MBEs consist of 0.26%. Women-owned firms' availability is 18.17%. The remaining Non-SMWBE availability resides with SBEs at 30.59% and VOBes at 0.26%.

Level 3 MWBE availability of 40.51% is computed from 709 MWBE firms out of the 1,750 total firms. This is the highest MWBE availability of the three levels. Disaggregated, MWBE availability is comprised of firms owned by the following: 14.17% African Americans, 1.89% Asian American, 2.23% Hispanic American, 0.51% Native Americans, 0.26% Other MBEs, and 18.17% women. SBE availability is 24.17% and VOB availability is 2%.

**Table 5.13. RWASM Availability: Levels 1-3
 Professional Services
 State of Tennessee, FY 2017 - FY 2021**

Race/Ethnicity/Gender	Level 1		Level 2		Level 3	
	#	%	#	%	#	%
Non-SMWBE	50	60.98	350	45.75	583	33.31
African American	1	1.22	20	2.61	248	14.17
Asian American	1	1.22	7	0.92	33	1.89
Hispanic American	-	0.00	7	0.92	39	2.23
Native American	-	0.00	4	0.52	9	0.51
Other MBEs	-	0.00	2	0.26	56	3.20
<i>Total Minority</i>	<i>2</i>	<i>2.44</i>	<i>40</i>	<i>5.23</i>	<i>385</i>	<i>22.00</i>
Woman-owned (WBEs)	11	13.41	139	18.17	322	18.40
Unknown MWBE	0	0.00	-	0.00	2	0.11
Total MWBE	13	15.85	179	23.40	709	40.51
SBE	19	23.17	234	30.59	423	24.17
VOBE	-	0.00	2	0.26	35	2.00
Grand Total	82	100.00	765	100.00	1,750	100.00

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data; Relevant Market— State of Tennessee; Other Minority is a firm identified as MBE, with no specific race/ethnicity identified; Unknown MWBE is a firm identified as MWBE, with no specific race/ethnicity/gender identified.

5.7.2 MARKETPLACE AVAILABILITY— PROFESSIONAL SERVICES

Marketplace firm counts track close to Level 3 with 2,177 Professional Services firms in the data axle database and 1,750 firms used for Level 3. The MWBE availability is nearly equal 40.51% in Level 3 and 40.93% in the marketplace. However, the breakdown of MWBE availability is radically different with women-owned firms in the marketplace nearly doubling their availability in Level 3, 36.15% to 18.17%. Together, minority owned firms' availability stands at 4.78% of the 40.93% MWBE availability.

**Table 5.14. Data Axle Availability
 Professional Services
 State of Tennessee, 2021**

Race/Ethnicity/Gender	#	%
Non-SMWBE	1,286	59.07
African American	17	0.78
Asian American	40	1.84
Hispanic American	44	2.02
Native American	3	0.14
Other MBEs	-	0.00
<i>Total Minority</i>	<i>104</i>	<i>4.78</i>
Woman-owned (WBEs)	787	36.15
Unknown MWBE	-	0.00
Total MWBE	891	40.93
SBE	-	0.00
VOBE	-	0.00
Grand Total	2,177	100.00

Source: Data Axle Firms as of Feb. 2021; M³ Consulting;

5.8 AVAILABILITY IN NON-PROFESSIONAL SERVICES

5.8.1 RWASM AVAILABILITY NON-PROFESSIONAL SERVICES

There is relative consistency in Level 1 and Level 2 MWBE availability for Non-Professional Services 17.54% to 15.61% (Table 5.15). Level 3 MWBE availability jumps to 39.27%. There is a significantly larger number of Level 3 MWBE firms, 2,149 compared to 110 and 233 respectively for Levels 1 and 2. Level 3 total firms are nine times the number of Level 2 firms and nineteen times more than Level 1 firms. This indicates that there are a large number of firms on COK vendor report + M/W/DBE Master List who do not actively seek to do business with the city. As the relevant market for this procurement category is nationwide, we focus on Level 3 RWASM MWBE availability, A breakdown of the 39.27% Level 3 MWBE availability includes 17.25% for African American–owned firms, followed by 14.64% women-owned firms. Asian American, Hispanic American, Native American, and Other MBEs combine for 7.27%.

**Table 5.15. RWASM Availability: Levels 1-3
 Non-Professional Services
 Nationwide, FY 2017 - FY 2021**

Race/Ethnicity/Gender	Level 1		Level 2		Level 3	
	#	%	#	%	#	%
Non-SMWBE	365	58.21	900	60.28	2,188	39.98
African American	23	3.67	38	2.55	944	17.25
Asian American	10	1.59	13	0.87	121	2.21
Hispanic American	8	1.28	21	1.41	134	2.45
Native American	3	0.48	6	0.40	44	0.80
Other MBEs	5	0.80	6	0.40	99	1.81
<i>Total Minority</i>	<i>49</i>	<i>7.81</i>	<i>84</i>	<i>5.63</i>	<i>1,342</i>	<i>24.52</i>
Woman-owned (WBEs)	61	9.73	149	9.98	801	14.64
Unknown MWBE	-	0.00	-	0.00	6	0.11
Total MWBE	110	17.54	233	15.61	2,149	39.27
SBE	149	23.76	351	23.51	1,032	18.86
VOBE	3	0.48	9	0.60	104	1.90
Grand Total	627	100.00	1,493	100.00	5,473	100.00

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data; Relevant Market— Nationwide; Other Minority is a firm identified as MBE, with no specific race/ethnicity identified; Unknown MWBE is a firm identified as MWBE, with no specific race/ethnicity/gender identified.

5.8.2 MARKETPLACE AVAILABILITY— NON-PROFESSIONAL SERVICES

The marketplace MWBE availability for non-professional service as found in the data axle database is consistent with Level 3 availability at 35.47% (Table 5.16) compared to 39.27%. However, the makeup of these percentages is radically different. Women-owned firms are 31.25% of the marketplace availability and 14.64% of Level 3 availability. African American-owned firms at 17.25% are the largest component of Level 3 availability, but are only 1.11% of marketplace availability. In fact, total minority firms for marketplace availability number 163 out of 3,862 total firms, representing 4.22%. The data axle database does not include SBE and VOB firms.

**Table 5.16. Data Axle Availability
 Non-Professional Services
 Nationwide, 2021**

Race/Ethnicity/Gender	#	%
Non-SMWBE	2,492	64.53
African American	43	1.11
Asian American	22	0.57
Hispanic American	94	2.43
Native American	4	0.10
Other MBEs	-	0.00
<i>Total Minority</i>	<i>163</i>	<i>4.22</i>
Woman-owned (WBEs)	1,207	31.25
Unknown MWBE	-	0.00
Total MWBE	1,370	35.47
SBE	-	0.00
VOBE	-	0.00
Grand Total	3,862	100.00

Source: Data Axle Firms as of Feb. 2021; M³ Consulting;

5.9 AVAILABILITY IN GOODS & SUPPLIES

5.9.1 RWASM AVAILABILITY GOODS & SUPPLIES

Level 3 RWASM MWBE availability for Goods & Supplies is at 26.13% or 1,140 firms out of a total of 4,362 comprised of bidders, sub-bidders, vendors, and M/W/DBE Master List firms (Table 5.17). The number of women-owned firms (555) is approximately equal to the number of minority-owned firms (578) which translates to an availability of 12.72% and 13.25%, respectively. African American-owned firms make up more than 50% of the availability of minority-owned firms at 6.81%. They are followed by Asian American-owned firms with 2.22%, Other MBEs at 2.02%, Hispanic American-owned firms at 1.54%, and Native American-owned firms at 0.66%. SBEs and VOBES represent 22.88% and 2.41% respectively.

**Table 5.17. RWASM Availability: Levels 1-3
 Goods & Supplies
 Nationwide, FY 2017 - FY 2021**

Race/Ethnicity/Gender	Level 1		Level 2		Level 3	
	#	%	#	%	#	%
Non-SMWBE	426	57.10	1,019	57.70	2,119	48.58
African American	15	2.01	23	1.30	297	6.81
Asian American	22	2.95	29	1.64	97	2.22
Hispanic American	5	0.67	14	0.79	67	1.54
Native American	7	0.94	11	0.62	29	0.66
Other MBEs	10	1.34	10	0.57	88	2.02
<i>Total Minority</i>	<i>59</i>	<i>7.91</i>	<i>87</i>	<i>4.93</i>	<i>578</i>	<i>13.25</i>
Woman-owned (WBEs)	74	9.92	191	10.82	555	12.72
Unknown MWBE	2	0.27	2	0.11	7	0.16
Total MWBE	135	18.10	280	15.86	1,140	26.13
SBE	172	23.06	447	25.31	998	22.88
VOBE	13	1.74	20	1.13	105	2.41
Grand Total	746	100.00	1,766	100.00	4,362	100.00

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data; Relevant Market— Nationwide; Other Minority is a firm identified as MBE, with no specific race/ethnicity identified; Unknown MWBE is a firm identified as MWBE, with no specific race/ethnicity/gender identified.

5.9.2 MARKETPLACE AVAILABILITY— GOODS & SUPPLIES

The marketplace MWBE availability, 29.18% is close to Level 3 MWBE availability at 26.13%. Like availability for Non-Professional Services, women-owned firms tend to dominate marketplace MWBE availability for Goods & Supplies. Women-owned firms at 22.97% are 78.71% of the marketplace MWBE availability. Minority availability consists of 3.75% Asian American-owned firms, 1.38% Hispanic American-owned firms, 1.03% African American-owned firms, and 0.05% Native American-owned firms.

**Table 5.18. Data Axle Availability
 Goods & Supplies
 Nationwide, 2021**

Race/Ethnicity/Gender	#	%
Non-SMWBE	1,437	70.82
African American	21	1.03
Asian American	76	3.75
Hispanic American	28	1.38
Native American	1	0.05
Other MBEs	-	0.00
<i>Total Minority</i>	<i>126</i>	<i>6.21</i>
Woman-owned (WBEs)	466	22.97
Unknown MWBE	-	0.00
Total MWBE	592	29.18
SBE	-	0.00
VOBE	-	0.00
Grand Total	2,029	100.00

Source: Data Axle Firms as of Feb. 2021; M³ Consulting;

5.10 SUMMARY OF FINDINGS

The table below summarizes the availability estimates for MWBE and SBE firms within the relevant market for COK. It provides the estimates, along with the source of the information. M³ Consulting places emphasis on the availability estimates, based on bidders', sub-bidders', and awardees' data at Level 2 of the RWASM model. The tables and the discussion are presented for the relevant markets by procurement type for all industries.

M³ Consulting typically places credence on RWASM estimates derived from bidders, sub-bidders, and awardees in that order of importance. Marketplace availability measures, based on Data Axle, are presented as a benchmark of minority- and women-owned firm availability and for COK to consider potentially available firms for outreach purposes.

A total of 58 firms make up the bidders, sub-bidders, and awardees located in the City of Knoxville available to perform Architecture and Engineering procurements during the study period (Table 5.19). Of that number, 42 firms (72.42%) are non-SMBEs and SBEs. Among the MWBEs, a total of 16 firms represent 27.59% of availability. Women-owned firms at 22.41%, African American–owned firms at 3.45%, and Asian American–owned firms at 1.72% comprise the MWBE total availability. The Other MBEs and VOBES do not present availability for Architecture and Engineering procurement.

All groups show Level 2 availability in Construction and Construction-Related Services. Non-SMWBEs at 41.87% and SBEs at 35.29% together account for 77.16% of the 289 available firms. The remaining 22.84% is distributed across MWBEs and VOBES with women-owned firms at 14.88%, followed in order by African American-owned firms at 4.84%, Hispanic American-owned firms at 1.38%, and the other minority-owned firms and VOBES together adding to 1.78%.

Women-owned firms represent 18.17% of the 765 firms that make up the total availability for Professional Services. Minority-owned firms comprise 5.23% with only African American–owned firms exceeding 1% at 2.61% availability. Asian American and Hispanic American–owned firms are just under 1% at 0.92% each. Native American-owned firms (0.52%), other MBEs (0.26%) and VOBES (0.26%) together are just under 1% availability.

The number of available firms for Non-Professional Services and Goods & Supplies are of similar magnitude — 1,493 and 1,766 respectively. Likewise, the distribution of availability across the groups is similar with MWBE availability for Non-Professional Services of 15.61% and 15.86% for Goods & Supplies. Women-owned firms, sitting at 9.98% of Non-Professional Services availability and 10.82% of Goods & Supplies availability, are about 65% of MWBE availability for each of these procurement categories. African American-owned firms and Hispanic American-owned firms are the only minority firms with availability above 1% at 2.55% and 1.41%. For Goods & Supplies, African American-owned firms, Asian American-owned firms, and VOBES exceed 1% at 1.30%, 1.64%, and 1.13%.

**Table 5.19. Summary Table - RWASM Level 2 Availability Percentage Participation
Relevant Market; FY 2017 - FY 2021**

Race/Ethnicity/Gender	Architecture and Engineering ⁴		Construction & Construction Related Services ³		Professional Services ²		Non-Professional Services ¹		Goods & Supplies ¹	
	#	%	#	#	#	%	#	%	#	%
Non-SMWBE	19	32.76	121	41.87	350	45.75	900	60.28	1,019	57.70
African American	2	3.45	14	4.84	20	2.61	38	2.55	23	1.30
Asian American	1	1.72	1	0.35	7	0.92	13	0.87	29	1.64
Hispanic American	-	0.00	4	1.38	7	0.92	21	1.41	14	0.79
Native American	-	0.00	2	0.69	4	0.52	6	0.40	11	0.62
Other MBEs	-	0.00	1	0.35	2	0.26	6	0.40	10	0.57
<i>Total Minority</i>	<i>3</i>	<i>5.17</i>	<i>22</i>	<i>7.61</i>	<i>40</i>	<i>5.23</i>	<i>84</i>	<i>5.63</i>	<i>87</i>	<i>4.93</i>
Woman-owned (WBEs)	13	22.41	43	14.88	139	18.17	149	9.98	191	10.82
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	2	0.11
Total MWBE	16	27.59	65	22.49	179	23.40	233	15.61	280	15.86
SBE	23	39.66	102	35.29	234	30.59	351	23.51	447	25.31
VOBE	-	0.00	1	0.35	2	0.26	9	0.60	20	1.13
Grand Total	58	100.00	289	100.00	765	100.00	1,493	100.00	1,766	100.00

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data; Other Minority is a firm identified as MBE, with no specific race/ethnicity identified; Unknown MWBE is a firm identified as MWBE, with no specific race/ethnicity/gender identified..

¹Nationwide

²State of Tennessee

³Knoxville, TN MSA

⁴City of Knoxville

**Table 5.20. Summary Table - Data Axle Availability
Relevant Market; 2021**

Race/Ethnicity/Gender	Architecture and Engineering ⁴		Construction & Construction Related Services ³		Professional Services ²		Non-Professional Services ¹		Goods & Supplies ¹	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	84	66.14	643	84.94	1,286	59.07	2,492	64.53	1,437	70.82
African American	2	1.57	5	0.66	17	0.78	43	1.11	21	1.03
Asian American	2	1.57	1	0.13	40	1.84	22	0.57	76	3.75
Hispanic American	4	3.15	13	1.72	44	2.02	94	2.43	28	1.38
Native American	-	0.00	-	0.00	3	0.14	4	0.10	1	0.05
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>8</i>	<i>6.30</i>	<i>19</i>	<i>2.51</i>	<i>104</i>	<i>4.78</i>	<i>163</i>	<i>4.22</i>	<i>126</i>	<i>6.21</i>
Woman-owned (WBEs)	35	27.56	95	12.55	787	36.15	1,207	31.25	466	22.97
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	43	33.86	114	15.06	891	40.93	1,370	35.47	592	29.18
SBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
VOBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	127	100.00	757	100.00	2,177	100.00	3,862	100.00	2,029	100.00

Source: Data Axle Firms as of Feb. 2021; M³ Consulting

¹Nationwide

²State of Tennessee

³Knoxville, TN MSA

⁴City of Knoxville

6.1 INTRODUCTION

This chapter presents the utilization of SMWBE by the City of Knoxville (COK) in the procurement categories of Architecture and Engineering; Construction and Construction-Related Services; Professional Services; Non-Professional Services; and Goods & Supplies.

Utilization is measured and analyzed using contract awards, purchase order awards, and payments to SMWBE from COK for the period FY 2017—FY 2021. This covers the universe of all dollars and contracts awarded by COK.

SMWBE utilization in each of the major procurement categories listed above is discussed separately. Utilization tables are presented for the relevant market in each procurement category. The overall tables are presented in Appendix A. Within each procurement category section, tables and discussions are presented to cover the data source, upon which M³ Consulting relies for conclusions and recommendations; tables representing other data sources considered are reflected in Appendix A. SMWBE utilization is also broken down by specific race, ethnicity, and gender and is hereinafter referred to in text and tables as SMWBE when discussing overall levels of participation for SMWBEs.

Contract awards data reflects both prime and subcontractor award dollars, to the degree available.¹ Accounts payable and purchase order payments reflect prime vendor/contractor payments only unless otherwise stated.

The final section of this chapter covers threshold analysis and top ten awardees to further decipher any patterns in utilization of SMWBE.

The following are some salient features of the overall chapter presentation:

- Utilization will be presented using the data collected from Purchase Order and Payments Data.
- The tables and discussions within the body of the chapter cover data pertaining to firms located within the relevant market for each procurement type.

¹ The calculation of “prime + subcontractor awards data” reflects a reduction of the Prime Contractor award dollars by any subcontractor dollars. Subcontractor dollars are placed into the appropriate race/ethnicity/gender category.

6.2 TOTAL UTILIZATION BASED ON CONTRACT AWARDS, PURCHASE ORDERS AND PAYMENTS

This section provides a summary of total contract awards (Table 6.1), purchase orders (POs) (Table 6.2), and payments (AP) (Table 6.3) by race/ethnic/gender group for the period FY 2017—FY 2021, regardless of procurement category. This view provides an overall picture of the utilization of SMWBE by COK. The analysis is then detailed by each procurement type.

Architecture & Engineering

Table 6.1 displays a total of \$8.7 million awarded to Architecture and Engineering firms during the five-year study period. No minority-owned firms were awarded a contract during the timeframe. Therefore MWBE awarded dollars went only to women-owned firms amounting to just \$160.3 thousand or 1.85%. SBEs received \$5.2 million, or 59.41% compared to \$3.7 million or 38.74% for Non-SMWBE firms.

During the five-year study period, Architecture and Engineering firms received purchase orders totaling about \$14.7 million (Table 6.2). Among MWBEs only women-owned firms received purchase orders totaling \$180,005 or 1.23%. SBEs' total purchase orders amounts to \$5.75 million or 39.22%.

The accounts payable amount for Architecture and Engineering firms is \$13.23 million with 71.69% of the dollars going to Non-SMWBE firms. This contrasts with the 59.65% purchase orders received by these firms. While minority firms did not receive POs during the study period, African American-owned firms did receive payments totaling \$84,723 (0.64%) and women-owned firms received \$146,764 or 1.11%. SBEs payments total \$3.51 million or 26.56%.

Construction and Construction-Related Services

Women-owned firms fared better in this procurement category compared to the Architecture and Engineering category. Women-owned firms were awarded nearly \$9 million or 3.84% of the \$232.5 million in construction and construction-related services contract awards. Minority-owned firms awards did not reach the 1% level totaling \$370,454 or about 0.16% of the total awarded dollars. African American-owned firms at \$319,009 (0.14%) and Native American-owned firms at \$51,450 (0.02%) account for the small percentage of these dollars going to minority-owned firms. SBE firms garnered \$52.5 million (22.58%) and VOBES firms \$460.62 (0.20%). Non-SMWBEs received 73.23% of awarded dollars.

FY 2017-FY2021 purchase orders total \$148.03 million with the Non-SMWBEs' percentage roughly equaling the same award percentage in contracts to these firms: 76.98% to 73.23% (Table 6.2). MWBE purchase orders total \$2.14 million which amounts to 1.45% with most of this amount \$1.88 million

(1.27%) going to women-owned firms. Of the total purchase order dollars, a little under \$32 million or 21.58% were to SBE firms.

Utilization measured by accounts payable is shown in Table 6.3. Of the \$121.09 million, \$72.68 million or 64.15% is paid to Non-SMWBE firms. Another \$41.5 million or 34.26% went to SBEs. MWBE firms payments represent just 1.59% of the total payments, amounting to slightly less than \$2 million. Most of those dollars (\$1.67 million) were paid to women-owned firms.

Professional Services

The Professional Services category shows roughly \$18.6 million of total awards with \$16.2 million or 87% received by Non-SMWBE firms. SBE firms garnered just under \$2.2 million or 11.71% of dollars awarded for Professional Services. Minority-owned firms together did not rise to the 1% level with only African American-owned firms being awarded dollars totaling \$36,650 (0.20%). Women-owned firms were awarded slightly more than 1% (1.1%) for a total of \$203,600. SDV and VOB E firms did not receive Professional Services awards.

MWBEs received about 6% of Professional Services purchase order dollars. Non-SMWBEs and SBEs together received about 94%, 73.25% Non-SMWBEs and 20.62% to SBEs. Women-owned firms captured most of the PO dollars received by MWBEs at 5.23%.

Like Architecture and Engineering and Construction and Construction-Related Services, SBE payments at 30.08% are substantially larger than the percentage of awards (11.71%), and POs 20.62%. Women-owned firms at 6.74 comprise over 86% of the 7.79% of payments to MWBEs. Minority firms together received payments totaling slightly more than a half million dollars.

Non-Professional Services

As in the Construction and Construction-Related Services category, SBE firms participated at a substantial level, winning \$9.2 million representing 20.39% of the \$43.9 awarded dollars. MWBE fared better in Non-Professional Services compared to the previous three categories receiving over \$9.2 million or 20.39%. Women-owned firms account for just over 11% (\$4.98 million) of the MWBE dollars followed in order by African American-owned firms at \$1.98 million (4.52%), Asian American-owned firms at \$1.78 million (3.91%), Hispanic American-owned firms at \$287,102 (0.65%), and Native American-owned firms at \$234,620 (0.53%). SBEs were awarded \$8.8 million or 20.22% of the total, nearly the same as MWBEs.

Most Non-Professional Services purchase order dollars, \$64.95 million or 81.44% of the \$79.75 million, went to Non-SMWBEs. Women-owned firms at 4.75% and African American-owned firms at 4.51% comprise the bulk of the 11.12% of PO dollars attributed to MWBEs. Asian American-owned firms are 1.68% and SBEs are 7.37% of PO dollars. Minority firms received payments totaling nearly \$4.5 million (8.75%), with African American-owned firms and Asian American-owned firms combining for \$4.14 million

or 8.07% of the total. Payments to MWBEs show an increase of 7.94% over purchase order dollars. Similarly, SBE payments are 9.3% more than POs. In contrast, Non-SMWBE percentages are lower by 1.73%.

Goods & Supplies

A little over \$50 million dollars were awarded in the Goods & Supplies category. The vast majority of these dollars was garnered by Non-SMWBE firm (\$41.3 million or 82.58%). MWBE firms received awards totaling a little under \$2.4 million or 4.72%. Women-owned firms (2.03%) and Asian American-owned firms (1.98%) comprise most of the MWBE total. Native American-owned firms, African American-owned firms, Hispanic American-owned firms & other MBEs together total \$355,319 which is less than 1%.

Women-owned firms received 8.85% of the 10.14% of purchase order dollars to MWBEs. Firms in this procurement category received purchase orders totaling \$133.65 million during the study period. Minority firms and SBEs received POs that represent 1.29% and 11.9% respectively.

Payments to firms for goods and supplies total \$129.5 million (Table 6.3). Percentage of payments to MWBEs are nearly the same as the percentage of purchase orders at 10.51% payments and 10.14% POs. SBE payments at 17.88% are 5.98% higher than dollars earmarked to those firms through purchase orders. Women-owned firms at 8.09% and Asian American-owned firms are the only 2 MWBEs that received more than 1% of total payments.

CHAPTER 6 // STATISTICAL ANALYSIS OF SMWBE UTILIZATION
CITY OF KNOXVILLE DISPARITY STUDY



**Table 6.1. Total Utilization
Contract Awards—Dollars
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Architecture & Engineering		Construction and Construction-Related Services		Professional Services		Non-Professional Services		Goods & Supplies		Total	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	3,365,700	38.74	170,277,805	73.23	16,174,618	87.00	25,837,434	58.81	41,291,561	82.58	256,947,119	72.63
African American	-	0.00	319,004	0.14	36,650	0.20	1,987,410	4.52	59,624	0.12	2,402,688	0.68
Asian American	-	0.00	-	0.00	-	0.00	1,717,090	3.91	989,821	1.98	2,706,911	0.77
Hispanic American	-	0.00	-	0.00	-	0.00	287,102	0.65	37,348	0.07	324,450	0.09
Native American	-	0.00	51,450	0.02	-	0.00	234,620	0.53	247,114	0.49	533,184	0.15
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	11,233	0.02	11,233	0.00
<i>Total Minority</i>	-	0.00	370,454	0.16	36,650	0.20	4,226,222	9.62	1,345,139	2.69	5,978,466	1.69
WBEs	160,394	1.85	8,918,274	3.84	203,600	1.10	4,984,012	11.35	1,016,875	2.03	15,283,155	4.32
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	160,394	1.85	9,288,728	3.99	240,250	1.29	9,210,234	20.97	2,362,015	4.72	21,261,620	6.01
SBE	5,161,337	59.41	52,513,204	22.58	2,177,245	11.71	8,882,358	20.22	6,263,480	12.53	74,997,624	21.20
SDV/VOBE	-	0.00	460,629	0.20	-	0.00	-	0.00	85,207	0.17	545,836	0.15
Grand Total	8,687,432	100.00	232,540,366	100.00	18,592,112	100.00	43,930,026	100.00	50,002,263	100.00	353,752,199	100.00

Source: COK Contracts Data, M³ Consulting

CHAPTER 6 // STATISTICAL ANALYSIS OF SMWBE UTILIZATION
CITY OF KNOXVILLE DISPARITY STUDY



**Table 6.2. Total Utilization
Purchase Orders—Dollars
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Architecture & Engineering		Construction and Construction- Related Services		Professional Services		Non-Professional Services		Goods & Supplies		Total	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	8,736,138	59.55	113,948,911	76.98	37,634,515	73.25	64,951,378	81.44	103,969,115	77.79	329,240,057	77.02
African American	-	0.00	259,091	0.18	56,206	0.11	3,594,537	4.51	64,310	0.05	3,974,144	0.93
Asian American	-	0.00	-	0.00	15,265	0.03	1,337,993	1.68	1,384,527	1.04	2,737,786	0.64
Hispanic American	-	0.00	-	0.00	149,871	0.29	119,181	0.15	125,417	0.09	394,469	0.09
Native American	-	0.00	9,985	0.01	151,000	0.29	23,774	0.03	151,153	0.11	335,912	0.08
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	<i>269,076</i>	<i>0.18</i>	<i>372,342</i>	<i>0.72</i>	<i>5,075,485</i>	<i>6.36</i>	<i>1,725,407</i>	<i>1.29</i>	<i>7,442,311</i>	<i>1.74</i>
WBEs	180,005	1.23	1,875,322	1.27	2,686,986	5.23	3,788,765	4.75	11,828,920	8.85	20,359,999	4.76
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	180,005	1.23	2,144,398	1.45	3,059,328	5.95	8,864,251	11.12	13,554,327	10.14	27,802,309	6.50
SBE	5,753,434	39.22	31,937,830	21.58	10,594,595	20.62	5,878,286	7.37	15,900,611	11.90	70,064,755	16.39
SDV	-	0.00	-	0.00	-	0.00	-	0.00	11,015	0.01	11,015	0.00
VOBE	-	0.00	-	0.00	90,277	0.18	56,376	0.07	217,390	0.16	364,043	0.09
Grand Total	14,669,576	100.00	148,031,139	100.00	51,378,716	100.00	79,750,291	100.00	133,652,457	100.00	427,482,179	100.00

Source: COK Purchase Order Data, M³ Consulting

CHAPTER 6 // STATISTICAL ANALYSIS OF SMWBE UTILIZATION
CITY OF KNOXVILLE DISPARITY STUDY



**Table 6.3. Total Utilization
Accounts Payable —Dollars
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Architecture & Engineering		Construction and Construction- Related Services		Professional Services		Non-Professional Services		Goods & Supplies		Total	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	9,484,773	71.69	77,675,043	64.15	29,805,328	61.18	32,946,290	64.14	92,343,069	71.31	242,254,503	66.57
African American	84,723	0.64	242,349	0.20	178,237	0.37	2,733,186	5.32	87,909	0.07	3,326,404	0.91
Asian American	600	0.00	-	0.00	29,174	0.06	1,413,109	2.75	1,420,415	1.10	2,863,299	0.79
Hispanic American	-	0.00	-	0.00	134,578	0.28	209,892	0.41	1,133,081	0.87	1,477,551	0.41
Native American	-	0.00	9,985	0.01	162,146	0.33	138,172	0.27	492,892	0.38	803,196	0.22
Other MBEs	-	0.00	-	0.00	5,506	0.01	-	0.00	-	0.00	5,506	0.00
<i>Total Minority</i>	<i>85,323</i>	<i>0.64</i>	<i>252,334</i>	<i>0.21</i>	<i>509,641</i>	<i>1.05</i>	<i>4,494,360</i>	<i>8.75</i>	<i>3,134,298</i>	<i>2.42</i>	<i>8,475,956</i>	<i>2.33</i>
WBEs	146,764	1.11	1,670,787	1.38	3,285,754	6.74	5,296,546	10.31	10,474,928	8.09	20,874,780	5.74
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	232,087	1.75	1,923,121	1.59	3,795,395	7.79	9,790,906	19.06	13,609,226	10.51	29,350,735	8.07
SBE	3,513,595	26.56	41,491,280	34.26	14,652,507	30.08	8,563,144	16.67	23,159,446	17.88	91,379,972	25.11
SDV	-	0.00	-	0.00	500	0.00	-	0.00	26,221	0.02	26,721	0.01
VOBE	-	0.00	-	0.00	462,662	0.95	67,217	0.13	361,107	0.28	890,986	0.24
Grand Total	13,230,455	100.00	121,089,444	100.00	48,716,393	100.00	51,367,557	100.00	129,499,069	100.00	363,902,917	100.00

Source: COK Payments Data, M³ Consulting

6.3 UTILIZATION BY PROCUREMENT TYPE

The tables on the following pages summarize the relevant contract award, purchase order and payments data by procurement type within the relevant market. The relevant market or the geographic area where COK vendors are located is the City of Knoxville; the Knoxville, TN MSA; the State of Tennessee; and Nationwide. The relevant market, as was discussed in the Availability Section, is the City of Knoxville for Architecture and Engineering; Knoxville, TN MSA; for Construction and Construction-Related Services; the State of Tennessee for Professional Services; and Nationwide for Non-Professional Services and Goods & Supplies. The table below summarizes this information for each procurement type:

Table 6.4. Summary of Relevant Market Determination

	City	MSA	State	Nationwide
Architecture and Engineering	✓			
Construction and Construction-Related Services		✓		
Professional Services			✓	
Non-Professional Services				✓
Goods and Supplies				✓

Source: M³ Consulting; City of Knoxville Contracts Data, PO and AP data, City of Knoxville Vendor data

Table 6.5 provides a comprehensive look at contract awards by including a breakdown of prime and subcontracting activity. Column 1 contains the original award amounts to each of the firm groups. Columns 2 and 3 respectively separate prime and subcontracting awarded dollars. Column 3 of the table shows nearly all subcontracting is done with MWBEs with just a small amount of \$8,345 awarded to Non-SMWBEs. A total of 8.10% of the contract awards, \$6.78 million was subcontracted with \$6.49 million or 95.68% of subcontracting dollars awarded to WBEs.

**Table 6.5. Contract Awards - Pure Prime + Subcontractor Dollars
Nationwide FY 2017 – FY 2021**

Race /Ethnicity /Gender	Original Award Amount		Pure Prime Contractors (Net of Subcontractors)		Subcontractors Only		Pure Prime + Subcontractors	
	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	176,364,460.43	75.84	170,269,460.43	75.42	8,345.00	0.12	170,277,805.43	73.23%
African American	85,649.00	0.04	85,649.00	0.04	233,354.90	3.44	319,003.90	0.14%
Asian American	-	0.00	-	0.00	-	0.00	-	0.00%
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00%
Native American	-	0.00	-	0.00	51,450.00	0.76	51,450.00	0.02%
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00%
<i>Total Minority</i>	<i>85,649.00</i>	<i>0.04</i>	<i>85,649.00</i>	<i>0.04</i>	<i>284,804.90</i>	<i>4.20</i>	<i>370,453.90</i>	0.16%
WBEs	2,438,533.41	1.05	2,423,438.41	1.07	6,494,835.44	95.68	8,918,273.85	3.84%
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00%
Total MWBE	2,524,182.41	1.09	2,509,087.41	1.11	6,779,640.34	99.88	9,288,727.75	3.99%
SBE	53,191,094.10	22.87	52,513,203.76	23.26	-	0.00	52,513,203.76	22.58%
SDV/ VOB	460,628.70	0.20	460,628.70	0.20	-	0.00	460,628.70	0.20%
Grand Total	232,540,365.64	100.00	225,752,380.30	100.00	6,787,985.34	100.00	232,540,365.64	100.00

Source: COK Contracts Data, M³ Consulting

6.4 ARCHITECTURE AND ENGINEERING UTILIZATION

For Architecture and Engineering utilization, SMWBE utilization is presented in this section using dollars for purchase orders by year and for the study period (Table 6.6), as well as for contract awards, purchase orders and payments for the study period (Table 6.7). Counts of purchase orders, contract awards and payments are reflected in Appendix A. The relevant market for Architecture and Engineering is the City of Knoxville.

6.4.1 Architecture and Engineering Utilization Based on Purchase Orders

The dollars reflected in Table 6.6 display purchase orders that are for firms residing in COK relevant market. The total \$11.7 million is \$3 million less than the total of \$14.7 million issued during the study period. A review of Table 6.6 shows that amounts were consistent across four of the study years of about \$1.5 million. The exception, FY 2019, POs amount to nearly \$5.4 million. Minority-owned firms and SDV/VOBE firms did not receive purchase orders for Architecture and Engineering work in any of the study years. Women-owned firms received POs that ranged from a low of 0.55% of dollars in FY 2021 to a high of 9.78% in FY 2020. SBEs across all fiscal years were issued double digit percentages between 12.33% in FY 2017 and 70.14% in FY 2019. In total, SBEs received 48.22% of total dollars awarded to firms in the relevant market during the study period. Women-owned firms received 1.54% with the remaining 50.24% going to Non-SMWBE firms.

Table 6.6. Architecture & Engineering Utilization
Purchase Order—Dollars
City of Knoxville, FY 2017 – FY 2021

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	962,150	86.14	1,581,929	80.51	1,604,478	29.86	1,120,079	79.45	590,270	32.85	5,858,905	50.24
African American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>
WBEs	17,100	1.53	15,194	0.77	-	0.00	137,811	9.78	9,900	0.55	180,005	1.54
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	17,100	1.53	15,194	0.77	-	0.00	137,811	9.78	9,900	0.55	180,005	1.54
SBE	137,680	12.33	367,874	18.72	3,768,830	70.14	151,845	10.77	1,196,760	66.60	5,622,989	48.22
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	1,116,930	100.00	1,964,997	100.00	5,373,307	100.00	1,409,735	100.00	1,796,930	100.00	11,661,899	100.00

Source: COK Purchase Order Data, M³ Consulting

6.4.2 Architecture and Engineering Utilization Comparison

The summary presented in Table 6.7 compares contract awards, purchase orders and payments restricted to firms in the COK relevant market. In each, minority-owned firms and SDV/VOBE firms show they rarely participate in Architecture and Engineering contracting, receiving just \$4,968 in payments during the five years examined. Women-owned firms fared slightly better. However, they received less than 3% in any of the three categories. Interestingly, SBE firms surpassed Non-SMWBE firms in contract awards (70.43% to 27.34%), and nearly equaled them in purchase orders (48.22% to 50.24%). Payment data found receipts of 32.55% to SBEs and 66.07% to Non-SMWBEs of the total of about \$9.9 million.

**Table 6.7 Architecture & Engineering Utilization
Comparison
Contract Awards, Purchase Orders, Payments—Dollars
City of Knoxville, FY 2017 – FY 2021**

Ethnicity	Contract Awards		Purchase Orders		Payments	
	\$	%	\$	%	\$	%
Non-SMWBE	1,961,672	27.34	5,858,905	50.24	6,519,577	66.07
African American	-	0.00	-	0.00	4,968	0.05
Asian American	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>4,968</i>	<i>0.05</i>
WBEs	160,394	2.24	180,005	1.54	131,331	1.33
Unknown MWBE	-	0.00	-	0.00	-	0.00
Total MWBE	160,394	2.24	180,005	1.54	136,299	1.38
SBE	5,054,322	70.43	5,622,989	48.22	3,211,589	32.55
SDV/VOBE	-	0.00	-	0.00	-	0.00
Grand Total	7,176,389	100.00	11,661,899	100.00	9,867,466	100.00

Source: COK Contracts Data, PO and AP Data, M³ Consulting, Relevant Market— City of Knoxville

6.5 CONSTRUCTION AND CONSTRUCTION-RELATED SERVICES UTILIZATION

In the area of Construction and Construction-Related Services, SMWBE utilization is presented in this section using dollars for payments by year and for the study period (Table 6.8), as well as for contract awards, purchase orders and payments for the study period (Table 6.9). Counts of purchase orders, contract awards and payments are reflected in Appendix A. The relevant market for Construction and Construction-Related Services is Knoxville, TN MSA.

6.5.1 Construction and Construction-Related Services Utilization Based on Accounts Payable

Payment dollars used for Construction and Construction-Related Services utilization is shown in Table 6.8 for the Knoxville, TN MSA relevant market. A total of \$87.11 million was paid over the study period. Individual years show that payments ranged between \$11.95 million in FY 2018 to a high of \$24.22 million in FY 2017. Overall 55.66% of payments went to Non-SMWBEs, and 42.42% were received by SBEs. The remaining 1.91% (\$1.66 million) is distributed across MWBEs with Women-owned firms garnering \$1.43 million (1.64%). Together, the total for Minority-owned firms is \$233,790 (0.27%). SBE payments across the first four years exceed 35%, but dropped to just over 21% in FY 2021. Women-owned firms' payments nearly reached the million-dollar level in FY 2018 at \$870,648, but they typically received payments of less than a half million in any of the study period years.

**Table 6.8. Construction and Construction-Related Services Utilization Payments—Dollars
Knoxville, TN MSA, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	10,687,101	44.11	4,777,980	39.98	10,711,151	62.40	10,359,270	56.62	11,955,286	77.27	48,490,788	55.66
African American	2,935	0.01	47,435	0.40	5,301	0.03	167,186	0.91	948	0.01	223,805	0.26
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	9,985	0.01
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>2,935</i>	<i>0.01</i>	<i>57,420</i>	<i>0.48</i>	<i>5,301</i>	<i>0.03</i>	<i>167,186</i>	<i>0.91</i>	<i>948</i>	<i>0.01</i>	<i>233,790</i>	<i>0.27</i>
WBEs	94,022	0.39	819,228	6.86	142,527	0.83	151,207	0.83	224,728	1.45	1,431,713	1.64
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	96,957	0.40	876,648	7.34	147,828	0.86	318,393	1.74	225,676	1.46	1,665,502	1.91
SBE	13,444,936	55.49	6,295,510	52.68	6,307,021	36.74	7,617,391	41.64	3,292,088	21.28	36,956,945	42.42
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	24,228,994	100.00	11,950,137	100.00	17,165,999	100.00	18,295,054	100.00	15,473,051	100.00	87,113,235	100.00

Source: COK Payments Data, M³ Consulting

6.5.2 Construction and Construction-Related Services Utilization Comparison

Table 6.9 shows a comparison of Contract Awards, Purchase Orders and Payments. It is important to note that Contract Awards do not reflect the original award amount due to adjustments made for subcontracting activity. The adjusted contract award amounts are reflected in Table 6.9. Purchase Orders and Payments do not reflect subcontractor data.

A comparative analysis across the three ways to measure utilization paints a very consistent picture. Total MWBE utilization does not reach the 3% level for either contract awards, purchase orders, or payments. Among the MWBE firms, only Women-owned firms exceed 1% of the dollars at 1.96% awards, 2.44% purchase orders, and 1.91% payments. This translates into \$2.08 million of the \$108.93 million contract awards, \$2.14 million of \$76.75 million purchase orders and \$1.43 million of \$87.11 million payments. The percentage of dollars for SBEs is of the same magnitude for the three utilization datasets: 40.19% contract awards, 34.65% purchase orders, and 42.42% payments.

Table 6.9 Construction and Construction-Related Services Utilization Comparison
Contract Awards, Purchase Orders, Payments—Dollars
Knoxville, TN MSA, FY 2017 – FY 2021

Ethnicity	Contract Awards		Purchase Orders		Payments	
	\$	%	\$	%	\$	%
Non-SMWBE	62,695,312	57.56	48,010,148	62.56	48,490,788	55.66
African American	319,004	0.29	259,091	0.34	223,805	0.26
Asian American	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00
Native American	51,450	0.05	9,985	0.01	9,985	0.01
Other MBEs	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>370,454</i>	<i>0.34</i>	<i>269,076</i>	<i>0.35</i>	<i>233,790</i>	<i>0.27</i>
WBEs	2,087,780	1.92	1,875,322	2.44	1,431,713	1.64
Unknown MWBE	-	0.00	-	0.00	-	0.00
Total MWBE	2,458,234	2.26	2,144,398	2.79	1,665,502	1.91
SBE	43,776,230	40.19	26,591,122	34.65	36,956,945	42.42
SDV/VOBE	-	0.00	-	0.00	-	0.00
Grand Total	108,929,776	100.00	76,745,669	100.00	87,113,235	100.00

Source: COK Contracts Data, PO and AP Data, M³ Consulting, Relevant Market— Knoxville, TN MSA

6.6 PROFESSIONAL SERVICES UTILIZATION

In the area of Professional Services, SMWBE utilization is presented in this section using dollars for purchase orders by year and for the study period, as well as for contract awards and payments for the study period. Counts of purchase orders, contract awards and payments are reflected in Appendix A. The relevant market for Professional Services is the State of Tennessee.

6.6.1 Professional Services Utilization Based on Purchase Orders

MWBE firms residing in the State of Tennessee relevant market in four of the five study years received purchase orders for Professional Services procurements at rates ranging from 2.67% in FY 2017 to 7.67% in FY 2019 (Table 610). FY 2021 appears to have been a banner year for minority and Women-owned firms as they received 48.43% of purchase order dollars. However, POs reported for the year totaled about \$1.35 million. The previous four years show that PO amounts ranged between \$7.4 million and \$15.19 million. Discounting the anomaly in FY 2021, Women-owned firms were awarded \$901,574 or 7.51% in FY 2019 which represents the most successful year for MWBE Professional Services procurement. In FY 2017 and FY 2018, MWBEs received awards of around 2.7% of dollars spent. None of the groups making up Minority-owned firms reached 0.5% in any of the study years. SBE firms reached double-digit percentages in each of the study years with a low of 11.74% (FY 2020) and a high of 43.07% (FY 2019). Veteran-owned and Disabled-owned businesses did not receive purchase orders.

Table 6.10. Professional Services Utilization
Purchase Order —Dollars
State of Tennessee, FY 2017 – FY 2021

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	12,887,719	84.85	6,474,057	74.95	5,912,712	49.27	6,199,002	83.66	229,600	17.01	31,703,091	71.10
African American	51,256	0.34	-	0.00	-	0.00	4,950	0.07	-	0.00	56,206	0.13
Asian American	-	0.00	-	0.00	-	0.00	9,880	0.13	-	0.00	9,880	0.02
Hispanic American	-	0.00	-	0.00	18,601	0.15	23,770	0.32	-	0.00	42,371	0.10
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>51,256</i>	<i>0.34</i>	<i>-</i>	<i>0.00</i>	<i>18,601</i>	<i>0.15</i>	<i>38,600</i>	<i>0.52</i>	<i>-</i>	<i>0.00</i>	<i>108,457</i>	<i>0.24</i>
WBEs	354,325	2.33	235,128	2.72	901,574	7.51	302,278	4.08	653,723	48.43	2,447,028	5.49
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	405,581	2.67	235,128	2.72	920,175	7.67	340,877	4.60	653,723	48.43	2,555,485	5.73
SBE	1,896,066	12.48	1,928,324	22.32	5,168,919	43.07	870,213	11.74	466,570	34.56	10,330,092	23.17
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	15,189,366	100.00	8,637,510	100.00	12,001,806	100.00	7,410,092	100.00	1,349,893	100.00	44,588,667	100.00

Source: COK Purchase Order Data, M³ Consulting

6.6.2 Professional Services Utilization Comparison

Professional Services purchase orders of \$44.59 million and payments of \$41.83 million are of the same magnitude. Contract award dollars total slightly more than \$12.4 million, (Table 6.11). MWBE participation for purchase orders and payments are relatively close 5.73% and 7.45% respectively. SBE participation rates are at 23.17% purchase orders and 33.57% of payments. This suggests that MWBE and SBE firm are issued POs and are receiving payments.

**Table 6.11 Professional Services Utilization
Comparison
Contract Awards, Purchase Orders, Payments—Dollars
State of Tennessee, FY 2017 – FY 2021**

Ethnicity	Contract Awards		Purchase Orders		Payments	
	\$	%	\$	%	\$	%
Non-SMWBE	10,812,529	87.18	31,703,091	71.10	24,667,391	58.96
African American	36,650	0.30	56,206	0.13	177,857	0.43
Asian American	-	0.00	9,880	0.02	18,589	0.04
Hispanic American	-	0.00	42,371	0.10	84,603	0.20
Native American	-	0.00	-	0.00	7,701	0.02
Other MBEs	-	0.00	-	0.00	5,506	0.01
<i>Total Minority</i>	<i>36,650</i>	<i>0.30</i>	<i>108,457</i>	<i>0.24</i>	<i>294,256</i>	<i>0.70</i>
WBEs	49,400	0.40	2,447,028	5.49	2,822,485	6.75
Unknown MWBE	-	0.00	-	0.00	-	0.00
Total MWBE	86,050	0.69	2,555,485	5.73	3,116,741	7.45
SBE	1,503,509	12.12	10,330,092	23.17	14,044,959	33.57
SDV/VOBE	-	0.00	-	0.00	4,980	0.01
Grand Total	12,402,088	100.00	44,588,667	100.00	41,834,070	100.00

Source: COK Contracts Data, PO and AP Data, M³ Consulting, Relevant Market— State of Tennessee

6.7 NON-PROFESSIONAL SERVICES UTILIZATION

Non-Professional Services. SMWBE utilization is presented in this section using dollars for Purchase Orders by year and for the study period; For contract awards, purchase orders, and payments, a comparison of dollars for the study period is shown. The relevant market for Non-Professional Services is Nationwide.

6.7.1 Non-Professional Services Utilization Based on Purchase Orders

Total PO dollars in this category spent by COK with firms nationwide is \$79.75 million from FY 2017 through FY 2021 (Table 6.12). More than 81% went to Non-SMWBE firms with MWBEs and SBEs accounting for 11.12% and 7.37% respectively. MWBEs received their highest total dollars (\$3.1 million) in FY 2018 and the highest percentage of dollars (37.93%) in FY 2020. Among the MWBEs, African American-owned firms and Women-owned firms combine for a total of \$7.35 million or 83.29% of total PO dollars awarded to these MWBE firms. SBE firms and SDV/VOBE firms together received \$5.93 million with most of these dollars \$5.88 million going to SBEs.

**Table 6.12. Non-Professional Services Utilization
Purchase Order —Dollars
Nationwide, FY 2017 – FY 2021**

Race/ Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	26,888,657	93.73	18,695,675	83.82	12,420,481	72.55	3,138,888	42.29	3,807,677	90.28	64,951,378	81.44
African American	502,963	1.75	381,996	1.71	293,025	1.71	2,396,519	32.29	20,033	0.47	3,594,537	4.51
Asian American	139,554	0.49	922,275	4.14	69,064	0.40	117,673	1.59	89,429	2.12	1,337,993	1.68
Hispanic American	100,877	0.35	-	0.00	-	0.00	-	0.00	18,304	0.43	119,181	0.15
Native American	10,400	0.04	-	0.00	-	0.00	13,374	0.18	-	0.00	23,774	0.03
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>753,794</i>	<i>2.63</i>	<i>1,304,271</i>	<i>5.85</i>	<i>362,089</i>	<i>2.12</i>	<i>2,527,566</i>	<i>34.06</i>	<i>127,766</i>	<i>3.03</i>	<i>5,075,485</i>	<i>6.36</i>
WBEs	20,274	0.07	1,799,940	8.07	1,591,002	9.29	287,319	3.87	90,231	2.14	3,788,765	4.75
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	774,068	2.70	3,104,211	13.92	1,953,091	11.41	2,814,884	37.93	217,996	5.17	8,864,251	11.12
SBE	1,009,030	3.52	496,545	2.23	2,712,736	15.85	1,467,956	19.78	192,018	4.55	5,878,286	7.37
SDV/VOBE	16,346	0.06	7,288	0.03	32,742	0.19	-	0.00	-	0.00	56,376	0.07
Grand Total	28,688,101	100.00	22,303,720	100.00	17,119,050	100.00	7,421,728	100.00	4,217,692	100.00	79,750,291	100.00

Source: COK Purchase Order Data, M³ Consulting

6.7.2 Non-Professional Services Utilization Comparison

A comparison of Non-Professional Services utilization across contract awards, purchase orders, and payments is found in Table 6.13. As reflected in the table, total purchase order dollars exceed awards and payments by more than \$35 million and \$25 million respectively. MWBEs received 20.97% of awards, 11.12% of POs and 19.06% of payments. Women-owned firms consistently make up the largest percentage of MWBE dollars at 11.35% awards, 4.75% POs, and 8.75% payments. Among minorities, African American-owned firms led with 4.52% awards, 4.51% purchase orders, and 5.32% payments. The purchase order and payments track well for each of the MWBE and SBE vendors as payments typically are nearly equal or exceed purchase orders. This is not the case for Non-SMWBE firms as their payments are about half of the PO dollars.

**Table 6.13 Non-Professional Services Utilization
Comparison
Contract Awards, Purchase Orders, Payments—Dollars
Nationwide, FY 2017 – FY 2021**

Ethnicity	Contract Awards		Purchase Orders		Payments	
	\$	%	\$	%	\$	%
Non-SMWBE	25,837,434	58.81	64,951,378	81.44	32,946,290	64.14
African American	1,987,410	4.52	3,594,537	4.51	2,733,186	5.32
Asian American	1,717,090	3.91	1,337,993	1.68	1,413,109	2.75
Hispanic American	287,102	0.65	119,181	0.15	209,892	0.41
Native American	234,620	0.53	23,774	0.03	138,172	0.27
Other MBEs	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>4,226,222</i>	<i>9.62</i>	<i>5,075,485</i>	<i>6.36</i>	<i>4,494,360</i>	<i>8.75</i>
WBEs	4,984,012	11.35	3,788,765	4.75	5,296,546	10.31
Unknown MWBE	-	0.00	-	0.00	-	0.00
Total MWBE	9,210,234	20.97	8,864,251	11.12	9,790,906	19.06
SBE	8,882,358	20.22	5,878,286	7.37	8,563,144	16.67
SDV/VOBE	-	0.00	56,376	0.07	67,217	0.13
Grand Total	43,930,026	100.00	79,750,291	100.00	51,367,556	100.00

Source: COK Contracts Data, PO and AP Data, M³ Consulting, Relevant Market— Nationwide

6.8 GOODS & SUPPLIES UTILIZATION

In the area of Goods & Supplies, SMWBE utilization is presented in this section using dollars for Purchase Orders by year and for the study period. For contract awards, purchase orders, and payments, a comparison of dollars for the study period is shown. The relevant market for Goods & Supplies is Nationwide.

6.8.1 Goods & Supplies Utilization Based on Purchase Orders

As shown in Table 6.14, most of the purchase orders in Goods & Supplies were to Non-SMWBEs at 77.79% or \$103.97 million. Each year, except for FY 2020, these Non-SMWBE firms exceed 70% of POs with a high of more than 85% in FY 2021. A track of MWBE POs reveals uneven participation from year-to-year around 3% in FY 2017 and FY 2019, peaking at 32.67% in FY 2020 before reverting back to single digits (6.94%) in FY 2021. The overall MWBE participation rate for the study period is 10.14%. Women-owned firms garnered \$11.83 million representing 87.27% of the \$13.55 million received by MWBEs. Asian American-owned firms at 1.38 million comprise 10.21% of MWBE dollars. SBE firms were issued POs totaling \$15.9 million (11.90%). SDV/VOBE firms received \$228.45 (0.17%).

**Table 6.14. Goods & Supplies Utilization
Purchase Order —Dollars
Nationwide, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	14,730,553	82.01	26,520,488	79.90	9,590,710	70.86	10,778,582	56.10	42,348,782	85.12	103,969,115	77.79
African American	1,376	0.01	-	0.00	56,356	0.42	-	0.00	6,578	0.01	64,310	0.05
Asian American	82,043	0.46	1,157,055	3.49	43,162	0.32	37,125	0.19	65,142	0.13	1,384,527	1.04
Hispanic American	-	0.00	89,473	0.27	-	0.00	-	0.00	35,944	0.07	125,417	0.09
Native American	32,766	0.18	34,201	0.10	-	0.00	54,101	0.28	30,085	0.06	151,153	0.11
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>116,185</i>	<i>0.65</i>	<i>1,280,729</i>	<i>3.86</i>	<i>99,518</i>	<i>0.74</i>	<i>91,227</i>	<i>0.47</i>	<i>137,749</i>	<i>0.28</i>	<i>1,725,407</i>	<i>1.29</i>
WBEs	545,433	3.04	1,468,581	4.42	316,471	2.34	6,185,158	32.19	3,313,277	6.66	11,828,920	8.85
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	661,617	3.68	2,749,310	8.28	415,990	3.07	6,276,384	32.67	3,451,026	6.94	13,554,327	10.14
SBE	2,556,766	14.23	3,887,069	11.71	3,499,833	25.86	2,076,895	10.81	3,880,049	7.80	15,900,611	11.90
SDV/VOBE	13,725	0.08	34,470	0.10	27,500	0.20	80,267	0.42	72,443	0.15	228,405	0.17
Grand Total	17,962,661	100.00	33,191,336	100.00	13,534,032	100.00	19,212,128	100.00	49,752,299	100.00	133,652,457	100.00

Source: COK Purchase Order Data, M³ Consulting

6.8.2 Goods & Supplies Utilization Comparison

Purchase orders may better reflect the utilization of Goods & Supplies, as most contracts in this procurement type are multi-year requirements contracts, and the purchase order may better reflect the dollar awards within a year. In Table 6.15 POs and payments reflect similar findings with MWBEs receiving 12.55 million (10.14%) of POS and 13.60 million (10.51%) payments. Among minority firms, Asian American–owned firms are the only group to exceed 1% at 1.98% of awards, 1.09% of POs, and 1.1% of payments. WBEs were more successful with 2.03%, 8.85%, and 8.09% of contract awards, purchase orders, and payments, respectively.

**Table 6.15 Goods & Supplies Utilization
Comparison
Contract Awards, Purchase Orders, Payments—Dollars
Nationwide, FY 2017 – FY 2021**

Ethnicity	Contract Awards		Purchase Orders		Payments	
	\$	%	\$	%	\$	%
Non-SMWBE	41,291,561	82.58	103,969,115	77.79	92,343,069	71.31
African American	59,624	0.12	64,310	0.05	87,909	0.07
Asian American	989,821	1.98	1,384,527	1.04	1,420,415	1.10
Hispanic American	37,348	0.07	125,417	0.09	1,133,081	0.87
Native American	247,114	0.49	151,153	0.11	492,892	0.38
Other MBEs	11,233	0.02	-	0.00	-	0.00
<i>Total Minority</i>	<i>1,345,139</i>	<i>2.69</i>	<i>1,725,407</i>	<i>1.29</i>	<i>3,134,298</i>	<i>2.42</i>
WBEs	1,016,875	2.03	11,828,920	8.85	10,474,928	8.09
Unknown MWBE	-	0.00	-	0.00	-	0.00
Total MWBE	2,362,015	4.72	13,554,327	10.14	13,609,226	10.51
SBE	6,263,480	12.53	15,900,611	11.90	23,159,446	17.88
SDV/VOBE	85,207	0.17	228,405	0.17	387,328	0.30
Grand Total	50,002,263	100.00	133,652,457	100.00	129,499,069	100.00

Source: COK Contracts Data, PO and AP Data, M³ Consulting, Relevant Market— Nationwide

6.9 UTILIZATION THRESHOLDS

Below are utilization thresholds presented for each procurement type. Purchase order dollars are utilized to calculate threshold values. Thresholds presented are: Below \$5K; \$5K-\$10K; \$10K-\$50K; \$50K-\$100K; \$100K-\$250K; \$250K-\$500K; \$500K-\$1M; \$1M-\$5M; \$5M-\$10M; and above \$10M.

Architecture & Engineering Thresholds

Table 6.16 presents Architecture and Engineering utilization dollars and percentages by race/ethnicity/gender using the thresholds above. There were no POs for Architecture and Engineering contracts above \$5M. MBE's and SDV/VOBE's did not participate in Architecture and Engineering contracting at any level. SBE firms received 100% of contracts below \$5K. Non-SMWBE, WBE, and SBE firms each were awarded in the \$5K-\$25K range. Non-SMWBEs received 37.02%, WBEs 8.22% and SBEs 54.75% of the \$513,203 total in this threshold. A similar amount(\$541,652) was paid in the \$25K-\$50K threshold with 72.69% to Non-SMWBEs and 27.41% to SBEs. SBE firms led in participation in the \$50K-\$100K threshold with 48.21% to 32.20%for Non-SMWBEs and 19.59% to WBEs. In thresholds above \$250K, only Non-SMWBE and SBE firms show participation: Non-SMWBEs at 89.47% for \$250K-\$500k and 74.59% for \$500K-\$1M. SBEs make up the remaining percentage in those two thresholds at 10.53% and 25.46%. Interestingly, in the top threshold, (\$1M-\$5M) for which Architecture and Engineering firms received POs, SBEs led with 78.34% compared to Non-SMWBEs at 21.66%.

**Table 6.16. Architecture & Engineering Utilization Thresholds
Purchase Orders—Dollars
City of Knoxville, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Below 5K		5K-25K		25K-50K		50K-100K		100K-250K	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	-	0.00	189,990	37.02	392,745	72.59	226,462	32.20	1,012,098	78.07
African American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>
WBEs	-	0.00	42,194	8.22	-	0.00	137,811	19.59	-	0.00
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	-	0.00	42,194	8.22	-	0.00	137,811	19.59	-	0.00
SBE	4,000	100.00	281,019	54.76	148,337	27.41	339,085	48.21	284,266	21.93
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	4,000	100.00	513,203	100.00	541,082	100.00	703,359	100.00	1,296,363	100.00

Source: COK Purchase Order Data, M³ Consulting

**Table 6.16 cont. Architecture & Engineering Utilization Thresholds
Purchase Orders—Dollars
City of Knoxville, FY 2017 – FY 2021**

Race /Ethnicity /Gender	250K-500K		500K-1M		1M-5M		Above 5M		TOTAL	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	4,228,456	89.47	1,684,271	74.54	1,002,115	21.66	-	0.00	8,736,138	59.55
African American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>
WBEs	-	0.00	-	0.00	-	0.00	-	0.00	180,005	1.23
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	-	0.00	-	0.00	-	0.00	-	0.00	180,005	1.23
SBE	497,810	10.53	575,300	25.46	3,623,617	78.34	-	0.00	5,753,434	39.22
SDV/VOBE		0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	4,726,266	100.00	2,259,571	100.00	4,625,732	100.00	-	0.00	14,669,576	100.00

Source: COK Purchase Order Data, M³ Consulting

Construction and Construction-Related Services Thresholds

Table 6.17 shows that more than 50% of total dollars (\$148.03 million) are in the above \$5M threshold. Of those dollars, 93% were issued to Non-SMWBEs and 7% to SBEs. These two firm categories also received all the dollars in the \$1M-\$5M threshold. However, the distribution changed with SBEs at 25.74% and Non-SMWBEs at 74.26%. For thresholds above \$250K to \$1M, Women-owned firms show participation at 2.66% in the \$250K-\$500K threshold and 6.88% in the \$500K-\$1M threshold. In thresholds above \$25K but less than \$250K, African American-owned firms received 6.15% for the \$50k-\$100K and 3.66% for the \$100K-\$250K threshold. Women-owned firms participated in every threshold between \$5K and \$250K, except for \$25K-\$50K. Their percentages ranged between 6.25% and 16.16%. Native American-owned firms participated in the \$5K-\$25K threshold at 3.72%. Asian American-Owned, Hispanic American-Owned, and SDV/VOBE firms did not participate at any level. In thresholds below \$250K, SBE firms ranged from a low of 23.17% in the \$25K-\$50K threshold to a high of 53.44% in the \$100K-\$250K threshold.

**Table 6.17. Construction and Construction-Related Services Utilization Thresholds
Purchase Orders—Dollars
Knoxville, TN MSA, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Below 5K		5K-25K		25K-50K		50K-100K		100K-250K	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	-	0.00	132,896	49.52	112,230	76.63	530,946	60.43	2,005,806	35.80
African American	-	0.00	-	0.00	-	0.00	54,024	6.15	205,067	3.66
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	9,985	3.72	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	<i>9,985</i>	<i>3.72</i>	-	<i>0.00</i>	<i>54,024</i>	<i>6.15</i>	<i>205,067</i>	<i>3.66</i>
WBEs	-	0.00	43,380	16.16	-	0.00	54,957	6.25	398,085	7.10
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	-	0.00	53,365	19.88	-	0.00	108,981	12.40	603,152	10.76
SBE	8,148	100.00	82,108	30.60	34,225	23.37	238,709	27.17	2,994,543	53.44
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	8,148	100.00	268,369	100.00	146,455	100.00	878,636	100.00	5,603,501	100.00

Source: COK Purchase Order Data, M³ Consulting

**Table 6.17 cont. Construction and Construction-Related Services Utilization Thresholds
Purchase Orders—Dollars
Knoxville, TN MSA, FY 2017 – FY 2021**

Race /Ethnicity /Gender	250K-500K		500K-1M		1M-5M		Above 5M		TOTAL	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	4,865,151	50.12	6,856,932	42.09	30,192,662	74.26	69,252,287	93.00	113,948,911	76.98
African American	-	0.00	-	0.00	-	0.00	-	0.00	259,091	0.18
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	9,985	0.01
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	-
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>269,076</i>	<i>0.18</i>
WBEs	258,246	2.66	1,120,654	6.88	-	0.00	-	0.00	1,875,322	1.27
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	258,246	2.66	1,120,654	6.88	-	0.00	-	0.00	2,144,398	1.45
SBE	4,584,515	47.22	8,312,514	51.03	10,468,047	25.74	5,215,021	7.00	31,937,830	21.58
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	9,707,912	100.00	16,290,100	100.00	40,660,709	100.00	74,467,308	100.00	148,031,139	100.00

Source: COK Purchase Order Data, M³ Consulting

Professional Services Thresholds

Professional Services thresholds are displayed in Table 6.18. Non-SMWBE firms show participation in all thresholds. SBE firms are active in all levels except above \$5M. Together Non-SMWBE and SBE firms account for 80% and above for each threshold level except \$100K–\$250K, where the percentage sums to 66.46%. In fact, as the levels increase, so does the combined percentage, which moves above 95% for levels between \$250K and \$1M. For the two, the \$1M–\$5M threshold added to 100%. Non-SMWBEs registered 100% in the above \$5M level. Women-owned firms show participation in all levels below \$1M, ranging from a low of 4.84% in \$250K–500K to a high of 19.64% in the \$25K–\$50K threshold. African American-owned firms received PO dollars in two levels: \$50K–100K and \$100K–\$250K, resulting in percentages of 6.15% and 3.66% respectively. Native American-owned firms received 3.72% of the dollars in the \$5K–\$25K threshold. SDV/VOBE, Asian American, and Hispanic American firms did not receive Professional Services awards.

Table 6.18. Professional Services Utilization Thresholds
Purchase Orders—Dollars
State of Tennessee, FY 2017 – FY 2021

Race /Ethnicity /Gender	Below 5K		5K-25K		25K-50K		50K-100K		100K-250K	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	46,234	48.83	792,169	46.43	428,081	48.73	1,683,889	57.11	1,684,254	34.94
African American	4,950	5.23	-	0.00	-	0.00	51,256	1.74	-	0.00
Asian American	-	0.00	15,265	0.89	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	49,871	2.92	-	0.00	-	0.00	100,000	2.07
Native American	-	0.00	-	0.00	-	0.00	-	0.00	151,000	3.13
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>4,950</i>	<i>5.23</i>	<i>65,136</i>	<i>3.82</i>	<i>-</i>	<i>0.00</i>	<i>51,256</i>	<i>1.74</i>	<i>251,000</i>	<i>5.21</i>
WBEs	7,468	7.89	221,634	12.99	172,544	19.64	149,000	5.05	1,365,397	28.33
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	12,418	13.11	286,770	16.81	172,544	19.64	200,256	6.79	1,616,397	33.54
SBE	36,039	38.06	627,233	36.76	277,786	31.62	974,287	33.04	1,519,211	31.52
SDV/VOBE	-	0.00	-	0.00	-	0.00	90,277	3.06	-	0.00
Grand Total	94,691	100.00	1,706,172	100.00	878,411	100.00	2,948,710	100.00	1,296,363	100.00

Source: COK Purchase Order Data, M³ Consulting

**Table 6.18 cont. Professional Services Utilization Thresholds
Purchase Orders—Dollars
State of Tennessee, FY 2017 – FY 2021**

Race /Ethnicity /Gender	250K-500K		500K-1M		1M-5M		Above 5M		TOTAL	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	3,858,157	72.90	3,689,660	78.20	8,741,067	61.51	16,711,005	100.00	37,634,515	73.25
African American	-	0.00	-	0.00	-	0.00	-	0.00	56,206	0.11
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	15,265	0.03
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	149,871	0.29
Native American	-	0.00	-	0.00	-	0.00	-	0.00	151,000	0.29
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>372,342</i>	<i>0.72</i>
WBEs	255,954	4.84	514,989	10.92	-	0.00	-	0.00	2,686,986	5.23
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	255,954	4.84	514,989	10.92	-	0.00	-	0.00	3,059,328	5.95
SBE	1,178,052	22.26	513,298	10.88	5,468,689	38.49	-	0.00	10,594,595	20.62
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	90,277	0.18
Grand Total	5,292,163	100.00	4,717,947	100.00	14,209,755	100.00	16,711,005	100.00	14,669,576	100.00

Source: COK Purchase Order Data, M³ Consulting

Non-Professional Services Thresholds

Unlike the results of the Professional Services threshold analysis, in which MWBEs were absent in several levels, their participation in Non-Professional Services occurred across almost all the levels below \$5 million (Table 6.19). Among Minority-owned firms, those owned by African Americans were most prevalent. Their participation ranged from a low of 0.16% in the below \$5K threshold to a high of 15.98% in the \$250K–\$500K. Overall, African American firms were 4.51% of the grand total (\$79.75 million).

Hispanic American-owned firms participate in three of the nine levels. They achieve their highest percentage in the \$50K–\$100K level at 2.06%. Asian American-owned firms show POs awarded in five thresholds: Below \$5K (29.80%), \$5K–\$25K (4.09%), \$50K–100K (1.38%), \$100K–\$250K (5.07%), and \$500K–\$1M (21.13%). Native American-owned firms are less than 1% in the \$5–\$25K threshold. Women-owned firms appear in all levels below \$250K with awards amounting to percentages between 1.17% in the threshold below \$5K to 7.10% in the \$50K–\$100K threshold. At higher-level thresholds, Women-owned firms notably received 19.79% in the \$1M–\$5M threshold. As a group, MWBE firms' participation measures from a low of 11.91% in threshold \$25K–\$50K to a high of 35.29% in the \$1M–\$5M threshold.

SDV/VOBEs receive 2.54% of POs in the below \$5K and 1.36% in the \$25K–\$50K threshold. SBE firms received POs in every threshold below \$1M–\$5M. They participate at double-digit percentages in most the thresholds.

**Table 6.19. Non-Professional Services Utilization Thresholds
Purchase Orders—Dollars
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Below 5K		5K-25K		25K-50K		50K-100K		100K-250K	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	540,559	58.07	2,527,622	75.95	1,648,879	68.42	3,694,437	76.72	3,128,033	49.99
African American	1,500	0.16	63,711	1.91	135,096	5.61	113,783	2.36	380,518	6.08
Asian American	277,410	29.80	136,071	4.09	-	0.00	66,638	1.38	317,048	5.07
Hispanic American	4,981	0.54	15,000	0.45	-	0.00	99,200	2.06	-	0.00
Native American	-	0.00	23,774	0.71	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>283,891</i>	<i>30.50</i>	<i>238,556</i>	<i>7.17</i>	<i>135,096</i>	<i>5.61</i>	<i>279,620</i>	<i>5.81</i>	<i>697,566</i>	<i>11.15</i>
WBEs	10,848	1.17	182,615	5.49	151,965	6.31	342,080	7.10	175,451	2.80
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	294,739	31.66	421,171	12.66	287,061	11.91	621,700	12.91	873,017	13.95
SBE	71,990	7.73	379,048	11.39	441,204	18.31	499,368	10.37	2,256,831	36.06
SDV/VOBE	23,634	2.54	-	0.00	32,742	1.36	-	0.00	-	0.00
Grand Total	930,922	100.00	3,327,840	100.00	2,409,886	100.00	4,815,506	100.00	6,257,880	100.00

Source: COK Purchase Order Data, M³ Consulting

**Table 6.19 cont. Non-Professional Services Utilization Thresholds
Purchase Orders—Dollars
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	250K-500K		500K-1M		1M-5M		Above 5M		TOTAL	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	1,535,273	40.25	1,458,595	56.99	9,564,880	64.71	40,853,101	100.00	64,951,378	81.44
African American	609,433	15.98	-	0.00	2,290,497	15.50	-	0.00	3,594,537	4.51
Asian American	-	0.00	540,827	21.13	-	0.00	-	0.00	1,337,993	1.68
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	119,181	0.15
Native American	-	0.00	-	0.00	-	0.00	-	0.00	23,774	0.03
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>609,433</i>	<i>15.98</i>	<i>540,827</i>	<i>21.13</i>	<i>2,290,497</i>	<i>15.50</i>	<i>-</i>	<i>0.00</i>	<i>5,075,485</i>	<i>6.36</i>
WBEs	-	0.00	-	0.00	2,925,805	19.79	-	0.00	3,788,765	4.75
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	609,433	15.98	540,827	21.13	5,216,302	35.29	-	0.00	8,864,251	11.12
SBE	1,669,845	43.78	560,000	21.88	-	0.00	-	0.00	5,878,286	7.37
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	56,376	0.07
Grand Total	3,814,551	100.00	2,559,422	100.00	14,781,182	100.00	40,853,101	100.00	79,750,291	100.00

Source: COK Purchase Order Data, M³ Consulting

Goods & Supplies Thresholds

In Table 6.20, Non-SMWBE suppliers receive roughly 65 to 80% of POs in thresholds up to \$1M-\$5M and 100% in the above \$5M threshold. Minority-owned firms participate in every level below \$100K and within the \$1M-\$5M threshold. While Hispanic-owned firms participate in all thresholds below \$100K, their participation never rose to 1% in any of them. Likewise, African American-owned firms, which participate in three of the four thresholds lower than \$100K, never have rates to reach 1%.

Asian American-owned firms are in the 1% range in the \$5K-\$25K and \$25K-\$50K thresholds, increasing to 4.48% in the \$1M-\$5M threshold. Women-owned firms are present in all threshold levels below the above \$5M threshold. Participation by WBEs ranges from 3.11% in the \$100K-\$250K level to a high of 9.95% in the \$5K-\$25K level. SDV/VOBE firms receive one to two percent in levels below \$50K. SBE suppliers receive POs in every level below \$5M. Their lowest (7.29%) occurs in the \$1M-\$5M threshold and a high of 20.53% in \$5K-\$25K threshold. These firms received double-digit percentages on POs for all levels below \$1M.

Table 6.20. Goods & Supplies Utilization Thresholds
Purchase Orders—Dollars
Nationwide, FY 2017 – FY 2021

Race /Ethnicity /Gender	Below 5K		5K-25K		25K-50K		50K-100K		100K-250K	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	1,104,576	74.16	4,109,264	64.04	4,774,755	75.64	7,316,133	78.66	12,610,526	75.24
African American	1,376	0.09	12,401	0.19	-	0.00	50,533	0.54	-	0.00
Asian American	139,684	9.38	156,890	2.45	28,491	0.45	-	0.00	-	0.00
Hispanic American	2,184	0.15	5,760	0.09	28,000	0.44	89,473	0.96	-	0.00
Native American	1,622	0.11	79,228	1.23	70,303	1.11	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>144,865</i>	<i>9.73</i>	<i>254,280</i>	<i>3.96</i>	<i>126,794</i>	<i>2.01</i>	<i>140,006</i>	<i>1.51</i>	<i>-</i>	<i>0.00</i>
WBEs	49,690	3.34	638,491	9.95	291,198	4.61	651,399	7.00	521,356	3.11
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	194,555	13.06	892,771	13.91	417,992	6.62	791,406	8.51	521,356	3.11
SBE	175,343	11.77	1,317,632	20.53	1,002,883	15.89	1,192,915	12.83	3,627,588	21.65
SDV/VOBE	14,951	1.00	96,853	1.51	116,601	1.85	-	0.00	-	0.00
Grand Total	1,489,426	100.00	6,416,520	100.00	6,312,230	100.00	9,300,453	100.00	16,759,469	100.00

Source: COK Purchase Order Data, M³ Consulting

**Table 6.20 cont. Goods & Supplies Utilization Thresholds
Purchase Orders—Dollars
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	250K-500K		500K-1M		1M-5M		Above 5M		TOTAL	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	9,257,005	68.76	14,814,892	63.95	16,902,903	71.42	33,079,061	100.00	103,969,115	77.79
African American	-	0.00	-	0.00	-	0.00	-	0.00	64,310	0.05
Asian American	-	0.00	-	0.00	1,059,462	4.48	-	0.00	1,384,527	1.04
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	125,417	0.09
Native American	-	0.00	-	0.00	-	0.00	-	0.00	151,153	0.11
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>1,059,462</i>	<i>4.48</i>	-	<i>0.00</i>	<i>1,725,407</i>	<i>1.29</i>
WBEs	662,135	4.92	5,034,200	21.73	3,980,451	16.82	-	0.00	11,828,920	8.85
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	662,135	4.92	5,034,200	21.73	5,039,913	21.29	-	0.00	13,554,327	10.14
SBE	3,543,449	26.32	3,315,525	14.31	1,725,276	7.29	-	0.00	15,900,611	11.90
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	228,405	0.17
Grand Total	13,462,589	100.00	23,164,617	100.00	23,668,092	100.00	33,079,061	100.00	133,652,457	100.00

Source: COK Purchase Order Data, M³ Consulting

6.10 TOP TEN BIDDERS AND AWARDEES

In trying to decipher patterns of utilization of firms by their race, ethnicity, and/or gender within each procurement type, the analysis below seeks to determine whether the same awardees repeatedly received COK contracts, as well as the success rate of COK’s top ten bidders in obtaining COK contracts.

A. Top Ten Bidders and Awardees for Architecture & Engineering

The Top Ten Bidders and Awardees consists of Non-SMWBE and SBE firms for Architecture and Engineering contracts (Tables 6.21 and 6.22). Nine of the top ten bidders are located in the City of Knoxville and one is in the MSA. The top ten bidders are split evenly between Non-SMWBEs and SBEs. Of the top ten awardees, eight are located in the city. Two are in the state of Tennessee. Five of the Architecture and Engineering firms appear in both lists: Two are SBEs and 3 are Non-SMWBEs. The top ten awardees had success rates above 50% (Table 6.23). The two firms below 50% were at 33% and 40%.

**Table 6.21. Top Ten Bidders
Architecture & Engineering
Nationwide, FY 2017 - FY 2021**

Bidder	Count of Bids	% of Counts	Race/Ethnicity/Gender	Location
Cannon & Cannon, Inc.	9	0.29	SBE	In City
CDM Smith Inc.	7	0.22	Non-SMWBE	In City
Michael Brady, Inc.	6	0.19	Non-SMWBE	In City
Barge, Waggoner, Sumner & Cannon, Inc.	6	0.19	SBE	In City
Thomas Caldwell, Architect	5	0.16	SBE	In City
Vaughn & Melton Consulting Engineers, Inc	5	0.16	Non-SMWBE	In City
Fulghum, MacIndoe & Associates, Inc.	5	0.16	SBE	In City
East Tennessee Community Design Center	4	0.13	Non-SMWBE	In City
Sanders [Pace] Architecture, LLC	3	0.10	SBE	In City
S&ME, Inc.	3	0.10	Non-SMWBE	In MSA
Grand Total	113*	3.60		

Source: City of Knoxville Contracts Data; M³ Consulting

*Represent the count of all bids within the procurement category

**Table 6.22. Top Ten Awardees
Architecture & Engineering
Contract Awards
Nationwide, FY 2017 - FY 2021**

Awardees	Dollars	% of Dollars	Awards	% of Awards	Race/ Ethnicity/ Gender	Location
McCarty Holsaple McCarty, Inc.	2,607,694	30.02	1	0.08	SBE	In City
Barge, Waggoner, Sumner & Cannon, Inc.	1,256,530	14.46	5	0.42	SBE	In City
Cannon & Cannon, Inc.	783,725	9.02	5	0.42	SBE	In City
Vaughn & Melton Consulting Engineers, Inc	736,373	8.48	3	0.25	Non-SMWBE	In City
CDM Smith Inc.	640,090	7.37	5	0.42	Non-SMWBE	In City
Kimley-Horn & Associates, Inc.	582,500	6.71	2	0.17	Non-SMWBE	In State
Gresham Smith	572,378	6.59	2	0.17	Non-SMWBE	In State
Barge Design Solutions Inc.	278,500	3.21	1	0.08	Non-SMWBE	In City
Fulghum, MacIndoe & Associates, Inc.	181,300	2.09	2	0.17	SBE	In City
East Tennessee Community Design Center	155,684	1.79	4	0.34	Non-SMWBE	In City
Grand Total	8,687,432*	2.46	66	5.54		

Source: City of Knoxville Contracts Award Data, M³ Consulting, Highlighted firms represent outliers

*Total Award amount within procurement category

Table 6.23. Success Rate of Top Ten Awardees: Architecture & Engineering Nationwide, FY 2017 - FY 2021

Architecture & Engineering	Total Bids	% of Bids	Race/Ethnicity/Gender	Location	# of Awards	% Success rate
McCarty Holsaple McCarty, Inc.	1	0.03	SBE	In City	1	100.00
Barge, Waggoner, Sumner & Cannon, Inc.	6	0.19	SBE	In City	5	83.33
Cannon & Cannon, Inc.	9	0.29	SBE	In City	5	55.56
Vaughn & Melton Consulting Engineers, Inc	5	0.16	Non-SMWBE	In City	3	60.00
CDM Smith Inc.	7	0.22	Non-SMWBE	In City	5	71.43
Kimley-Horn & Associates, Inc.	2	0.06	Non-SMWBE	In State	2	100.00
Gresham Smith	2	0.06	Non-SMWBE	In State	2	100.00
Barge Design Solutions Inc.	3	0.10	Non-SMWBE	In City	1	33.33
Fulghum, MacIndoe & Associates, Inc.	5	0.16	SBE	In City	2	40.00
East Tennessee Community Design Center	4	0.13	Non-SMWBE	In City	4	100.00
Grand Total	113*	3.60			66	58.41

Source: City of Knoxville Contracts Award Data, M³ Consulting, Highlighted firms represent outliers

*Represents the count of all bids within the procurement category

B. Top Ten Bidders and Awardees for Construction and Construction-Related Services

SBEs represent seven of the top ten bidders for Construction and Construction-Related Services. The other three are Non-SMWBEs (Table 6.24). Five of the top ten are located in the city: 1 in the MSA, 3 in the state, and 1 nationwide. These top ten bidders are about one-fifth of bids received for this procurement type. Half of the top ten bidders are also in the top ten awardees list (Table 6.25). Together, the top ten awardees received 65.74% of total dollars. Although SBE firms occupy seven of the top ten places among bidders, they represent 4 of the top ten in contract awards. Success rates for this group of awardees exceed 50% for 6 of the firms. Among the 6, just 1 is a SBE.

**Table 6.24. Top Ten Bidders
Construction and Construction-Related Services
Nationwide, FY 2017 – FY 2021**

Bidders	Count of Bids	% of Counts	Race/Ethnicity/Gender	Location
Southern Constructors	53	1.69	SBE	In City
Design & Construction	46	1.47	SBE	In City
Mckinnon Construction Company, LLC	18	0.57	SBE	In City
Whaley Construction, LLC	17	0.54	SBE	In State
Rogers Group, Inc.	11	0.35	Non-SMWBE	In City
Adams Contracting, LLC	11	0.35	SBE	Nationwide
APAC-Atlantic, Inc.	10	0.32	Non-SMWBE	In MSA
Charles Blalock and Sons, Inc.	9	0.29	Non-SMWBE	In State
Ronald Franks Construction Co., LLC	9	0.29	SBE	In State
The Franklin Group, LLC	9	0.29	SBE	In City
Grand Total	628*	20.01		

Source: City of Knoxville Contracts Data; M³ Consulting

*Represents the count of all bids within the procurement category

**Table 6.25. Top Ten Awardees
Construction and Construction-Related Services
Contract Awards
Nationwide, FY 2017 – FY 2021**

Awardees	Dollars	% of Dollars	Awards	% of Awards	Race/ Ethnicity/ Gender	Location
Messer Construction Company	82,513,000	35.48	2	0.17	Non-SMWBE	Nationwide
Rogers Group, Inc.	39,798,138	17.11	7	0.59	Non-SMWBE	In City
Design & Construction	12,699,695	5.46	24	2.01	SBE	In City
Siemens Industry, Inc	9,764,618	4.20	1	0.08	Non-SMWBE	In State
Southern Constructors	8,810,780	3.79	11	0.92	SBE	In City
APAC-Atlantic, Inc.	8,047,251	3.46	1	0.08	Non-SMWBE	In MSA
Bell & Associates Construction, LLC	7,590,431	3.26	3	0.25	Non-SMWBE	In State
Jones Brother's Construction	7,259,061	3.12	4	0.34	SBE	In MSA
Charles Blalock and Sons, Inc.	6,011,426	2.59	3	0.25	Non-SMWBE	In State
Mckinnon Construction Company, LLC	4,736,358	2.04	4	0.34	SBE	In City
Grand Total	232,540,366*	65.74	212	17.80		

Source: City of Knoxville Contracts Award Data, M³ Consulting, Highlighted firms represent outliers

*Total Award amount within procurement category

Table 6.26. Success Rate of Top Ten Awardees: Construction and Construction-Related Services Nationwide, FY 2017 – FY 2021

Construction and Construction-Related Services	Total Bids	% of Bids	Race/Ethnicity/Gender	Location	# of Awards	% Success rate
Messer Construction Company	2	0.06	Non-SMWBE	Nationwide	2	100.00
Rogers Group, Inc.	11	0.35	Non-SMWBE	In City	7	63.64
Design & Construction	46	1.47	SBE	In City	24	52.17
Siemens Industry, Inc	1	0.03	Non-SMWBE	In State	1	100.00
Southern Constructors	53	1.69	SBE	In City	11	20.75
APAC-Atlantic, Inc.	10	0.32	Non-SMWBE	In MSA	1	10.00
Bell & Associates Construction, LLC	3	0.10	Non-SMWBE	In State	3	100.00
Jones Brother's Construction	5	0.16	SBE	In MSA	4	80.00
Charles Blalock and Sons, Inc.	9	0.29	Non-SMWBE	In State	3	33.33
Mckinnon Construction Company, LLC	18	0.57	SBE	In City	4	22.22
Grand Total	628*	20.01			212	33.76

Source: City of Knoxville Contracts Award Data, M³ Consulting, Highlighted firms represent outliers

*Represents the count of all bids within the procurement category

C. Top Ten Bidders and Awardees for Professional Services

Tables 6.27 and 6.28 display the top ten bidders and awardees for Professional Services. One WBE and 1 SBE are among the top ten bidders. Three of the ten are located in the city, 4 in the state, and the remaining 3 were nationwide. Five of the top bidders are also in the top ten awardees. However, the only WBE and SBE firms in the bidders list did not make the top ten awardees, all ten of which are Non-SMWBEs. The top ten awardees locations include 2 in the city, 5 in the state, and 3 nationwide. All of the awardees were successful in at least 50% or of their bids (Table 6.29).

**Table 6.27. Top Ten Bidders
Professional Services
Nationwide, FY 2017 – FY 2021**

Bidders	Count of Bids	% of Counts	Race/Ethnicity/Gender	Location
Willis Towers Watson Southeast Inc	11	0.35	Non-SMWBE	In City
Vaughn & Melton Consulting Engineers, Inc	7	0.22	Non-SMWBE	In City
Gresham Smith	6	0.19	Non-SMWBE	In State
Fred D. Thompson, Jr.	6	0.19	SBE	In State
CDM Smith Inc.	6	0.19	Non-SMWBE	In City
Toole Design Group, LLC	5	0.16	WBE	Nationwide
Cigna Health and Life Insurance Company	5	0.16	Non-SMWBE	Nationwide
BlueCross BlueShield of Tennessee	4	0.13	Non-SMWBE	In State
BlueRe of Tennessee	4	0.13	Non-SMWBE	Nationwide
Kimley-Horn & Associates, Inc.	4	0.13	Non-SMWBE	In State
Grand Total	256*	8.16		

Source: City of Knoxville Contracts Data; M³ Consulting

*Represents the count of all bids within the procurement category

**Table 6.28. Top Ten Awardees
Professional Services
Contract Awards
Nationwide, FY 2017 – FY 2021**

Awardees	Dollars	% of Dollars	Awards	% of Awards	Race/ Ethnicity/ Gender	Location
Premise Health Employer Solutions, LLC	2,334,977	12.56	1	0.08	Non-SMWBE	In State
Vaughn & Melton Consulting Engineers, Inc	2,104,918	11.32	4	0.34	Non-SMWBE	In City
BlueRe of Tennessee	1,429,492	7.69	4	0.34	Non-SMWBE	Nationwide
Crosslin & Associates	1,333,000	7.17	1	0.08	Non-SMWBE	In State
Willis Towers Watson Southeast Inc	1,087,147	5.85	10	0.84	Non-SMWBE	In City
HM Life Insurance Group	1,055,010	5.67	2	0.17	Non-SMWBE	Nationwide
BlueCross BlueShield of Tennessee	759,705	4.09	2	0.17	Non-SMWBE	In State
Trident Public Risk Solutions (Argo Group) & Travelers	731,094	3.93	2	0.17	Non-SMWBE	In State
Gresham Smith	593,520	3.19	3	0.25	Non-SMWBE	In State
Wage Works, Inc..	420,000	2.26	1	0.08	Non-SMWBE	Nationwide
Grand Total	18,592,112*	5.26	123	10.33		

Source: City of Knoxville Contracts Award Data, M³ Consulting, Highlighted firms represent outliers

*Total Award amount within procurement category

**Table 6.29. Success Rate of Top Ten Awardees: Professional Services
State of Tennessee, FY 2017 – FY 2021**

Professional Services	Total Bids	% of Bids	Race/Ethnicity/Gender	Location	# of Awards	% Success rate
Premise Health Employer Solutions, LLC	1	0.03	Non-SMWBE	In State	1	100.00
Vaughn & Melton Consulting Engineers, Inc	7	0.22	Non-SMWBE	In City	4	57.14
BlueRe of Tennessee	4	0.13	Non-SMWBE	Nationwide	4	100.00
Crosslin & Associates	1	0.13	Non-SMWBE	In State	1	100.00
Willis Towers Watson Southeast Inc	11	0.35	Non-SMWBE	In City	10	90.91
HM Life Insurance Group	2	0.06	Non-SMWBE	Nationwide	2	100.00
BlueCross BlueShield of Tennessee	4	0.13	Non-SMWBE	In State	2	50.00
Trident Public Risk Solutions (Argo Group) & Travelers	2	0.06	Non-SMWBE	In State	2	100.00
Gresham Smith	6	0.19	Non-SMWBE	In State	3	50.00
Wage Works, Inc.	1	0.03	Non-SMWBE	Nationwide	1	100.00
Grand Total	256*	8.16			123	48.05

Source: City of Knoxville Contracts Award Data, M³ Consulting, Highlighted firms represent outliers

*Represent the count of all bids within the procurement category

D. Top Ten Bidders and Awardees for Non-Professional Services

Two African American –owned firm, 1 Asian American –owned firm and 1 Native American-owned firm made the top ten bidders list for this procurement category. The other 6 spots find 4 SBEs and 2 Non-SMWBEs (Table 6.30). Six of these firms are located in the city, 1 in the MSA, and 3 in the state. None of the top ten bidders land in the top ten awardees. However, among firms in the top ten awardees, 1 is African American, 2 are Asian American, and 2 are WBEs. Non-SMWBEs take up 4 spots, and SBEs 1 (Table 6.31). All of the top ten awardees show success rates above 50% (Table 6.32)

**Table 6.30. Top Ten Bidders
Non-Professional Services
Nationwide, FY 2017 – FY 2021**

Bidders	Count of Bid Responses	% of Counts	Race/Ethnicity/Gender	Location
B&B Lawn Services, LLC	31	0.99	African American	In City
AvaLawn, Inc.	25	0.80	SBE	In City
Comcast Business	20	0.64	Non-SMWBE	In City
Patriot Lawn Maintenance, LLC	14	0.45	SBE	In State
National Building Service, Inc.	12	0.38	Asian American	In City
Southern Grounds Landscaping	10	0.32	SBE	In City
Pyro Shows, Inc.	10	0.32	Non-SMWBE	In State
Denny's Lawn & Landscaping	9	0.29	Native American	In MSA
Elite Facility Maintenance	9	0.29	African American	In City
Taylor's Lawn Service	8	0.25	SBE	In State
Grand Total	895*	28.52		

Source: City of Knoxville Contracts Data; M³ Consulting

*Represents the count of all bids within the procurement category

**Table 6.31. Top Ten Awardees
Non-Professional Services
Contract Awards
Nationwide, FY 2017 – FY 2021**

Awardees	Dollars	% of Dollars	Awards	% of Awards	Race/ Ethnicity/ Gender	Location
Waste Connections of TN, Inc.	4,994,910	11.37	3	0.25	Non-SMWBE	In City
Living Earth	3,165,722	7.21	1	0.08	Non-SMWBE	Nationwide
Service One, Inc.	2,735,000	6.23	2	0.17	WBE	In City
Edison Electric LLC	1,200,000	2.73	1	0.08	African American	In City
Theverymany, LLC	1,060,000	2.41	2	0.17	SBE	Nationwide
Luminator Technology Group, In	1,059,462	2.41	1	0.08	Asian American	Nationwide
PRI of East TN, Inc.	1,029,978	2.34	2	0.17	WBE	In City
Cummins Sales & Service	939,275	2.14	1	0.08	Non-SMWBE	Nationwide
Milliken & Company	650,477	1.48	1	0.08	Non-SMWBE	Nationwide
National Building Service, Inc.	613,214	1.40	7	0.59	Asian American	In City
Grand Total	43,930,026*	12.42	415	34.84		

Source: City of Knoxville Contracts Award Data, M³ Consulting, Highlighted firms represent outliers

*Total Award amount within procurement category

Table 6.32. Success Rate of Top Ten Awardees: Non-Professional Services Nationwide, FY 2017 – FY 2021

Non-Professional Services	Total Bids	% of Bids	Race/Ethnicity/Gender	Location	# of Awards	% Success rate
Waste Connections of TN, Inc.	3	0.10	Non-SMWBE	In State	3	100.00
Living Earth	1	0.03	Non-SMWBE	Nationwide	1	100.00
Service One, Inc.	3	0.10	WBE	In City	2	66.67
Edison Electric LLC	2	0.06	African American	In City	1	50.00
Theverymany, LLC	2	0.06	SBE	Nationwide	2	100.00
Luminator Technology Group, In	1	0.03	Asian American	Nationwide	1	100.00
PRI of East TN, Inc.	2	0.06	WBE	In City	2	100.00
Cummins Sales & Service	1	0.03	Non-SMWBE	Nationwide	1	100.00
Milliken & Company	1	0.03	Non-SMWBE	Nationwide	1	100.00
National Building Service, Inc.	12	0.38	Asian American	In City	7	58.33
Grand Total	895*	28.52			415	46.37

Source: City of Knoxville Contracts Award Data, M³ Consulting, Highlighted firms represent outliers

*Represent the count of all bids within the procurement category

E. Top Ten Bidders and Awardees for Goods & Supplies

The top ten bidders for Goods and Supplies include 1 African American–owned firm, 1 Hispanic American–owned firm, 4 SBEs and 4 Non-SMWBEs (Table 6.33). No top ten bidder was able to make the top ten awards lists (Table 6.34). Two of the top ten bidders are located in the city, 1 in the MSA, 1 in the state, and 4 nationwide. While all of the top ten bidders show double digit bids, 6 of them show only a single award. Table 6.35 reflects that the success rates of the top ten awardees is 50% or more. The only SBE in this group bid 9 times and had 5 awards: a success rate of 55.56%.

**Table 6.33. Top Ten Bidders
Goods & Supplies
Nationwide, FY 2017 – FY 2021**

Bidder	Count of Bids	% of Counts	Race/Ethnicity/Gender	Location
Mythics, Inc.	16	0.51	Non-SMWBE	Nationwide
Thomas Consultants, Inc.	15	0.48	African American	In State
Precision Traffic and Safety Systems, LLC	15	0.48	SBE	In MSA
Traffic Parts, Inc.	13	0.41	SBE	Nationwide
Dana Safety Supply, Inc.	13	0.41	Non-SMWBE	Nationwide
Expoquip, Inc.	12	0.38	Hispanic American	In City
Summit Uniform Solutions, Inc.	11	0.35	SBE	In City
Greenville Turf & Tractor, Inc.	11	0.35	Non-SMWBE	In State
Elmer Arms South, LLC	11	0.35	SBE	In State
Nafeco, Inc.	10	0.32	Non-SMWBE	Nationwide
Grand Total	1,243*	39.61		

Source: City of Knoxville Contracts Data; M³ Consulting

*Represents the count of all bids within the procurement category

**Table 6.34. Top Ten Awardees
Goods & Supplies
Contract Awards
Nationwide, FY 2017 – FY 2021**

Awardees	Dollars	% of Dollars	Awards	% of Awards	Race/ Ethnicity/ Gender	Location
Gillig Corporation	10,075,256	20.15	4	0.34	Non-SMWBE	Nationwide
New Flyer of America, Inc.	5,436,018	10.87	1	0.08	Non-SMWBE	Nationwide
Axon Enterprise, Inc.	4,923,126	9.85	1	0.08	Non-SMWBE	Nationwide
GMV Syncromatics	3,419,484	6.84	1	0.08	Non-SMWBE	Nationwide
Tri Star Energy, LLC	2,187,178	4.37	1	0.08	Non-SMWBE	In State
Stringfellow, Inc.	1,747,626	3.50	5	0.42	SBE	In State
Rogers Petroleum, Inc.	1,653,895	3.31	1	0.08	Non-SMWBE	In State
Premier Truck Group of Knoxville	1,444,906	2.89	2	0.17	Non-SMWBE	Nationwide
Mid-South Bus Center, Inc.	1,244,660	2.49	1	0.08	Non-SMWBE	In State
Public Works Equipment	1,228,404	2.46	5	0.42	Non-SMWBE	Nationwide
Grand Total	50,002,263*	14.13	375	31.49		

Source: City of Knoxville Contracts Award Data, M³ Consulting, Highlighted firms represent outliers

*Total Award amount within procurement category

Table 6.35. Success Rate of Top Ten Awardees: Goods & Supplies Nationwide, FY 2017 – FY 2021

Goods & Supplies	Total Bids	% of Bids	Race/Ethnicity/Gender	Location	# of Awards	% Success rate
Gillig Corporation	5	0.16	Non-SMWBE	Nationwide	4	80.00
New Flyer of America, Inc.	1	0.03	Non-SMWBE	Nationwide	1	100.00
Axon Enterprise, Inc.	1	0.03	Non-SMWBE	Nationwide	1	100.00
GMV Syncromatics	1	0.03	Non-SMWBE	Nationwide	1	100.00
Tri Star Energy, LLC	1	0.03	Non-SMWBE	In State	1	100.00
Stringfellow, Inc.	9	0.29	SBE	In State	5	55.56
Rogers Petroleum, Inc.	2	0.06	Non-SMWBE	In State	1	50.00
Premier Truck Group of Knoxville	3	0.10	Non-SMWBE	Nationwide	2	66.67
Mid-South Bus Center, Inc.	2	0.06	Non-SMWBE	In State	1	50.00
Public Works Equipment	6	0.19	Non-SMWBE	Nationwide	5	83.33
Grand Total	1,243*	39.61			375	30.17

Source: City of Knoxville Contracts Award Data, M³ Consulting, Highlighted firms represent outliers

*Represents the count of all bids within the procurement category

6.11 SUMMARY OF FINDINGS

Table 6.36 summarizes utilization of MWBEs by the three utilization measures: Purchase Orders, Accounts Payables, and Contract Awards.

The data in Table 6.1 through Table 6.35 lead to the summary presented in Table 6.36 above. The percentages in this table provide the utilization metrics for the numerator used for the disparity ratios found in Chapter VII. Utilization across the three measures range from a low of zero for MBEs participation in Architecture and Engineering contracts as measured by POs and contract dollars to a high of 20.97% for MWBEs for Professional Services contract dollars. Together MBEs, WBEs, and MWBEs show the highest level of utilization in Non-Professional Services, followed by Goods & Supplies. Non-Professional Services utilization rates for MWBEs are 11.12%, 19.06%, and 20.97% as measured by purchase orders, accounts payable, and contract dollars respectively. For Goods & Supplies, the MWBE utilization comes in at 10.14% for purchase orders, 10.51% for accounts payable, and 4.72% for contract dollars. Their participation rates mostly remained below 2.5% for Architecture and Engineering and Construction and Construction-Related Services. Professional Services MWBE utilization is in the 6% to 8% range for purchase orders and accounts payable, but drops significantly to less than 1% for contract dollars.

Table 6.37 disaggregates the data in Table 6.36 among the minority groups to be used to calculate the disparity ratios. The percentages in this table provide the utilization metrics for the numerator used for the disparity ratios found in Chapter VII. For Architecture and Engineering each of the minority groups and VBEs show zero utilization. SBE utilization is at 48.22%. African American- and Native American-owned firms' utilization in Construction and Construction-Related Services is 0.26 % and 0.01 % respectively. SBE utilization for this procurement category is 42.22%. For Professional Services, minority utilization combines for less than 0.25% at 0.13%, 0.02%, and 0.10% for African American-, Asian American- and Hispanic American -owned firms respectively. SBE firms make up 23.17% of the utilization for Professional Services. The combined minority firm's percentage is highest for Non-Professional Services at 6.36%. The break down ranges from 0.03% for Native American-owned firms to 4.51% for African American-Owned firms. SBE firms' lowest utilization occurs in Non-Professional Services at 7.37%. Total MBE utilization for Goods & Supplies is 1.29% with Asian American-Owned firms comprising most of the utilization at 1.04%. SBEs and VOBES show utilization of 11.9% and 0.17 % respectively.

**Table 6.36 MWBE Utilization in Percent of Dollars of Purchase Orders, Payments, and Contract Awards
Summary of MWBE Utilization; FY 2017 – FY 2021
By Relevant Market**

Procurement Category	MWBE Utilization Based on Purchase Orders			MWBE Utilization Based on Accounts Payables			MWBE Utilization Based on Contract Dollars		
	(in percent)			(in percent)			(in percent)		
	MBE	WBE	MWBE ⁵	MBE	WBE	MWBE ⁵	MBE	WBE	MWBE ⁵
Architecture & Engineering⁴	0.00	1.54	1.54	0.05	1.33	1.38	0.00	2.24	2.24
Construction and Construction-Related Services³	0.35	2.44	2.79	0.27	1.64	1.91	0.34	1.92	2.26
Professional Services²	0.24	5.49	5.73	0.70	6.75	7.45	0.30	0.40	0.69
Non-Professional Services¹	6.36	4.75	11.12	8.75	10.31	19.06	9.62	11.35	20.97
Goods & Supplies¹	1.29	8.85	10.14	2.42	8.09	10.51	2.69	2.03	4.72

Source: M³ Consulting; COK Contracts Data, PO and AP data, COK Vendor data; Relevant Market; Other Minority is a firm identified as MBE, with no specific race/ethnicity identified; Unknown MWBE is a firm identified as MWBE, with no specific race/ethnicity/gender identified..

¹Nationwide

² State of Tennessee

³ Knoxville, TN MSA

⁴ City of Knoxville

⁵Includes unknown Minority Business Enterprises (MBEs)

**Table 6.37 Utilization in Dollars of Purchase Orders, Payments, and Contract Awards
Summary of Utilization; FY 2017 – FY 2021
By Relevant Market**

Race/ Ethnicity/ Gender	Architecture & Engineering ^{4,5}		Construction & Construction Related Services ^{3,6}		Professional Services ^{2,5}		Non-Professional Services ^{1,5}		Goods & Supplies ^{1,5}	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	5,858,905	50.24	48,490,788	55.66	31,703,091	71.10	64,951,378	81.44	103,969,115	77.79
African American	-	0.00	223,805	0.26	56,206	0.13	3,594,537	4.51	64,310	0.05
Asian American	-	0.00	-	0.00	9,880	0.02	1,337,993	1.68	1,384,527	1.04
Hispanic American	-	0.00	-	0.00	42,371	0.10	119,181	0.15	125,417	0.09
Native American	-	0.00	9,985	0.01	-	0.00	23,774	0.03	151,153	0.11
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total Minority	-	0.00	233,790	0.27	108,457	0.24	5,075,485	6.36	1,725,407	1.29
Woman-Owned (WBEs)	180,005	1.54	1,431,713	1.64	2,447,028	5.49	3,788,765	4.75	11,828,920	8.85
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	180,005	1.54	1,665,502	1.91	2,555,485	5.73	8,864,251	11.12	13,554,327	10.14
SBE	5,622,989	48.22	36,956,945	42.42	10,330,092	23.17	5,878,286	7.37	15,900,611	11.90
VOBE	-	0.00	-	0.00	-	0.00	56,376	0.07	228,405	0.17
Grand Total	11,661,899	100.00	87,113,235	100.00	44,588,667	100.00	79,750,291	100.00	133,652,457	100.00

Source: M³ Consulting; the COK Contract Awards Data, PO and AP data, the COK Vendor data; Relevant Market—Relevant Market; May not add up because of rounding error.

¹Nationwide

² State of Tennessee

³ Knoxville, TN MSA

⁴ City of Knoxville

⁵ Utilization measure is PO Data

⁶ Utilization measure is AP Data

7.1 INTRODUCTION

This chapter begins by reporting the statistical evidence of disparities between SMWBE availability in the applicable relevant market and SMWBE utilization by year, using the measure relied upon for decision-making, followed by a comparison of disparity based on Contract Awards, Purchase Orders, and Accounts Payable for the study period. Disparities are analyzed in the industry categories of Architecture and Engineering, Construction and Construction-Related Services, Professional Services, Non-Professional Services, and Goods & Supplies. Disparity ratios using Data Axle Availability (Marketplace Availability) are also provided, showing the difference, if any, between actual availability and potential availability.

M³ Consulting presents the disparity ratios for the COK's ready, willing and able (RWASM) availability. For all industries, RWASM availability will consist of firms that have bid for prime contracts awarded by the COK during the study period, firms awarded prime contracts during the study period, and firms that have been awarded subcontracts during the study period. The measure of availability used to calculate disparity is the COK RWASM availability, Level 2, consisting of bidders, and sub-bidders, formal and informal awardees from purchase orders and payments data.

Utilization for each procurement category is measured via Purchase Order, Accounts Payable, and Contract Award data as maintained by COK's procurement department. The utilization percentage used to calculate the disparity ratios is based on formal and informal purchases by race and gender.

7.2 DISPARITY RATIOS METHODOLOGY

Disparity ratios compare the percentage utilization of various race and gender groups to the percentage availability of these same groups. The disparity ratio is calculated by dividing the former percentage by the latter. A resulting ratio greater than one indicates overutilization. Conversely, a ratio less than one indicates underutilization. The methodologies for calculating availability, utilization, disparity, and significance testing—specifically for this study—are presented in **Chapter IV: Statistical Methodology**.

7.3 DISPARITIES IN ARCHITECTURE AND ENGINEERING

Purchase Orders (Table 7.1) represent the measure of utilization for Architecture and Engineering used in calculating disparity ratios for individual firm groups. The three utilization metrics, based on Contract Awards, Purchase Orders, and Payments are presented in Table 7.2.

Table 7.1 details disparity ratios by each fiscal year as well as the study period for each of the identified firm groups. For the overall study period the Non-SMWBE disparity ratio, 1.53, indicates overutilization that is statistically significant. The ratios for FY 2017, FY 2018 and FY 2020 are above 2.4, showing significant overutilization. Among minority groups, African American and Asian American firms show underutilization for the study period that is not significant. Women-owned firms show significant underutilization for the overall study period, specifically FY 2018. SBEs are overutilized in two of the five years and underutilized in three others resulting in nonsignificant overutilization for the period.

Disparity ratios presented in Table 7.2 are compared using three different utilization measures and Level 2 availability. Using payments as the utilization metric results in Non-SMWBEs being significantly overutilized and every other group significantly underutilized. For contract awards, The Total Minority group shows nonsignificant disparity, women-owned firms significant disparity, SBEs significant overutilization, and Non-SMWBEs underutilization that is not significant. Purchase order disparity ratios are discussed in the previous paragraph. Of note, Non-SMWBEs are underutilized when using contracts as the measure of utilization, but overutilized when purchase orders and payments are used. SBE ratios show underutilization for payment and overutilization for contracts and purchase orders.

Table 7.3 presents disparity calculations using Data Axle availability. African American, Asian American, and Native American-owned firms have disparity for the study period that is not significant. Women-owned firms and SBEs show significant disparity. Non-SMWBEs are overutilized in three of the study years and underutilized in two, resulting in significant underutilization for the study period.

**Table 7.1. Purchase Order Utilization vs. RWASM Availability Level 2
Architecture and Engineering
City of Knoxville, FY 2017 - FY 2021**

Race/Ethnicity/Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	2.63	S	2.46	S	0.91	NS	2.43	S	1.00	NS	1.53	S
African American	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS
Asian American	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS
Hispanic American	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Native American	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Other MBEs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Total Minority</i>	<i>0.00</i>	<i>NS</i>	<i>0.00</i>	<i>NS</i>	<i>0.00</i>	<i>NS</i>	<i>0.00</i>	<i>NS</i>	<i>0.00</i>	<i>NS</i>	<i>0.00</i>	<i>NS</i>
Woman-owned (WBEs)	0.07	NS	0.03	S	0.00	NS	0.44	NS	0.02	NS	0.07	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total M/WBE	0.06	NS	0.03	S	0.00	NS	0.35	NS	0.02	NS	0.06	S
SBE	0.31	NS	0.47	NS	1.77	S	0.27	S	1.68	NS	1.22	NS
VOBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Source: M³ Consulting; COK contract data, PO and AP data; M³ Consulting; Relevant Market—City of Knoxville;
Significance is S and Ratio is Less than 1 –Statistically Significant Underutilization; Significance is S and Ratio is Greater than 1–Statistically Significant Overutilization.
ND – Not Determined (Represents zero availability)

**Table 7.2. Architecture and Engineering
 Summary Disparity Ratios by Race, Ethnicity, and Gender
 Utilization vs. RWASM Availability Level 2
 City of Knoxville, FY 2017 - FY 2021**

Race/Ethnicity/Gender	Contract Awards		Purchase Order		Payments	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	0.83	NS	1.53	S	2.02	S
African American	0.00	NS	0.00	NS	0.01	S
Asian American	0.00	NS	0.00	NS	0.00	S
Hispanic American	ND	ND	ND	ND	ND	ND
Native American	ND	ND	ND	ND	ND	ND
Other MBEs	ND	ND	ND	ND	ND	ND
<i>Total Minority</i>	0.00	NS	0.00	NS	0.01	S
Woman-owned (WBEs)	0.10	S	0.07	S	0.06	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND
Total M/WBE	0.08	S	0.06	S	0.05	S
SBE	1.78	S	1.22	NS	0.82	S
VOBE	ND	ND	ND	ND	ND	ND

Source: COK contract data, PO, and AP data; M³ Consulting;

Significance is S and Ratio is Less than 1—Statistically Significant Underutilization. Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.

ND – Not Determined (Represents zero availability)

**Table 7.3. Purchase Order Utilization vs. Data Axle Availability
Architecture and Engineering
City of Knoxville, FY 2017 - FY 2021**

Race/Ethnicity/Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.30	NS	1.22	NS	0.45	S	1.20	NS	0.50	NS	0.76	S
African American	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS
Asian American	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS
Hispanic American	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS
Native American	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Other MBEs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Total Minority</i>	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS
Woman-owned (WBEs)	0.06	NS	0.03	S	0.00	NS	0.35	NS	0.02	NS	0.06	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total M/WBE	0.05	S	0.02	S	0.00	S	0.29	NS	0.02	NS	0.05	S
SBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Source: M³ Consulting; COK contract data, PO and AP data; Data Axle; M³ Consulting; Relevant Market—City of Knoxville;
Significance is S and Ratio is Less than 1—Statistically Significant Underutilization; Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.
ND – Not Determined (Represents zero availability) since Data Axle does not provide adequate information to place in SBE and VOB categories.

7.4 DISPARITIES IN CONSTRUCTION AND CONSTRUCTION-RELATED SERVICES

Payments are used as the measure of utilization for calculating the ratios that are presented in Table 7.4. All three utilization metrics in aggregate for the study period are presented in Table 7.5.

Disparity ratios computed from payments utilization and RWASM Level 2 availability for construction and construction-related services reflect statistical significance for all groups (Table 7.4) SBEs and Non-SMWBEs are overutilized and M/WBEs and VOBES are underutilized for the study period. However, individual groups show disparity that is not significant in some of the fiscal years. For example, SBE firms disparity was not significant in FY 2019, but significantly overutilized in every other year except for FY 2021 where there was significant underutilization. African American-owned firms have ratios that result in significant underutilization for each of the study years. Asian American and Hispanic American-owned firms were not utilized in construction and construction-related services, though they were available. The resulting disparity ratios for these two groups of firms result in underutilization that is not significant for Asian American-owned firms and significant for Hispanic American-owned firms.

A comparison using the three definitions of utilization (Table 7.5) shows significant disparity for M/WBEs across each of the three measures of utilization: Contract awards, purchase orders, and payments. Individual firm groups reflect significant disparity for African American and Women-owned firms for each utilization measure, Non-significant disparity for Asian American, Hispanic American, and native American-owned firms using contract awards and purchase orders and significant disparity using payments.

M³ Consulting provides another look at disparity by comparing Data Axle availability with payments to develop the disparity ratios in Table 7.6. The results are similar to Table 7.4 with some exceptions. Asian American-owned firms' underutilization for the study period is not significant and Non-SMWBEs are significantly underutilized. African American-owned firms show Non-significance for all years with the entire study period showing significant underutilization.

**Table 7.4. Payments Utilization vs. RWASM Availability Level 2
Construction and Construction-Related Services
Knoxville, TN MSA, FY 2017 - FY 2021**

Race/Ethnicity/Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.05	NS	0.95	NS	1.49	S	1.35	S	1.85	S	1.33	S
African American	0.00	S	0.08	S	0.01	S	0.19	S	0.00	S	0.05	S
Asian American	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	S
Hispanic American	0.00	S	0.00	S	0.00	S	0.00	S	0.00	NS	0.00	S
Native American	0.00	NS	0.12	NS	0.00	NS	0.00	NS	0.00	NS	0.02	S
Other MBEs	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	S
<i>Total Minority</i>	0.00	S	0.06	S	0.00	S	0.12	S	0.00	S	0.04	S
Woman-owned (WBEs)	0.03	S	0.46	S	0.06	S	0.06	S	0.10	S	0.11	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total M/WBE	0.02	S	0.33	S	0.04	S	0.08	S	0.06	S	0.09	S
SBE	1.57	S	1.49	S	1.04	NS	1.18	S	0.60	S	1.20	S
VOBE	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	S

Source: M³ Consulting; COK contract data, PO and AP data; M³ Consulting; Relevant Market—Knoxville, TN MSA;
Significance is S and Ratio is Less than 1—Statistically Significant Underutilization; Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.
ND – Not Determined (Represents zero availability).

CHAPTER 7 // STATISTICAL ANALYSIS OF SMWBE DISPARITY IN CONTRACTING
CITY OF KNOXVILLE DISPARITY STUDY

**Table 7.5. Construction and Construction-Related Services
Summary Disparity Ratios by Race, Ethnicity, and Gender
Utilization vs. RWASM Availability Level 2
Knoxville, TN MSA, FY 2017 - FY 2021**

Race/Ethnicity/Gender	Contract Awards		Purchase Order		Payments	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.37	S	1.49	S	1.33	S
African American	0.06	S	0.07	S	0.05	S
Asian American	0.00	NS	0.00	NS	0.00	S
Hispanic American	0.00	NS	0.00	NS	0.00	S
Native American	0.07	NS	0.02	NS	0.02	S
Other MBEs	0.00	NS	0.00	NS	0.00	S
<i>Total Minority</i>	0.04	S	0.05	S	0.04	S
Woman-owned (WBEs)	0.13	S	0.16	S	0.11	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND
Total M/WBE	0.10	S	0.12	S	0.09	S
SBE	1.14	NS	0.98	NS	1.20	S
VOBE	0.00	NS	0.00	NS	0.00	S

Source: COK contract data, PO and AP data; M³ Consulting;
ND – Not Determined (Represents zero availability).

**Table 7.6. Payments Utilization vs. Data Axle Availability
Construction and Construction-Related Services
Knoxville, TN MSA, FY 2017 - FY 2021**

Race/Ethnicity/Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	0.52	S	0.47	S	0.73	S	0.67	S	0.91	S	0.66	S
African American	0.02	NS	0.60	NS	0.05	NS	1.38	NS	0.01	NS	0.39	S
Asian American	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS
Hispanic American	0.00	S	0.00	S	0.00	S	0.00	S	0.00	S	0.00	S
Native American	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Other MBEs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Total Minority</i>	0.00	S	0.19	S	0.01	S	0.36	NS	0.00	S	0.11	S
Woman-owned (WBEs)	0.03	S	0.55	S	0.07	S	0.07	S	0.12	S	0.13	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total M/WBE	0.03	S	0.49	S	0.06	S	0.12	S	0.10	S	0.13	S
SBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Source: M³ Consulting; COK contract data, PO and AP data; Data Axle; M³ Consulting; Relevant Market—Knoxville, TN MSA;
Significance is S and Ratio is Less than 1—Statistically Significant Underutilization; Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.
ND – Not Determined (Represents zero availability) since Data Axle does not provide adequate information to place in SBE and VOB categories.

7.5 DISPARITIES IN PROFESSIONAL SERVICES

Purchase orders represent the measure of utilization for Non-Professional Services and are presented in Table 7.7. All three utilization metrics in aggregate are presented in Table 7.8.

M/WBEs as a group and SBEs are underutilized for professional services contracts (Table 7.7). Individually, Asian American, Hispanic American, Native American, and Other MBEs are underutilized, but the underutilization is not statistically significant in any of the years. Disparity ratios for Non-SMWBEs indicate that their overutilization is statistically significant. Across fiscal years, the disparity ratios for a particular group may indicate both underutilization and overutilization. Additionally, the disparity can be significant or not significant. As an example, SBEs were underutilized in three of the years and overutilized in two. The two years that disparity ratios are above one are nonsignificant, whereas the three years of ratios less than one *are* significant. Women-owned firms were significantly underutilized for the study period and four of the five fiscal years.

Table 7.8 looks at a summary of disparity ratios that are computed from contract awards, purchase order and payment utilization, and RWASM Level 2 availability. Using contract awards, all minority group ratios indicate nonsignificant underutilization. When purchase orders provide the utilization metrics, African American-owned firms' underutilization is significant and all other minority-owned firms show underutilization that is not significant. Women-owned firms' disparity ratios are significant for each of the utilization measures.

Disparity ratios in Table 7.9 compare purchase order utilization with Data Axle availability. All the minority groups are underutilized using Data Axle availability. However, the underutilization is not statistically significant. Women-owned firms were not significantly overutilized in FY 2020 and significantly underutilized in other years and overall.

**Table 7.7. Purchase Orders Utilization vs. RWASM Availability Level 2
Professional Services
State of Tennessee, FY 2017 - FY 2021**

Race/Ethnicity/Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.85	S	1.64	S	1.08	NS	1.83	S	0.37	S	1.55	S
African American	0.13	NS	0.00	NS	0.00	NS	0.03	NS	0.00	NS	0.05	S
Asian American	0.00	NS	0.00	NS	0.00	NS	0.15	NS	0.00	NS	0.02	NS
Hispanic American	0.00	NS	0.00	NS	0.17	NS	0.35	NS	0.00	NS	0.10	NS
Native American	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS
Other MBEs	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS
<i>Total Minority</i>	0.06	NS	0.00	NS	0.03	NS	0.10	NS	0.00	NS	0.05	S
Woman-owned (WBEs)	0.13	S	0.15	S	0.41	NS	0.22	S	2.67	S	0.30	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total M/WBE	0.11	S	0.12	S	0.33	S	0.20	S	2.07	S	0.24	S
SBE	0.41	S	0.73	NS	1.41	NS	0.38	S	1.13	NS	0.76	S
VOBE	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS

Source: M³ Consulting; COK contract data, PO and AP data; M³ Consulting; Relevant Market—State of Tennessee;
Significance is S and Ratio is Less than 1—Statistically Significant Underutilization; Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.
ND – Not Determined (Represents zero availability).

CHAPTER 7 // STATISTICAL ANALYSIS OF SMWBE DISPARITY IN CONTRACTING
CITY OF KNOXVILLE DISPARITY STUDY

**Table 7.8. Professional Services
Summary Disparity Ratios by Race, Ethnicity, and Gender
Utilization vs. RWASM Availability Level 2
State of Tennessee, FY 2017 - FY 2021**

Race/Ethnicity/Gender	Contract Awards		Purchase Order		Payments	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.91	S	1.55	S	1.29	S
African American	0.11	NS	0.05	S	0.16	S
Asian American	0.00	NS	0.02	NS	0.05	S
Hispanic American	0.00	NS	0.10	NS	0.22	S
Native American	0.00	NS	0.00	NS	0.04	S
Other MBEs	0.00	NS	0.00	NS	0.05	S
<i>Total Minority</i>	0.06	NS	0.05	S	0.13	S
Woman-owned (WBEs)	0.02	S	0.30	S	0.37	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND
Total M/WBE	0.03	S	0.24	S	0.32	S
SBE	0.40	S	0.76	S	1.10	S
VOBE	0.00	NS	0.00	NS	0.05	S

Source: COK contract data, PO and AP data; M³ Consulting;
ND – Not Determined (Represents zero availability).

**Table 7.9. Purchase Orders Utilization vs. Data Axle Availability
Professional Services
State of Tennessee, FY 2017 - FY 2021**

Race/Ethnicity/Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.44	S	1.27	NS	0.83	NS	1.42	S	0.29	S	1.20	S
African American	0.43	NS	0.00	NS	0.00	NS	0.09	NS	0.00	NS	0.16	NS
Asian American	0.00	NS	0.00	NS	0.00	NS	0.07	NS	0.00	NS	0.01	NS
Hispanic American	0.00	NS	0.00	NS	0.08	NS	0.16	NS	0.00	NS	0.05	NS
Native American	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS
Other MBEs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Total Minority</i>	0.07	NS	0.00	NS	0.03	NS	0.11	NS	0.00	NS	0.05	S
Woman-owned (WBEs)	0.06	S	0.08	S	0.21	S	0.11	S	1.34	NS	0.15	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total M/WBE	0.07	S	0.07	S	0.19	S	0.11	S	1.18	NS	0.14	S
SBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Source: M³ Consulting; COK contract data, PO and AP data; Data Axle; M³ Consulting; Relevant Market—State of Tennessee;
Significance is S and Ratio is Less than 1—Statistically Significant Underutilization; Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.
ND – Not Determined (Represents zero availability) since Data Axle does not provide adequate information to place in SBE and VOB categories.

7.6 DISPARITIES IN NON-PROFESSIONAL SERVICES

Based on Purchase Order data shown in Table 7.10, Native American-owned and Total Minority firms ratios of disparity are not significant for the study period. All three utilization metrics are presented in Table 7.11.

Asian American-owned firms have the highest disparity ratio among all the groups at 1.93. Along with African American-owned firms and Non-SMWBEs, they present significant overutilization for the study period (Table 7.10). Except for Native American-owned firms, all other groups' disparity is significant.

Total Minority-owned firms disparity ratios displayed in Table 7.11 reveal significant overutilization across the three utilization measures. Women-owned firms display significant overutilization for ratios using payments, nonsignificant overutilization using contract awards, and significant underutilization using purchase orders. African American- and Asian American-owned firms' ratios reveal significant overutilization across the three measures. Hispanic American-owned firms have a disparity that is significant for purchase orders and payments, but nonsignificant for contract awards.

When the denominator (availability) in the disparity ratio formula is taken from the Data Axle database, African American and Asian American-owned firms have the highest ratios for the period: 4.05 and 2.95 respectively (Table 7.12). Along with Non-SMWBEs, they are significantly overutilized. Except for Native American-owned firms, all others are significantly underutilized.

**Table 7.10. Purchase Orders Utilization vs. RWASM Availability Level 2
Non-Professional Services
Nationwide, FY 2017 - FY 2021**

Race/Ethnicity/Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.55	S	1.39	S	1.20	S	0.70	S	1.50	S	1.35	S
African American	0.69	NS	0.67	NS	0.67	NS	12.69	S	0.19	NS	1.77	S
Asian American	0.56	NS	4.75	S	0.46	NS	1.82	NS	2.44	NS	1.93	S
Hispanic American	0.25	NS	0.00	NS	0.00	NS	0.00	NS	0.31	NS	0.11	S
Native American	0.09	NS	0.00	NS	0.00	NS	0.45	NS	0.00	NS	0.07	NS
Other MBEs	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	S
<i>Total Minority</i>	0.47	NS	1.04	NS	0.38	S	6.05	S	0.54	NS	1.13	NS
Woman-owned (WBEs)	0.01	S	0.81	NS	0.93	NS	0.39	S	0.21	S	0.48	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total M/WBE	0.17	S	0.89	NS	0.73	NS	2.43	S	0.33	S	0.71	S
SBE	0.15	S	0.09	S	0.67	S	0.84	NS	0.19	S	0.31	S
VOBE	0.09	NS	0.05	NS	0.00	NS	0.00	NS	0.00	NS	0.12	S

Source: M³ Consulting; COK contract data, PO and AP data; M³ Consulting; Relevant Market—**Nationwide**;
Significance is S and Ratio is Less than 1—Statistically Significant Underutilization; Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.
ND – Not Determined (Represents zero availability).

CHAPTER 7 // STATISTICAL ANALYSIS OF SMWBE DISPARITY IN CONTRACTING
 CITY OF KNOXVILLE DISPARITY STUDY

**Table 7.11. Non-Professional Services
 Summary Disparity Ratios by Race, Ethnicity, and Gender
 Utilization vs. RWASM Availability Level 2
 Nationwide, FY 2017 - FY 2021**

Race/Ethnicity/Gender	Contract Awards		Purchase Order		Payments	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	0.98	NS	1.35	S	1.06	S
African American	1.78	S	1.77	S	2.09	S
Asian American	4.49	S	1.93	S	3.16	S
Hispanic American	0.46	NS	0.11	S	0.29	S
Native American	1.33	NS	0.07	NS	0.67	S
Other MBEs	0.00	NS	0.00	S	0.00	S
<i>Total Minority</i>	1.71	S	1.13	NS	1.56	S
Woman-owned (WBEs)	1.14	NS	0.48	S	1.03	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND
Total M/WBE	1.34	S	0.71	S	1.22	S
SBE	0.86	NS	0.31	S	0.71	S
VOBE	0.00	NS	0.12	S	0.22	S

Source: COK contract data, PO and AP data; M³ Consulting;
 ND – Not Determined (Represents zero availability).

**Table 7.12. Purchase Orders Utilization vs. Data Axle Availability
Non-Professional Services
Nationwide, FY 2017 - FY 2021**

Race/Ethnicity/Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.45	S	1.30	S	1.12	S	0.66	S	1.40	S	1.26	S
African American	1.57	NS	1.54	NS	1.54	NS	29.00	S	0.43	NS	4.05	S
Asian American	0.85	NS	7.26	S	0.71	NS	2.78	S	3.72	S	2.95	S
Hispanic American	0.14	NS	0.00	S	0.00	S	0.00	S	0.18	NS	0.06	S
Native American	0.35	NS	0.00	NS	0.00	NS	1.74	NS	0.00	NS	0.29	NS
Other MBEs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Total Minority</i>	0.62	NS	1.39	NS	0.50	NS	8.07	S	0.72	NS	1.51	S
Woman-owned (WBEs)	0.00	S	0.26	S	0.30	S	0.12	S	0.07	S	0.15	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total M/WBE	0.08	S	0.39	S	0.32	S	1.07	NS	0.15	S	0.31	S
SBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Source: M³ Consulting; COK contract data, PO and AP data; Data Axle; M³ Consulting; Relevant Market—**Nationwide**;

Significance is S and Ratio is Less than 1—Statistically Significant Underutilization; Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.

ND – Not Determined (Represents zero availability) since Data Axle does not provide adequate information to place in SBE and VOB categories.

7.7 DISPARITIES IN GOODS & SUPPLIES

For Goods & Supplies shown in Table 7.13, Purchase Order data reflects the utilization because of requirements contracts that are prevalent in this procurement category, along with capturing informal purchases. All three utilization metrics in aggregate for the study period are presented in Table 7.14.

Purchase order utilization for goods and supplies results in significant period disparity ratios for all groups except unknown M/WBEs (Table 7.13). Non-SMWBE ratios indicate overutilization and underutilization for all others. As in other contraction categories, the ratios for goods and supplies vary over the individual fiscal years. Hispanic American and Native American–owned firms' disparity is not significant across the fiscal years. African American-owned firms disparity is not significant for FY 2019, but significant for every other year. Likewise, Asian American–owned firms' disparity is not significant for FY 2017 but significant for other years. Women-owned firms show significant overutilization in FY 2020 but significant underutilization in all other years.

Disparity ratios using POs contrasted against disparity ratios using payments and contract awards reveal some differences. Payment utilization results in disparity ratios that are significant across the board (Table 7.14) whereas contract awards disparities are not significant for Asian Americans, Hispanic Americans, other MBEs, VOBes, and Unknown M/WBEs. Unknown M/WBEs is the only group whose ratio is not significant when using purchase orders to define utilization.

Native American-owned firms and Non-SMWBEs are found to be overutilized when Data Axle availability is used to calculate disparity. All others are underutilized, which is statistically significant. Though the period ratio for Native American-owned firms is substantially higher than one, it is not significant.

Among the different measures of utilization, contract awards show the most variability in the significance of disparity for the different groups. Asian American-owned firms and Non-SMWBEs are significantly overutilized. Women-owned and African American-owned firms, as well as SBEs are significantly underutilized. While all other minorities are underutilized, the underutilization is not statistically significant.

**Table 7.13. Purchase Orders Utilization vs. RWASM Availability Level 2
Goods & Supplies
Nationwide, FY 2017 - FY 2021**

Race/Ethnicity/Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.42	S	1.38	S	1.21	S	0.97	NS	1.48	S	1.35	S
African American	0.01	S	0.00	S	0.32	NS	0.00	S	0.01	S	0.04	S
Asian American	0.28	NS	2.12	S	0.19	S	0.12	S	0.08	S	0.63	S
Hispanic American	0.00	NS	0.34	NS	0.00	NS	0.00	NS	0.09	NS	0.12	S
Native American	0.29	NS	0.17	NS	0.00	NS	0.45	NS	0.10	NS	0.18	S
Other MBEs	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	S
<i>Total Minority</i>	0.13	S	0.78	NS	0.15	S	0.10	S	0.06	S	0.26	S
Woman-owned (WBEs)	0.28	S	0.41	S	0.21	S	2.98	S	0.62	S	0.82	S
Unknown M/WBE	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS	0.00	NS
Total M/WBE	0.23	S	0.52	S	0.19	S	2.06	S	0.44	S	0.64	S
SBE	0.56	S	0.46	S	1.01	NS	0.43	S	0.31	S	0.47	S
VOBE	0.07	S	0.09	S	0.00	NS	0.37	NS	0.13	S	0.15	S

Source: M³ Consulting; COK contract data, PO and AP data; M³ Consulting; Relevant Market—Nationwide;
Significance is S and Ratio is Less than 1—Statistically Significant Underutilization; Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.

CHAPTER 7 // STATISTICAL ANALYSIS OF SMWBE DISPARITY IN CONTRACTING
 CITY OF KNOXVILLE DISPARITY STUDY

Table 7.14. Goods & Supplies
Summary Disparity Ratios by Race, Ethnicity, and Gender
Utilization vs. RWASM Availability Level 2
Nationwide, FY 2017 - FY 2021

Race/Ethnicity/Gender	Contract Awards		Purchase Order		Payments	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.43	S	1.35	S	1.24	S
African American	0.09	S	0.04	S	0.05	S
Asian American	1.21	NS	0.63	S	0.67	S
Hispanic American	0.09	NS	0.12	S	1.10	S
Native American	0.79	NS	0.18	S	0.61	S
Other MBEs	0.04	NS	0.00	S	0.00	S
<i>Total Minority</i>	0.55	S	0.26	S	0.49	S
Woman-owned (WBEs)	0.19	S	0.82	S	0.75	S
Unknown M/WBE	0.00	NS	0.00	NS	0.00	S
Total M/WBE	0.30	S	0.64	S	0.66	S
SBE	0.49	S	0.47	S	0.71	S
VOBE	0.15	NS	0.15	S	0.26	S

Source: COK contract data, PO and AP data; M³ Consulting.

**Table 7.15. Purchase Orders Utilization vs. Data Axle Availability
Goods & Supplies
Nationwide, FY 2017 - FY 2021**

Race/Ethnicity/Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.16	S	1.13	S	1.00	NS	0.79	S	1.20	S	1.10	S
African American	0.01	S	0.00	S	0.40	NS	0.00	S	0.01	S	0.05	S
Asian American	0.12	S	0.93	NS	0.09	S	0.05	S	0.03	S	0.28	S
Hispanic American	0.00	S	0.20	S	0.00	S	0.00	S	0.05	S	0.07	S
Native American	3.70	NS	2.09	NS	0.00	NS	5.71	S	1.23	NS	2.29	NS
Other MBEs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Total Minority</i>	0.10	S	0.62	S	0.12	S	0.08	S	0.04	S	0.21	S
Woman-owned (WBEs)	0.13	S	0.19	S	0.10	S	1.40	S	0.29	S	0.39	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total M/WBE	0.13	S	0.28	S	0.11	S	1.12	NS	0.24	S	0.35	S
SBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Source: M³ Consulting; COK contract data, PO and AP data; Data Axle; M³ Consulting; Relevant Market—Nationwide;
Significance is S and Ratio is Less than 1—Statistically Significant Underutilization; Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.
ND – Not Determined (Represents zero availability) since Data Axle does not provide adequate information to place in SBE and VOB categories.

7.8 SUMMARY OF FINDINGS

Table 7.16 summarizes the disparity ratios discussed in this chapter for each of the procurement categories at the race/ethnic/gender group level for COK procurements during FY 2017-FY 2021. Based on the foregoing analysis and the summary below, findings of statistically significant disparity are made for the following groups in the following procurement categories:

- Architecture and Engineering—WBEs and Total M/WBEs.
- Construction and Construction-Related Services—All groups.
- Professional Services—African American, WBEs, SBEs, Total M/WBEs.
- Non-Professional Services—All groups except Native Americans.
- Goods & Supplies—All except Unknown M/WBEs.

CHAPTER 7 // STATISTICAL ANALYSIS OF SMWBE DISPARITY IN CONTRACTING
CITY OF KNOXVILLE DISPARITY STUDY

Table 7.16. Summary Disparity Ratios by Race, Ethnicity, and Gender Utilization vs. RWASM Availability Level 2 Relevant Market, FY 2017 - FY 2021

Race/Ethnicity/Gender	Architecture & Engineering (Purchase Orders)		Construction & Construction-Related Services (Payments)		Professional Services (Purchase Orders)		Non-Professional Services (Purchase Orders)		Goods & Supplies (Purchase Orders)	
	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.	Ratio	Sign.
Non-SMWBE	1.53	S	1.33	S	1.55	S	1.35	S	1.35	S
African American	0.00	NS	0.05	S	0.05	S	1.77	S	0.04	S
Asian American	0.00	NS	0.00	S	0.02	NS	1.93	S	0.63	S
Hispanic American	ND	ND	0.00	S	0.10	NS	0.11	S	0.12	S
Native American	ND	ND	0.02	S	0.00	NS	0.07	NS	0.18	S
Other MBEs	ND	ND	0.00	S	0.00	NS	0.00	S	0.00	S
<i>Total Minority</i>	<i>0.00</i>	<i>NS</i>	<i>0.04</i>	<i>S</i>	<i>0.05</i>	<i>S</i>	<i>1.13</i>	<i>NS</i>	<i>0.26</i>	<i>S</i>
Woman-owned (WBEs)	0.07	S	0.11	S	0.30	S	0.48	S	0.82	S
Unknown M/WBE	ND	ND	ND	ND	ND	ND	ND	ND	0.00	NS
Total M/WBE	0.06	S	0.09	S	0.24	S	0.71	S	0.64	S
SBE	1.22	NS	1.20	S	0.76	S	0.31	S	0.47	S
VOBE	ND	ND	0.00	S	0.00	NS	0.12	S	0.15	S

Source: COK Contracts Data, PO and AP data; M³ Consulting;

Significance is S and Ratio is Less than 1—Statistically Significant Underutilization; Significance is S and Ratio is Greater than 1—Statistically Significant Overutilization.

ND – Not Determined (Represents zero RWASM availability).

8.1 INTRODUCTION

Disparities as seen in Chapter VII, are often attributed to differences in the capacity of Non-MBE and MBE firms. As such, this capacity analysis sought to examine if there were any differences in the capacity of firms based on race or gender that could hinder firms from being actually and potentially available to COK.

8.2 CAPACITY ANALYSIS

The analysis of business capacity is complicated because capacity is difficult to define and measure and is an elastic concept. Proxies of capacity cannot adequately capture the ability of firms using any single measure. Once a set of variables that measure capacity are controlled for, M³ Consulting will examine differences in the capacity of firms based on race and gender using established statistical methods.

8.2.1 Capacity Analysis Based On Average Employees And Average Sales Revenues From Data Axle

Below are measures of sales and employees from firms in the Knoxville, TN MSA which provide a measure of the capacity of the race, ethnic, and gender groups of firms measured by these proxies for capacity. Firms included in the Data Axle analysis is refined to those that fall into NAICS code areas under review for this Disparity Study.

Capacity Based on Number of Employees

Total Firms

Using Table 8.1 to compare capacity of firms measured by the number of employees, for firms in the lowest range of 1-19 employees, there are 2,740 MWBE firms, with 2,345 of these as WBEs and nearly 395 Total Minority (Non-women owned) and 5,420 Non-MWBE firms. As capacity (number of employees) increases, MWBEs remain lower than the Non-MWBE firms, with 53 Non-MWBE firms with 100-249 employees compared to 24 MWBE firms. For capacity measured as 250-499 employees, only 5 MWBEs, 4 WBEs compared to 15 Non-MWBE firms. Looking at firms with 1,000-4,999 employees, where there is one Non-MWBE firm and one MWBE firm. Taking the Grand Total, 41.5% of all firms are Non-MWBE, 20.7% are MWBE where 17.9% are WBEs.

Architecture and Engineering

Based on Table 8.2, for Architecture and Engineering, the highest range was 250-499, where there were only two Non-MWBEs. For firms with 100-249 employees, there are two MWBEs and two Non-MWBEs. For the 50-99 employee range, there is an additional Hispanic American-owned architectural firm along with one WBE and 5 Non-MWBEs. For firms with a 20-49 employee range, there is an additional Hispanic American-owned architectural firm along with 4 WBEs, totaling 5 Non-MWBEs. Most firms were in the 1-19 employee range, with Non-MWBEs representing about 37.8% of firms, as compared to MWBEs at 21.9%, the majority (19.2%) of which are WBEs. In this range, we could find, African American, Asian American, and Hispanic- American-owned firms, as well.

Construction

For Construction (Table 8.3), Non-MWBEs, MWBEs and WBEs represented 57.2%, 9.6%, and 8.1% respectively of the Grand Total. Six Non-MWBE and two WBEs firms were represented in the range 100-249. Non-MWBEs represented about 47.5% in the 50-90 employee range. One Hispanic American firm was in the 20-49 range. In the lower range of 1-19 employees, there were 12 Hispanic American-owned firms, five African American-owned firms and one Asian American. MWBEs and WBEs were 10.1% and 8.4% in this range. Unknown firms represented between 32-45% of firms, with their highest percentage representation in the ranges of 50-49.

Professional Services

Professional Services (Table 8.4) saw Non-MWBE firms reflect between 21-38% across all employee ranges. MWBEs represented 10-25% across all ranges. Non-MWBEs, MWBEs, and WBEs represented 35.8%, 24.7%, and 21.8% respectively of the grand total. One African American-owned and one Hispanic American-owned firm were represented in all ranges up to 50-99, with one firm in the two higher ranges. Among firms with 1-19 employees, Asian American, Hispanic American, and African-American-owned firms participated at 1.3%, 1.2%, and 0.5% respectively. No MBEs were represented from the 100-249 employee size range and above. MWBEs and WBEs were 24.5% and 21.4% in this range. Unknown firms represented between 39-75% of firms, with their highest percentage representation in the ranges of 1,000-4,999.

Non-Professional Services

Non-Professional Services (Table 8.5) saw MWBE and WBE representation in all ranges. MWBEs and WBEs represented 10-23% and 8-21% across all ranges respectively. Non-MWBEs, MWBEs, and WBEs represented 40.2%, 22.0%, and 19.4% respectively of the grand total. In Non-Professional Services, Non-MWBEs included one firm with 1,000-4,999 employees, seven firms with 250-499 employees and more than 26 firms in every range below. MBEs included one Hispanic American-owned firm in each of the

following ranges: 500-999, 100-249, and below. One African American-owned firm is present in ranges 100-249 and below, and one Asian American-owned firm has over 250 employees. Smaller firms, with 1-19 employees, have the greatest numbers of minority firms.

Goods and Supplies

(Table 8.6) Most Goods and Supplies companies have up to 100 employees. Only three Non-MWBE firms and two WBEs have over 250-499 employees. Seven WBE firms have 50-99 employees and 100-249 employees in each employee range. WBE firms are included in every category with fewer than 499 employees, representing 15.3% of firms with 1-19 employees. Most African American-owned firms had less than 19 employees, with only one firm with 20-49 employees. In the MSA, the minority-owned firms are all in the 1-19 employee range, with Asian American-owned firms representing 2.8% and Hispanic Americans-owned firms representing 1%. Unknown-owned firms represented between 33% to 75% for the ranges lower than 499 employees, and even 100% in the above 500 employee range.

**Table 8.1. Data Axle
Capacity Based on Total Number of Employees
Total
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	1-19		20-49		50-99		100-249	
	#	%	#	%	#	%	#	%
Non-SMWBE	5,420	42.74	433	35.79	122	29.98	53	26.63
African American	81	0.64	4	0.33	2	0.49	1	0.50
Asian American	136	1.07	1	0.08	1	0.25	1	0.50
Hispanic American	170	1.34	11	0.91	2	0.49	1	0.50
American Indian	8	0.06	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>395</i>	<i>3.12</i>	<i>16</i>	<i>1.32</i>	<i>5</i>	<i>1.23</i>	<i>3</i>	<i>1.51</i>
WBEs	2,345	18.49	169	13.97	61	14.99	21	10.55
Total MWBE	2,740	21.61	185	15.29	66	16.22	24	12.06
Unknown Multi-Ethnic ¹	4,520	35.65	592	48.93	219	53.81	122	61.31
Grand Total	12,680	100.00	1,210	100.00	407	100.00	199	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.1. cont. Data Axle
Capacity Based on Total Number of Employees
Total
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	250-499		500-999		1,000-4,999		Grand Total	
	#	%	#	%	#	%	#	%
Non-SMWBE	15	27.78	-	0.00	1	10.00	6,044	41.45
African American	-	0.00	-	0.00	-	0.00	88	0.60
Asian American	1	1.85	-	0.00	-	0.00	140	0.96
Hispanic American	-	0.00	1	4.76	-	0.00	185	1.27
American Indian	-	0.00	-	0.00	-	0.00	8	0.05
<i>Total Minority</i>	<i>1</i>	<i>1.85</i>	<i>1</i>	<i>4.76</i>	<i>-</i>	<i>0.00</i>	<i>421</i>	<i>2.89</i>
WBEs	4	7.41	1	4.76	1	10.00	2,602	17.85
Total MWBE	5	9.26	2	9.52	1	10.00	3,023	20.73
Unknown Multi-Ethnic ¹	34	62.96	19	90.48	8	80.00	5,514	37.82
Grand Total	54	100.00	21	100.00	10	100.00	14,581	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.2. Data Axle
Capacity Based on Total Number of Employees
Architecture and Engineering
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	1-19		20-49		50-99		100-249	
	#	%	#	%	#	%	#	%
Non-SMWBE	114	37.75	10	21.28	5	33.33	2	20.00
African American	3	0.99	-	0.00	0	0.00	-	0.00
Asian American	1	0.33	-	0.00	0	0.00	1	10.00
Hispanic American	4	1.32	1	2.13	1	6.67	-	0.00
American Indian	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>8</i>	<i>2.65</i>	<i>1</i>	<i>2.13</i>	<i>1</i>	<i>6.67</i>	<i>1</i>	<i>10.00</i>
WBEs	58	19.21	4	8.51	1	6.67	1	10.00
Total MWBE	66	21.85	5	10.64	2	13.33	2	20.00
Unknown Multi-Ethnic ¹	122	40.40	32	68.09	8	53.33	6	60.00
Grand Total	302	100.00	47	100.00	15	100.00	10	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.2. cont. Data Axle
Capacity Based on Total Number of Employees
Architecture and Engineering
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	250-499		500-999		1,000-4,999		Grand Total	
	#	%	#	%	#	%	#	%
Non-SMWBE	2	66.67	-	0.00	-	0.00	133	35.19
African American	-	0.00	-	0.00	-	0.00	3	0.79
Asian American	-	0.00	-	0.00	-	0.00	2	0.53
Hispanic American	-	0.00	-	0.00	-	0.00	6	1.59
American Indian	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>11</i>	<i>2.91</i>
WBEs	-	0.00	-	0.00	-	0.00	64	16.93
Total MWBE	-	0.00	-	0.00	-	0.00	75	19.84
Unknown Multi-Ethnic ¹	1	33.33	1	100.00	-	0.00	170	44.97
Grand Total	3	100.00	1	100.00	-	0.00	378	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.3. Data Axle
Capacity Based on Total Number of Employees
Construction
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	1-19		20-49		50-99		100-249	
	#	%	#	%	#	%	#	%
Non-SMWBE	644	58.28	52	52.53	19	47.50	6	42.86
African American	5	0.45	-	0.00	-	0.00	-	0.00
Asian American	1	0.09	-	0.00	-	0.00	-	0.00
Hispanic American	12	1.09	1	1.01	-	0.00	-	0.00
American Indian	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>18</i>	<i>1.63</i>	<i>1</i>	<i>1.01</i>	<i>-</i>	<i>0.00</i>	<i>-</i>	<i>0.00</i>
WBEs	93	8.42	4	4.04	3	7.50	2	14.29
Total MWBE	111	10.05	5	5.05	3	7.50	2	14.29
Unknown Multi-Ethnic ¹	350	31.67	42	42.42	18	45.00	6	42.86
Grand Total	1,105	100.00	99	100.00	40	100.00	14	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.3. cont. Data Axle
Capacity Based on Total Number of Employees
Construction
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	250-499		500-999		1,000-4,999		Grand Total	
	#	%	#	%	#	%	#	%
Non-SMWBE	-	0.00	-	0.00	-	0.00	721	57.22
African American	-	0.00	-	0.00	-	0.00	5	0.40
Asian American	-	0.00	-	0.00	-	0.00	1	0.08
Hispanic American	-	0.00	-	0.00	-	0.00	13	1.03
American Indian	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>19</i>	<i>1.51</i>
WBEs	-	0.00	-	0.00	-	0.00	102	8.10
Total MWBE	-	0.00	-	0.00	-	0.00	121	9.60
Unknown Multi-Ethnic ¹	2	100.00	-	0.00	-	0.00	418	33.17
Grand Total	2	100.00	-	0.00	-	0.00	1,260	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.4. Data Axle
Capacity Based on Total Number of Employees
Professional Services
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	1-19		20-49		50-99		100-249	
	#	%	#	%	#	%	#	%
Non-SMWBE	1,182	36.70	65	29.28	14	20.59	13	30.95
African American	15	0.47	1	0.45	1	1.47	-	0.00
Asian American	37	1.15	1	0.45	1	1.47	-	0.00
Hispanic American	43	1.33	1	0.45	-	0.00	-	0.00
American Indian	3	0.09	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>98</i>	<i>3.04</i>	<i>3</i>	<i>1.35</i>	<i>2</i>	<i>2.94</i>	<i>-</i>	<i>0.00</i>
WBEs	690	21.42	61	27.48	20	29.41	4	9.52
Total MWBE	788	24.46	64	28.83	22	32.35	4	9.52
Unknown Multi-Ethnic ¹	1,251	38.84	93	41.89	32	47.06	25	59.52
Grand Total	3,221	100.00	222	100.00	68	100.00	42	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.4. cont. Data Axle
Capacity Based on Total Number of Employees
Professional Services
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	250-499		500-999		1,000-4,999		Grand Total	
	#	%	#	%	#	%	#	%
Non-SMWBE	3	33.33	-	0.00	-	0.00	1,277	35.76
African American	-	0.00	-	0.00	-	0.00	17	0.48
Asian American	-	0.00	-	0.00	-	0.00	39	1.09
Hispanic American	-	0.00	-	0.00	-	0.00	44	1.23
American Indian	-	0.00	-	0.00	-	0.00	3	0.08
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>103</i>	<i>2.88</i>
WBEs	1	11.11	1	20.00	1	25.00	778	21.79
Total MWBE	1	11.11	1	20.00	1	25.00	881	24.67
Unknown Multi-Ethnic ¹	5	55.56	4	80.00	3	75.00	1,413	39.57
Grand Total	9	100.00	5	100.00	4	100.00	3,571	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.5. Data Axle
Capacity Based on Total Number of Employees
Non-Professional
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	1-19		20-49		50-99		100-249	
	#	%	#	%	#	%	#	%
Non-SMWBE	2,180	41.19	208	36.49	62	32.98	26	28.57
African American	38	0.72	2	0.35	1	0.53	1	1.10
Asian American	21	0.40	0	0.00	-	0.00	-	0.00
Hispanic American	83	1.57	8	1.40	1	0.53	1	1.10
American Indian	4	0.08	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>146</i>	<i>2.76</i>	<i>10</i>	<i>1.75</i>	<i>2</i>	<i>1.06</i>	<i>2</i>	<i>2.20</i>
WBEs	1,081	20.42	77	13.51	30	15.96	7	7.69
Total MWBE	1,227	23.18	87	15.26	32	17.02	9	9.89
Unknown Multi-Ethnic ¹	1,886	35.63	275	48.25	94	50.00	56	61.54
Grand Total	5,293	100.00	570	100.00	188	100.00	91	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.5. cont. Data Axle
Capacity Based on Total Number of Employees
Non-Professional
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	250-499		500-999		1,000-4,999		Grand Total	
	#	%	#	%	#	%	#	%
Non-SMWBE	7	35.00	-	0.00	1	20.00	2,484	40.21
African American	-	0.00	-	0.00	-	0.00	42	0.68
Asian American	1	5.00	-	0.00	-	0.00	22	0.36
Hispanic American	-	0.00	1	10.00	-	0.00	94	1.52
American Indian	-	0.00	-	0.00	-	0.00	4	0.06
<i>Total Minority</i>	<i>1</i>	<i>5.00</i>	<i>1</i>	<i>10.00</i>	-	<i>0.00</i>	<i>162</i>	<i>2.62</i>
WBEs	1	5.00	-	0.00	-	0.00	1,196	19.36
Total MWBE	2	10.00	1	10.00	-	0.00	1,358	21.98
Unknown Multi-Ethnic ¹	11	55.00	9	90.00	4	80.00	2,335	37.80
Grand Total	20	100.00	10	100.00	5	100.00	6,177	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.6. Data Axle
Capacity Based on Total Number of Employees
Goods and Supplies
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	1-19		20-49		50-99		100-249	
	#	%	#	%	#	%	#	%
Non-SMWBE	1,300	47.12	98	36.03	22	22.92	6	14.29
African American	20	0.72	1	0.37	-	0.00	-	0.00
Asian American	76	2.75	-	0.00	-	0.00	-	0.00
Hispanic American	28	1.01	-	0.00	-	0.00	-	0.00
American Indian	1	0.04	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>125</i>	<i>4.53</i>	<i>1</i>	<i>0.37</i>	<i>-</i>	<i>0.00</i>	<i>-</i>	<i>0.00</i>
WBEs	423	15.33	23	8.46	7	7.29	7	16.67
Total MWBE	548	19.86	24	8.82	7	7.29	7	16.67
Unknown Multi-Ethnic ¹	911	33.02	150	55.15	67	69.79	29	69.05
Grand Total	2,759	100.00	272	100.00	96	100.00	42	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.6. cont. Data Axle
Capacity Based on Total Number of Employees
Goods and Supplies
Knoxville, TN MSA, 2022**

Race /Ethnicity /Gender	250-499		500-999		1,000-4,999		Grand Total	
	#	%	#	%	#	%	#	%
Non-SMWBE	3	15.00	-	0.00	-	0.00	1,429	44.73
African American	-	0.00	-	0.00	-	0.00	21	0.66
Asian American	-	0.00	-	0.00	-	0.00	76	2.38
Hispanic American	-	0.00	-	0.00	-	0.00	28	0.88
American Indian	-	0.00	-	0.00	-	0.00	1	0.03
<i>Total Minority</i>	-	0.00	-	0.00	-	0.00	126	3.94
WBEs	2	10.00	-	0.00	-	0.00	462	14.46
Total MWBE	2	10.00	-	0.00	-	0.00	588	18.40
Unknown Multi-Ethnic ¹	15	75.00	5	100.00	1	100.00	1,178	36.87
Grand Total	20	100.00	5	100.00	1	100.00	3,195	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

Capacity Based on Sales Volume

Total Firms

If capacity were to be measured using sales volume (Table 8.7), then MBEs, WBEs, and Non-MWBEs are represented in all sales ranges up to \$500 million. Nine Non-MWBE firms and three WBEs are in the capacity range of \$100 million-\$500 million. Most of the firms concentrate in the \$10-\$20 million range. Consequently, based on sales volume, differences in capacity are not vast based on race or gender groups, although the number and proportion of MWBE firms is smaller, overall.

Architecture and Engineering

Based on Table 8.8, MWBEs, and WBEs are represented in every revenue range till \$20 million. One Asian American- and one Hispanic American-owned firm in the range \$10-\$20 million. No African American or Indian American-owned firms are in the \$10-\$20 million sales volume range. Minority firms up to \$10 million include 3 African American-, 1 Asian American- and 4 Hispanic American-owned. Most of the firms concentrate in the range up to \$2.5 million. Out of the grand total of 129 firms, 35.3%, 19.5%, and 16.4% are Non-MWBEs, MWBEs, and WBEs respectively.

Construction

In Table 8.9, Unknown multi-ethnic construction firms are reflected in every revenue range. There are firms with capacities ranging from less than \$500k up to \$1 billion. Based on sales volume, non-MWBEs range up to \$50 million. Looking at the \$5-10 million range, we can observe a concentration of firms: three WBEs, and 1 Hispanic American-owned. There are no Minority-owned construction firms over the \$20 million range.

Professional Services

Among Professional Service firms shown in Table 8.10, we observe one MWBEs in the \$100-\$500 million range. No other firm is in this range. No other firms exceed \$50 million. There are six Non-MWBEs and two WBEs. Minority-owned firms concentrate in the \$500K -\$1 million range: 20 Asian American- and 17 Hispanic American-owned firms. Twelve African American-owned firms had capacity up to \$1 million. Three American Indian-owned firms trailed, with capacity only up to \$1 million.

Non-Professional Services

In Table 8.11, there are MWBEs (many of the WBEs) firms with capacity up to \$100 million in sales volume. Minority-owned firms are present in sales of up to \$5 million. Hispanic American-owned firms are in each

range up to \$50 million. There is one Asian American-owned firm in the range of \$50-100 million. The rest of this racial group only ranges up to \$5 million.

Goods and Supplies

All firms show capacity in Goods and Supplies up to \$500 million (Table 8.12). Two WBEs show capacity up to \$500 million and four WBEs range up to \$100 million. One has capacity up to \$50 million. Two Hispanic American-owned firms and one Asian American-owned firm are in the range of \$5-\$10 million.

Minority-owned firms concentrate in ranges up to \$10 million. In the range of \$1-2.5 million, 45.4% are Non-MWBEs, 16.5% are MWBEs, and 11.2% are WBEs

**Table 8.7. Data Axle
Capacity Based on Sales Volume
Total
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	LESS THAN \$500,000		\$500,000-\$1 MILLION		\$1-2.5 MILLION		\$2.5-5 MILLION		\$5-10 MILLION		\$10-20 MILLION	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-MWBE	2,549	45.30	1,306	42.62	982	39.97	450	40.95	258	38.57	136	39.88
African American	47	0.84	18	0.59	9	0.37	9	0.82	1	0.15	-	0.00
Asian American	51	0.91	41	1.34	24	0.98	16	1.46	2	0.30	1	0.29
Hispanic American	92	1.63	46	1.50	20	0.81	7	0.64	5	0.75	3	0.88
American Indian	2	0.04	5	0.16	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total MBE</i>	<i>192</i>	<i>3.41</i>	<i>110</i>	<i>3.59</i>	<i>53</i>	<i>2.16</i>	<i>32</i>	<i>2.91</i>	<i>8</i>	<i>1.20</i>	<i>4</i>	<i>1.17</i>
WBE	1,168	20.76	507	16.55	418	17.01	140	12.74	76	11.36	30	8.80
Total MWBE	1,360	24.17	617	20.14	471	19.17	172	15.65	84	12.56	34	9.97
Unknown Multi-Ethnic ¹	1,718	30.53	1,141	37.24	1,004	40.86	477	43.40	327	48.88	171	50.15
Grand Total	5,627	100.00	3,064	100.00	2,457	100.00	1,099	100.00	669	100.00	341	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.7. cont. Data Axle
Capacity Based on Sales Volume
Total
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	\$20-50 MILLION		\$50-100 MILLION		\$100-500 MILLION		\$500M-\$1 BILLION		Grand Total	
	#	%	#	%	#	%	#	%	#	%
Non-MWBE	69	33.99	15	23.81	9	24.32	-	0.00	5,774	42.57
African American	-	0.00	-	0.00	-	0.00	-	0.00	84	0.62
Asian American	1	0.49	1	1.59	-	0.00	-	0.00	137	1.0
Hispanic American	1	0.49	-	0.00	-	0.00	-	0.00	174	1.28
American Indian	-	0.00	-	0.00	-	0.00	-	0.00	7	0.05
<i>Total MBE</i>	<i>2</i>	<i>0.99</i>	<i>1</i>	<i>1.59</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>402</i>	<i>2.96</i>
WBE	10	4.93	5	7.94	3	8.11	-	0.00	2,357	17.38
Total MWBE	12	5.91	6	9.52	3	8.11	-	0.00	2,759	20.34
Unknown Multi-Ethnic ¹	122	60.10	42	66.67	25	67.57	4	100.00	5,031	37.09
Grand Total	203	100.00	63	100.00	37	100.00	4	100.00	13,564	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.8. Data Axle
Capacity Based on Sales Volume
Architecture and Engineering
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	LESS THAN \$500,000		\$500,000-\$1 MILLION		\$1-2.5 MILLION		\$2.5-5 MILLION		\$5-10 MILLION		\$10-20 MILLION	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-MWBE	51	35.42	31	34.44	28	42.42	8	30.77	5	27.78	3	23.08
African American	1	0.69	1	1.11	1	1.52	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	1	1.52	-	0.00	-	0.00	1	7.69
Hispanic American	3	2.08	1	1.11	-	0.0	1	3.85	-	0.00	1	7.69
American Indian	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MBE	4	2.78	2	2.22	2	3.03	1	3.85	-	0.00	2	15.38
WBE	30	20.83	20	22.22	6	9.09	1	3.85	2	11.11	1	7.69
Total MWBE	34	23.61	22	24.44	8	12.12	2	7.69	2	11.11	3	23.08
Unknown Multi-Ethnic ¹	59	40.97	37	41.11	30	45.45	16	61.54	11	61.11	7	53.85
Grand Total	144	100.00	90	100.00	66	100.00	26	100.00	18	100.00	13	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.8. cont. Data Axle
Capacity Based on Sales Volume
Architecture and Engineering
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	\$20-50 MILLION		\$50-100 MILLION		\$100-500 MILLION		\$500M-\$1 BILLION		Grand Total	
	#	%	#	%	#	%	#	%	#	%
Non-MWBE	1	25.00	1	50.00	1	50.00	-	0.00	129	35.34
African American	-	0.00	-	0.00	-	0.00	-	0.00	3	0.82
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	2	0.55
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	6	1.64
American Indian	-	0.00	-	0.00	-	0.00	-	0.00	0	0.00
<i>Total MBE</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>11</i>	<i>3.01</i>
WBE	-	0.00	-	0.00	-	0.00	-	0.00	60	16.44
Total MWBE	-	0.00	-	0.00	-	0.00	-	0.00	71	19.45
Unknown Multi-Ethnic ¹	3	75.00	1	50.00	1	50.00	-	0.00	165	45.21
Grand Total	4	100.00	2	100.00	2	100.00	-	0.00	365	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.9. Data Axle
Capacity Based on Sales Volume
Construction
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	LESS THAN \$500,000		\$500,000-\$1 MILLION		\$1-2.5 MILLION		\$2.5-5 MILLION		\$5-10 MILLION		\$10-20 MILLION	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-MWBE	299	65.43	173	54.75	136	50.56	53	58.24	28	51.85	12	50.00
African American	3	0.66	-	0.00	1	0.37	1	1.10	-	0.00	-	0.00
Asian American	-	0.00	1	0.32	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	6	1.31	5	1.58	-	0.00	-	0.00	1	1.85	-	0.00
American Indian	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total MBE</i>	<i>9</i>	<i>1.97</i>	<i>6</i>	<i>1.90</i>	<i>1</i>	<i>0.37</i>	<i>1</i>	<i>1.10</i>	<i>1</i>	<i>1.85</i>	<i>-</i>	<i>0.00</i>
WBE	38	8.32	30	9.49	21	7.81	4	4.40	3	5.56	2	8.33
Total MWBE	47	10.28	36	11.39	22	8.18	5	5.49	4	7.41	2	8.33
Unknown Multi- Ethnic ¹	111	24.29	107	33.86	111	41.26	33	36.26	22	40.74	10	41.67
Grand Total	457	100.00	316	100.00	269	100.00	91	100.00	54	100.00	24	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.9. cont. Data Axle
Capacity Based on Sales Volume
Construction
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	\$20-50 MILLION		\$50-100 MILLION		\$100-500 MILLION		\$500M-\$1 BILLION		Grand Total	
	#	%	#	%	#	%	#	%	#	%
Non-MWBE	2	22.22	-	0.00	-	0.00	-	0.00	703	57.53
African American	-	0.00	-	0.00	-	0.00	-	0.00	5	0.41
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	1	0.08
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	12	0.98
American Indian	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total MBE</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>18</i>	<i>1.47</i>
WBE	-	0.00	-	0.00	-	0.00	-	0.00	98	8.02
Total MWBE	-	0.00	-	0.00	-	0.00	-	0.00	116	9.49
Unknown Multi-Ethnic ¹	7	77.78	1	100.00	1	100.00	-	0.00	403	32.98
Grand Total	9	100.00	1	100.00	1	100.00	-	0.00	1,222	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.10. Data Axle
Capacity Based on Sales Volume
Professional Services
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	LESS THAN \$500,000		\$500,000-\$1 MILLION		\$1-2.5 MILLION		\$2.5-5 MILLION		\$5-10 MILLION		\$10-20 MILLION	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-MWBE	469	40.78	456	39.01	181	28.15	61	28.24	26	25.74	8	22.86
African American	7	0.61	5	0.43	3	0.47	1	0.46	-	0.00	-	0.00
Asian American	14	1.22	20	1.71	2	0.31	1	0.46	1	0.99	-	0.00
Hispanic American	17	1.48	17	1.45	7	1.09	1	0.46	-	0.00	-	0.00
American Indian	-	0.00	3	0.26	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total MBE</i>	<i>38</i>	<i>3.30</i>	<i>45</i>	<i>3.85</i>	<i>12</i>	<i>1.87</i>	<i>3</i>	<i>1.39</i>	<i>1</i>	<i>0.99</i>	<i>-</i>	<i>0.00</i>
WBE	236	20.52	207	17.71	177	27.53	61	28.24	28	27.72	6	17.14
Total MWBE	274	23.83	252	21.56	189	29.39	64	29.63	29	28.71	6	17.14
Unknown Multi-Ethnic ¹	407	35.39	461	39.44	273	42.46	91	42.13	46	45.54	21	60.00
Grand Total	1,150	100.00	1,169	100.00	643	100.00	216	100.00	101	100.00	35	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.10. cont. Data Axle
Capacity Based on Sales Volume
Professional Services
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	\$20-50 MILLION		\$50-100 MILLION		\$100-500 MILLION		\$500M-\$1 BILLION		Grand Total	
	#	%	#	%	#	%	#	%	#	%
Non-MWBE	6	40.00	1	25.00	-	0.00	-	0.00	1,208	36.23
African American	-	0.00	-	0.00	-	0.00	-	0.00	16	0.48
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	38	1.14
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	42	1.26
American Indian	-	0.00	-	0.00	-	0.00	-	0.00	3	0.09
<i>Total MBE</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>99</i>	<i>2.97</i>
WBE	2	13.33	0	0.00	1	100.00	-	0.00	718	21.54
Total MWBE	2	13.33	0	0.00	1	100.00	-	0.00	817	24.51
Unknown Multi-Ethnic ¹	7	46.67	3	75.00	-	0.00	-	0.00	1,309	39.26
Grand Total	15	100.00	4	100.00	1	100.00	-	0.00	3,334	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.11. Data Axle
Capacity Based on Sales Volume
Non-Professional Services
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	LESS THAN \$500,000		\$500,000-\$1 MILLION		\$1-2.5 MILLION		\$2.5-5 MILLION		\$5-10 MILLION		\$10-20 MILLION	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-MWBE	1,340	43.52	395	41.36	328	40.75	149	40.05	66	38.37	39	41.05
African American	25	0.81	6	0.63	3	0.37	4	1.08	1	0.58	-	0.00
Asian American	16	0.52	2	0.21	1	0.12	1	0.27	-	0.00	-	0.00
Hispanic American	58	1.88	15	1.57	7	0.87	1	0.27	2	1.16	2	2.11
American Indian	2	0.06	1	0.10	-	0.00	-	0.00	-	0.00	-	0.00
Total MBE	101	3.28	24	2.51	11	1.37	6	1.61	3	1.74	2	2.11
WBE	694	22.54	161	16.86	120	14.91	30	8.06	20	11.63	5	5.26
Total MWBE	795	25.82	185	19.37	131	16.27	36	9.68	23	13.37	7	7.37
Unknown Multi-Ethnic ¹	944	30.66	375	39.27	346	42.98	187	50.27	83	48.26	49	51.58
Grand Total	3,079	100.00	955	100.00	805	100.00	372	100.00	172	100.00	95	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.11. cont. Data Axle
Capacity Based on Sales Volume
Non-Professional Services
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	\$20-50 MILLION		\$50-100 MILLION		\$100-500 MILLION		\$500M-\$1 BILLION		Grand Total	
	#	%	#	%	#	%	#	%	#	%
Non-MWBE	16	33.33	4	25.00	1	11.11	-	0.00	2,338	42.10
African American	-	0.00	-	0.00	-	0.00	-	0.00	39	0.70
Asian American	-	0.00	1	6.25	-	0.00	-	0.00	21	0.38
Hispanic American	1	2.08	-	0.00	-	0.00	-	0.00	86	1.55
American Indian	-	0.00	-	0.00	-	0.00	-	0.00	3	0.05
Total MBE	1	2.08	1	6.25	-	0.00	-	0.00	149	2.68
WBE	2	4.17	1	6.25	-	0.00	-	0.00	1,033	18.60
Total MWBE	3	6.25	2	12.50	-	0.00	-	0.00	1,182	21.29
Unknown Multi-Ethnic ¹	29	60.42	10	62.50	8	88.89	2	100.00	2,033	36.61
Grand Total	48	100.00	16	100.00	9	100.00	2	100.00	5,553	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic did not have any race assigned

**Table 8.12. Data Axle
Capacity Based on Sales Volume
Goods and Supplies
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	LESS THAN \$500,000		\$500,000-\$1 MILLION		\$1-2.5 MILLION		\$2.5-5 MILLION		\$5-10 MILLION		\$10-20 MILLION	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-MWBE	390	48.93	251	47.00	309	45.85	179	45.43	133	41.05	74	42.53
African American	11	1.38	6	1.12	1	0.15	3	0.76	-	0.00	-	0.00
Asian American	21	2.63	18	3.37	20	2.97	14	3.55	1	0.31	-	0.00
Hispanic American	8	1.00	8	1.50	6	0.89	4	1.02	2	0.62	-	0.00
American Indian	-	0.00	1	0.19	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total MBE</i>	<i>40</i>	<i>5.02</i>	<i>33</i>	<i>6.18</i>	<i>27</i>	<i>4.01</i>	<i>21</i>	<i>5.33</i>	<i>3</i>	<i>0.93</i>	<i>-</i>	<i>0.00</i>
WBE	170	21.33	89	16.67	94	13.95	44	11.17	23	7.10	16	9.20
Total MWBE	210	26.35	122	22.85	121	17.95	65	16.50	26	8.02	16	9.20
Unknown Multi-Ethnic ¹	197	24.72	161	30.15	244	36.20	150	38.07	165	50.93	84	48.28
Grand Total	797	100.00	534	100.00	674	100.00	394	100.00	324	100.00	174	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi-Ethnic¹ did not have any race assigned

**Table 8.12. cont. Data Axle
Capacity Based on Sales Volume
Goods and Supplies
Knoxville, TN MSA, 2022**

Race/ Ethnicity/ Gender	\$20-50 MILLION		\$50-100 MILLION		\$100-500 MILLION		\$500M-\$1 BILLION		Grand Total	
	#	%	#	%	#	%	#	%	#	%
Non-MWBE	44	34.65	9	22.50	7	29.17	-	0.00	1,396	45.18
African American	-	0.00	-	0.00	-	0.00	-	0.00	21	0.68
Asian American	1	0.79	-	0.00	-	0.00	-	0.00	75	2.43
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	28	0.91
American Indian	-	0.00	-	0.00	-	0.00	-	0.00	1	0.03
<i>Total MBE</i>	<i>1</i>	<i>0.79</i>	<i>-</i>	<i>0.00</i>	<i>-</i>	<i>0.00</i>	<i>-</i>	<i>0.00</i>	<i>125</i>	<i>4.05</i>
WBE	6	4.72	4	10.00	2	8.33	-	0.00	448	14.50
Total MWBE	7	5.51	4	10.00	2	8.33	-	0.00	573	18.54
Unknown Multi-Ethnic ¹	76	59.84	27	67.50	15	62.50	2	100.00	1,121	36.28
Grand Total	127	100.00	40	100.00	24	100.00	2	100.00	3,090	100.00

Source: 2022 Data Axle Data; M³ Consulting; Ethnicities based on assigned races from source data

¹: Unknown Multi- Ethnic did not have any race assigned

8.2.2 Capacity Analysis Based on Survey Data

M³ Consulting conducted a survey of firms on the COK vendor registry and Master MWBE/SBE list, with a focus on gathering capacity data to be used in the regression analysis to examine for differences in capacity based on race/gender/ethnicity, if any. The list includes firms that may never have done business with COK. The process involved creating a questionnaire, sample design, data collection and coding, analysis, and interpretation. Questions were designed with the specific purpose of collecting information about the availability of firms seeking to do business with COK and the private sector and their capacity.

Typically, a sampling frame is defined based on vendors that registered to do business with COK and the Master MWBE/SBE list and a random sample drawn, enabling M³ Consulting to obtain information to make inferences about capacity of vendors in the population being analyzed. However, since the survey was online (therefore cost effective) we emailed the survey link to the entire population of firms in the two aforementioned lists to maximize sample size.

A total of 9,386 firms were sent an online survey invitation with a unique link to the survey on September 7, 2022. There were 179 bounce-backs. Reminders were sent to non-responders four times over the subsequent three weeks. The survey was closed on September 28, 2022 with a total of 366 completed responses.

A. Respondent Demographics:

Throughout the report, the data from this research are broken out by each of the following business types: White Male-owned, Total Minority/Women-owned, Minority-owned, and Women-owned. The Total/Minority-owned is an aggregate of those who qualify as either a Minority-owned business or a Women-owned business. Percentages may not add up to 100% due to rounding. The number of respondents per question varies and may not equal 366 due to skip logic.

Statistical testing was conducted at the 90% and 95% confidence level. Differences between each of the groups are identified with a letter. The margin of error for each of the groups is as follows: White Male-owned n=166, margin of error +/- 7.5%; Total Minority/Women-owned n=186, margin of error +/- 7.1%; Minority-owned n=97, margin of error +/- 9.9%; Women-owned n=89, margin of error +/- 10.3%. Those with fewer than 40 observations (<40) are noted throughout the report with the following symbol: ^. This indicates a need for caution when interpreting results.

I. Contracting

White male-owned businesses are more likely to have contracted with various entities in the past five years than Minority-owned businesses overall. White male-owned businesses do more contracting with COK than Minority-owned and Women-owned businesses combined.

Table 8.13. Q1: Has your company contracted with any with any of the following public entities in the past five years?

Contracted with public entities in past 5 years (Summary of 'yes' responses)	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Private Sector companies	83% BC	74%	65%	83%
Other Public Sector agencies in Tennessee	73% BC	62%	48%	78%
Other Public Sector agencies outside of Tennessee	55% BC	41%	37%	46%
COK	51% BCD	29%	21%	38%

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

Those who contracted with COK first began contracting an average of six to seven years ago.

Table 8.14. Q2: How long ago did your company first contract with the City of Knoxville?

How long ago did your company first contract with the City of Knoxville	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)^	Female Owned (D)^
0 to 3 years	26%	30%	35%	26%
4 to 7 years	14%	13%	10%	15%
8 to 10 years	13%	13%	25%	6%
Over 10 years	42% C	35%	15%	47%
Don't know	5%	9%	15%	6%
Mean	7.29	6.83	5.85	7.34
Median	9.09	8.43	6.25	10.50

Base: Those who have contracted with COK in the past 5 years. Sample size white Male-owned n=84, Total Minority/Women-owned n=54, Minority-owned n=20^, Women-owned n=34^.

^Please interpret with caution due to small base sizes..

White male-owned businesses have been contracting with any public sector agency for a longer period of time than Minority-owned businesses (9 years vs. 6 years respectively).

Table 8.15. Q2a: How long ago did your company first contract with any Public Sector agency?

How long ago did your company first contract with any public sector agency	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
0 to 3 years	13%	23% A	38% A	12%
4 to 7 years	8%	17% A	23% A	12%
8 to 10 years	9%	7%	9%	5%
Over 10 years	64% BC	50%	27%	68%
Don't know	5%	3%	4%	3%
Mean	9.02 BC	7.66	5.80	9.04
Median	11.00	11.00	5.38	11.00

Base: Those that have contracted with other Public Sector agencies in Tennessee in the past 5 years. Sample size white Male-owned n=137, Total Minority/Women-owned n=131, Minority-owned n=56, Women-owned n=75.

Contracting with any private sector agency or company follows the same pattern; white male-owned businesses are more likely to have begun contracting longer ago than Minority-owned businesses.

Table 8.16. Q2b. How long ago did your company first contract with any Private Sector company?

How long ago did your company first contract with any private sector agency/ company	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
0 to 3 years	14%	20%	32% A	11%
4 to 7 years	7%	12% a	19% A	7%
8 to 10 years	7%	6%	10%	3%
Over 10 years	72% BC	58%	35%	77%
Don't know	1%	4%	5%	3%
Mean	9.16 BC	8.16	6.53	9.51
Median	11.00	11.00	6.50	11.00

Base: Those that have contracted with private Sector agencies/companies in the past 5 years. Sample size white Male-owned n=137, Total Minority/Women-owned n=137, Minority-owned n=63, Women-owned n=74.

II. Company Firmographics

White male-owned businesses are more likely to be structured as corporations compared to both Minority and Women-owned businesses. Women-owned businesses are more likely to be structured as Subchapter S Corporations compared to white male-owned businesses.

Table 8.17. Q3: What type of organization is your company?

Company organization type	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
LLC	34%	35%	39%	30%
Corporation	37% BCD	24%	24%	25%
Subchapter S Corporation	11%	22% A	18%	27% A
Sole Proprietorship	16%	15%	14%	16%
Partnership	0%	2%	2%	1%
Other	1%	2%	3%	1%

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

The primary market area is split with approximately one-third or more describing it as the state of Tennessee, one-third or more stating their primary market area is nationwide, and 12% or fewer saying it is COK.

Table 8.18. Q4. What is your primary market area (area in which you sell your goods and/or services?)

Primary market area	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
City of Knoxville	4%	10% A	12% A	7%
State of Tennessee	30%	37%	37%	37%
Greater Knoxville area	27% BC	17%	11%	24%
Nationwide	39%	36%	39%	33%

Base: Total respondents. Sample size White Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

Respondents primarily categorize their businesses as providing Professional, Scientific, and Technical Services, Construction, Manufacturing, or Retail Trade. White male-owned businesses are more likely to categorize their business as manufacturing (compared to minority-owned businesses), or retail trade (compared to Minority-owned businesses).

Table 8.19. Q5: Which one of the following industries best categorizes what your company does?

Industry Categorization	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Professional, Scientific, and Technical Services	23%	26%	26%	27%
Construction	16%	16%	16%	16%
Manufacturing	15% BC	6%	4%	9%
Retail Trade	8% C	12%	3%	22% A
Other Services (except Public Administration)	11%	8%	9%	6%
Wholesale Trade	7%	6%	7%	6%
Arts, Entertainment, and Recreation	2%	3%	4%	2%
Transportation and Warehousing	4%	2%	4%	0%
Utilities	2%	3%	4%	1%
Accommodation and Food Services	1%	3%	4%	1%
Educational Services	2%	2%	2%	2%
Agriculture, Forestry, Fishing and Hunting	1%	2%	1%	2%
Finance and Insurance	1%	2%	2%	2%
Administrative and Support and Waste Management and Remediation Services	1%	2%	4% A	0%
Real Estate and Rental and Leasing	2%	1%	1%	0%
Information	1%	1%	2%	0%
Public Administration	0%	1%	2%	0%
Management of Companies and Enterprises	0%	1%	1%	0%

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

White male-owned businesses have more full-time employees (on average) than all other groups. Minority and Women-owned businesses are more likely than male-owned businesses to have ten or fewer full-time employees.

Table 8.20. Q6: How many full-time, full-year employees does your company have presently across all locations it controls and operates? Your best estimate is fine.

Full-time employees	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
10 or less	51%	70% A	70% A	70% A
11-50	31% C	24%	22%	27%
51-200	10% BCD	4%	4%	3%
201-1000	6% B	2%	3%	0%
More than 1000	2%	1%	1%	0%
Mean	87.51 BCD	34.86	48.38	20.12
Median	10.00	10.00	10.00	10.00

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

White male-owned businesses are also more likely to have been in business longer, on average, than Minority- or Women- owned businesses.

Table 8.21. Q7a: How many years has your firm been in business?

Years in business	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
1-3 years	4%	9% A	11% A	6%
3-5 years	5%	8%	8%	8%
5-10 years	9%	16% A	26% A	6%
10-25 years	28%	42% A	38% A	46% A
More than 25 years	54% BCD	25%	16%	35%
Mean	19.90 BCD	15.61	13.45	17.97
Median	26.00	16.15	11.82	20.06

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

Most businesses were established as startups, though white male-owned businesses were more likely to be established through a buy-out of a previously existing enterprise than Minority-owned businesses.

Table 8.22. Q7b: When your business was established was it...?

How business was established	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
A Startup	84%	88%	92% A	84%
A Buy-Out Of A Previously Existing Enterprise	11% C	7%	4%	10%
Other	3%	3%	2%	4%
Don't Know	1%	2%	2%	1%

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

III. Startup Financing

Among those whose business began as a startup, the initial capital investments on average were between \$35,000 and \$68,000. Capital investment by Minority-owned businesses were more likely to be between \$1 and less than \$10,000 compared to white male-owned businesses.

Table 8.23. Q8: Which of the following categories best describes your company's total initial capital investment for startup? Your best estimate is fine.

Company's total initial capital investment for startup	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
None	3%	6%	6%	5%
\$1 to less than \$10,000	28%	46% A	51% A	38%
\$10,000 to less than \$25,000	16%	13%	15%	11%
\$25,000 to less than \$50,000	18%	11%	10%	11%
\$50,000 to less than \$100,000	11%	10%	10%	9%
\$100,000 to less than \$250,000	4%	8%	4%	13% A
\$250,000 to less than \$500,000	1%	5% A	3%	7% A
\$500,000 or more	4%	0%	0%	0%
Don't know	14% BD	2%	0%	5%
Mean	\$60,687	\$49,562	\$35,478	\$67,981
Median	\$20,999	\$9,463	\$8,571	\$15,000

Base: Those who indicated their business began as a startup and is not a corporation. Sample size white Male-owned n=93, Total Minority/Women-owned n=123, Minority-owned n=68, Women-owned n=55.

Startups were primarily self-funded, particularly among minority-owned businesses compared to white male-owned businesses.

Table 8.24. Q9: What sources of funding were used as start-up capital for your company? (Multiple answers were accepted).

Used minority owned financial institution	White Male Owned (A)^	Total Minority/ Female Owned (B)^	Minority Owned (C)^	Female Owned (D)^
Self/Home	73%	86% A	89% A	83%
Financial Institution - Bank	13%	22%	19%	25% A
Family/Friends	20% B	11%	11%	12%
Financial Institution – Credit Union	2%	3%	5%	2%
Contract	2%	3%	5%	2%
Other	0%	3%	3%	2%
Don't know	13% BD	2%	0%	4%

Base: Those who indicated their business began as a startup and is not a corporation. Sample size white Male-owned n=93, Total Minority/Women-owned n=123, Minority-owned n=68, Women-owned n=55.

Among the people whose business began as a startup, and invested some money initially from a financial institution, their financial institution was not likely to be Minority-owned, though only 41 people answered this question.

Table 8.25. Q9b: You mentioned a financial institution was used as a source of funding for your company. To the best of your knowledge, were any a minority owned financial institution?

Used minority-owned financial institution	White Male Owned (A)^	Total Minority/ Female Owned (B)^	Minority Owned (C)^	Female Owned (D)^
Yes	0%	4%	8%	0%
No	43%	63%	46%	79% A
Don't know	57% D	33%	46%	21%

Base: Those who indicated their business began as a startup, is not a corporation, invested more than \$0 initially and used a financial institution as a source of funding. Sample size white Male-owned n=14^, Total Minority/Women-owned n=27^, Minority-owned n=13^, Women-owned n=14^.

^Please interpret with caution due to small base sizes..

B. Business Principals (those who may hold a title such as Principals, President or CEO)

I. Personal

Company principals are on average between 54 and 58 years old.

Table 8.26. Q12a: What is his/her current age? Your best estimate is fine.

Age of Principal	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
23-29	1%	1%	0%	1%
30-39	8%	10%	10%	9%
40-49	20%	18%	22%	15%
50-59	30%	30%	33%	26%
60-69	27%	26%	23%	30%
70-79	13%	12%	10%	15%
80-89	1%	3%	1%	4%
Mean	56.29	56.04	53.86	58.42

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

Principals of white male-owned firms are more likely to be married and living with a spouse, while Minority- and Women-owned principals are more likely to be widowed than white male-owned principals.

Table 8.27. Q12b: What is his/her current marital status?

Marital status of principal	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Single, never married	5%	9%	14% A	3%
Unmarried, living with partner	2%	1%	2%	0%
Married, living with spouse	84% BCD	70%	67%	73%
Divorced/Separated	8%	9%	8%	10%
Widowed	1%	11% A	8% A	13% A

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

II. Education

Company principals have often graduated college. White male-owned businesses are more likely to have a principal who graduated from high school or equivalent. Minority-owned business principals are more likely to have completed post-graduate work or degrees than white male-owned business principals.

Table 8.28. Q12: What is the highest degree or level of education that your principal has completed?

Education level of principal	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Some high school or less	2%	1%	2%	0%
Graduated from high school or equivalent	14% BC	8%	6%	9%
Some college or associate degree	20%	23%	19%	27%
Graduated college	42% C	34%	30%	39%
Post-graduate work or degree	19%	33% A	43% A	22%
Don't know	3%	1%	0%	2%

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

III. Professional Experience

Most principals have worked in their professional area prior to involvement with the company. Women-owned firms are more likely to have a principal who has never worked in their professional area compared to white male-owned firms. Minority-owned firms are more likely to have principals who worked in their professional area for fewer than five years compared to white male-owned firms. On average, white male-owned firms have principals who have worked in their professional area longer than Women-owned firms.

Table 8.29. Q14: Prior to the principal's involvement with your company, how many years did he or she work in the same profession that the company specializes in presently?

Years Principal Worked in Professional Area	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Zero/Never	13%	18%	14%	22% A
Less than 5 years	9%	15% A	18% A	12%
5 to less than 10 years	14%	15%	12%	17%
10 to less than 15 years	14%	17%	16%	18%
15 to less than 20 years	11%	11%	14%	7%
More than 20 years	31%	24%	25%	22%
Don't know	7% BD	1%	0%	1%
Mean	12.19 BD	10.28	10.90	9.60
Median	13.70	10.55	11.72	9.33

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

C. Business Capacity

I. Revenue

In 2021, white male-owned businesses had higher average gross receipts—particularly due to a higher number of businesses with gross receipts totaling \$300,000, \$1 million, \$5 million, and \$10 million or more. Minority-owned firms are more likely to have grossed less than \$100,000.

Table 8.30. Q18: Which of the following categories best describes you company’s total gross receipts from all sources for Fiscal Year (FY) 2021

Company Total Gross Receipts FY 2021	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Less than \$100,000	10%	28% A	43% A	11%
\$100,000 to less than \$200,000	5%	9%	6%	12% A
\$200,000 to less than \$300,000	3%	6%	5%	8%
\$300,000 to less than \$500,000	13% BC	6%	5%	8%
\$500,000 to less than \$1,000,000	11%	11%	10%	11%
\$1,000,000 to less than \$2,500,000	21% C	19%	11%	27%
\$2,500,000 to less than \$5,000,000	10%	9%	7%	11%
\$5,000,000 to less than \$10,000,000	8% C	5%	3%	8%
\$10,000,000 or more	19% BCD	6%	8%	3%
Mean	\$1,687,650 BC	\$1,277,150	\$926,288	\$1,659,550
Median	\$10,000,000	\$500,000	\$210,000	\$974,999

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

II. Financing in the Past 5 Years

Minority-owned businesses are more likely to have used small business loan programs than white male-owned businesses.

Table 8.31. Q26: Which of the following programs to obtain company funding/financing, if any, has your company used in the past 5 years? (Multiple answers were accepted.)

Funding/Financing Programs Used in Past 5 Years	White Male Owned (A)	Total Minority/Female Owned (B)	Minority Owned (C)	Female Owned (D)
Small business loan programs	15%	25% A	30% A	20%
Government assistance programs	16%	22%	20%	25%
Micro loan programs	1%	2%	2%	1%
Bond programs	0%	2%	3%	0%
Other, please specify	5%	5%	5%	6%
None of the above	67%	59%	59%	58%

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

In the past five years, more than four in ten companies have applied for a loan/line of credit or bond.

Table 8.32. Q19: Which, if any, of the following has your company applied for in the past 5 years? (Multiple answers were accepted.)

Company Applied for any of the Following in Past 5 years	White Male Owned (A)	Total Minority/Female Owned (B)	Minority Owned (C)	Female Owned (D)
Loan/Line of credit	46%	48%	53%	44%
Bond	14%	18%	20%	17%
None of the above	49%	48%	44%	53%

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

III. Bonds, Loans and Lines of Credit

Among the respondents who applied for a bond in the past five years, white male-owned businesses did so more frequently on average than minority-owned businesses.

Table 8.33. Q20: How many times in the past 5 years has your company applied for a bond?

Number of Times Applied for Bond in Past 5 Years	White Male Owned (A)^	Total Minority/ Female Owned (B)^	Minority Owned (C)^	Female Owned (D)^
1	13%	24%	32%	13%
2	22%	21%	26%	13%
3	4%	18% A	21%	13%
4	4%	3%	5%	0%
5	17%	18%	5%	33%
6+	39% BC	18%	11%	27%
Mean	21.13 BCD	4.85	3.00	7.20

Base: Those that have applied for a bond in the past 5 years. Sample size white Male-owned n=23^, Total Minority/Women-owned n=34^, Minority-owned n=19^, Women-owned n=15^.

^Please interpret with caution due to small base sizes..

Most who applied were approved for the bond. Notably, white male-owned firms are more likely to have never been denied for a bond than Minority-owned firms.

Table 8.34. Q21: How many times in the past 5 years has your company been denied for a bond?

Number of Times Denied for a Bond in Past 5 Years	White Male Owned (A)^	Total Minority/ Female Owned (B)^	Minority Owned (C)^	Female Owned (D)^
0	100% BC	88%	79%	100%
1	0%	3%	5%	0%
2	0%	3%	5%	0%
3	0%	3%	5%	0%
4	0%	0%	0%	0%
5	0%	3%	5%	0%
Mean	0.00	0.32 A	0.58 A	0.00

Base: Those that have applied for a bond in the past 5 years. Sample size white Male-owned n=23^, Total Minority/Women-owned n=34^, Minority-owned n=19^, Women-owned n=15^.

^Please interpret with caution due to small base sizes.

Most of those who applied for a loan/line of credit did so once or twice.

Table 8.35. Q22: How many times in the past 5 years has your company applied for a loan/line of credit?

Number of Times Applied for Loan/Line of Credit in Past 5 Years	White Male Owned (A)	Total Minority/Female Owned (B)	Minority Owned (C)	Female Owned (D)^
1	42%	49%	43%	56%
2	22%	23%	25%	21%
3	13%	14%	20%	8%
4	1%	1%	2%	0%
5	16% C	9%	6%	13%
6+	5%	3%	4%	3%
Mean	2.54	2.14	2.18	2.10

Base: Those that have applied for a lone/line of credit in the past 5 years. Sample size white Male-owned n=62, Total Minority/Women-owned n=137, Minority-owned n=99, Women-owned n=38^.

^Please interpret with caution due to small base sizes.

Though denial for a loan/line of credit in the past five years is not common, Minority-owned businesses were declined more often on average than white male-owned businesses.

Table 8.36. Q23: How many times in the past 5 years has your company denied for a loan/line of credit?

Number of Times Denied for Loan/Line of Credit in Past 5 Years	White Male Owned (A)	Total Minority/Female Owned (B)	Minority Owned (C)	Female Owned (D)^
0	95% BC	78%	71%	87%
1	4%	12% A	16% A	8%
2	0%	6%	8%	3%
3	0%	2%	2%	3%
4	0%	0%	0%	0%
5	0%	1%	2%	0%
6+	1%	1%	2%	0%
Mean	0.16	0.44 A	0.63 A	0.21

Base: Those that have applied for a lone/line of credit in the past 5 years. Sample size white Male-owned n=76, Total Minority/Women-owned n=90, Minority-owned n=51, Women-owned n=39^.

^Please interpret with caution due to small base sizes.

Approximately one-third of Minority-owned businesses noted that the loan application process was a challenge (more than white male-owned businesses). They also faced challenges from a bank/financial institution’s pricing. White male-owned businesses are more likely than Minority-owned businesses to report facing no challenges at all when attempting to secure a loan or line of credit from a financial institution.

Table 8.37. Q24: What challenges, if any, did your company encounter in attempting to secure a loan or line of credit from a financial institution in the past 5 years. (Multiple answers were accepted.)

Challenges Faced When Attempting to Secure a Loan or Line of Credit From an FI in Past 5 Years	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)^
Loan application process	8%	23% A	35% A	8%
Pricing (interest rate charged or other terms of the loan)	9%	21% A	29% A	10%
Bank/Financial institution manager's attitude	9%	11%	16%	5%
Other	1%	4%	8%	0%
No challenges at all	78% BC	58%	41%	79%

Base: Those that have applied for a lone/line of credit in the past 5 years. Sample size white Male-owned n=76, Total Minority/Women-owned n=90, Minority-owned n=51, Women-owned n=39^.

^Please interpret with caution due to small base sizes.

IV. Bidding and Contract Awards

Minority-owned businesses are more likely to have only bid on projects as both prime and subcontractors compared to white male-owned businesses.

Table 8.38. Q26a: Does your company bid projects as a prime or subcontractor?

Bidding projects by type of role	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Only as prime	42% BC	31%	24%	39%
Only as sub	10%	13%	10%	16%
Both as prime and sub	49%	56%	66% A	45%

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

An average of 6%-10% of all bids are submitted to COK as prime contractor. However, Minority-owned businesses are more likely to have not submitted bids to COK as a prime contractor (or consultant) in the last two years.

Table 8.39. Q27a: Thinking about all of the bids (supplying a quote or proposal) your company has submitted in the past 2 years as a prime contractor (or consultant), what percentage has gone to each of the following agency or company types? - City of Knoxville

Percentage of bids submitted to COK as prime contractor	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
0	49%	66% A	72% A	59%
1-10	35% BC	21%	14%	29%
11-20	6% C	3%	1%	5%
21-30	4%	3%	2%	4%
31-40	0%	1%	1%	1%
41-50	2%	1%	1%	0%
51-60	0%	0%	0%	0%
61-70	0%	0%	0%	0%
71-80	0%	1%	1%	0%
81-90	0%	0%	0%	0%
91-100	5%	4%	7%	1%
Mean	9.03%	8.29%	10.43%	5.81%

Base: Those that bid projects as prime contractor. Sample size white Male-owned n=150, Total Minority/Women-owned n=162, Minority-owned n=87, Women-owned n=75.

An average of 20%- 31% of all bids are submitted to other TN public sector agencies as prime contractor. Similarly though, Minority-owned businesses are more likely to submit any bids in the last two years than white male-owned businesses.

Table 8.40. Q27b: Thinking about all of the bids (supplying a quote or proposal) your company has submitted in the past 2 years as a prime contractor (or consultant), what percentage has gone to each of the following agency or company types? - Other Public Sector agencies in Tennessee

Percentage of bids submitted to other TN public sector agencies as prime contractor	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
0	31% D	30%	41%	17%
1-10	26% C	19%	14%	25%
11-20	13%	9%	10%	8%
21-30	9%	11%	9%	13%
31-40	3%	2%	1%	4%
41-50	7%	10%	7%	13%
51-60	1%	2%	2%	1%
61-70	3%	3%	3%	3%
71-80	2%	3%	2%	4%
81-90	3%	5%	3%	7%
91-100	3%	5%	6%	4%
Mean	19.74%	26.90% A	23.57%	30.76% A

Base: Those that bid projects as prime contractor. Sample size white Male-owned n=150, Total Minority/Women-owned n=162, Minority-owned n=87, Women-owned n=75.

On average, about 18%- 23% of bids from all firms are submitted to other public sector agencies outside TN as a prime contractor.

Table 8.41. Q27c. Thinking about all of the bids (supplying a quote or proposal) your company has submitted in the past 2 years as a prime contractor (or consultant), what percentage has gone to each of the following agency or company types? - Other Public Sector agencies outside of Tennessee

Percentage of bids submitted to other public sector agencies outside TN as prime contractor	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
0	46%	52%	53%	51%
1-10	15% C	10%	8%	12%
11-20	5%	8%	8%	8%
21-30	9%	10%	10%	11%
31-40	1%	2%	1%	3%
41-50	5%	6%	7%	5%
51-60	1%	1%	1%	1%
61-70	2%	1%	1%	1%
71-80	5%	2%	5%	0%
81-90	4% B	1%	1%	0%
91-100	7%	6%	5%	8%
Mean	23.06%	18.80%	19.33%	18.17%

Base: Those that bid projects as prime contractor. Sample size white Male-owned n=150, Total Minority/Women-owned n=162, Minority-owned n=87, Women-owned n=75.

On average, 45% -48% of bids are submitted to private sector agencies/companies, though Minority-owned business owners are less likely to submit bids to these agencies.

Table 8.42. Q27d. Thinking about all of the bids (supplying a quote or proposal) your company has submitted in the past 2 years as a prime contractor (or consultant), what percentage has gone to each of the following agency or company types? – Private Sector agencies/companies

Percentage of bids submitted to private sector agencies as prime contractor	White Male Owned (A)	Total Minority/Female Owned (B)	Minority Owned (C)	Female Owned (D)
0	17%	21%	24%	17%
1-10	12%	10%	7%	13%
11-20	6%	4%	6%	3%
21-30	7%	8%	8%	8%
31-40	3%	4%	2%	7%
41-50	9%	11%	11%	11%
51-60	3%	2%	1%	4%
61-70	3%	7%	8%	7%
71-80	13% BC	7%	5%	11%
81-90	11%	9%	6%	12%
91-100	14%	15%	22%	8%
Mean	48.17%	46.01%	46.67%	45.25%

Base: Those that bid projects as prime contractor. Sample size white Male-owned n=150, Total Minority/Women-owned n=162, Minority-owned n=87, Women-owned n=75.

Businesses that did not bid as a prime contractor to COK in the past two years primarily did not have notice of bids, a relationship, or no bids for what they sell. Women-owned businesses were more likely to say they had no relationship with COK compared to white male-owned businesses. Minority-owned businesses were more likely to be unable to meet bonding, insurance, or financial requirements than white male-owned businesses.

Table 8.43. Q27aa. If you did not submit a bid as a prime contractor/consultant to the City of Knoxville in the past 2 years, why not?

Reasons for Not Bidding as Prime Contractor to COK in Past 2 Years	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
No notice of bids from the COK	43% D	43%	53%	29%
No relationship with the COK	20%	36% A	32%	41% A
No bids for what I sell	25%	31%	26%	36%
Too much bureaucracy/red tape	12%	15%	19%	10%
COK favors certain contractors	7%	11%	14%	9%
Not certified by COK	4%	11% A	12% A	9%
Bid requirements unfair	4%	10%	11%	9%
Contract size too large	4%	7%	7%	7%
Can't meet bonding, insurance or financial requirements	1%	9% A	11% A	7%
Adequate and on-going technical assistance lacking	2%	3%	5%	0%
Technology	0%	2%	3%	0%
Language barriers made it difficult to communicate	1%	0%	0%	0%
Other	20% BC	11%	10%	12%

Base: Those that have not bid projects as prime contractor on contracts with COK. Sample size white Male Owned n=89, Total Minority/Women-wned n=131, Minority-owned n=73, Women-owned n=58.

An average of 4%- 9% of all bids are submitted to COK as prime contractor.

Table 8.44. Q29a: Thinking about all of the bids (supplying a quote or proposal) your company has submitted in the past 2 years as a subcontractor (or sub-consultant), what percentage has gone to each of the following agency or company types? - City of Knoxville

Percentage of bids submitted to COK as subcontractor	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
0	69%	76%	77%	74%
1-10	22% BC	10%	5%	17%
11-20	3%	4%	4%	4%
21-30	3%	3%	3%	4%
31-40	0%	0%	0%	0%
41-50	2%	3%	5%	0%
51-60	0%	0%	0%	0%
61-70	0%	0%	0%	0%
71-80	0%	1%	1%	0%
81-90	0%	0%	0%	0%
91-100	1%	3%	4%	2%
Mean	4.41%	7.48%	9.41%	4.83%

Base: Those that bid projects as sub contractor. Sample size white Male-owned n=97, Total Minority/Women-owned n=128, Minority-owned n=74, Women-owned n=54.

Firms submit an average of 14%- 26% of their total bids as subcontractors to other public sector agencies in TN. Minority-owned and Women-owned businesses more likely to submit a higher number of subcontractor bids to other public sector agencies in TN on average than white male-owned businesses.

Table 8.45. Q29b: Thinking about all of the bids (supplying a quote or proposal) your company has submitted in the past 2 years as a subcontractor (or sub-consultant), what percentage has gone to each of the following agency or company types? - Other Public Sector agencies in Tennessee

Percentage of bids submitted to other public sector agencies in Tennessee as subcontractor	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
0	45%	45%	47%	41%
1-10	23% BC	13%	8%	19%
11-20	9%	6%	4%	9%
21-30	9%	6%	8%	4%
31-40	2%	3%	3%	4%
41-50	3%	8%	11% A	4%
51-60	2%	3%	4%	2%
61-70	2%	2%	1%	2%
71-80	2%	3%	1%	6%
81-90	0%	3%	1%	6%
91-100	2%	9% A	11% A	6%
Mean	14.40%	25.43% A	26.30% A	24.24% A

Base: Those that bid projects as subcontractor. Sample size white Male Owned n=83, Total Minority/Women-owned n=201, Minority-owned n=136, Women-owned n=65.

An average of 11%- 21% of all contracts are submitted to other public sector agencies outside of TN as a subcontractor with white male-owned businesses being directionally more likely to submit a higher percentage of bids on average than Women-owned businesses.

Table 8.46. Q29c: Thinking about all of the bids (supplying a quote or proposal) your company has submitted in the past 2 years as a subcontractor (or sub-consultant), what percentage has gone to each of the following agency or company types? - Other Public Sector agencies outside of Tennessee

Percentage of bids submitted to other public sector agencies outside Tennessee as subcontractor	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
0	47%	59% A	57%	61%
1-10	20% C	12%	5%	20%
11-20	7%	5%	5%	4%
21-30	8% D	6%	9%	2%
31-40	1%	2%	1%	4%
41-50	2%	6%	8% A	4%
51-60	2%	2%	1%	2%
61-70	3%	1%	1%	0%
71-80	2%	0%	0%	0%
81-90	1%	1%	1%	0%
91-100	6%	7%	9%	4%
Mean	18.34% D	16.38%	20.68%	10.48%

Base: Those that bid projects as subcontractor. Sample size white Male-owned n=97, Total Minority/Women-owned n=128, Minority-owned n=74, Women-owned n=54.

White male-owned businesses submit on average 63% of bids as subcontractors to private sector agencies, significantly more than Minority-owned business owners (44% on average). Minority-owned businesses are more likely to not submit any bids as a subcontractor to private sector agencies than white male-owned businesses.

Table 8.47. Q29d: Thinking about all of the bids (supplying a quote or proposal) your company has submitted in the past 2 years as a subcontractor (or sub-consultant), what percentage has gone to each of the following agency or company types? - Private Sector agencies/companies

Percentage of bids submitted to private sector agencies as subcontractor	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
0	9%	23% A	30% A	15%
1-10	6%	5%	3%	7%
11-20	4%	6%	8%	4%
21-30	11% BD	5%	5%	4%
31-40	4%	6%	7%	6%
41-50	3%	12% A	15% A	7%
51-60	2%	2%	1%	2%
61-70	6% C	3%	1%	6%
71-80	10% BC	4%	3%	6%
81-90	6% C	6%	1%	13%
91-100	37%	28%	26%	31%
Mean	62.85 BC	50.72	43.62	60.44

Base: Those that bid projects as subcontractor. Sample size white Male-owned n=97, Total Minority/Women-owned n=128, Minority-owned n=74, Women-owned n=54.

Among those who did not submit bids as a subcontractor to COK, the most common reasons were that there was no notice of sub-bids from prime contractors or consultants, they did not have a relationship with COK, no bids for what they sell, or no relationship with prime contractor. Women-owned businesses were more likely to not have submitted a bid because they had no relationship with COK. Minority-owned businesses were more likely to have not submitted a bid because they feel prime contractors favor certain subcontractors, or the bid requirements are unfair compared to white male-owned businesses. Both Minority and Women-owned businesses were more likely to say they had no relationship with prime contractors or consultants compared to white male-owned businesses.

Table 8.48. Q29aa. If you did not submit a sub-bid as a subcontractor/sub-consultant to a prime contractor/consultant on a City of Knoxville project in the past 2 years, why not? (Multiple answers were accepted.)

Reasons for Not Bidding as Subcontractor to COK in Past 2 Years	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
No notice of sub-bids from prime contractors/consultants	34%	35%	35%	35%
No relationship with COK	24%	37% A	34%	40% A
No bids for what I sell	34% C	25%	20%	31%
No relationship with prime contractor/consultant	15%	28% A	30% A	25% A
Too much bureaucracy/red tape	10%	12%	16%	8%
Prime contractors/consultants favor certain subcontractors/sub-consultants	7%	12%	16% A	7%
Not certified by the COK	4%	13% A	18% A	8%
Bid requirements unfair	2%	6% A	10% A	3%
Contract size too large	3%	4%	4%	4%
Can't meet bonding, insurance or financial requirements	1%	5% A	5%	5%
Adequate and on-going technical assistance lacking	0%	3%	5%	0%
Technology	1%	0%	0%	0%
Other	13%	13%	11%	15%

Base: Those that have not bid as a subcontractor on contracts with COK. Sample size white Male-owned n=136, Total Minority/Women-owned n=155, Minority-owned n=80, Women-owned n=75.

In the past two years, white male-owned businesses were more likely to win contracts as a prime contractor and subcontractors from all sectors, including COK, than Minority-owned businesses. White male-owned businesses were also more likely than Women-owned firms to receive a prime contract than Women-owned businesses, and were directionally more likely to receive contracts as subcontractors than Women-owned businesses.

Table 8.49. Q28: In the past 2 years, has your company won a contract or been awarded a contract as a prime contractor (consultant) on contracts in or with any of the following? (Multiple answers were accepted.)

Won a Contract as Prime Contractor Past 2 Years	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Private Sector agencies/companies	61% BC	51%	46%	56%
Other Public Sector agencies in Tennessee	51% BC	38%	26%	52%
Other Public Sector agencies outside of Tennessee	41% BCD	21%	23%	19%
COK	27% BCD	9%	3%	16%
None of the above	18%	31% A	40% A	20%

Base: Those that have bid on contracts as a prime contractor. Sample size white Male-owned n=150, Total Minority/Women-owned n=162, Minority-owned n=87, Women-owned n=75.

Table 8.50. Q30: In the past 2 years, has your company won a contract or been awarded a contract as a subcontractor (subconsultant) on contracts for any of the following? (Multiple answers were accepted.)

Won a Contract as Subcontractor Past 2 Years	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Private Sector agencies/companies	73% BCD	42%	32%	56%
Other Public Sector agencies in Tennessee	41% BC	29%	22%	39%
Other Public Sector agencies outside of Tennessee	37% BCD	21%	19%	24%
COK	16% BCD	4%	1%	7%
None of the above	15%	41% A	50% A	28% A

Base: Those who submitted a bid as a subcontractor in past 2 years. Sample size white Male-owned n=97, Total Minority/Women-owned n=128, Minority-owned n=74, Women-owned n=54.

The average bids submitted in the past two years were between \$240,000 and \$785,000.

Table 8.51. Q31: Which of the following categories best describes the average bid range that your company has submitted in the past 2 years?

Average Bid Range of Submissions in Past 2 Years	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Less than \$25,000	30%	34%	28%	42% A
\$25,000 to less than \$50,000	19%	14%	14%	13%
\$50,000 to less than \$100,000	19% BC	12%	9%	15%
\$100,000 to less than \$250,000	17% D	13%	18%	9%
\$250,000 to less than \$500,000	5%	10% A	10%	10%
\$500,000 to less than \$1,000,000	5%	8%	8%	8%
\$1,000,000 to less than \$5,000,000	5%	6%	8%	3%
\$5,000,000 to less than \$10,000,000	1%	1%	1%	0%
More than \$10,000,000	1%	2%	3%	0%
Mean	\$362,575	\$524,059	\$784,536 A	\$240,168
Median	\$54,687	\$56,818	\$91,666	\$40,624

Base: Those who have not submitted a bid as a prime contractor or subcontractor in past 2 years. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

Among the 56 respondents who received prime contracts from COK, the largest single contract awards ranged on an average from \$92,000 to \$261,000.

Table 8.52. Q32: Which of the following categories best describes the single largest contract dollar award received as a prime contractor (consultant) from the City of Knoxville?

Largest Single Contract Award Received as Prime Contractor from COK	White Male Owned (A)^	Total Minority/ Female Owned (B)^	Minority Owned (C)^	Female Owned (D)^
Less than \$25,000	37%	33%	33%	33%
\$25,000 to less than \$50,000	22%	13%	0%	17%
\$50,000 to less than \$100,000	15%	27%	33%	25%
\$100,000 to less than \$250,000	7%	7%	33%	0%
\$250,000 to less than \$500,000	10%	13%	0%	17%
\$500,000 to less than \$1,000,000	5%	7%	0%	8%
\$1,000,000 to less than \$5,000,000	5%	0%	0%	0%
Mean	\$260,670	\$144,999	\$91,666	\$158,333
Median	\$40,277	\$56,250	\$75,000	\$50,000

Base: Those who won a bid as a prime contractor in past 2 years with COK. Sample size white Male-owned n=41^, Total Minority/Women-owned n=15^, Minority-owned n=3^, Women-owned n=12^.

^Please interpret with caution due to small base sizes.

Subcontractor awards received from COK range from an average of \$50,000 to \$375,000 among the 21 respondents who received them.

Table 8.53. Q33: Which of the following categories best describes the single largest contract dollar award received as a subcontractor (sub-consultant) for a City of Knoxville contract?

Largest Single Contract Award Received as Subcontractor from COK	White Male Owned (A) [^]	Total Minority/ Female Owned (B) [^]	Minority Owned (C) [^]	Female Owned (D) [^]
Less than \$25,000	56%	0%	0%	0%
\$25,000 to less than \$50,000	25%	0%	0%	0%
\$50,000 to less than \$100,000	6%	60% A	0%	75% A
\$100,000 to less than \$250,000	13%	20%	0%	25%
\$250,000 to less than \$500,000	0%	20%	100%	0%
\$500,000 to less than \$1,000,000	0%	0%	0%	0%
More than \$1,000,000	0%	0%	0%	0%
Mean	\$49,999	\$155,000	\$375,000	\$100,000
Median	\$25,000	\$91,666	\$375,000	\$83,333

Base: Those who won a bid as a subcontractor in past 2 years from a COK contract. Sample size white Male-owned n=16[^], Total Minority/Women-owned n=5[^], Minority-owned n=1[^], Women-owned n=4[^].

[^]Please interpret with caution due to small base sizes.

The largest single contract dollar award in the private sector for prime contractors and, among white male owned-businesses, is higher on average than that of Minority-and Women-owned businesses.

Table 8.54. Q34: Which of the following categories best describes the single largest contract dollar award received as a prime contractor from a Private Sector agency or company?

Single Largest Contract Dollar Award as Prime Contractor from Private Sector	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Less than \$25,000	15%	18%	10%	26%
\$25,000 to less than \$50,000	11%	10%	13%	7%
\$50,000 to less than \$100,000	21%	20%	15%	24%
\$100,000 to less than \$250,000	12%	11%	13%	10%
\$250,000 to less than \$500,000	9%	13%	13%	14%
\$500,000 to less than \$1,000,000	5%	11%	18% a	5%
\$1,000,000 to less than \$5,000,000	15%	10%	10%	10%
\$5,000,000 to less than \$10,000,000	7%	4%	3%	5%
More than \$10,000,000	5%	4%	8%	0%
Mean	\$1,606,793 D	\$1,107,621	\$1,455,937	\$775,892
Median	\$140,909	\$133,333	\$250,000	\$84,999

Base: Those who won a bid as a prime contractor in past 2 years with a Private Sector agency/company. Sample size white Male-owned n=92, Total Minority/Women-owned n=82, Minority-owned n=40, Women-owned n=42.

[^]Please interpret with caution due to small base sizes.

Average subcontracting amounts from the private sector range from \$782,000- \$1,022,000.

Table 8.55. Q35: Which of the following categories best describes the single largest contract dollar award received as a subcontractor from a Private Sector agency or company?

Single Largest Contract Dollar Award as Subcontractor from Private Sector	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)^	Female Owned (D)^
Less than \$25,000	15%	17%	17%	17%
\$25,000 to less than \$50,000	11%	9%	8%	10%
\$50,000 to less than \$100,000	15% C	11%	4%	17%
\$100,000 to less than \$250,000	15%	9%	13%	7%
\$250,000 to less than \$500,000	11%	20%	21%	20%
\$500,000 to less than \$1,000,000	10%	15%	21%	10%
\$1,000,000 to less than \$5,000,000	17%	17%	13%	20%
\$5,000,000 to less than \$10,000,000	3%	2%	4%	0%
More than \$10,000,000	1%	0%	0%	0%
Mean	\$1,022,183	\$858,564	\$954,166	\$782,083
Median	\$175,000	\$295,454	\$350,000	\$250,000

Base: Those who won a bid as a subcontractor in past 2 years with a Private Sector agency/company. Sample size white Male-owned n=71, Total Minority/Women-owned n=54, Minority-owned n=24^, Women-owned n=30^.

^Please interpret with caution due to small base sizes.

The largest single contract dollar award from the public sector among prime contractors ranges between \$656,000 - \$2.1m on average, with white male-owned businesses winning larger average contracts than Women-owned businesses.

Table 8.56. Q36: Which of the following categories best describes the single largest contract dollar award received as a prime contractor from a Public Sector agency or company?

Single Largest Contract Dollar Award as Prime Contractor from Public Sector	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)^	Female Owned (D)
Less than \$25,000	12%	21%	13%	27% A
\$25,000 to less than \$50,000	14% C	8%	3%	11%
\$50,000 to less than \$100,000	13%	8%	7%	9%
\$100,000 to less than \$250,000	16%	16%	7%	22%
\$250,000 to less than \$500,000	13%	11%	13%	9%
\$500,000 to less than \$1,000,000	6%	11%	13%	9%
\$1,000,000 to less than \$5,000,000	17%	20%	33% A	11%
\$5,000,000 to less than \$10,000,000	2%	3%	3%	2%
More than \$10,000,000	7%	3%	7%	0%
Mean	\$1,499,750 D	\$1,228,999	\$2,087,916	\$656,388
Median	\$203,124	\$218,749	\$750,000	\$122,500

Base: Those who won a bid as a prime contractor in past 2 years with a Public Sector agency/company. Sample size white Male-owned n=100, Total Minority/Women-owned n=75, Minority-owned n=30^, Women-owned n=45^.

^Please interpret with caution due to small base sizes.

The largest single contract subcontractor awards from the public sector range from \$604,000- \$1.5m on average.

Table 8.57. Q37: Which of the following categories best describes the single largest contract dollar award received as a subcontractor from a Public Sector agency or company?

Single Largest Contract Dollar Award as Prime Contractor from Public Sector	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)^	Female Owned (D)^
Less than \$25,000	12%	21%	13%	27% A
\$25,000 to less than \$50,000	14% C	8%	3%	11%
\$50,000 to less than \$100,000	13%	8%	7%	9%
\$100,000 to less than \$250,000	16%	16%	7%	22%
\$250,000 to less than \$500,000	13%	11%	13%	9%
\$500,000 to less than \$1,000,000	6%	11%	13%	9%
\$1,000,000 to less than \$5,000,000	17%	20%	33% A	11%
\$5,000,000 to less than \$10,000,000	2%	3%	3%	2%
More than \$10,000,000	7%	3%	7%	0%
Mean	\$1,499,750 D	\$1,228,999	\$2,087,916	\$656,388
Median	\$203,124	\$218,749	\$750,000	\$122,500

Base: Those who won a bid as a subcontractor in past 2 years with a Public Sector agency/company. Sample size white Male-owned n=51, Total Minority/Women-owned n=50, Minority-owned n=25^, Women-owned n=25^.

^Please interpret with caution due to small base sizes.

V. COK Policies and Experiences

Those who had an opinion typically feel that the COK policy to promote inclusion of DBEs and SBEs is fair, or they are neutral.

Table 8.58. Q38: The City of Knoxville administers a program targeted to promote inclusion of Disadvantaged Business Enterprises and Small Business Enterprises. What is the general consensus of opinion in your company's leadership as to the general fairness of this policy?

Opinion on Fairness of COK Policy to Promote DBEs and SBEs	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Very fair	34%	35%	26%	45%
Somewhat fair	13%	12%	8%	16%
Neutral	38%	34%	39%	27%
Somewhat unfair	11%	9%	12%	6%
Very unfair	5%	11% A	16% A	5%

Base: Those who have an opinion on the policy. Sample size white Male Owned n=122, Total Minority/Women-owned n=139, Minority-owned n=77, Women-owned n=62.

Approximately half feel COK policy to discourage discrimination against MBEs and WBEs is fair with white male-owned businesses considering the policy very fair more often than Minority-owned businesses, who are more likely to feel neutral towards the policy.

Table 8.59. Q38b: The City of Knoxville administers a program targeted to discourage discrimination against Minority/Women-Owned Business Enterprises. What is the general consensus of opinion in your company’s leadership as to the general fairness of this policy?

Opinion on Fairness of COK Policy to Discourage Discrimination of MBEs and WBEs	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Very fair	45% C	35%	25%	46%
Somewhat fair	14%	13%	15%	12%
Neutral	34%	32%	31%	33%
Somewhat unfair	4%	8%	12% A	4%
Very unfair	3%	11% A	17% A	4%

Base: Those who have an opinion on the policy. Sample size white Male-owned n=116, Total Minority/Women-owned n=142, Minority-owned n=75, Women-owned n=67.

Fewer than half of those who bid as a prime contractor felt that officials fairly evaluated bids and fewer still felt that officials followed bid procedures. White male-owned businesses are more likely to feel that they received timely notification of bid opportunities and that officials fairly evaluated bids, compared to both Minority- and Women-owned businesses. White male-owned businesses also were more likely to say officials followed bid procedures compared to Minority-owned businesses. Minority-owned businesses are more likely than white male-owned businesses to say they experienced high bonding or insurance requirements compared to scope of work, experienced unfair or discriminatory treatment from COK when acting as a prime contractor during the bid process, and experienced unfair or discriminatory treatment from COK when acting as a prime contractor on the jobsite. Both Minority- and Women-owned businesses were more likely than white male-owned businesses to say they received payments too slowly as a prime contractor with COK.

Table 8.60. Q42: Has your company ever experienced any of the following issues while bidding as a prime or subcontractor?

Bidding Experience as Prime Contractor (Summary of Issues Experienced)	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Received timely notification of bid opportunities	45% BCD	30%	28%	31%
Officials fairly evaluated bids/sub-bids	43% BCD	23%	22%	25%
Officials followed bid procedures	36% BC	26%	23%	29%
Could access a Procurement Officer or Small and Minority Business Manager to obtain information	27%	20%	22%	18%
Experienced changes in scope of work, after work was started	17%	15%	15%	15%
Contract was denied despite being lowest bidder	13%	12%	16%	8%
Experienced high bonding or insurance requirements compared to scope of work	7%	13% A	14% A	11%
Experienced solicitation of subcontractor bids after contract awards (i.e., bid shopping, collusion etc.)	4%	5%	8%	2%
Experienced unfair or discriminatory treatment from the COK when acting as a prime contractor during the bid process	2%	8% A	8% A	7%
Received payments too slowly as a prime contractor with the COK	1%	8% A	7% A	8% A
Experienced unfair or discriminatory treatment from the COK when acting as a prime contractor on the jobsite	1%	4% A	5% A	2%

Base: Those who bid on a contract as a prime contractor answering. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

Few reported any issues during their experience as a subcontractor.

Table 8.61. Q42: Has your company ever experienced any of the following issues while bidding as a prime or subcontractor?

Bidding Experience as Subcontractor (Summary of Issues Experienced)	White Male Owned (A)	Total Minority/ Female Owned (B)	Minority Owned (C)	Female Owned (D)
Officials followed bid procedures	11%	14%	8%	20% A
Received timely notification of bid opportunities	10%	12%	8%	17%
Officials fairly evaluated bids/sub-bids	7%	12%	7%	17% A
Experienced changes in scope of work, after work was started	8%	11%	10%	12%
Experienced solicitation of subcontractor bids after contract awards (i.e., bid shopping, collusion etc.)	9% D	6%	8%	3%
Could access a Procurement Officer or Small and Minority Business Manager to obtain information	4%	10% A	10% A	9%
Contract was denied despite being lowest bidder	4%	7%	9%	4%
Experienced high bonding or insurance requirements compared to scope of work	5%	5%	7%	2%
Received payments too slowly as a prime contractor with COK	1%	1%	0%	2%
Experienced unfair or discriminatory treatment from COK when acting as a prime contractor during the bid process	1%	1%	2%	0%
Experienced unfair or discriminatory treatment from COK when acting as a prime contractor on the jobsite	1%	1%	1%	0%

Base: Those who bid on a contract as a subcontractor answering. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

Comments from respondents included Minority-owned businesses noting they want more support for SBE/WBE/DBE/BME/SDVOSB and better notifications about open bids—more so than white male-owned businesses.

Table 8.62. Q44a: Please use the space below to record any other comments you may wish to share on the subject of the City of Knoxville and bidding and award opportunities for DBEs or SBEs. (Responses were coded from an open-ended question.)

Other Comments on Bidding and Awards from COK	White Male Owned (A)	Total Minority/Female Owned (B)	Minority Owned (C)	Female Owned (D)
Need to support SBE/WBE/DBE/BME/SDVOSB more	5%	13% A	16% A	9%
Better notifications about open bids	3%	6%	4%	8%
Would like to work with COK	2%	5%	6%	4%
Other mentions	10%	8%	9%	7%
None/nothing	2%	1%	2%	0%
Don't know/refused	2%	3%	3%	2%
No answer	76% BC	65%	59%	72%

Base: Total respondents answering. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

D. Additional Demographics

Approximately half of Minority-owned businesses are owned or controlled by women.

Table 8.63. Q10: Is at least 51% of your firm owned and controlled by one or more women?

At Least 51% of Company Owned/Controlled by Women	White Male Owned (A)	Total Minority/Female Owned (B)	Minority Owned (C)	Female Owned (D)
Yes	5%	72% A	48% A	98% A
No	90% BCD	28%	52%	2%
Don't know	5%	0%	0%	0%

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

Over half of minority businesses are majority-held by African American/Black business owners.

Table 8.64. Q11: Is at least 51% of your firm owned and controlled by a member of one of the following racial/ethnic/gender groups? Please select which group.

51%+ Ownership by Any of Following Groups	White Male Owned (A)	Total Minority/Female Owned (B)	Minority Owned (C)	Female Owned (D)
Caucasian/White Male (not of Hispanic origin)	93%	0%	0%	0%
Caucasian/White Female (not of Hispanic origin)	0%	47%	0%	99%
African American/Black (not of Hispanic origin)	0%	31%	60%	0%
Asian or Pacific Islander	0%	8%	15%	0%
Hispanic (of Latin American descent)	0%	8%	14%	0%
My firm is publicly owned and/or this is not applicable	0%	0%	0%	0%
American Indian (i.e., American Indian) or Alaskan Native	0%	4%	7%	0%
Other	7% BD	2%	3%	1%

Base: : Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

Minority-owned businesses are largely made up of African American business owners.

Table 8.65. Final Designation

Final Designation – Breakdown of Respondents	White Male Owned (A)	Total Minority/Female Owned (B)	Minority Owned (C)	Female Owned (D)
Non-MWSBE	100%	0%	0%	0%
African American	0%	31%	60%	0%
Asian American	0%	9%	18%	0%
Hispanic American	0%	8%	14%	0%
American Indian	0%	4%	8%	0%
WBE	0%	48%	0%	100%
Non-Profit	0%	0%	0%	0%

Base: Total respondents. Sample size white Male-owned n=166, Total Minority/Women-owned n=186, Minority-owned n=97, Women-owned n=89.

8.3. Multivariate Regression Analysis

Introduction

Survey data presents differences in capacities of MWBEs and SBEs and Non-(M/W/SMBEs) using z-tests of differences in percentages and t-tests of differences in means. That said, other social science research suggests multiple factors in understanding the relationships among issues affecting firm revenues that may include race and gender. A multivariate regression analysis may help analyze variables including race and gender that can affect a firm's success.

M³ conducted a multivariate statistical regression analysis to identify disparities between Non-MWSBEs and MWSBEs. We employed the Blinder-Oaxaca decomposition—a well-established method for exploring discrimination between groups—to estimate the extent of disparity in the revenues between Non-MWSBE and MWSE companies after accounting for other influencing factors.

The analysis determines if revenue differences are attributable to discrimination between the two groups or are simply due to other factors such as experience or education. We estimated log-linear regression models for each group using the natural log of the companies' total gross receipts from all sources for FY 2021 as the dependent variable, and other explanatory factors such as the number of full-time employees, age of business, principal's prior public and prior private business experience, and the average bid size for each company over the past two years as the independent variables.

Regression Results

The Blinder-Oaxaca methodology suggests that 0.7713 of the 1.0676 difference between the MWSBE and Non-MWSBE in the logarithmic total gross receipts from all sources for FY 2021 can be accounted for by variables other than race that were included in the model. The rest can be attributed to discrimination and a formal test cannot reject the hypothesis that this discrimination is equal to zero.

Regression Detail

Figures 8.1 – 8.3 show the results from log-linear models. The independent variable is the natural logarithm of the companies' total gross receipts from all sources for FY 2021, in 100 thousand dollars (i.e., code name Q18) and the independent variables described below. Figure 8.1 shows the overall results and the next two are for non-MWSBE and MWSBE. Other controlling variables such as whether the firm was a start-up, the education of the principal, and principal's age were removed as they had no significant impact on the results.

Figure 8.1. All respondents

All		R-square: 0.6156			
Variable Description	Level	Code Name	Coef	t-ratio	Xbar
		Intercept	-0.766	-2.396	1.000
Number of full-time employees	11 to 50	Q6reco 2	1.842	11.485	0.276
Base = 10 or fewer	More than 50	Q6reco 3	2.567	11.070	0.116
	3 to 5 years	Q7A-2	0.919	2.512	0.065
How many years has your firm been in business	5 to 10 years	Q7A-3	0.660	2.032	0.128
Base = 1-3 years	10 to 25 years	Q7A-4	1.337	4.601	0.352
	More than 25 years	Q7A-5	1.792	6.109	0.389
Marital Status	Married, living with spouse	Q12B 3	0.499	3.082	0.767
Natural Log of percentage bids (submitted in last 2 years) as prime contractor to the City	--	Q27 A	-0.983	-2.071	0.061
Natural Log of percentage bids (submitted in last 2 years) as prime contractor to Private Sector companies	--	Q27 D	-0.409	-1.507	0.312
Natural Log of percentage bids (submitted in last 2 years) as subcontractor to Private Sector companies	--	Q29 D	0.339	1.348	0.262
	\$25,000 to less than \$50,000	Q31 2	0.545	2.699	0.162
P2Yr avg bid size	\$50,000 to less than \$100,000	Q31 3	0.656	3.177	0.153
Base = Less than \$25,000	\$100,000 to less than \$250,000	Q31 4	0.784	3.762	0.151
	\$250,000 to less than \$500,000	Q31 5	0.890	3.327	0.077
	\$500,000 to less than \$1,000,000	Q31 6	0.622	2.163	0.065
	\$1,000,000 to less than \$5,000,000	Q31 7	1.363	4.314	0.054

Figure 8.2. Non-WMSBE

All		R-square: 0.6646			
Variable Description	Level	Code Name	Coef	t-ratio	Xbar
		Intercept	-0.379	-0.748	1.000
Number of full-time employees	11 to 50	Q6reco 2	1.762	8.283	0.313
Base = 10 or fewer	More than 50	Q6reco 3	2.612	9.662	0.181
	3 to 5 years	Q7A-2	0.723	1.218	0.048
How many years has your firm been in business	5 to 10 years	Q7A-3	0.867	1.645	0.090
Base = 1-3 years	10 to 25 years	Q7A-4	1.176	2.496	0.277
	More than 25 years	Q7A-5	1.441	3.089	0.542
Marital Status	Married, living with spouse	Q12B 3	0.604	2.306	0.843
Natural Log of percentage bids (submitted in last 2 years) as prime contractor to the City	--	Q27 A	-1.620	-2.536	0.065
Natural Log of percentage bids (submitted in last 2 years) as prime contractor to Private Sector companies	--	Q27 D	-0.706	-1.855	0.326
Natural Log of percentage bids (submitted in last 2 years) as subcontractor to Private Sector companies	--	Q29 D	0.700	2.105	0.268
	\$25,000 to less than \$50,000	Q31 2	0.753	2.832	0.187
P2Yr avg bid size	\$50,000 to less than \$100,000	Q31 3	0.480	1.809	0.193
Base = Less than \$25,000	\$100,000 to less than \$250,000	Q31 4	0.503	1.773	0.169
	\$250,000 to less than \$500,000	Q31 5	0.782	1.769	0.048
	\$500,000 to less than \$1,000,000	Q31 6	0.686	1.521	0.048
	\$1,000,000 to less than \$5,000,000	Q31 7	1.568	3.552	0.048

Figure 8.3. WMSBE

All		R-square: 0.5593			
Variable Description	Level	Code Name	Coef	t-ratio	Xbar
		Intercept	-0.941	-2.197	1.000
Number of full-time employees	11 to 50	Q6reco 2	1.775	7.215	0.242
Base = 10 or fewer	More than 50	Q6reco 3	2.366	5.293	0.059
	3 to 5 years	Q7A-2	0.913	1.882	0.081
How many years has your firm been in business	5 to 10 years	Q7A-3	0.594	1.383	0.161
Base = 1-3 years	10 to 25 years	Q7A-4	1.423	3.710	0.419
	More than 25 years	Q7A-5	2.009	4.918	0.253
Marital Status	Married, living with spouse	Q12B 3	0.453	2.078	0.699
Natural Log of percentage bids (submitted in last 2 years) as prime contractor to the City	--	Q27 A	-0.676	-0.939	0.057
Natural Log of percentage bids (submitted in last 2 years) as prime contractor to Private Sector companies	--	Q27 D	-0.192	-0.481	0.300
Natural Log of percentage bids (submitted in last 2 years) as subcontractor to Private Sector companies	--	Q29 D	-0.025	-0.065	0.257
	\$25,000 to less than \$50,000	Q31 2	0.321	1.028	0.140
P2Yr avg bid size	\$50,000 to less than \$100,000	Q31 3	0.786	2.358	0.118
Base = Less than \$25,000	\$100,000 to less than \$250,000	Q31 4	1.004	3.209	0.134
	\$250,000 to less than \$500,000	Q31 5	1.065	3.007	0.102
	\$500,000 to less than \$1,000,000	Q31 6	0.660	1.681	0.081
	\$1,000,000 to less than \$5,000,000	Q31 7	1.225	2.694	0.059

The Blinder-Oaxaca (BO) decompositions are a tool for estimating the extent of discrimination between different groups. There are several assumptions that can be made. However, the decomposition employed in this research is that the pooled sample estimated from both groups (i.e., Neumark 1988 and Oaxaca & Ransom 1999) serves as the non-discriminatory 'total gross receipts from all sources for FY 2021' (i.e., Q18) structure.

On average, total gross receipts were \$2,749,716. Subgroups' averages were \$5,252,711 and \$2,408,333 for non-MWSBE and MWSBE respectively. This highlights a large difference, but the question is whether it can be explained by factors of education, experience, years in business, marital status, number of employees, or the types of bids (prime or subcontractor), and average bid sizes.

The difference between the averaged natural logarithm of the total gross receipts for the non-MWSBE and MWSBE is calculated to be 1.0676, which is the gross logarithmic revenue differential. The BO method decomposes the gross logarithmic revenue differential between the explained and unexplained parts to determine whether some form of discrimination is taking place. Table 4 presents such results that were estimated using the R software and the Oaxaca package (i.e., Hlavac 2022).

Figure 8.4. Non-MWSE vs. MWSE

Total Explained		Total Unexplained		Non-MWSBE		MWSBE	
Coef (explained)	Standard Error (explained)	Coef (explained)	Standard Error (explained)	Coef (explained)	Standard Error (explained)	Coef (explained)	Standard Error (explained)
0.7713	0.164	0.2963	0.1095	0.1566	0.0583	-0.140	0.052

The decomposition suggests that 0.7713 of the 1.0676 logarithmic revenue differential is explained. The total of 1.0676 is not shown in Table 4, but corresponds to 0.7713+0.2963. Discrimination is presumably to blame for the remainder, namely 0.2963. According to the methodologies, non-MWSBE received 16.95% greater total gross receipts from all sources in 2021 than they would have if discrimination did not exist. In addition, the MWSBE group received 13.04% less than it would have if prejudice had not occurred.

Note that +16.95% is $(\exp(0.1566)-1)$ and -13.04% is $(\exp(-0.1397)-1)$ because of the log-linear transformation. Also, these coefficients are normally reported in absolute values, and the discriminated-against group (i.e., MWSBE) would be shown as a positive number, but we kept it as -0.1397 in Table 4. The reason for depicting them in absolute value is to show that they add to the expected totals. Specifically, $0.2963=0.1566+\text{abs}(-0.1397)$. In words, the difference between the non-MWSBE and MWSBE is first decomposed into a total that can be explained and one that remains unexplained while the unexplained total is then further decomposed into a positive discrimination for non-MWSBE and a negative one for MWSBE.

The final consideration is whether the total unexplained discrimination (i.e., 0.2963) is significantly different in a statistical sense (i.e., at the 5% significance level) from zero or not. Clearly in this case it is since the standard error is quite small compare to the coefficient itself and the t-ratio is 2.705, which is much larger than the limit 1.96 limit at the 5% level.

The MWSBE is being discriminated against and this discrimination is very significant.

8.4 Disparities in Business Formation: PUMS Analysis

8.4.1 PUMS Analysis

Public Use Microdata Samples (PUMS) [from U.S. Census data] analysis is undertaken by M³ Consulting to examine the impact of race and gender, along with other demographic and economic factors that impact: (1) the choice of self-employment and (2) the level of self-employment income.

Promoting entrepreneurship is often a beneficial means to improve the economic status of minorities and women. Disparities in business formation often limit the development and growth of firms. In their research on this topic, Black, Holtz-Eakin, and Rosenthal [2000]¹ found that there was considerable spatial variation in self-employment rates (and self-employment earnings)—especially for Minority-owned firms—among metropolitan areas. Black, Holtz-Eakin, and Rosenthal noted that the variation is 70% among Black Americans, 166% among Hispanic Americans, and 100% among Asian Americans. A central point of the literature in self-employment has been on the degree to which access to capital limits the ability of individuals to attain self-employment, especially the role of such constraints in explaining racial differences in self-employment (Meyer [1990])². Black, Holtz-Eakin, and Rosenthal [2000], in analyzing regional rates of self-employment for the prime-age males (25 to 64) found:

- Overall, in the United States, the self-employment rate is 10.4%, which includes a range from 9.9% in the Northeast to 12.7% in the Pacific region; a difference of nearly 30%.
- The rate of self-employment differs greatly across races, ranging from a low of 4.3% among Black Americans to 12.7% among whites.

Blanchflower and Shadforth (2007) and others³ provide an excellent summary of the research in the area of self-employment. The findings in summary are that self-employment is higher among men than women; among older workers than younger workers; and is particularly high in construction and retailing. It is also especially high among some immigrant groups and varies by region and state being especially high in construction occupations, agriculture and retailing. Fairlie and Robb (2007b) found, that Black business owners were much less likely than their white counterparts to have had a self-employed family member-owner prior to starting their business and are less likely to have worked in that family member's business. Fairlie and Robb noted that the lack of prior work experience in a family business among Black business owners, perhaps by limiting their acquisition of general and specific business human capital, negatively affects Black business outcomes.

Blanchflower (2009)⁴ studied minority self-employment overall and particularly in the construction industry and examined the role that affirmative action programs have played in this context. Blanchflower points out that while *Crosby* in 1989 made it very difficult to maintain affirmative action programs,

¹Black, D., D. Holtz-Eakin and S. Rosenthal (2001), "Racial Minorities, economic scale and the geography of Self-employment," Brookings-Wharton Papers on Urban Affairs, pp 245-286.

² Meyer, B. 1990. "Why Are There So Few Black Entrepreneurs?" National Bureau of Economic Research, Working Paper No. 3537.

³Blanchflower, D.G., Levine, P., Zimmerman, D.: Discrimination in the small business credit market. *Rev Econ Stat* 85(4), 930-943 (2003); Blanchflower, D.G., Shadforth, C.: Entrepreneurship in the UK. *Found Trends Entrepreneurship* 3(4), 257-364 (2007)

⁴ Blanchflower, D.G., "Minority self-employment in the United States and the impact of affirmative action programs", *Ann Finance* (2009) 5:361-396.

multiple cases since 2000 have changed the course of that discussion in the other direction, with courts declaring a number of programs constitutional⁵. Low representation of minorities, specifically, among the ownership of firms in construction compared to their representation in the population as a whole, is also noted. Based on the 2002 Economic Census Survey of Business Owners, of the 2,770,888 firms in construction, 2.4% were owned by African Americans; 7.0% by Hispanics; 1.1% by American Indians or Alaskan natives; 1.4% by Asians and Pacific Islanders, and 10.5% by women compared to their proportional representation in the population⁶. According to proportional representation, African Americans were 12.7%; Hispanics 13.7%; Asian/Pacific Islanders 4.3%; American Indians/Alaskan Native 1.0% and two or more races 1.3%.⁷

Blanchflower (2009) provides new evidence on self-employment rates by race and gender using data during 1983–2006 as follows.

- Across all industries: 15.5% of white males were self-employed compared with 7.4% of white females, 3.6% of African Americans, and 7.8% of Hispanic Americans.
- In Construction: Self-employment rates of white males were 28% compared with 21% for white females, 17% for African Americans, and 13% for Hispanic Americans.
- The gap between the earnings of white males and all groups except Asian Americans remains large.
- The differential between the overall self-employment rates of white males and white females in construction has narrowed dramatically over time. The narrowing is more apparent than is found for ‘all industries’.
- The differential between the overall self-employment rates in construction of white males and African Americans has narrowed but less than it has for white females. The differential between the overall self-employment rates in construction of white males and Hispanic Americans has widened over time.

This section describes the two types of statistical analyses conducted to examine the impact of race and gender on self-employment, controlling for economic and demographic characteristics. The first analysis, undertaken via binary logistic regression, examines the likelihood that the individual will be self-employed. The second analysis, conducted via linear regression, examines the determinants of self-employment income. The analysis uses variables from the Integrated Public Use Microdata Series (IPUMS) data for 2019 ACS 5-year survey⁸. The labor force participants were selected for the sample if they satisfied the following criteria:

⁵ Also worth noting is Blanchflower, D.G., Wainwright, J.: An analysis of the impact of affirmative action programs on self-employment in the construction industry. National Bureau of Economic Research, Inc, NBER Working Papers # 11793 (2005)

⁶ Based on the 2008 Statistical Abstract of the United States, population in 2006.

⁷ Large disparities between blacks and whites, for example, are also found in relation to wealth (Kennickel, 2003); income (Bound and Freeman, 1992; Chandra, 2003; Heckman, Lyons and Todd, 2000 and Smith and Welch, 1989), educational achievement (Jencks and Phillips, 1998); out-of-wedlock childbearing (Ventura and Bachrach, 2000), health (see Chandra and Skinner, 2003), happiness (Blanchflower and Oswald, 2004) crime (Freeman, 2000) and even names (Fryer and Leavitt, 2003). The degree of residential segregation by race, though lower today than in the past is still high (Cutler, Glaeser and Vigdor, 1999)

⁸ IPUMS USA collects, preserves and harmonizes U.S. census microdata and provides easy access to this data with enhanced documentation. Data includes decennial censuses from 1790 to 2010 and American Community Surveys (ACS) from 2000 to the present.

- Residents of the State of Tennessee
- 18 years of age or older

I. Self-Employment Decision

First, M³ Consulting attempted to examine the factors that impact the self-employment decision and whether there are differences in the probability of self-employment among the different races and genders.

We examine the self-employment decision using a statistical technique called binary logistic regression model. In a logistic regression model, the dependent variable is a categorical variable where “yes” is equal to 1 and “no” is equal to 0. The binary logistic regression allows the statistician to determine if a specific characteristic increases or decreases the likelihood that the dependent variable will be a “yes” or a “no.” For instance, a statistician can use a logistic regression model to examine if a certain set of characteristics (called independent variables) will increase the likelihood of teen pregnancy in a certain population. Thus, the independent variables will allow the researcher to determine whether they contribute to the “yes” or “no” response, and whether these variables impact the response variable by increasing or decreasing the likelihood. For example, logistic regression may show that parental involvement may decrease the incidence of teen pregnancy, while single-family homes (lack of monitoring) may increase this likelihood. Similarly, we attempt to examine if a certain set of characteristics (independent variables) will increase the likelihood of self-employment in a certain population (in this case, Tennessee). Mathematically, the logistic regression model can be written as:

$$\ln(\pi/1-\pi) = \alpha + \beta_1 X_1 + \varepsilon_1$$

where:

$(\pi/1-\pi)$	= the probability of self-employment
α	= a constant
β_1	= the coefficient for each of the independent variables
X_1	= the independent variable, namely race, gender, education level, marital status, household income, and home ownership status
ε_1	= the error term that captures the variation in the variables

In this model, the binary logistic regression investigates if a set of independent variables such as race, gender, age, education, household type, and other economic and demographic characteristics contribute to the likelihood of self-employment. This model is estimated for the entire sample from IPUMS 2019 ACS five-year database for the State of Tennessee, and then separately for self-employment in areas of Construction, Goods & Supplies, and Non-Professional Services.

Secondly, M³ Consulting analyzed the factors that impact self-employment income and whether self-employment income is impacted by race and/or gender.

Linear regression is used to answer the question of whether the earnings of self-employed minority and white women owners are different from those of non-minorities, given a set of economic and demographic characteristics. The dependent variable in this analysis is the amount of self-employment earnings.

Mathematically, the linear regression model can be written as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \dots + \epsilon_1$$

where,

Y	= the self-employment income
β_0	= a constant
β_i	= the coefficient for each of the independent variables, representing the impact of that variable on the dependent variable, self-employment income
X_i	= the independent variable, namely race, gender, education level, marital status, language proficiency, disability, etc.
ϵ_i	= the error term that captures the variation in the variables

In the linear regression model, the impact of race and gender on the dependent variable is estimated, (earnings received by owners), controlling for the independent variables (economic and demographic characteristics).

II. Results and Discussion of the Analyses

This section provides the results of the binary logistic regression for the impact of race and gender on the likelihood of self-employment.

The binary logistic regression analysis examined the impact of economic and demographic characteristics on the probability of self-employment across all industries. Specifically, the analysis examined if minorities and white females were more or less likely to be self-employed. The analysis includes six minority indicator variables: African American, Asian American, Hispanic American, other Race or Gender (Male vs Female). Research finds that minorities and females are less likely to be self-employed, perhaps due to factors such as limited access to capital and other resources. Other factors, such as level of education attained, marital status, age, last employment status, nativity, income (wages and salaries), property value, and industry may be contributing factors to self-employment. Thus, the likelihood of self-employment was determined to be a function of race and gender, a subset of economic and demographic variables that allow for self-employment.

The logistic regression is first estimated for the full PUMS sample for the State. The results of the logistic regression provide estimates of the independent variables and the probability of self-employment. The analysis allows the computation of the odds of self-employment or not, given this set of independent variables. The results of odds ratios for minority groups being self-employed are presented in Table 8.66. The odds ratio estimates the probability of self-employment for the various race and gender groups after accounting for economic and rank demographic variables that may impact self-employment. Alternately, if minority groups who are similarly situated with white males, with respect to economic and demographic variables are compared, the odds ratio estimates the probability of each group’s likelihood of self-employment compared to white males.

Table 8.66. “Odds Ratio” For Self-Employment for Minority Groups Relative to Non-Minority Males Controlling for Economic and Demographic Factors

Race/Ethnic Group	Odds Coefficient	Odds Ratio Inverse
American Indian or Alaska Native	0.82377	1.21393
Asian or Other Pacific Islander	1.33442	0.74939
Black American	0.77855	1.28444
Other Races	0.88876	1.12517
White Female	0.98862	1.01152
Hispanic vs non-Hispanic	1.19150	0.83928

Source: M³ Consulting, Inc.; PUMS US Census Bureau.

From the results listed in Table 8.66, comparing similarly situated individuals (in terms of economic and demographic variables), a white male is more than 1.28 times likely to be self-employed compared to an African American and 1.2 times as likely as an American Indian or Alaskan Native. However, a white male is only a little over 0.7 times as likely as an Asian American or other Pacific Islander to be self-employed in Tennessee. Also, white males are almost as likely as white females to be self-employed.

The full results of the binary logistic regression are presented in Table 8.67.

Table 8.67. Results of the Binary Logistic Regression Analysis for Full Sample

Dependent Variable: Self-employed (or not) Variables	Coefficient (β)	Standard Error	Significance (p-value)	Significance
(Intercept)	-4.04560	0.61445	0.00000	Yes
American Indian or Alaska Native	-0.19386	0.27904	0.48989	No
Asian or Other Pacific Islander	0.28850	0.40592	0.48001	No
Black American	-0.25032	0.20178	0.21960	No
Others	-0.11793	0.36899	0.75038	No
White Female	-0.01145	0.11636	0.92194	No
Hispanic	0.17521	0.39362	0.65783	No
Age	0.01742	0.01739	0.32069	No
Age Squared	-0.00006	0.00017	0.70419	No
Advanced Degree	0.24496	0.19263	0.20839	No
Bachelor's Degree	0.40241	0.13120	0.00324	Yes
Some College	-0.10361	0.10982	0.34927	No
Has Health Coverage	0.18398	0.17991	0.31060	No
Property Value	0.00000	0.00000	0.00819	Yes
Personal Earned Income	0.00000	0.00000	0.00259	Yes
Married	0.36179	0.11919	0.00355	Yes
Construction	1.77149	0.38450	0.00002	Yes
Goods & Supplies	0.43979	0.38303	0.25545	No
Non-Professional Services	0.83143	0.38385	0.03429	Yes
Professional Services	-0.00836	0.36694	0.98190	No

Source: M³ Consulting, Inc.; PUMS US Census Bureau

The logistic regression estimates the likelihood of self-employment based on race and gender characteristics, controlling for variables related to economic and demographic factors. Based on the results above, individuals with a Bachelor's degree are significantly more likely to be self-employed relative to individuals with less than high-school education or high school diploma. Being married increases the likelihood of being self-employed in Tennessee relative to being unmarried. Working in the Construction sector or Professional Services increases the likelihood of self-employment in the state of Tennessee.

Table 8.68. "Odds Ratio" For Self-Employment for Minority Groups Relative to Non-Minority Males Controlling for Economic and Demographic Factors - Construction Only

Race/Ethnic Group	Odds Coefficient	Odds Ratio Inverse
American Indian or Alaska Native	0.62838	1.59140
Asian or Other Pacific Islander	1.20162	0.83221
Black American	0.79313	1.26082
Other Races	0.69578	1.43723
White Female	0.54166	1.84618
Hispanic vs non-Hispanic	1.69137	0.59124

Source: M³ Consulting, Inc.; PUMS US Census Bureau.

From the results listed in Table 8.68, it includes observations in the Construction sector only, and comparing similarly situated individuals (in terms of economic and demographic variables), a white male is more than 1.85 times likely to be self-employed compared to a white female and 1.6 times as likely as an American Indian or Alaskan Native to be self-employed. However, a non-Hispanic is only 0.6 times as likely as a Hispanic to be self-employed. As in Table 8.62, a white male is only little over 0.8 times as likely as an Asian American or other Pacific Islander to be self-employed in Tennessee.

Table 8.69. Results of the Binary Logistic Regression Analysis for Construction Only

Dependent Variable: Self-employed (or not) Variables	Coefficient (β)	Standard Error	Significance (p-value)	Significance
(Intercept)	-3.31957	0.79790	0.00010	Yes
American Indian or Alaska Native	-0.46462	0.37716	0.22250	No
Asian or Other Pacific Islander	0.18367	0.68598	0.78975	No
Black American	-0.23176	0.37471	0.53843	No
Others	-0.36272	0.53620	0.50119	No
White Female	-0.61312	0.23044	0.00985	Yes
Hispanic	0.52554	0.48572	0.28333	No
Age	0.07571	0.03293	0.02479	Yes
Age Squared	-0.00041	0.00033	0.22019	No
Advanced Degree	0.04528	0.44532	0.91932	No
Bachelor's Degree	0.25852	0.21105	0.22509	No
Some College	-0.08823	0.13342	0.51080	No
Has Health Coverage	-0.71972	0.20853	0.00099	Yes
Property Value	0.00000	0.00000	0.00010	Yes
Personal Earned Income	0.00000	0.00000	0.30329	No
Married	0.08266	0.17308	0.63456	No

Source: M³ Consulting, Inc.; PUMS US Census Bureau

Looking at the Construction sector only, and based on the results above in Table 8.69, white females are significantly less likely to be self-employed whereas having health coverage decreases the likelihood of being self-employed in Tennessee. As one ages it increases the likelihood of self-employment in Knoxville. Individuals with health coverage are less likely to be self-employed compared to those who do not have health insurance. The coefficient for property value is extremely small but positive. Consequently, an increase in property value will result in a very small increase in the likelihood of being self-employed due to the presence of alternative income to make the decision towards self-employment.

Table 8.70. “Odds Ratio” For Self-Employment for Minority Groups Relative to Non-Minority Males Controlling for Economic and Demographic Factors - Non-Professional Services Only

Race/Ethnic Group	Odds Coefficient	Odds Ratio Inverse
American Indian or Alaska Native	0.83588	1.19634
Asian or Other Pacific Islander	1.30892	0.76399
Black American	0.81286	1.23022
Other Races	1.69860	0.58872
White Female	1.30105	0.76861
Hispanic vs non-Hispanic	0.52651	1.89930

Source: M³ Consulting, Inc.; PUMS US Census Bureau.

From the results listed in Table 8.70, it includes observations in the Non-Professional Services sector only, and comparing similarly situated individuals (in terms of economic and demographic variables), a white male is more than 1.23 times likely to be self-employed compared to a Black American and 1.2 times as likely as an American Indian or Alaska Native to be self-employed. However, a non-Hispanic is only 1.9 times as likely as a Hispanic to be self-employed. As in Table 8.70, a white male is only little over 0.8 times as likely as a white female to be self-employed in Tennessee.

Table 8.71. Results of the Binary Logistic Regression Analysis for Non-Professional Services Only

Dependent Variable: Self-employed (or not) Variables	Coefficient (β)	Standard Error	Significance (p-value)	Significance
(Intercept)	-3.15704	0.43529	0.00000	Yes
American Indian or Alaska Native	-0.17927	0.23536	0.44906	No
Asian or Other Pacific Islander	0.26920	0.25319	0.29167	No
Black American	-0.20719	0.13003	0.11598	No
Others	0.52981	0.24430	0.03383	No
White Female	0.26317	0.08101	0.00185	No
Hispanic	-0.64148	0.26835	0.01978	No
Age	0.04454	0.01697	0.01085	Yes
Age Squared	-0.00032	0.00017	0.06219	Yes
Advanced Degree	-0.07639	0.15361	0.62071	No
Bachelor’s Degree	0.18405	0.09149	0.04847	Yes
Some College	0.07632	0.07770	0.32970	Yes
Has Health Coverage	-0.64005	0.13481	0.00001	No
Property Value	0.00000	0.00000	0.00002	No
Personal Earned Income	0.00000	0.00000	0.58261	Yes
Married	0.33193	0.08855	0.00038	Yes

Source: M³ Consulting, Inc.; PUMS US Census Bureau

*Significant at 90% Confidence Interval

Looking at the Non-Professional Services sector only, and based on the results above in Table 8.71, they indicate that as one ages it increases the likelihood of self-employment, but this likelihood declines as one gets older. Individuals with Bachelor’s degree are significantly more likely to be self-employed relative to individuals with high-school diploma or less than High School. Individuals with health coverage are less likely to be self-employed compared to those who do not have health insurance. The coefficient for

Personal Earned Income is extremely small but positive, consequently an increase in Personal Earned Income will result in a very small increase in the likelihood of being self-employed in Non-Professional Services.

III. Self-Employment Earnings

Following are the results of the linear regression for the impact of race and gender on self-employment earnings.

The linear regression analyses estimated the impact of race and gender on self-employment earnings, controlling for economic and demographic characteristics. The dependent variable for this analysis is self-employment earnings. The independent variables and the hypothesized relation to self-employment earnings are as follows:

- **Age:** Research shows that age proxies for experience, and self-employment earnings should be positively related to age.
- **Gender (Male vs. Female):** Research shows that males are more likely to receive higher earnings than females.
- **Race:** Research shows that non-minorities earn more than minorities, and minority status should be negatively related to earnings.
- **College Education:** Research shows that individuals with higher educational levels earn more, and college educated individuals should receive higher earnings.
- **Age-Squared:** Research shows a non-linear relation between earnings and age. This variable captures the fact that earnings increase up to a certain age, and then tend to level off.
- **Income:** Research shows a negative relation between earnings and income status.
- **Marital Status:** Research shows that married individuals tend to earn more than those single individuals.
- **Disability:** Research shows that those with disability will tend to have lower self-employment incomes.

Full Sample Results: The results of the linear regression of self-employment earnings are first estimated for the full sample for the State of Tennessee.

The results below lead us to note the following:

- All other variables kept constant, a self-employed Hispanic American will earn about \$15,920 less (but this result is only marginally significant), a white female will earn about \$3,912 less.
- An increase in mortgage payments, or in property value or in personal earned income will result in a very small increase in earnings from self-employment within the State. If the person sees an

increase in other income source, it will result in a decrease of \$53,288 in self-employment earnings.

- Among the industries, individuals in Construction, Non-Professional Services and Professional Service will earn approximately \$11,000 less in self-employment.
- Looking at the Construction Sector only, a self-employed African American will earn about \$11,242 less. An increase in mortgage payment, in property value and in personal earned income will result in an increase, although very small, in earnings from self-employment within the State.
- Looking at the Non-Professional Services Sector only, an increase in personal earned income will result in an increase in self-employed earnings within the State in a very small amount. An increase in other income sources will result in a decline of self-employment earnings by \$43,272 on average.

Table 8.72. Linear Regression Results for the Determinants of Self-Employment Income by Race and Gender for Full Sample

Variables	Coefficients (β)	Standard Error	t-statistic	p-value	Significant
(Intercept)	45191.73430	10666.90724	4.23663	0.00008	Yes
Age	-431.75528	358.13241	-1.20557	0.23271	No
Age Squared	3.40355	3.58758	0.94870	0.34658	No
American Indian or Alaska Native	-1163.63930	4583.19420	-0.25389	0.80045	No
Asian or Other Pacific Islander	-3087.05014	9475.83466	-0.32578	0.74572	No
Black American	-3741.49808	3156.51251	-1.18533	0.24056	No
Other Races	14341.83819	10527.49258	1.36232	0.17819	No
White Female	-3911.56208	2261.30541	-1.72978	0.08881	Yes*
Hispanic vs non-Hispanic	-15919.60704	8587.09625	-1.85390	0.06867	Yes*
Advanced Degree	-805.93306	4093.55975	-0.19688	0.84459	No
Bachelor's Degree	-499.54521	2644.76915	-0.18888	0.85082	No
Some College	-1561.52902	2018.88730	-0.77346	0.44229	No
Mortgage Payment	2.86638	1.44669	1.98133	0.05214	Yes*
Personal Earned Income	0.54087	0.03161	17.11046	0.00000	Yes
Has other income source	-53288.20888	2209.99263	-24.11239	0.00000	Yes
Property Value	0.00698	0.00416	1.67726	0.09869	Yes*
Construction	-11386.74929	5697.30417	-1.99862	0.05019	Yes*
Goods & Supplies	-10085.80034	6896.08988	-1.46254	0.14881	No
Non-Professional Services	-11556.15099	5508.99554	-2.09769	0.04015	Yes
Professional Services	-11103.54237	5824.71171	-1.90628	0.06141	Yes*

Source: M³ Consulting, Inc.; PUMS US Census Bureau;

*Significant at 90% Confidence Interval

Table 8.73. Linear Regression Results for the Determinants of Self-Employment Income by Race and Gender for Construction Only

Variables	Coefficients (β)	Standard Error	t-statistic	p-value	Significant
(Intercept)	19518.66356	29492.45456	0.66182	0.51032	No
Age	97.1925	1380.76838	0.07039	0.94409	No
Age Squared	-3.42142	15.38854	-0.22234	0.82472	No
American Indian or Alaska Native	4491.65413	5367.80559	0.83678	0.40565	No
Asian or Other Pacific Islander	-6992.67253	6515.20157	-1.07329	0.28694	No
Black American	-11242.18166	5174.20277	-2.17274	0.03329	Yes
Other Races	3038.54279	10574.69470	0.28734	0.77473	No
White Female	-4473.53123	18569.33575	-0.24091	0.81035	No
Hispanic vs non-Hispanic	-7733.01408	4815.80943	-1.60576	0.11296	No
Mortgage Payment	13.74692	5.48154	2.50786	0.01454	Yes
Personal Earned Income	0.57915	0.07727	7.49504	0.00000	Yes
Has other income source	-63621.14108	9022.76904	-7.05118	0.00000	Yes

Source: M³ Consulting, Inc.; PUMS US Census Bureau;
*Significant at 90% Confidence Interval

Table 8.74. Linear Regression Results for the Determinants of Self-Employment Income by Race and Gender for Non-Professional Services Only

Variables	Coefficients (β)	Standard Error	t-statistic	p-value	Significant
(Intercept)	26465.43834	11095.18637	2.38531	0.02004	Yes
Age	-229.33976	417.29182	-0.54959	0.58451	No
Age Squared	0.61489	4.01961	0.15297	0.87890	No
American Indian or Alaska Native	-15996.65762	15048.94577	-1.06298	0.29179	No
Asian or Other Pacific Islander	8282.20089	8681.67234	0.95399	0.34368	No
Black American	-1216.90285	4206.01601	-0.28932	0.77327	No
Other Races	14569.36799	16560.32876	0.87978	0.38227	No
White Female	-648.31440	1877.31159	-0.34534	0.73097	No
Hispanic vs non-Hispanic	-19368.56860	14702.03267	-1.31741	0.19240	No
Advanced Degree	2155.50036	4844.09489	0.44497	0.65784	No
Bachelor's Degree	912.55274	3823.90980	0.23864	0.81214	No
Some College	-307.72236	2238.02348	-0.13750	0.89107	No
Mortgage Payment	3.11224	1.88388	1.65203	0.10343	No
Personal Earned Income	0.58568	0.05238	11.18227	0.00000	Yes
Has other income source	-43271.82988	2705.99531	-15.99110	0.00000	Yes
Property Value	-0.00444	0.00573	-0.77416	0.44168	No

Source: M³ Consulting, Inc.; PUMS US Census Bureau;
*Significant at 90% Confidence Interval

8.5 SUMMARY OF FINDINGS

The purpose of this analysis is to determine if there are any differences in the capacity of race, gender, and ethnic groups and after accounting for any differences in the capacity of firms, if race and gender are contributing factors to any disparities found.

Capacity Based on Data Axle

Comparing capacity of firms measured by the number of employees, the number of firms in the lowest range of 1-19 employees are 2,740 MWBE firms, with 2,345 of these as WBEs, 395 MBEs and 5,420 Non-SMWBE firms. As capacity increases, MWBEs remain lower than the Non-SMWBE firms, with 53 Non-SMWBE firms with 100-249 employees compared to 24 MWBE firms. For capacity measured as 250-499 employees, only 5 MWBEs, 4 WBEs compared to 15 Non-SMWBE firms. Looking at firms with 1,000-4,999 employees, where there are 1 Non-SMWBE firm and 1 WBE firms.

In Architecture and Engineering, the highest range was 250-499, where there were only 2 Non-SMWBEs. For firms with 100-249 employees, there are two MWBEs and 2 Non-SMWBEs. For the 50-99 employee range, there is 1 Hispanic American-owned architectural firm along with 1 WBE and 5 Non-SMWBEs. For firms with a 20-49 employee range, there is 1 Hispanic American-owned architectural firm along with 4 WBE and 10 Non-SMWBEs. Most firms were in the 1-19 employee range, with Non-SMWBEs representing about 37.8% of firms, as compared to MWBEs at 21.9%, the majority (19.2%) of which are WBEs. In this range we could find, in addition to Hispanic American-owned firms, African American-owned and Asian American-owned firms as well.

In Construction and Construction-Related Services, 6 Non-SMWBE and 2 WBEs firms were represented in the range 100-249. Non-SMWBEs represented about 47.5% in the 50-90 employee ranges. 1 Hispanic American-owned firm was in the 20-49 range. In the lower range of 1-19 employees, there were 12 Hispanic American-, 5 African American- and 1 Asian American-owned firms. MWBEs and WBEs were 10.1% and 8.4% in this range. Unknown firms represented between 32%-100% of firms, with their highest percentage representation in the 250-499 employee range.

In Non-Professional Services, MBEs and WBE are represented in all ranges except ranges above 500 employees where there is 1 Hispanic American-owned firm. MWBEs and WBEs represented 10-23% and 5-20% across these ranges respectively. Non-SMWBEs included 1 firm with 1,000-4,999 employees, 7 firms with 250-499 employees and more than 26 firms in every range below 250 employees. MBEs included at least 1 Hispanic American-owned firm in each of the following ranges, 500-999, 100-249, and below. At least 1 African American-owned firm is present in ranges 100-249 employees and below, and 1 Asian American-owned firm with over 250 employees. Smaller firms, with 1-19 employees, with have the greatest numbers of minority firms.

If capacity was to be measured using sales volume, then MBEs, WBEs, and Non-SMWBEs are represented in all sales ranges up to \$100 million. 9 Non-SMWBE firms and 3 WBEs are in the capacity range of \$100 million - \$500 million. Most of the firms concentrate in the ranges up to \$10-\$20 million. Consequently, Based on sales volume, differences in capacity are not vast based on race or gender groups, although the number and proportion of MWBE firms is smaller, overall. For Architecture and Engineering, MWBEs, and WBEs are represented in every revenue range to \$20 million. 1 Asian American- and 1 Hispanic American-owned firm is in the range of \$10-\$20 million. 1 African American-owned firm is in the \$1-\$2.5 million sales volume range and 6 Hispanic American- and 1 Asian American-owned firms up to \$10 million. Most of the firms concentrate in the range up to \$2.5 million. For Construction, Non-SMWBEs occur in all sales volume ranges up to \$50 million. Looking at the range below \$500,000, we can observe a concentration of firms: There are 38 WBEs, 6 Hispanic American-, and 3 African American-owned firms. There are no minority-owned construction firms over the \$10 million range.

Capacity Based on Survey Regressions

Based on the results from the survey,

- Of the respondents, white male owned businesses are more likely to have contracted with various entities in the past five years than minority owned businesses overall. White male owned businesses do more contracting with COK than both minority-owned, and women-owned businesses combined.
- White male owned businesses have more full-time employees (on average) than all other groups. Minority- and women owned-businesses are more likely than male-owned businesses to have ten or fewer full-time employees.
- Startups were primarily self-funded, particularly among minority owned businesses compared to white male-owned businesses. Among the people whose business began as a startup, and invested some money initially from a financial institution, their financial institution was not likely to be minority-owned.
- Minority-owned businesses are more likely to have used small business loan programs than white male-owned businesses. Among the respondents who applied for a bond in the past five years, white male-owned businesses did so more frequently on average than minority-owned businesses.
- Approximately one-third of minority owned-businesses noted that the loan application process was a challenge (more than white male-owned businesses). They also faced challenges from a bank/financial institution's pricing. White male-owned businesses are more likely than minority-owned businesses to report facing no challenges at all when attempting to secure a loan or line of credit from a financial institution.

Using a log-linear model, we measure if gross revenue differences are attributable to discrimination between the MWBEs and Non-MWBE groups or simply due to other factors such as experience or

education. Explanatory factors such as number of full-time employees, age of business, principal's prior public and prior private business experience, and the average past two-year bid size for each company were included to explain the differences in gross revenue differences. Utilizing the Blinder-Oaxaca (BO) decomposition method for estimating the extent of discriminating between different groups, we find that Non-SMWBE received 16.95 ($\exp(0.1566)-1$)% greater total gross receipts from all sources in 2021 than they would have if discrimination did not exist. In addition, the MWBE group received 13.04 ($\exp(-0.1397)-1$)% less than it would have if prejudice had not occurred.

Capacity Based on PUMS

Using a binary logistic regression model and the IPUMS 2019 ACS five-year database for the State of Tennessee, M³ Consulting attempted to examine the impact of economic and demographic characteristics on the self-employment decision and whether there are differences in the probability of self-employment among the different race/ethnicities and genders. Additionally, M³ Consulting analysed the factors that impact self-employment income and whether self-employment income is impacted by race and/or gender.

- According to their socio-economic characteristics, individuals with Bachelor's degree are significantly more likely to be self-employed relative to individuals with high-school diploma or less. Being Married increases the likelihood of being self-employed in Tennessee relative to being unmarried.
- The coefficients for Property Value and Personal Earned Income are extremely small but positive, consequently a change in these two features will increase in a very small amount the likelihood of being self-employed due to the presence of alternative income to make the decision towards self-employment.
- Working in the Construction sector or Professional Services increases the likelihood of self-employment in the State of Tennessee.

M³ Consulting utilizes a linear regression analysis to estimate the impact of race and gender on self-employment earnings, controlling for economic and demographic characteristics. A summary of the results are as follows:

- All other variables kept constant, a self-employed Hispanic American will earn about \$15,920 less (but this result is only marginally significant), a white female will earn about \$3,912 less.
- An increase in mortgage payments, in property value, or in personal earned income will result in a very small increase in earnings from self-employment within the State. If the person sees an increase in another income source, it will result in a decrease of \$53,288 in self-employment earnings.
- Among the industries, individuals in Construction, Non-Professional Services, and Professional Service will earn less in self-employment.

9.1 Introduction

As a part of the disparity study process, Miller³ Consulting, Inc. (M³ Consulting) sought to explore the experiences of businesses who were seeking business opportunities and/or performing on contracts with the City of Knoxville (“COK”) and the Knoxville marketplace. This report contains a categorized summary of anecdotal experiences concerning the issues and barriers that small-, minority-, and women-owned business enterprises (SMWBEs) face overall in attempting to transact or grow their businesses with COK.

The anecdotal data was gathered through a series of 20 one-on-one interviews and three focus groups. There was a total of 28 participants in the focus groups. Those interviewed included both minority-owned and non-minority-owned firms with beginning, moderate, and seasoned business owners in the Knoxville area. The objective of the in-depth interviews was to capture the corporate culture and perceptions, attitudes, issues, challenges, and barriers of SMWBEs and other private businesses seeking opportunities with COK and with other public and private organizations in the greater Knoxville area and other private businesses seeking opportunities with COK and with other public and private organizations in the greater Knoxville area.

9.2 Interview Methodology

To develop the sample of business owners to contact for interviews, M³ Consulting utilized a Tennessee Master list of registered SMWBEs, the COK vendor database, and the East Tennessee Diversity Business Alliance’s database. The latter is composed of multiple public agencies in alignment with COK.

Each vendor listed was identified in one of five procurement categories: Construction, Architecture & Engineering, Goods & Supplies, Professional Services, and Other Services.

Initially, from the master list and other business owner databases, 3,284 firms were randomly identified and contacted through multiple communications channels that included email and flier distribution, phone contact, social media, and onsite visits.

The following is the summary of data from interviews and focus groups by race and gender, as well as industry category.

Table 9.1. One-on-One In-Depth Interview and Focus Group Participants by Race

Interview Count	Firm Owner Race/Gender
27	African American Male-Owned
10	African American Female-Owned
5	White American Male-Owned
4	White American Female-Owned
1	Hispanic American-Male-Owned
1	Hispanic American Female-Owned
48	Total

Table 9.2. One-on-One In-Depth Interview and Focus Group Participants by Procurement Type

Interview Count	Firm Procurement Type
1	Architecture & Engineering
16	Construction
21	Professional Services
6	Goods and Supplies
4	Other Services
48	Total

Local Interviewers from M³ Consulting’s team used an in-depth interview guide to probe and direct questions. Interviews were recorded with interviewees’ consent. M³ Consulting then reviewed and analyzed the interview and focus group conversations and transcripts, and subsequently identified the common themes and patterns that materialized. Upon identifying the common themes and patterns, interviews were categorized under specific topic headings. Excerpts and quotes from interviews are provided as support for each category, and the race and/or gender of the interviewee is indicated. In some instances, the same interviewee may have multiple statements highlighted.

INTERVIEW CONFIDENTIALITY

During this process, all interviews and discussions were confidential. Each interviewee was assured his/her identity and the identity of his/her company would remain confidential, barring a court order that requires M³ Consulting to disclose this information. Efforts to verify or find corroborating data that supports any claim made during an anecdotal interview may subject the interviewee to foreseen and unforeseen reprisals. Therefore, in using and following up on the comments reflected in this Chapter, COK should take measures to protect interviewees from any retaliatory actions.

9.3 ANECDOTAL INTERVIEW FINDINGS

The following sections identify recurrent themes that materialized during the interviews and were repeated during the focus groups. Each theme includes anecdotal summaries and direct quotes from the interviewees illustrating the recurrent themes.

- **Theme 1** - Policies, requirements, and practices within COK that discourage and deter DBEs, SBEs, and SMWBEs pursuit and award of contracts
- **Theme 2** - Inequitable relationships/relationship-building, and contract opportunities with COK's decision-makers and prime contractors
- **Theme 3** - Negative perception of DBEs, SBEs, and SMWBEs that historically low contract Awards to diverse companies at COK will never change
- **Theme 4** - Capacity, resource, and limitation challenges of DBEs, SBEs, and SMWBEs pursuing prime contracts
- **Theme 5** - Availability in numbers of skilled DBEs, SBEs, and SMWBEs to prime contractors and COK
- **Theme 6** - Suggestions and comments

Theme 1 - Policies, Requirements, and Practices within the City of Knoxville that Discourage and Deter DBEs, SBEs, and SWMBEs Pursuit and Award of Contracts

This section explores the experiences of firms attempting to navigate COK's procurement process.

Several interviewees shared their experiences in soliciting and submitting bids and performing on contracts with COK. These interviewees categorized the process, particularly as it related to contracts awarded strictly on the basis of "low-bid", as unfair and inequitable for SMWBE firms competing against non-minority larger firms. Additionally, interviewees noted that in their experiences: (1) the procurement process was too time-consuming and over-inundated with documents and requirements. (2) Often their firms were not recruited or alerted of upcoming bid postings in a timely manner adequate to prepare submissions. When they did submit, there was little-to-no debriefing to understand what areas of their bids fell short of requirements other than it was not the lowest price. (3) When participating on contracts, the low bid pricing parameters and timing of payments by COK was very challenging and made it almost impossible for small minority firms to profit.

Interviewee 1, Black Female, Goods and Supplies

Interviewee 1 stated that COK's low bid policies often deterred her from bidding. She highlighted the difficulty for her small business to try and compete with national industrial suppliers given the quantities of scale difference. She asserted that when she finds out that the larger national companies are competing, "I do not even send in my response because it's a moot point...the low price will be out of my range". She went on to state that it is very hard to enter into an opportunity with COK because of the current relationships that they have.

Interviewee 5, Black Male, Construction

Interviewee 5 stated that working with COK “has been very hard to deal with as far as being able to participate on a level playing field”. He stated that, as the owner of a small business, there are not adequate resources and back office to finance a project and compete with the larger general contractors in Knoxville. He stated that the larger firms are getting work from COK that his firm could perform, but he went on to explain “that if we’re sitting across the table from them [large non-minority general contractors] we do not stand a chance because of their resources, back office, and how they can spread their general conditions out over multiple projects that they are working on”.

Interviewee 23, White Male, Construction

Interviewee 23 is a large non-minority general contractor in Knoxville who has conducted dozens of multi-million-dollar construction projects with COK and other public entities in the area. When commenting on the fairness or not of competing with SMWBEs on COK’s contracts he stated that, “we buy \$125 million a year of products and services in Knoxville, Tennessee. If somebody is buying \$5 million worth, it’s hard for them to be competitive. I don’t know how you get around that.”

Interviewee 13, Hispanic Female, Professional Services

Interviewee 13 highlighted the challenges and barriers that Hispanic firms experience trying to do business with COK. She stated that as a user of COK’s procurement processes, more and more information is being offered online. She further explained that it is hard to find where you can translate the information. She referenced that there must be other ways to reach out to Hispanics, especially those who do not speak English. She stated that in her opinion, there needs to be a solid language access policy. She cautioned that “the information does not get to the [Hispanic] public first of all because of the language barrier and then the technology barrier”. She also stated that the vendor process for Hispanics at COK, Knox County, and other agencies were all different processes. Therefore, it was difficult to become a vendor because the paperwork was overwhelming. According to her, there should be “a localized system where small businesses can be visible to everyone”.

Interviewee 3, Black Male, Construction

Interviewee 3 is a African American/veteran-owned general contractor who is a certified small business with COK and has worked on multiple projects with COK. He has chosen not to pursue any additional projects with COK to grow his small business. He stated that the main reason is the time requirement involved in trying to procure contracts along with the “layers and layers and layers and layers of red tape” to get it. He went on to state that once you got the contract, the elongated payment process was difficult for small businesses. He stated that time is money, and when he operated outside of COK, it was very simple. He noted that he could price a job, do the work, and get paid in 2 to 3 weeks. In contrast, he stated that when he pursued projects with COK, it would take 2 to 3 weeks just to find out if you even got the job or not. He noted that it was a timing issue with his firm in working with COK, and he leans toward the faster bid process, service, and timing of getting paid.

Interviewee 15, White Female, Construction

Interviewee 15 explained that she had an experience with COK where her company received a bid award they did not win by mistake. The award was supposed to be sent to another firm. She spoke about being able to see what the winning price was and feeling “hurt and disappointed” by losing the bid by “pennies” to a large, out-of-town firm in Illinois. She stated “for a few pennies, a small minority-owned company lost that local business to a large business out of state. And that’s when we were like wow, this is tough because over pennies we lost out on a three-year contract...We are a small local business.” She went on to state that she felt there should have been consideration for her small local business in that situation.

Interviewee 7, Black Female, Construction

Interviewee number 7 detailed the challenges and difficulties that her small, women-owned company had with “over” bonding and insurance requirements in pursuit of contracts with COK and the County of Knoxville. She stated that the requirements and fees on projects that she was pursuing and currently performing were too much for a small business given the size of the projects. For her, the different fees, bonding, and insurance requirements make it difficult to profit as a small business. She stated if a larger company had gotten the same bid, they would be more profitable because they could afford to pay all the requirements on the same project that are not necessarily needed. She went on to say that her company held the bonding and insurance necessary to meet and exceed the obligations of the projects, but still had to pay unnecessarily high monthly fees and high bonding and insurance requirements that she could be using to grow her business by hiring more help and buying equipment.

Theme 2 - Inequitable Relationships/Relationship Building and Invited Contract Opportunities with the City of Knoxville’s Decision-Makers and Prime Contractors

This section describes the perceptions and realities of interviewees who believe their inability to access decision-makers prevents the opportunity to build quality exposure and confidence of procurement officials in their firms.

Both discussed the “good old boy” system they believed existed at the City and in Knoxville as a whole. This system results in non-minority firms receiving updates/alerts on upcoming projects and more calls to perform contracts that do not have to be publicly bid than small minority firms. Several of the interviewees stated that these events occur based on relationships/friendships, trust, perceived capabilities, and familiarity of past project performances that white-owned firms have with City officials and its Prime Contractors — relationships that small minority firms do not have.

Interviewee 11, Black Male, Professional Services

Interviewee 11 is a prominent service-disabled Black male who has been doing business in Knoxville for over two decades. He stated that he is an independent contractor for a nationally acclaimed and recognizable franchise plumbing company. According to him, he has never been able to make any progress despite his best efforts on service or maintenance contracts with COK. He referenced that he had been to the diversity outreach events and

had sold his company's credentials and quality of work to COK officials. He explained that his company has an A+ Rating with the Better Business Bureau and rarely has client complaints. His belief is that his company does not get contracts because "whoever awards the work does not believe that we have the capacity, which is far from the truth". He further explained that as an independent contractor for his franchisee, "you have to be licensed, bonded, and you have to have the insurance at a level that is, [a] majority of the time, greater than what the municipality is asking for." He went on to explain that Prime Contractors for COK, University of Tennessee, KUB, and other public and private entities subcontract out problematic issues of their contracts for his company to solve. He stated that his business consistently performs work for other major public and private entities in Knoxville such as the University of Tennessee, Oak Ridge National Laboratory, Tennova and St. Mary's Hospitals, Walmart, Pilot, Chop House, Aubrey's, and Calhoun's. "You name it, we have done work for them at some point and time". When asked if he had gotten a call or been solicited to provide services for COK in the two decades that he had been in business, he responded "not one". He stated "I honestly think that it is because of who I am...with the quality of work that we do and the ability and capacity that we have to do the work, I think that the reason we're not getting the calls is because of who I am... I am a Black plumber in the City of Knoxville, and I think that is what creates an issue at the City of Knoxville".

Interviewee 2, White Male, Architecture and Engineering

Interviewee 2 is the Executive Level Officer at a prestigious Architectural Design firm in Knoxville. He stated that his firm had performed dozens of contracts for COK and other public and private entities in the area. When discussing the topic of why a prominent Black general contractor in Knoxville that his firm was currently working with did not receive the same calls on projects from COK and other public entities in Knoxville, he stated, "This sounds crappy, but Knoxville has been and continues to be a 'good old boy' network". When asked what "good old boy" means to him, he went on to say that "for years men and women of privilege in Knoxville have only wanted to work with other men and women of privilege in Knoxville, whether they're the most capable or not...I do not know how to explain it other than you just want to work with people of your socioeconomic class, of your friend group, of your color." He stated that was the best he could do with the explanation.

Interviewee 8, Black Male, Professional Services

Interviewee 8 has done business for 20 years in Knoxville. He stated that he targeted COK for contracts because certain departments were allowed to pick and choose whom to use from several printing companies without a bidding process. He stated that he grew frustrated with the process because his company never received solicitation calls and that he was not going to keep "beating his head against a rock" so he stopped pursuing COK's work. He stated that "I am not a bitter person, and I did not want to become bitter". He also explained that when there were preferences that they wanted to use an MBE, "A white woman would come into play that had a printing business, and of course, she would be chosen over me".

Interviewee 29, Black Male, Professional Services

Interviewee 29 stated that he was "hounded" during a bid process with COK officials so bad that he had to form a political protest after having to re-bid and win the same low-bid contract three times before it was awarded to him. He stated COK kept rebidding the contract "because I was not the one that was supposed to win it. I was too

small according to them”. He went on to reference that he was finally awarded the contract and that he performed on it well.

Interviewee 14, White Female, Construction

Interviewee 14 stated that her small, woman-owned construction firm has grown frustrated with going to COK’s DBE outreach conferences, meetings, and events, “jumping through the same hoops” with no success. She stated that her firm had been aggressive in attending all the meetings but had grown exhausted going to visit the same agencies that she knew utilized and needed her service and advertised the desire to use SMWBEs. She stated that it was a good show that COK was putting on but with no results.

Interviewee 18, Black Male, Construction

Interviewee 18 stated that there is no incentive without requirements for procurement officials to use SMWBEs. He explained, “There is nothing favorable for them to utilize the minority business... That procurement officer—once they get familiar with you—will use you from that point on...but their incentive is get me the low-bid and get somebody that can just get the job done. Call Joe and them, they’re the ones that’s been doing it”.

Interviewee 6, Black Male, Professional Services

Interviewee 6 stated that he owns a small, minority landscape company in Knoxville, and has pursued and performed on multiple projects with COK that have expanded over a decade. He stated that his small, minority firm—when bidding and performing on projects—is held to a different standard than non-minority firms once they get the bids. He stated, “When you don’t get the contract, and as that contract is being performed, you are able to see what is being done and is not being done according to the contract...you lost because you were not the low bidder, but that company is being allowed to proceed. It’s just they’re giving eight-tenths of what’s in the specification where I was held to ten-tenths”.

Theme 3 - Negative Perception of DBEs, SBEs, and SMWBEs that Historically Low Contracts Awards to Diverse Companies at the City of Knoxville will Never Change

These responses describe the collective belief of many interviewees that the historically low contract award results at COK for SWMBEs are intentional, seemingly discriminatory in practice, and are due to a lack of investment, prioritization, and accountability of officials that has extended for decades.

Interviewees characterized the low percentage of contract awards to SWMBEs as “demoralizing” and a “waste of time” to pursue contracts. By comparison, several interviewees pointed to their wide range of successes in

winning public and private contract awards with other municipalities and cities but were unable to have any sustainable success with COK where their businesses are all headquartered.

Interviewee 29, Black Male, Professional Services

Interviewee 29 stated that “Knoxville does not want to do anything!” He continued to say that when he first got into business, he was in his mid-twenties. He explained that COK was doing its first disparity study during this period. He went on to say that “I am getting ready to hit my mid-fifties and we are still doing studies”. He finished by stating “...bottom-line, nothing has changed, and nothing is going to change here...”

Interviewee 21, Black Male, Goods and Supplies

Interviewee 21 is the Sr. Executive of a local, state, and federal-focused small, minority woman-owned industrial supply, project management, promotional items, and staffing company. He stated that his firm “left the table” and stopped pursuing contracts with COK “because they make it such a maze and so difficult that it becomes un-cost effective for you to pursue business with the City. Because in business, to be successful, the first thing you need to eliminate is the thought of being demoralized. And the first thing the City of Knoxville does to its minority businesses is they beat you down so bad on the price; they make you compete so high; they hold you to standards that’s unreasonable, that’s so difficult, it makes you feel like this simply is not worth it for me.”

Interviewee 42, White Female, Other Services

Interviewee 42 stated that opening up her small women-owned business working with COK “at the get-go to get up and running was the most horrendous experience ever and I would not recommend to anybody to open up a business if the City continues to treat people like they did me”. She explained that working out issues that should have taken a short time with permitting took one and a half years. “I think they tried to break me.” She explained that she did not get treated fairly because of the low-income area of town where her coffee shop is located, and she felt that someone at COK was trying to bankrupt her to purchase the property for themselves.

Interviewee 30, Black Male, Professional Services

Interviewee 30 is a veteran-owned small minority business that provides security services for local, state, federal, and private entities. He described his experience working on a contract with COK as “demoralizing,” so he quit to pursue other business. He stated that a lot of businesses and other States outside of Knoxville are trying to make sure small businesses make a profit. He went on to say that COK wanted to keep adding services onto his contract, but not increase his compensation for the additional services. He stated that he was paying out more money than he had coming in and that was one of the problems.

Interviewee 5, Black Male, Construction

Interviewee 5 stated that all the DBE companies in general construction in Knoxville have to go outside of COK to get work. “It’s sad to say that we have to go out of the city/county to get work. If we sit around here, we wouldn’t have a business because the City does not offer it [mandatory DBE usage policies], the county does not offer it, UT doesn’t offer it. Everybody says that we encourage it, but encouraging it has no teeth to it”.

Interviewee 44, Black Male, Construction

Interviewee 44 stated that he bid on a local public construction project in Knoxville where his bid was low at \$1.2-\$1.3 million and the only other competitor's bid was \$2.2 million. He stated that it was such a widespread gap that he had to go meet with the Contractor to find out if it was something that they left out in their bid. He stated that there was nothing in the specifications that alluded to any additional work that was to be done, but that there were conversations in the amount of \$1 million being had with the other group in the background. He went on to state that the project was re-bid, and his firm came back with a \$1.9 million bid. The other firm that initially bid \$2.2 million came back at \$20,000 below his number, and they got the bid. He stated that this is an event that happens to small minority companies in public procurements all the time.

Interviewee 4, Black Woman, Goods and Supplies

Interviewee 4 stated that she keeps gathering disparity studies from COK and they know what the information says. She wanted to know what COK does with the Disparity Study findings. She stated that if we make it very clear and transparent to the masses that these things (discriminatory acts in procurement processes) are happening that SMWBEs can put pressure on COK to make changes.

Interviewee 36, Black Woman, Professional Services

Interview 36 explained that the only time that she has been awarded a contract from COK is when there was a specific preference or need for a SMWBEs on a particular project. She stated that her firm was the low bid on a project before and she still did not win the contract because a high-ranking City official "gave it to a person they wanted to have it". She went on to state that the firm did the work and got paid, but later it was discovered that they should not have gotten the contract and had to give the money back.

Interviewee 36, Black Woman, Professional Services and Interviewee 35, Black Man Construction

Interviewees 36 and 35 expressed their frustration with a major COK-affiliated project: The construction of a downtown sports complex. They stated, "They [the Developers] are utilizing the demographics of a specific community to access the money they're doing for the specific work. And then nobody in that community is leading that project."

Theme 4 - Capacity, Resource, and Limitation Challenges of DBEs, SBEs, and SWMBEs Pursuing Prime Contracts

This section illustrates practices or experiences that have prevented small businesses from building capacity, gaining experience, and acquiring the resources necessary to grow and work independently on prime contracts.

Interviewee 32, Black Female, Other Services

Interviewee 32 stated that she has been in the bakery business for over 20 years, has good credit, and resides downtown, but still has not been able to secure the capital that she needs to grow her business. She spoke about a white bakery trainee that she trained who was able to immediately go out and receive a six-figure loan while she had been in business for a “quarter of a century” without being able to secure the same funds.

Interviewee 46, White Female, Construction

Interviewee 46 stated that a larger Prime Contractor uses her small woman-owned minority business status to get a project and then “do their best to try and put me out of business”.

Interviewee 24, White Male, Professional Services

Interviewee 24 stated that he believed the challenges in Knoxville from operating and employing SMWBEs for his home services and real estate ventures company was that the majority of the minority population in Knoxville falls under a low-income range. He stated that the most educated minority professionals leave the area to do business elsewhere, so you are left with primarily uneducated minorities concentrated in certain areas.

Interviewee 38, Black Woman, Construction

Interviewee 38 stated that she is in her first year of business and operates a small, minority woman-owned excavation company. She stated that her firm is not as sought after because her bond limit is not as high as competitors. She went on to state that, given the fact that her company is new, there should be smaller-scale opportunities to demonstrate the company’s skills to advance to larger projects.

Interviewee 36, Black Woman, Goods & Supplies

Interviewee 36 stated that her small, minority woman-owned firm had problems accessing bid and project information in time to prepare a competitive submission. She stated that by the time her firm received the project alerts, the meetings behind the meetings would have already taken place, and the bid would be relatively “tied up”. She also identified access to the capital and materials to adequately compete is a constant source of frustration as well.

Interviewee 13, Hispanic Woman, Professional Services

Interviewee 13 expressed her frustrations and limitations with having the ability to get in front of the right people to do business. She stated that “doing business with the City of Knoxville, my experience is that if you know somebody, then you might get invited or to quote...We thought knowing someone in particular was really, really, hard or next to impossible”.

Interviewee 9, White Woman, Goods and Supplies and Interview 10, Hispanic Male, Goods and Supplies

Interviewee 10 stated that her small, minority-owned heavy equipment supplies company just does not have the ability to compete with the “big dogs”. Along with interviewee 9, they stated that “when you got the big dogs to compete with it's tough because you are a small company, and you may not have the capital to have better pricing on your product. It does not mean that we can't perform. We can perform.”

Theme 5 - Lack In Total Numbers of Skilled DBEs, SBEs, and SWMBEs Available to the City of Knoxville and Prime Contractors

Several interviewee responses in this section come from larger minority and non-minority firms who spoke to the belief that it is the lack of availability, interest, and pure numbers of highly skilled SMWBEs in Knoxville that has led to the low percentage of contract awards to SMWBEs by the COK and Prime Contractors.

Interviewee 37, White Male, Construction

Interviewee 37 is co-owner and a high-level Executive of a large, prominent, non-minority general construction firm in Knoxville that has performed multiple large-scale projects with COK and other public and private entities. He stated that whenever there were goals for minority participation by COK, his firm wanted to succeed the goal. He went on to explain that his firm's challenge was based on the limited numbers of SWMBEs in the marketplace.

Interviewee 23, White Male, Construction

Interviewee 23 is the owner and senior executive for a large, non-minority general construction firm in Knoxville. He stated that finding skilled SMWBEs to perform on subcontracts was a source of frustration for him. He stated that the reason for COK's and his firm's low contract awards to SMWBEs on projects was due to a “lack of interest”. He went on to explain that they advertise, use COK's database, and call other groups that they know to help, and he just could not get the participation. He stated that Knoxville was at a great disadvantage when it came to SMWBEs because “we just do not have that many to help us”.

Interviewee 21, Black Male, Professional Services

Interviewee 21 is a high-level executive who represents a Black-owned firm, which provides electrical services for public and private entities in Knoxville and other states. He stated that his company exceeded the small minority

business status exception in Knoxville. He stated that when you have a city with very few minority corporations, it is hard to develop a feeling in the community that you are dedicated to minority businesses. He stated minority businesses thrive off of each other and when you only have one or two major African American businesses doing all the work, it is hard to spread that wealth amongst other companies.

Interviewee 39, White Female, Professional Services

Interviewee 39 is a senior executive of a well-respected, woman-owned PR and Marketing firm that has provided services to COK and other public entities for over three decades. She stated that there is a lack of sensitivity to the barriers and obstacles to getting minority businesses involved in projects by most companies seeking them. She stated that it was a small minority business community in Knoxville and if you do not know what communication channels to use in order to reach that community, “you may miss the mark”. She went on to state that she believed that there are not enough minority- and women-owned firms in Knoxville to fulfill the project needs of COK and Prime projects.

Theme 6 - Additional Suggestions and Comments

This final section captures ideas, conversations, suggestions, and comments throughout the process presented by interviewees on how COK could improve and/or modify its procurement processes to have more success with procurement participation and contract awards to SMWBEs.

Interviewee 23, White Male, Construction

Interviewee 23 is the Owner and President/CEO of a major well-established, large, majority-owned general construction firm in Knoxville that has performed dozens of projects for COK and other public and private entities. He stated that if COK wanted to increase its SMWBEs contracts awards, then it should separate out some projects to help minority businesses. He stated that his firm would not mind it at all. He went on to say, “Don’t invite us...invite only minority companies. That way a minority company is gonna get the opportunity to do a project, hopefully make a profit, and hopefully retain some of that money in the business to grow it”.

Interviewee 16, Black Male, Construction

Interviewee 16 suggested that COK should break projects down into smaller bundles. He stated that he would like to see COK take larger projects and break them down into three smaller projects so that companies with lower bonding capacity may bid on it.

Interviewee 44, Black Male, Construction

Interviewee 44 would like to see COK take the information gathered from the previous two Disparity Studies and this one to come up with race-based remedy policies. He explained that every public entity in the past that used racial remedies increased its minority participation drastically.

Interviewee 3, Black Male, Construction

Interviewee 3 suggested that if COK officials desired to attract more quality Hispanic and African American firms to participate in its bid process, they need to establish a policy to immediately pay the subcontractors when they finished the work. He stated that “it’s real simple”.

Interviewee 24, White Male, Professional Services

Interviewee 24 stated that what he thinks is needed is real intentionality from COK regarding their recruiting of minority firms.

Interviewee 31, Black Female, Professional Services

Interviewee 31 suggested that the representatives should come and have similar conversations with the small businesses that the disparity study officials were having. Additionally, she stated that they should remain in communication—particularly when the small businesses are responding to bids. Lastly, she suggested that COK should staff the Title IX office vacancy because that is where small businesses can go if they are experiencing difficulties or problems procuring contracts.

9.4 SUMMARY OF FINDINGS

After analyzing the experiences of those interviewed and considering all anecdotal evidence referenced above, the following observations illustrate the possible barriers that interviewees perceive to exist for small, minority, and women business owners as they attempt to transact business with COK:

- A. **Inequitable Low Bid Policies.** Several interviewees found COK low bid policies to be unfair and to deter small, minority, and women business owners from bidding and winning contract awards. According to these firms, the difference in the economy of scale when larger firms compete against small, minority, and women-owned firms strictly on low price has made it difficult for small, minority, and women-owned firms to win.
- B. **Gap in Trust and Confidence.** Among interviewees, there is a strong belief of those interviewed that pursuing contracts is “a waste of time” and that COK is not serious about implementing new strategies, practices, and policies that eliminate barriers and challenges for disadvantaged firms attempting to transact business.
- C. **Disconnect Between Buyers/Decision-Makers.** The majority of small, minority, and women business owners interviewed agreed that COK’s outreach activities to disadvantaged firms were very informative and supportive. However, the outreach does not equate to impact for most of their firms. The large majority of small, minority, and women-owned firms interviewed stated that limited-to-no access to COK’s “Buyers/Decision Makers” prevented them from connecting, fostering relationships, and promoting their capabilities. As a result, those interviewed believe that the Non-M/WBE firms who have previous access, relationships, and a positive past performance track record with COK’s Buyers/Decision-Makers are the firms who continue to receive repeat contacts for contract awards.
- D. **Need for De-bundled COK Contracts.** Several of the small, minority, and women business owners interviewed expressed the challenges of accessing adequate bonding, insurance, and capital to meet COK bid requirements on contracts. According to them, if COK was to de-bundle large projects into smaller projects and break out specified trades, more small, minority, and women-owned firms would be able to successfully participate at procurement levels that are aligned with its capacity and resources.
- E. **Perception of Blatant Discriminatory Practices.** Several small, minority, and women business owners described negative past experiences with COK officials that were deemed as discriminatory or exclusionary acts and practices such as:
 - I. A qualified Black prime contractor yet to win one contract with COK in 20 years while white prime contractors with similar credentials win awards and subsequently sub-out the same work to the subject Black prime contractor as a third-party subcontractor to the white prime contractor.
 - II. A qualified Black professional services COK vendor for more than 10 years seeks to provide services under COK thresholds where projects do not have to be publicly bid. The Black professional services vendor is never called to provide pricing for projects while their white professional services competitors with the same credentials receive calls to provide pricing for the same COK services year after year while the Black professional services vendor never receives the same calls to provide pricing.
 - III. Minority COK prime and subcontractor vendors continuously win contracts in Chattanooga, Nashville, Memphis, and at the Oak Ridge National Laboratory, but fail to procure and win the same contracts from COK.

- F. **Implementation of Prime Contractor/SWMBE Matchmaking/Mentor-Protégé Program.** Many of the small, minority, and women-owned firms interviewed expressed a need to learn and build sustainable relationships with COK and its Prime Contractors. Additionally, Prime Contractors expressed a frustration in locating minority and women-owned firms and connecting with those SWMBE's that had the skillset and capacity to subcontract on COK projects. One of the most successful industry programs to help accomplish all the above is the implementation of a Prime Contractor/SWMBE Matchmaking/Mentor/Protégé program.

10.1 INTRODUCTION

To gain a better understanding of factors outside of the City of Knoxville (COK) that may limit the participation of SMWBEs in COK's bidding process, we examine the role of the private sector and the overall marketplace. Given the examination of the availability and utilization of SMWBEs in previous chapters and the results of the analysis, the analysis in this chapter may offer some insight into the extent of SMWBE penetration of the private sector of the local construction industry.

The chapter begins with a summary of background information on the demographic and economic profile of the State of Tennessee and the Knoxville, TN Metro Area (utilizing U.S. Census data); and a brief description of the industrial and occupational composition of the local economy.

Following this summary is a review of available research that addresses marketplace disparities.¹ This chapter examines private sector disparities—primarily in the construction industry—in the following ways:

- Occupational and apprentice employment using 2020 Census data
- Comparison by occupation of employment in the marketplace (based on EEO census tabulations)
- Private and public sector bid and award activity, based on Dodge data
- City of Knoxville business license data

To the extent the data allow, the present analysis may offer some evidence of the existence of passive participation, if any, by COK, in discriminatory acts in the private sector.

¹ A fundamental constraint, however, is the scarcity of economic and historical research that is sufficiently localized to address the first *Croson* standard.

10.2 DEMOGRAPHIC AND ECONOMIC PROFILE OF THE RELEVANT MARKET

The demographic structure of the local area may explain some differences in the market availability and utilization of SMWBEs, since business owners are a subset of the general population. Understanding the broad contours of the population in the State of Tennessee and the Knoxville, TN Metro Area is necessary to identify instances in which discrimination may have inhibited SMWBE development.

Table 10.1 includes the population of people age 16 and older providing a picture of those eligible to enter the labor force in the geographical area. We observe that the percentage distribution of racial and ethnic groups across the State of Tennessee; the Knoxville, TN Metro Area; and the City of Knoxville show more similarities than differences. Whites largely reside in the State of Tennessee (78.3%), the Knoxville, TN Metro Area (89.6%), and the City of Knoxville (78.4%). Blacks or African Americans represent 16.1% of the population in the State of Tennessee, a similar percentage (15.5%) in the City of Knoxville, and a lower percentage (5.5%) in the Knoxville, TN Metro Area. Hispanic Americans make up 4.5% of the State of Tennessee’s population, 4.3% in the City of Knoxville, and 3.2% in the Knoxville Metro Area, respectively. Two or more races make up similar percentages in the City of Knoxville (2.8%), the State (2.2%), and in the Metro Area (2.1%). This group is larger than Asian Americans, who make up a larger percentage in the city (1.9%) and in the State (1.8%) than in the Metro Area (1.6%). All other race/ethnic groups make up less than 2% in all geographies listed in Table 10.1.

**Table 10.1. Total Population 16 Years and Older by Race and Hispanic Origin
Census 2020**

Ethnicity	State of Tennessee		Knoxville, TN Metro Area		City of Knoxville, Tennessee	
	#	%	#	%	#	%
Population 16 years and over	5,437,242	100.00	704,981	100.00	155,487	100.00
RACE AND HISPANIC OR LATINO ORIGIN						
White alone	4,259,414	78.34	631,977	89.64	121,903	78.40
Black or African American alone	874,483	16.08	38,917	5.52	24,027	15.45
American Indian and Alaska Native alone	14,930	0.27	1,967	0.28	486	0.31
Asian alone	98,218	1.81	11,503	1.63	2,886	1.86
Native Hawaiian and Other Pacific Islander alone	3,133	0.06	273	0.04	90	0.06
Some other race alone	69,250	1.27	5,541	0.79	1,693	1.09
Two or more races	117,814	2.17	14,803	2.10	4,402	2.83
Hispanic or Latino origin (of any race)	242,235	4.46	22,657	3.21	6,583	4.23

Source: Census 2020 American Community Survey; M³ Consulting, Inc.

Table 10.2 shows the estimates of the civilian labor force in the three geographical areas given the labor participation rate. The total labor force includes 99,201 people in COK; 425,809 people in the Knoxville Metro Area, and over 3.3 million people in the State of Tennessee. About 63.2% of whites, 74.0% of African Americans, 71.6% of Hispanic Americans, 70.4% two or more races, and 70.6% of Asian Americans are part of the labor force in COK. While white Americans, African Americans, Hispanic Americans, and Asian Americans see a drop in the percentage within the Metro Area, African Americans and Hispanic Americans show an increase in their participation at the State level.

**Table 10.2. Civilian Labor Force Total Population 16 Years and Older by Race and Hispanic Origin
Census 2020**

Race	State of Tennessee			Knoxville, TN Metro Area			City of Knoxville, Tennessee		
	Total	Labor Force Participation Rate		Total	Labor Force Participation Rate		Total	Labor Force Participation Rate	
	Estimate	Estimate	Calculated from Percentage*	Estimate	Estimate	Calculated from Percentage*	Estimate	Estimate	Calculated from Percentage*
Population 16 years and over	5,437,242	61.50	3,343,904	704,981	60.40	425,809	155,487	63.80	99,201
RACE AND HISPANIC OR LATINO ORIGIN									
White alone	4,259,414	60.50	2,576,945	631,977	59.90	378,554	121,903	63.20	77,043
Black or African American alone	874,483	64.30	562,293	38,917	62.10	24,167	24,027	64.00	15,377
American Indian and Alaska Native alone	14,930	54.20	8,092	1,967	58.50	1,151	486	66.30	322
Asian alone	98,218	66.70	65,511	11,503	63.80	7,339	2,886	70.60	2,038
Native Hawaiian and Other Pacific Islander alone	3,133	70.50	2,209	273	68.50	187	90	77.80	70
Some other race alone	69,250	70.80	49,029	5,541	64.60	3,579	1,693	74.10	1,255
Two or more races	117,814	67.10	79,053	14,803	72.50	10,732	4,402	70.40	3,099
Hispanic or Latino origin (of any race)	242,235	71.60	173,440	22,657	69.40	15,724	6,583	71.60	4,713

Source: Census 2020 American Community Survey; M³ Consulting, Inc.

10.3 EDUCATION AND TRAINING: PATHWAYS TO THE CONSTRUCTION SECTOR

It is generally recognized that relevant education and prior experience in an industry and occupation are strongly and positively correlated with the business formation decision. Of relevance to the formation of new businesses is the availability of jobs that offer the opportunity for occupational training, either in the form of formal apprenticeship training, or other formal pathways to occupational expertise. This connection is particularly important in the construction industry.

10.3.1 EMPLOYMENT IN APPRENTICABLE EEO CONSTRUCTION OCCUPATIONS

Table 10.3, 10.4, and 10.5 summarizes employment in selected apprenticeable EEO construction occupations for the State of Tennessee, the Knoxville, TN Metro Area, and the City of Knoxville respectively as enumerated by the 2014-2018 Census EEO File.

For the State of Tennessee, the majority of construction operations are dominated by males. Hispanic American males are largely in all construction occupations, with the lowest participation in Production Occupations (62.5%). Among non-Hispanic-Latinos, white males dominate all construction operations. Hispanic American females (37.5%), African American females (39.75%), and Asian American females (48.1%) are represented mostly in Production occupations. These groups are also in Transportation and Material Moving Occupations with lower percentages (26%, 26.6%, and 30.5%, respectively). African American males exceed their female counterparts across all occupations, whereas African American females have their highest percentage in Production occupations. Asian American males and females show a similar pattern to African Americans within the State, with the exception of Laborers and Helpers, whose participation is 66.7%.

In the Knoxville Metro Area, white alone are the largest group in all occupations. Construction and Extraction occupations are dominated by males among all racial and ethnic groups. Installation, Maintenance, and Repair occupations are similar, with the exception of African American females, whose participation is 13.9%. Females, among other racial and ethnic groups, show a participation of less than 3%. Among Production Occupations, Asian females (83.3%), Hispanic females (50.5%), and African American females (39.7%) show the largest participation. In Transportation and Material Moving occupations, Asian females (54.6%) show a larger participation followed by Hispanic females (29.6%). Most Laborers and Helpers, if not all, are males for all races, except Asian females (33.3%).

In COK, all Construction and Extraction occupations are dominated by males among all racial and ethnic groups. Installation, Maintenance, and Repair occupations are predominantly males, with the exception of African American females (22.5%). In Production occupations, whites primarily hold the occupation. Asian females, Hispanic American females, and African American females represent 94.1%, 64.4%, and 45.0% respectively for their individual races. In Transportation and Material Moving occupations, Asian

females represent 28.6% of their race and African American females 22.1%. Most Laborers and Helpers are males for all races.

**Table 10.3. Employment in Selected Apprenticable EEO Construction Occupations
By Hispanic Origin and Race, 2014-2018
Tennessee**

Occupation Label: SOC / Census Code	Construction and Extraction Occupations			Installation, Maintenance, and Repair Occupations			Production Occupations			Transportation and Material Moving Occupations			Laborers and Helpers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Race/Ethnicity /Gender	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%
Total All Groups	132,665	95.45	4.55	103,050	95.98	4.02	249,340	68.83	31.17	266,720	79.15	20.85	33,085	95.60	4.40
Hispanic or Latino	26,020	95.73	4.27	3,970	96.98	3.02	15,364	62.51	37.49	11,925	74.00	26.00	7,440	95.77	4.23
Non-Hispanic or Latino															
White alone	95,035	95.73	4.27	86,475	96.74	3.26	177,425	72.12	27.88	177,270	82.03	17.97	22,365	95.71	4.29
Black or African American alone	9,569	93.36	6.64	9,840	89.94	10.06	47,745	60.34	39.66	70,650	73.43	26.57	2,780	94.60	5.40
American Indian/ Alaska Native	438	93.15	6.85	250	100.00	0.00	510	70.59	29.41	444	76.35	23.65	45	88.89	11.11
Asian alone	402	71.39	28.61	1,000	89.00	11.00	4,800	51.88	48.13	2,440	69.47	30.53	30	33.33	66.67
Native Hawaiian/ Pacific Islander	-	0.00	0.00	25	100.00	0.00	215	90.70	9.30	118	93.22	6.78	30	100.00	0.00
Balance of not Hispanic or Latino	1,193	94.97	5.03	1,495	93.65	6.35	3,294	66.61	33.39	3,870	73.36	26.64	395	98.73	1.27

Source: US Census Bureau, Census 2014-2018 special tabulation - Data based on where people live.

**Table 10.4. Employment in Selected Apprenticable EEO Construction Occupations
By Hispanic Origin and Race, 2014-2018
Knoxville, TN Metro Area**

Occupation Label: SOC / Census Code	Construction and Extraction Occupations			Installation, Maintenance, and Repair Occupations			Production Occupations			Transportation and Material Moving Occupations			Laborers and Helpers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Race/Ethnicity /Gender	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%
Total All Groups	17,815	96.18	3.82	13,815	97.03	2.97	24,780	70.62	29.38	31,870	83.24	16.76	4,610	97.40	2.60
Hispanic or Latino	2,779	96.58	3.42	195	100.00	0.00	864	49.54	50.46	844	70.38	29.62	710	100.00	0.00
Non-Hispanic or Latino															
White alone	14,515	96.35	3.65	12,925	97.29	2.71	21,560	73.33	26.67	27,445	84.50	15.50	3,785	96.96	3.04
Black or African American alone	377	89.39	10.61	325	86.15	13.85	1,624	60.28	39.72	2,860	76.40	23.60	85	100.00	0.00
American Indian/ Alaska Native	54	100.00	0.00	65	100.00	0.00	75	73.33	26.67	70	85.71	14.29	15	66.67	33.33
Asian alone	10	100.00	0.00	115	100.00	0.00	390	16.67	83.33	110	45.45	54.55	-	0.00	0.00
Native Hawaiian/ Pacific Islander	-	0.00	0.00	25	100.00	0.00	-	0.00	0.00	40	100.00	0.00	-	0.00	0.00
Balance of not Hispanic or Latino	84	100.00	0.00	170	88.24	11.76	255	65.88	34.12	514	80.54	19.46	15	100.00	0.00

Source: US Census Bureau, Census 2014-2018 special tabulation - Data based on where people live.

**Table 10.5. Employment in Selected Apprenticable EEO Construction Occupations
By Hispanic Origin and Race, 2014-2018
Knoxville City, Tennessee**

Occupation Label: SOC / Census Code	Construction and Extraction Occupations			Installation, Maintenance, and Repair Occupations			Production Occupations			Transportation and Material Moving Occupations			Laborers and Helpers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Race/Ethnicity /Gender	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%
Total All Groups	6,443	97.22	2.78	5,535	96.21	3.79	6,630	63.80	36.20	13,035	85.12	14.88	1,830	99.45	0.55
Hispanic or Latino	1170	96.92	3.08	120	100.00	0.00	264	35.61	64.39	320	89.06	10.94	335	100.00	0.00
Non-Hispanic or Latino															
White alone	4,953	97.09	2.91	4,980	96.99	3.01	5,280	68.37	31.63	10,550	86.49	13.51	1,400	99.64	0.36
Black or African American alone	248	100.00	0.00	200	77.50	22.50	889	55.01	44.99	1,905	77.95	22.05	75	100.00	0.00
American Indian/ Alaska Native	35	100.00	0.00	65	100.00	0.00	-	0.00	0.00	50	100.00	0.00	4	0.00	100.00
Asian alone	10	100.00	0.00	50	100.00	0.00	169	5.92	94.08	35	71.43	28.57	-	0.00	0.00
Native Hawaiian/ Pacific Islander	-	0.00	0.00	25	100.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00
Balance of not Hispanic or Latino	34	100.00	0.00	100	80.00	20.00	19	100.00	0.00	175	80.00	20.00	15	100.00	0.00

Source: US Census Bureau, Census 2014-2018 special tabulation - Data based on where people live.

10.3.2 EMPLOYMENT IN APPRENTICABLE EEO PROFESSIONAL OCCUPATIONS

In Management, Business, and Finance occupations within the State of Tennessee, the distribution of men and women is almost even, with slightly greater male participation (around 54.8%). African American and American Indian /Alaska Native are the only racial/ethnic groups whose female participation (60.7% and 54.2%) is greater than male. In Computer Engineering and Science occupations, participation from Native Hawaiians and African Americans were 49.6% and 41.8%, respectively for their individual races. Asian American females and Hispanic females were 28.4% and 26.4%, respectively. Among Healthcare practitioners, females comprise about 70% to 80%, with the lowest participation being from Asian American females at 65.1%. Similarly, Technical occupations witnessed a greater proportion of women across all racial and ethnic populations within the State, with the exception of Native Hawaiian females at 18.2%.

Sales and related occupations had slightly higher female participation than males across all races, except for white females. Office and administrative positions, however, had much larger female participation with over 70%, and Native Hawaiian female participation was 92.9%. Protective Service occupations see a reverse of this trend, with a range of 16% to 36% among women of any race/ethnicity. Among the category of Service workers, except Protective Service, all females had a participation above 60%, except for Asian Americans (57.6%) and Hispanics (49.1%).

For the Knoxville Metro Area, Management, Business, and Finance occupations follow similar trends as the State. American Indian females and African American females have again a greater participation than males at around 57%. Computer Engineering and Science occupations showed female participation from American Indians (100.0%) and African Americans (46.8%), with rates greater than 23%. Females make up most Healthcare occupations, from a low of 63% for Hispanic Americans to 100.0% for American Indians. Technical occupations showed similar trends as the State.

Sales and related occupations had slightly higher female participation than males for American Indians, African Americans, and Hispanic Americans. Office and Administrative positions, however, had much larger female participation at over 70%, except for Asian American females, who reached 51.9%. Like the State, Protective Service occupations see a reverse of this trend, with males of any race/ethnicity representing the majority, except Hispanic Americans and American Indians. Among Service workers (except Protective Service), females garnered 49.1% to 62.2% representation.

COK has a similar pattern to the State of Tennessee in Management, Business, and Financial occupations across genders for all race and ethnic groups, with exception of American Indian and Native Hawaiian females. In Computer Engineering and Science occupations, whites, Hispanic Americans, and Asian Americans see a greater male participation, whereas African Americans (52.3%) see a greater female participation than male. Healthcare participants are similar to the State and Metro Area trends, with females dominating in all race and ethnic groups. Over 75% female participation is seen in Technical occupations among all racial and ethnic groups, with exception of American Indians and Native Hawaiians with no participation.

Sales and related occupations see greater female participation among American Indians, African Americans, and Hispanic Americans at 73.9%, 68.2%, and 63.3%, respectively. Office and Support Service occupations and Services workers (except Protective) occupations follow a similar pattern as in the Metro Area, with greater female participation among all racial and ethnic groups. Protective Service male workers have a greater participation than female, following the pattern in the

State. Among Service workers (except Protective Service), females garnered 50.1% to 89.7% representation, save for Asian females at 38%.

**Table 10.6. Employment In Selected Apprenticeable EEO Professional Occupations
By Hispanic Origin And Race, 2014-2018
Tennessee**

Occupation Label: SOC / Census Code	Management, Business, and Financial Occupations			Computer, Engineering, and Science Occupations			Healthcare Practitioners			Other Professionals			Technical Occupations		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Race/Ethnicity /Gender	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%
Total All Groups	414,785	54.75	45.25	135,290	73.80	26.20	131,835	23.72	76.28	301,710	35.48	64.52	73,820	21.51	78.49
Hispanic or Latino	11,058	57.13	42.87	3,803	73.57	26.43	2,250	33.51	66.49	7,240	39.90	60.10	1,665	27.63	72.37
Non-Hispanic or Latino															
White alone	344,760	56.75	43.25	105,345	76.05	23.95	110,895	24.05	75.95	243,505	35.75	64.25	57,890	21.84	78.16
Black or African American alone	44,725	39.33	60.67	13,385	58.18	41.82	11,995	14.05	85.95	41,080	30.95	69.05	12,380	17.49	82.51
American Indian/ Alaska Native	977	45.85	54.15	218	74.31	25.69	285	15.79	84.21	534	38.01	61.99	160	46.88	53.13
Asian alone	8,107	55.47	44.53	9,850	71.62	28.38	4,790	34.95	65.05	4,990	46.49	53.51	1,020	33.24	66.76
Native Hawaiian/ Pacific Islander	148	56.08	43.92	129	50.39	49.61	40	25.00	75.00	25	40.00	60.00	55	81.82	18.18
Balance of not Hispanic or Latino	5,000	49.68	50.32	2,548	73.08	26.92	1,615	28.11	71.89	4,325	42.15	57.85	655	21.22	78.78

Source: US Census Bureau, Census 2014-2018 special tabulation - Data based on where people live.

**Table 10.6 cont. Employment In Selected Apprenticeable EEO Professional Occupations
By Hispanic Origin And Race, 2014-2018
Tennessee**

Occupation Label: SOC / Census Code	Sales and Related Occupations			Office and Administrative Support Occupations			Protective Service Occupations			Service Workers Except Protective		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Race/Ethnicity /Gender	#	%	%	#	%	%	#	%	%	#	%	%
Total All Groups	319,995	48.80	51.20	369,705	24.42	75.58	64,155	79.50	20.50	445,300	38.91	61.09
Hispanic or Latino	9,125	47.29	52.71	9,954	26.55	73.45	1,460	73.56	26.44	37,985	50.86	49.14
Non-Hispanic or Latino												
White alone	255,935	51.25	48.75	280,310	23.75	76.25	46,740	84.40	15.60	297,760	37.02	62.98
Black or African American alone	43,430	35.03	64.97	69,840	26.21	73.79	14,715	64.73	35.27	91,185	39.76	60.24
American Indian/ Alaska Native	510	31.37	68.63	890	24.16	75.84	48	68.75	31.25	1,060	32.08	67.92
Asian alone	5,385	50.88	49.12	3,445	29.32	70.68	285	82.46	17.54	9,235	42.45	57.55
Native Hawaiian/ Pacific Islander	184	59.24	40.76	140	7.14	92.86	50	100.00	0.00	155	35.48	64.52
Balance of not Hispanic or Latino	5,435	44.99	55.01	5,135	29.89	70.11	845	75.74	24.26	7,940	39.85	60.15

Source: US Census Bureau, Census 2014-2018 special tabulation - Data based on where people live.

**Table 10.7. Employment In Selected Apprenticable EEO Professional Occupations
By Hispanic Origin And Race, 2014-2018
Knoxville, TN Metro Area**

Occupation Label: SOC / Census Code	Management, Business, and Financial Occupations			Computer, Engineering, and Science Occupations			Healthcare Practitioners			Other Professionals			Technical Occupations		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Race/Ethnicity /Gender	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%
Total All Groups	53,410	54.68	45.32	23,190	76.35	23.65	19,045	26.99	73.01	40,250	35.06	64.94	9,925	23.22	76.78
Hispanic or Latino	1,068	63.39	36.61	327	81.65	18.35	285	36.84	63.16	907	39.58	60.42	129	7.75	92.25
Non-Hispanic or Latino															
White alone	49,185	54.83	45.17	20,315	77.01	22.99	17,805	26.71	73.29	35,845	33.92	66.08	9,075	23.20	76.80
Black or African American alone	1,547	42.86	57.14	863	53.19	46.81	424	24.53	75.47	1,910	36.91	63.09	395	31.65	68.35
American Indian/ Alaska Native	114	42.98	57.02	4	0.00	100.00	4	0.00	100.00	45	44.44	55.56	15	0.00	100.00
Asian alone	878	57.52	42.48	1,453	77.77	22.23	405	35.80	64.20	984	62.50	37.50	149	9.40	90.60
Native Hawaiian/ Pacific Islander	-	0.00	0.00	4	100.00	0.00	-	0.00	0.00	-	0.00	0.00	35	100.00	0.00
Balance of not Hispanic or Latino	600	56.67	43.33	227	82.38	17.62	134	25.37	74.63	540	45.93	54.07	124	12.10	87.90

Source: US Census Bureau, Census 2014-2018 special tabulation - Data based on where people live.

**Table 10.7 cont. Employment In Selected Apprenticable EEO Professional Occupations
By Hispanic Origin And Race, 2014-2018
Knoxville, TN Metro Area**

Occupation Label: SOC / Census Code	Sales and Related Occupations			Office and Administrative Support Occupations			Protective Service Occupations			Service Workers Except Protective		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Race/Ethnicity /Gender	#	%	%	#	%	%	#	%	%	#	%	%
Total All Groups	45,140	51.17	48.83	50,165	24.31	75.69	7,970	84.76	15.24	60,070	39.90	60.10
Hispanic or Latino	885	47.46	52.54	1,055	24.93	75.07	175	42.29	57.71	3,995	51.94	48.06
Non-Hispanic or Latino												
White alone	41,445	51.89	48.11	44,870	24.17	75.83	7,345	85.98	14.02	48,135	37.83	62.17
Black or African American alone	1,600	36.56	63.44	3,090	21.97	78.03	365	79.45	20.55	5,584	43.95	56.05
American Indian/ Alaska Native	155	29.03	70.97	209	16.75	83.25	4	0.00	100.00	175	50.86	49.14
Asian alone	480	60.42	39.58	395	48.10	51.90	49	91.84	8.16	813	50.43	49.57
Native Hawaiian/ Pacific Islander	25	100.00	0.00	20	0.00	100.00	-	0.00	0.00	40	100.00	0.00
Balance of not Hispanic or Latino	550	42.73	57.27	519	32.76	67.24	35	100.00	0.00	1,339	52.20	47.80

Source: US Census Bureau, Census 2014-2018 special tabulation - Data based on where people live.

**Table 10.8. Employment In Selected Apprenticable EEO Professional Occupations
By Hispanic Origin And Race, 2014-2018
Knoxville City, Tennessee**

Occupation Label: SOC / Census Code	Management, Business, and Financial Occupations			Computer, Engineering, and Science Occupations			Healthcare Practitioners			Other Professionals			Technical Occupations		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Race/Ethnicity /Gender	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%
Total All Groups	23,625	52.68	47.32	7,975	72.04	27.96	11,245	24.68	75.32	19,440	38.34	61.66	4,620	22.29	77.71
Hispanic or Latino	549	57.56	42.44	128	88.28	11.72	200	32.50	67.50	477	51.15	48.85	80	0.00	100.00
Non-Hispanic or Latino															
White alone	21,460	53.30	46.70	6,800	71.99	28.01	10,440	24.23	75.77	16,590	37.55	62.45	3,990	22.81	77.19
Black or African American alone	941	31.14	68.86	430	47.67	52.33	240	18.75	81.25	1,349	27.72	72.28	290	20.69	79.31
American Indian/ Alaska Native	35	100.00	0.00	-	0.00	0.00	4	0.00	100.00	10	0.00	100.00	-	0.00	0.00
Asian alone	363	61.98	38.02	493	85.80	14.20	255	39.22	60.78	779	63.54	36.46	144	9.72	90.28
Native Hawaiian/ Pacific Islander	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	35	100.00	0.00
Balance of not Hispanic or Latino	244	52.87	47.13	119	91.60	8.40	108	31.48	68.52	238	45.80	54.20	75	5.33	94.67

Source: US Census Bureau, Census 2014-2018 special tabulation - Data based on where people live.

**Table 10.8 cont. Employment In Selected Apprenticable EEO Professional Occupations
By Hispanic Origin And Race, 2014-2018
Knoxville City, Tennessee**

Occupation Label: SOC / Census Code	Sales and Related Occupations			Office and Administrative Support Occupations			Protective Service Occupations			Service Workers Except Protective		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Race/Ethnicity /Gender	#	%	%	#	%	%	#	%	%	#	%	%
Total All Groups	21,320	52.53	47.47	24,595	26.06	73.94	2,850	82.63	17.37	29,095	41.97	58.03
Hispanic or Latino	474	36.71	63.29	670	35.52	64.48	14	100.00	0.00	2204	49.91	50.09
Non-Hispanic or Latino												
White alone	19,200	54.66	45.34	21,400	25.65	74.35	2580	83.14	16.86	21,490	40.00	60.00
Black or African American alone	1,165	31.76	68.24	2,025	26.12	73.88	225	80.00	20.00	4,249	44.25	55.75
American Indian/ Alaska Native	115	26.09	73.91	94	15.96	84.04	4	0.00	100.00	39	10.26	89.74
Asian alone	180	63.89	36.11	93	51.61	48.39	10	100.00	0.00	389	61.70	38.30
Native Hawaiian/ Pacific Islander	-	0.00	0.00	20	0.00	100.00	-	0.00	0.00	25	100.00	0.00
Balance of not Hispanic or Latino	185	13.51	86.49	290	29.31	70.69	10	100.00	0.00	700	54.29	45.71

Source: US Census Bureau, Census 2014-2018 special tabulation - Data based on where people live.

10.4 ANALYSIS OF DODGE GENERAL CONSTRUCTION DATA

In showing an additional source of SMWBE participation in marketplace construction activity, M³ Consulting collected information maintained by the private firm of Dodge Data & Analytics (Dodge), which surveys construction-related activity in various regions around the United States. A substantial portion of the Dodge data relates to bid activity, and significantly more so for projects owned by public entities than for private owners². M³ Consulting, however, analyzed all projects submitted, both public and private. In the case of the data M³ Consulting received from Dodge, the selected geographic region for analysis as the State of Tennessee.

Most importantly, the *dollar value* of those projects that are available in Dodge is only based on the owner and cannot be apportioned to the contractor (such as architect, construction manager, engineer, general contractor, or subcontractor) level. This limits the analysis. The details about the data submitted by Dodge are presented in **Chapter IV, Statistical Methodology**.

10.4.1 COMPARISON OF PRIVATE AND PUBLIC OWNERS OF PROJECT VALUES AND CONTRACTORS

The number of projects in the private sector constituted 56.2% of reported projects in FY 2021. The dollar value of projects is almost evenly divided among the private and public sectors. Private sector projects constituted 49.5% of the value of total projects in FY 2021 in the State of Tennessee.

**Table 10.9. Counts and Project Value of Unique Projects
By Project Owner
State of Tennessee
2021**

Project Owner	#	%	\$	%
Private	10,215	56.18	29,978,089	49.52
Public	7,967	43.82	30,555,057	50.48
Total	18,182	100.00	60,533,146	100.00

Source: Dodge Data 2021

One of the main purposes of presenting the Dodge data is to gain insight into the MWBE penetration in the private sector. Below is an examination of categories of Construction firms by SMWBE status. As the data indicates, in most areas of Construction, MWBEs received 3.1% of the projects in the State of Tennessee. The largest participation is in Designer (8.3%) and Consultant (6.4%) occupations. In other areas, such as General Contractor (4.7%), Engineer (3.3%), and Architectural firms (3.1%), MWBEs received less than 5% of projects.

² This may be a function of the ease with which public records may be accessed as opposed to bid documents of private owners that may be protected from public scrutiny.

**Table 10.10. Firms Availability by Role
State of Tennessee
FY 2021**

Ethnicity	Architect		Construction Manager		Consultant		Designer		Engineer		General Contractor	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	2,180	92.92	72	87.80	124	88.57	11	91.67	1,421	91.09	4,148	90.93
African American	18	0.77	-	0.00	1	0.71	-	0.00	19	1.22	68	1.49
Asian American	1	0.04	-	0.00	-	0.00	1	8.33	3	0.19	4	0.09
Hispanic American	3	0.13	1	1.22	-	0.00	-	0.00	3	0.19	9	0.20
American Indian	1	0.04	-	0.00	-	0.00	-	0.00	-	0.00	6	0.13
Other MBEs	6	0.26	-	0.00	2	1.43	-	0.00	5	0.32	20	0.44
<i>Total Minority</i>	<i>29</i>	<i>1.24</i>	<i>1</i>	<i>1.22</i>	<i>3</i>	<i>2.14</i>	<i>1</i>	<i>8.33</i>	<i>30</i>	<i>1.92</i>	<i>107</i>	<i>2.35</i>
Woman-owned (WBEs)	43	1.83	-	0.00	6	4.29	-	0.00	22	1.41	109	2.39
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	72	3.07	1	1.22	9	6.43	1	8.33	52	3.33	216	4.73
SBE	91	3.88	9	10.98	6	4.29	-	0.00	84	5.38	182	3.99
VOBE	3	0.13	-	0.00	1	0.71	-	0.00	3	0.19	16	0.35
Grand Total	2,346	100.00	82	100.00	140	100.00	12	100.00	1,560	100.00	4,562	100.00

Source: Dodge Data 2021; M³ Consulting, Inc.

*Consists of Reprographers, Interior Designer, Lessee/Franchisee

Count includes Owner/Owner Agent firms even when acting as engineer, architect etc.

**Table 10.10 cont. Firms Availability by Role
State of Tennessee
FY 2021**

Ethnicity	Owner/Owner's Agent/ Owner-Builder/Developer		Project Manager		Subcontractor		Others*		Total	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	3,461	96.97	27	90.00	149	88.69	172	96.09	8,949	93.48
African American	18	0.50	1	3.33	1	0.60	-	0.00	97	1.01
Asian American	1	0.03	-	0.00	-	0.00	-	0.00	8	0.08
Hispanic American	3	0.08	1	3.33	-	0.00	1	0.56	16	0.17
American Indian	1	0.03	-	0.00	-	0.00	-	0.00	6	0.06
Other MBEs	5	0.14	-	0.00	1	0.60	-	0.00	29	0.30
<i>Total Minority</i>	<i>28</i>	<i>0.78</i>	<i>2</i>	<i>6.67</i>	<i>2</i>	<i>1.19</i>	<i>1</i>	<i>0.56</i>	<i>156</i>	<i>1.63</i>
Woman-owned (WBEs)	27	0.76	-	0.00	1	0.60	5	2.79	155	1.62
Unknown MWBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total MWBE	55	1.54	2	6.67	3	1.79	6	3.35	311	3.25
SBE	51	1.43	1	3.33	16	9.52	-	0.00	294	3.07
VOBE	2	0.06	-	0.00	-	0.00	1	0.56	19	0.20
Grand Total	3,569	100.00	30	100.00	168	100.00	179	100.00	9,573	100.00

Source: Dodge Data 2021; M³ Consulting, Inc.

*Consists of Reprographers, Interior Designer, Lessee/Franchisee

Count includes Owner/Owner Agent firms even when acting as engineer, architect etc.

Specifically, among Architectural firms, Women-owned business enterprises (WBEs) (1.8%) and African American-owned firms (0.8%) had the largest participation. Of the 124 projects in Consultant, 6 (4.3%) went to Women-owned firms. Non-SMWBE engineering firms garnered 91.1%, while 3.3% and 1.4% were the shares of MWBEs and Women-owned firms, respectively. Among Designers, Asian American-owned firms and MWBEs had one project each. Under General Contractors, 2.4% were WBEs and 1.5% were African American-owned firms. Among Subcontractors, Non-SMWBEs represent 96.1%. WBEs and Hispanic American-owned participation are 2.8% and 0.6% respectively.

10.4.2 COMPARISON OF BID ACTIVITY AND BIDDERS ACROSS PRIVATE AND PUBLIC OWNERS OF PROJECTS

The ranking of bidders reflects the decision rates of owners in determining the winning bidder (awardee). Given that public sector bids may include COK, it indicates whether MWBEs are winning public sector contracts within the State. As the data in Table 10.11 reflect, less than 7% of MWBEs were ranked #1, and 6.6% and 6.4% were ranked #2 or #3, respectively. In total, 98 WBEs (4.1%) out of more than 2,400 bids were ranked #1 in public sector projects, whereas African American-, Hispanic American- and Asian American-owned firms had 41, 6, and 6 bids, respectively, in rank #1. This pattern held steady for ranks #2 and #3 as well. A total of 194 SBEs (8%) were ranked #1, while only 96 each were ranked #2 and #3. In contrast to MWBEs, more than 2,000 Non-SMWBEs were ranked #1, and more than 950 and 840 were ranked #2 and #3 respectively, thus gaining a majority of public sector projects.

**Table 10. 11. Distribution of SMWBEs by Bidder Ranking
By Project Owner: Public
State of Tennessee
FY 2021**

Ethnicity	Rank #1		Rank #2		Rank #3	
	#	%	#	%	#	%
Non-SMWBE	2,052	84.72	971	84.88	846	84.01
African American	41	1.69	19	1.66	17	1.69
Asian American	6	0.25	3	0.26	2	0.20
Hispanic American	6	0.25	2	0.17	2	0.20
American Indian	4	0.17	3	0.26	2	0.20
Other MBEs	13	0.54	11	0.96	7	0.70
<i>Total Minority</i>	<i>70</i>	<i>2.89</i>	<i>38</i>	<i>3.32</i>	<i>30</i>	<i>2.98</i>
Woman-owned (WBEs)	98	4.05	37	3.23	34	3.38
Unknown MWBE	-	0.00	-	0.00	-	0.00
Total MWBE	168	6.94	75	6.56	64	6.36
SBE	194	8.01	96	8.39	96	9.53
VOBE	8	0.33	2	0.17	1	0.10
Grand Total	2,422	100.00	1,144	100.00	1,007	100.00

Source: Dodge Data 2021; M³ Consulting, Inc.

Count includes Owner/Owner Agent firms even when acting as engineer, architect etc.

Compared to the public sector, winning private sector bids is typically more challenging for MWBEs. While Non-SMWBEs win about 95.6% of all private sector bids, as reflected in Table 10.12, 70 WBEs, 50 African American-owned firms, and 7 Hispanic American-owned firms are the firms with the largest number of wins in private sector bids in FY 2021.

**Table 10. 12. Distribution of SMWBEs by Bidder Ranking
By Project Owner: Private
State of Tennessee
FY 2021**

Ethnicity	Rank #1		Rank #2		Rank #3	
	#	%	#	%	#	%
Non-SMWBE	6,614	95.54	21	84.00	17	70.83
African American	50	0.72	-	0.00	-	0.00
Asian American	5	0.07	-	0.00	-	0.00
Hispanic American	7	0.10	-	0.00	-	0.00
American Indian	2	0.03	-	0.00	-	0.00
Other MBEs	14	0.20	-	0.00	-	0.00
<i>Total Minority</i>	<i>78</i>	<i>1.13</i>	<i>-</i>	<i>0.00</i>	<i>-</i>	<i>0.00</i>
Woman-owned (WBEs)	70	1.01	-	0.00	-	0.00
Unknown MWBE	-	0.00	-	0.00	-	0.00
Total MWBE	148	2.14	-	0.00	-	0.00
SBE	150	2.17	4	16.00	7	29.17
VOBE	11	0.16	-	0.00	-	0.00
Grand Total	6,923	100.00	25	100.00	24	100.00

Source: Dodge Data 2021; M³ Consulting, Inc.
Count includes Owner/Owner Agent firms even when acting as engineer, architect etc.

Having a ranking of #1 suggests those firms won the bid.

10.4 CITY OF KNOXVILLE BUSINESS LICENSE ANALYSIS

We can compare business license data as a measure of firm marketplace availability for both private and public sectors to COK availability in Chapter 5. Table 10.13 presents information about business licenses in the COK by role. Looking at the total, 94.76% of business licenses are held by Non-SMWBE firms. Minority-owned businesses held 1.40% and WBEs held 1.23%. Similar disparities are present in other roles. One African American and one SBE each held licenses in Architecture & Engineering. 28 African Americans, 71 WBEs, 30 Hispanic Americans, 2 Asian American and 3 American Indians hold licenses in Construction. 7 African Americans and 7 WBEs hold licenses in Professional Services. 67 WBEs, 65 African American-, 17 Hispanic American-, 5 American Indian-, and 2 Asian American-owned business(es) are licensed in Non-Professional Services. 78 WBEs, 24 African American-, 10 Asian American-, 27 Hispanic American-, and 2 American Indian-owned business hold licenses in Goods & Supplies.

**Table 10.13. City of Knoxville Business License Data
FY 2017 - FY 2021**

Race/Ethnicity/Gender	Architecture and Engineering		Construction & Construction Related Services		Professional Services		Non-Professional Services	
	#	%	#	#	#	%	#	%
Non-SMWBE	8	80.00	3,350	91.88	645	96.13	6,589	95.59
African American	1	10.00	28	0.77	7	1.04	65	0.94
Asian American	0	0.00	2	0.05	0	0.00	2	0.03
Hispanic American	0	0.00	30	0.82	0	0.00	17	0.25
American Indian	0	0.00	3	0.08	0	0.00	5	0.07
Other MBEs	0	0.00	8	0.22	1	0.15	9	0.13
<i>Total Minority</i>	<i>1</i>	<i>10.00</i>	<i>71</i>	<i>1.94</i>	<i>8</i>	<i>1.19</i>	<i>98</i>	<i>1.42</i>
Woman-owned (WBEs)	0	0.00	71	1.95	7	1.04	67	0.97
Unknown MWBEs	0	0.00	0	0.00	0	0.00	0	0.00
Total MWBE	1	10.00	142	3.89	15	2.23	165	2.39
SBE	1	10.00	153	4.20	10	1.49	131	1.90
SDV/VOBE	0	0.00	1	0.03	1	0.15	8	0.12
Grand Total	10	100.00	3,646	100.00	671	100.00	6,893	100.00

Source: M³ Consulting, Inc.; City of Knoxville Business License Data

**Table 10.13. cont. City of Knoxville Business License Data
FY 2017 - FY 2021**

Race/Ethnicity/Gender	Goods & Supplies		(blank)		Total	
	#	%	#	%	#	%
Non-SMWBE	6,318	95.32	202	95.73	17,112	94.76
African American	24	0.36	0	0.00	125	0.69
Asian American	10	0.15	1	0.47	15	0.08
Hispanic American	27	0.41	1	0.47	75	0.42
American Indian	2	0.03	0	0.00	10	0.06
Other MBEs	9	0.14	0	0.00	27	0.15
<i>Total Minority</i>	<i>72</i>	<i>1.09</i>	<i>2</i>	<i>0.94</i>	<i>252</i>	<i>1.40</i>
Woman-owned (WBEs)	78	1.18	0	0.00	223	1.23
Unknown MWBEs	0	0.00	0	0.00	0	0.00
Total MWBE	150	2.27	2	0.94	475	2.63
SBE	157	2.37	6	2.84	458	2.54
SDV/VOBE	3	0.05	1	0.47	14	0.08
Grand Total	6,628	100.00	211	100.00	18,059	100.00

Source: M³ Consulting, Inc.; City of Knoxville Business License Data

10.5 SUMMARY OF FINDINGS

To understand factors that impact the participation of MWBEs with COK, it is important to understand the role of the marketplace disparities and the potential opportunities that may limit the participation of MWBEs. The demographic configuration may explain in part the differences in the market availability and utilization of MWBEs. COK has a large white population, while African Americans make up the second-largest group in terms of participation in the three geographical perspectives.

Taking a gauge of the civilian labor force, 63.2% of whites, 64.0% of African Americans, 63.8% of Hispanic Americans, and 70.6% of Asian Americans are part of the labor force in COK. While whites, African Americans, American Indians, and Hispanic Americans see a drop in the percentage within the Metro Area and the State, African Americans and Hispanic Americans maintain a nearly similar participation in the State and the Metro Area.

The EEO occupational breakdown provides a picture of Construction and Professional opportunities in the marketplace In COK, Construction and Extraction occupations are predominantly male across all racial and ethnic groups. In terms of numbers, whites and Hispanic Americans are the largest groups. A similar situation is presented in Installation, Maintenance, and Repair occupations, in which male participation is a greater than 96%, except for African American males whose participation is 77.5%. In Production occupations, white and African American male participation rates are the only ones above 50% (68.4% and 55.0% respectively). Asian and Hispanic American females have participation rates of 94.1% and 64.4% respectively. In Transportation and Material Moving occupations, Asian females represent 28.6% of their race and African American females, 22.1%. Most Laborers and Helpers are males for all races, except for all four American Indian females (100%).

In Professional Services occupations, COK shows Management, Business, and Financial occupations, Sales and related occupations, Service Workers (except Protective) are mostly even across genders for all race and ethnic groups. In Computer Engineering and Science occupations, whites, Hispanic Americans, and Asian Americans see a greater male participation, whereas African Americans see almost even participation among men and women within COK. Healthcare participants are similar to the Knoxville Metro Area and the state of Tennessee, with females most abundant in all race and ethnic groups. Female participation is seen at over 77% in technical occupations among all racial and ethnic groups, with the highest participation among Asian American females at 90.3%.

Using Dodge data, MWBE participation in marketplace construction activity is examined. For the State of Tennessee, the data indicates that MWBE has limited penetration across all roles.

Comparing bid activity across private and public owners of projects within the State of Tennessee, 2.1% of MWBEs were ranked #1 (winner) in private sector projects, while 6.9% were ranked #1 in public sector projects. Of all private sector bids in the State of Tennessee, about 95.5% were awarded to Non-SMWBEs, 1.1% to minority-owned firms, and 1% to women-owned firms in FY 2021.

The Marketplace Analysis shows there is inequality in the distribution of the labor force by gender and ethnic/racial groups:

- In all construction occupations, white-male workers lead at the city, Metro Area and state levels.
- Under Employment In Selected Apprenticable EEO Professional Occupations, we can see that males lead in Computer, Engineering, and Science, as well as Protective Service occupations.
- Healthcare Practitioners are predominantly female, as well as Other Professional, and Office and Administrative Support occupations.
- Whites dominate in all occupations, primarily because represent the majority of all groups.
- Looking at private and public owners of project values and contractors, there is a great disparity (maybe absolute disparity) favoring non-minority businesses. This is the case if we look at the number of these projects.

11.1 Introduction

As discussed in Chapter 2: Legal Analysis, as part of narrow tailoring, public entities are required to consider the efficacy of race-neutral measures in addressing any disparity or discrimination. The race-neutral analysis seeks to determine the ability of existing race-neutral efforts in eliminating disparity in the marketplace.

Federal case law has provided some illumination on the question of what constitutes adequate consideration of race-neutral measures.

1. A governmental entity does not have to enact race-neutral means if those means are not feasible or conducive to remedying past discrimination.¹
2. If race-neutral programs and legislation were in place prior to the establishment of a race-conscious program and had been attempted in good faith, and yet MWBE participation in public procurement remains low relative to availability, then an inference is created that race-neutral programs were inadequate to relieve the impact of past discrimination.²

Several city, state, and local organizations were identified that provide technical and financial assistance to small, minority, and woman-owned business enterprises in COK and throughout the State of Tennessee. A discussion is also provided of public entities that operate race and gender-conscious and -neutral programs. The inclusion of the results of race- and gender-conscious initiatives further reflects the effectiveness of all remedial activity in addressing disparity within the area.

These programmatic initiatives have been in place during the operation of Knoxville Diversity Business Enterprise (DBE) programs.

The chapter is divided into four sections, with the following subsections.

11.2 Methodology

11.3 Discussion of Race-Neutral Programs

- 11.3.1 Management and Technical Organizations
- 11.3.2 Financial Assistance Organizations
- 11.3.3 Networking, Outreach, and Advocacy Organizations
- 11.3.4 Trade Organizations and Business Associations
- 11.3.5 Chambers of Commerce
- 11.3.6 Small Business and Goal-Based Programs

11.4 Anecdotal Comments From Agency Executives, Managers, and Directors

11.5 Summary of Findings

11.2 Methodology

M³ Consulting conducted exhaustive research on 27 organizations servicing the Knoxville, Greater Knoxville, and East Tennessee regions. Of this group, M³ Consulting selected a mix of 20 public entities, nonprofits, technical providers, and Community Development Financial Institution (CDFI) lenders to engage in a more in-depth analysis. M³ Consulting conducted a series of in-person and Zoom interviews with 20 Executive Managers, Departmental Directors, or Program Managers that were all recorded and transcribed. Upon completion of the interview phase, data was extracted from each of the transcriptions to build a comprehensive analysis of the impact race-neutral programs were having in the Knoxville area.

Along with the interviews, publicly available data was collected on each organization. Additional data not publicly available was provided by the organizations researched. That data was then aggregated into the following two sections:

- 11.3 Organizations: Discussion of Race Neutral Programs
- 11.4 Anecdotal Comments from Agency Executives, Managers, and Directors

11.3 Discussion of Race-Neutral Programs

11.3.1 Management and Technical Assistance Providers

Management and technical assistance providers herein are depicted as organizations that may provide services such as accounting, marketing, strategic and operational planning, financial analysis, business development, contract management, compliance, and various business-related software.

Knoxville Area Urban League

The Knoxville Area Urban League (KAUL), is an affiliate of the National Urban League. Both are dedicated to empowering urban communities and changing lives. KAUL's mission is to enable African Americans, other minority groups, and the underserved to secure economic self-reliance, and parity, as well as power and civil rights. KAUL provides programs and support for education, entrepreneurship, housing, jobs, and young professionals, such as:

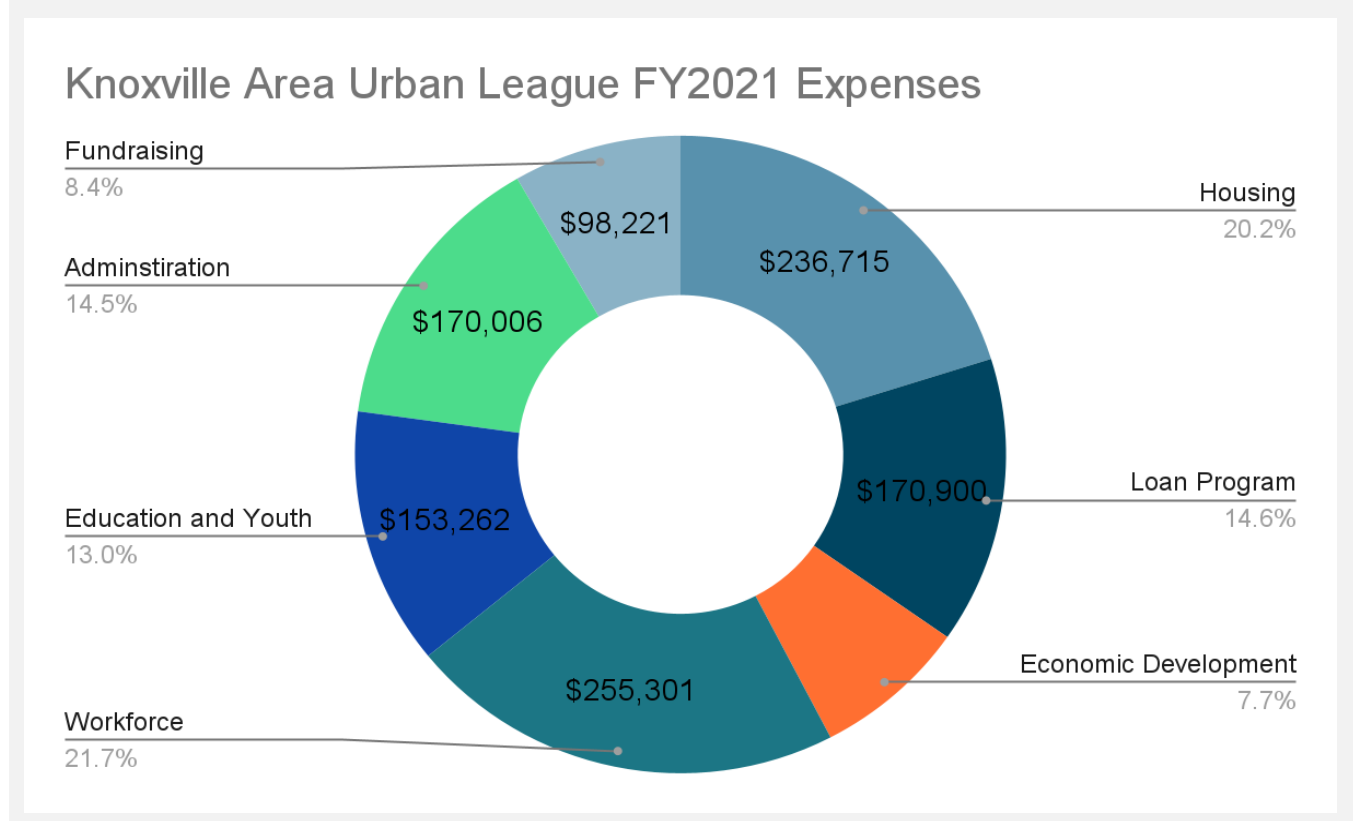
- Empowerment Opportunity Loan Program
 - As a Community Development Financial Institution (CDFI), KAUL provides loans of \$5,000 to \$250,000 to qualified business owners in the Knox County area. Loans are given at higher risk exposure and less restrictive loan requirements than traditional banks.
- COSTARTERS
 - KAUL uses this program to empower new business owners in an incubator environment while providing step-by-step business start-up education and training.
- Housing Program
 - KAUL's housing program—which is funded by the National Urban League and Tennessee Housing

Development Agency (THDA)—offers financial counseling on home ownership and assists homeowners who are facing foreclosure, as well as works to help first-time homebuyers become credit-worthy to finance their first home.

Additionally, KAUL was recently contracted by the Developers of the new COK \$114 million Sports Complex project to actively help recruit SMWBEs to participate in bonding, trade, and insurance training. KAUL also helps SMWBEs seek meaningful contracts and employment on COK projects. The overall goal for SMWBE participation on the new complex was set at 17% by the Sports Authority Board. This is COK's established non-profit entity that helps oversee the developer's budget, design, and construction of the complex in regards its public investment in the project.

The following figure represents a breakdown of how KAUL's resources and funding are categorically expensed according to its most recent Annual Report filing:

Figure 11.1. Knoxville Area Urban League FY2021 Expenses



Source: 2021 Knoxville Area Urban League Annual Report

Centro Hispano de East Tennessee

Centro Hispano de East Tennessee is an organization based in Knoxville that works to fill in the gaps that public and private organizations leave for Latinos in East Tennessee. For small businesses, Centro Hispano focuses on

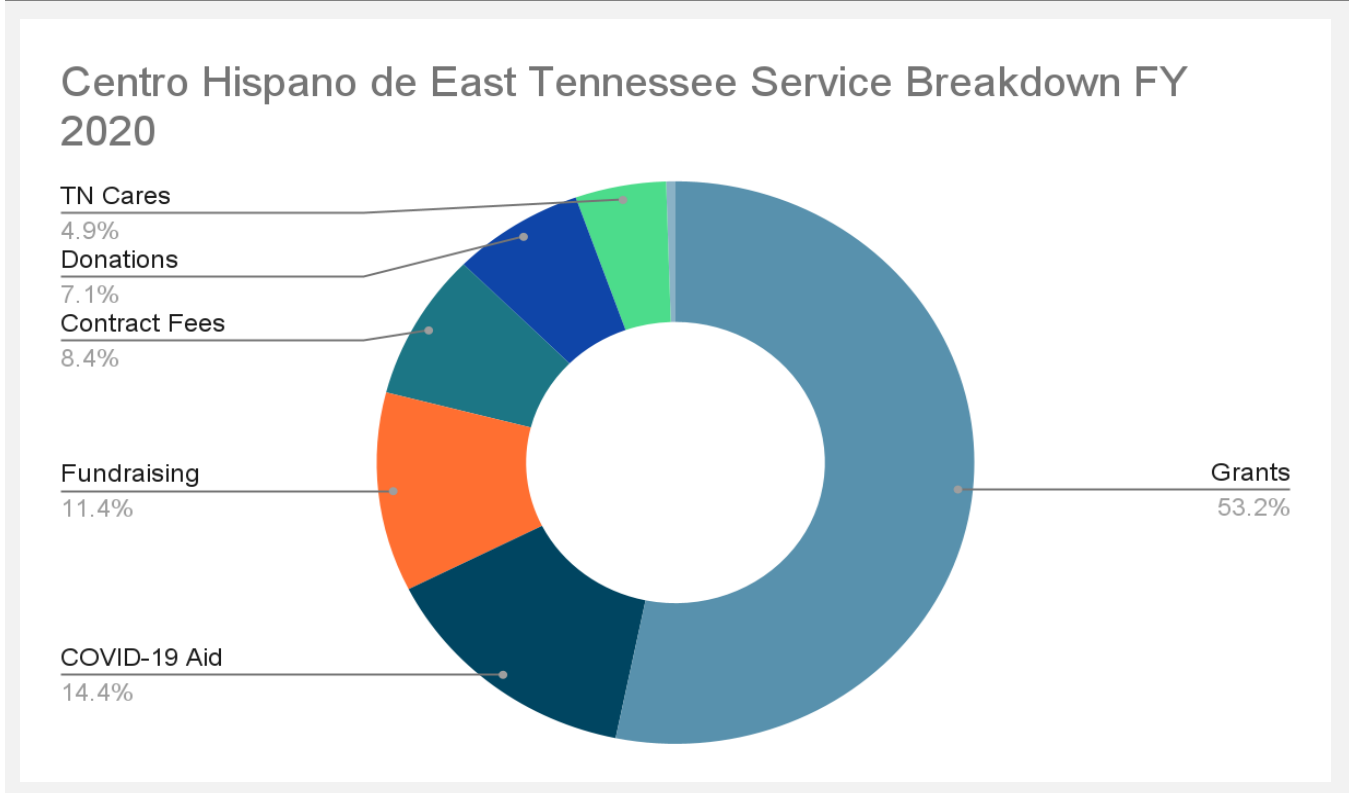
community resources, economic integration, and its program *Grandes Sueños en Pequeñas Empresas* (Big Dreams in Small Businesses).

Grandes Sueños en Pequeñas Empresas is a program with many facets including CO.STARTERS, a ten-week incubator program for new businesses. This, along with specialized workshops and one-on-one consulting, aims to launch small Hispanic American-owned businesses into success. Community resources provided by Centro Hispano extend beyond its robust network of government contacts and financial institutions. Centro Hispano also contributes to providing its participants with bilingual lawyers and civic resources. Additionally, Centro Hispano provides document translation services and explanations on licenses needed for certain business activities.

Centro Hispano receives funding from both state and federal funding sources. The majority of its funding comes from grants which made up 53.2% of its annual revenue in the most recent reporting year. It should also be noted that Centro Hispano serves small businesses as well as the Hispanic community. These diverse services are reflected in its expenditures.

The majority of Centro Hispano's programs are supported by grants. Centro Hispano tracks all usage requirements for its funding and publishes it in the annual report which contains the services and resources it renders to businesses and the Hispanic community. The following table breaks down how Centro Hispano received funding in its most recent Annual Report filing:

Figure 11.2. Centro Hispano de East Tennessee Service Breakdown FY 2020



Source: Centro Hispano Annual Report FY 2020

Service Corps of Retired Executives (SCORE)

SCORE is a national volunteer organization of retired professionals from all industries with affiliate offices all across the United States. It is headquartered in Herndon, Virginia with a team of 50 individuals that support the organization. Score is a resource partner of the U.S. Small Business Administration, whose primary mission is to provide free mentoring and education to current and aspiring small business owners through a network of 10,000 volunteers. Since its founding in 1964, SCORE has helped 11 million entrepreneurs start, grow, or exit their businesses.

SCORE has a local affiliate office serving Greater Knoxville, Tennessee where volunteers donate their time, expertise, and passion to help provide business plans, marketing strategies, and financial management to anyone looking to start or grow their small business.

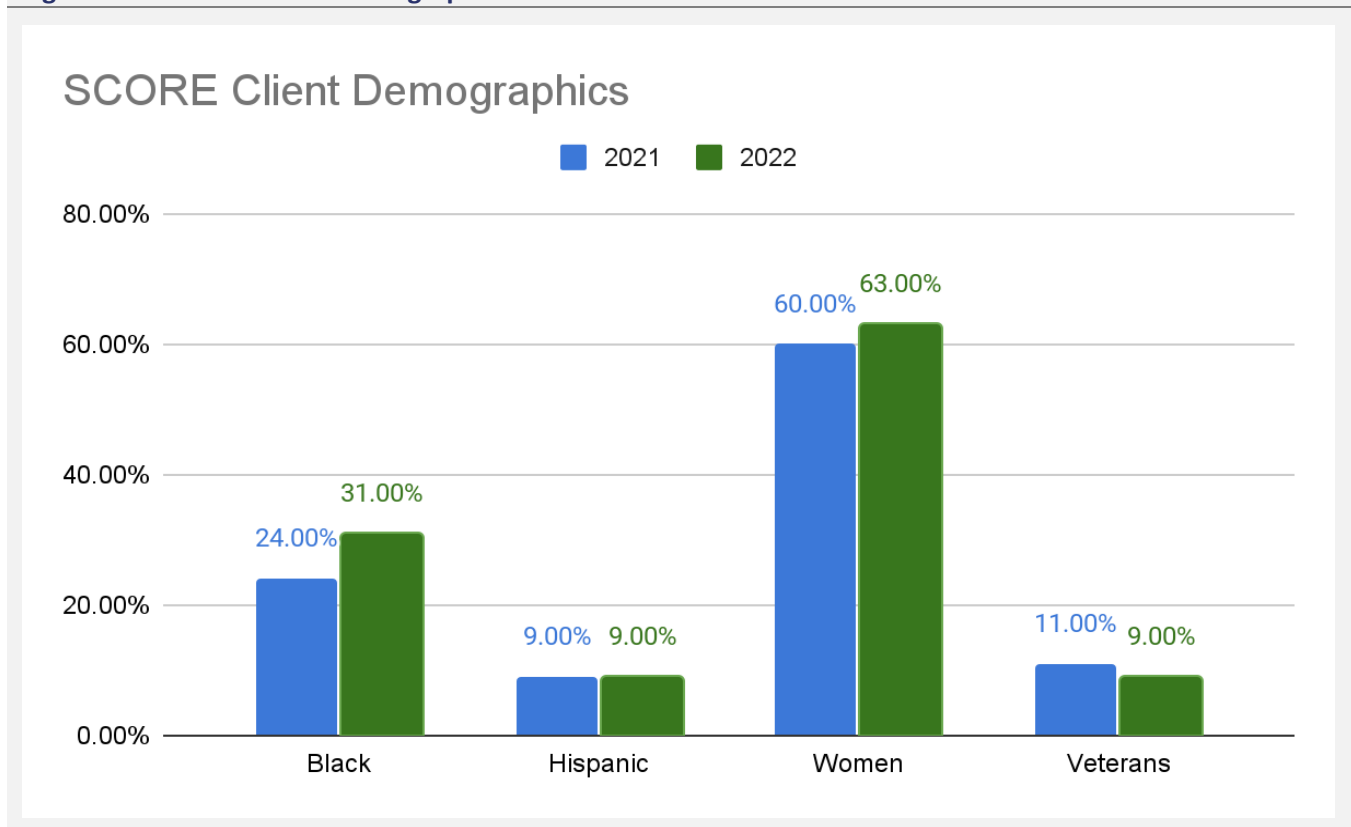
In addition to free consultation, SCORE offers low-cost workshops that feature the following:

- SCORE for All
 - This is an Affirmative Action Program that highlights the employment practices of firms to ensure they are conducted in a fair manner. This includes federal and state compliance guidelines in Equal Employment Opportunities and Affirmative Action Plans.
- Startup Roadmap

- This is a business start-up program that provides the right tools needed to begin their startup journey.
- Small Business Resilience
 - This is a unique program that offers guidance on what to do when things go south with a business such as natural disasters and bankruptcy.

SCORE represents the value and importance of Diversity, Equity, and Inclusion among its board members, clients, and volunteers. This diversity of participants and administrators enables SCORE to effectively execute its mission of helping small business owners. The following figure represents the diverse service breakdown of SCORE's Client Demographics in its most recent Annual Report filing:

Figure 11.3. SCORE Client Demographics



Source: Score 2021 Empowering Entrepreneurs Annual Report

Tennessee Small Business Development Center

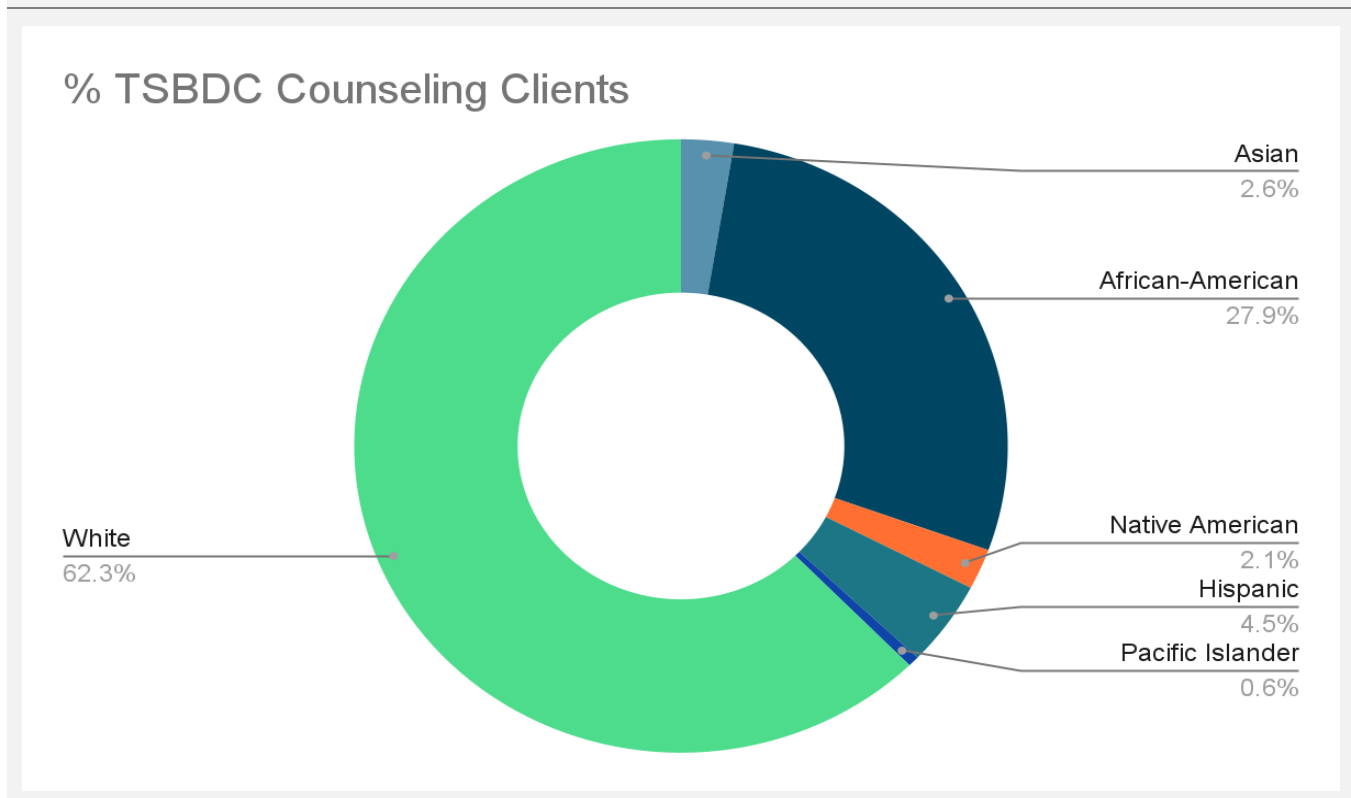
The Tennessee Small Business Development Center (TSBDC) is a culmination of centers around the state of Tennessee and is funded through a cooperative agreement with the U.S. Small Business Administration. There are 16 centers in Tennessee with headquarters in Murfreesboro. The Knoxville area TSBDC location is housed in Pellissippi State Technical Community College's east branch at 1610 E. Magnolia Avenue, Knoxville, TN 37918. This location provides a plethora of small business services, such as:

- Pathways for small businesses moving into the international market
- Natural disaster resources and support
- Guides for various business areas like marketing and financial statements
- Entrepreneur training program for veterans and military personnel

TSBDC also provides consulting to small businesses for free. The consulting focuses on the strategic growth of the business. That said, it offers help in other areas, as well. Training videos, live sessions, and knowledge portals are also available for entrepreneurs on the website. The on-demand videos are created by any one of the centers across Tennessee and are available to watch on TSBDC's sites.

The TSBDC mission is to help businesses of any size start, grow, and sustain. The following figure represents TSBDC's counseling of clients by race as reported in its most recent Annual Report filing:

Figure 11.4. TSBDC Counseling Clients



Source: 2021 TSBDC Annual Report

Knoxville Entrepreneur Center (KEC)

The Knoxville Entrepreneur Center is an organization that was established in 2013 to accelerate business start-ups. KEC's objective is to create entrepreneurial activity that is diverse and sustainable while also boosting the

economic activity in Knoxville. KEC has connections to many other business development organizations in the area such as Knoxville Area Urban League, The 100, and the Knoxville Chamber. KEC is a non-profit that hosts or supports multiple programs as part of its service offerings such as:

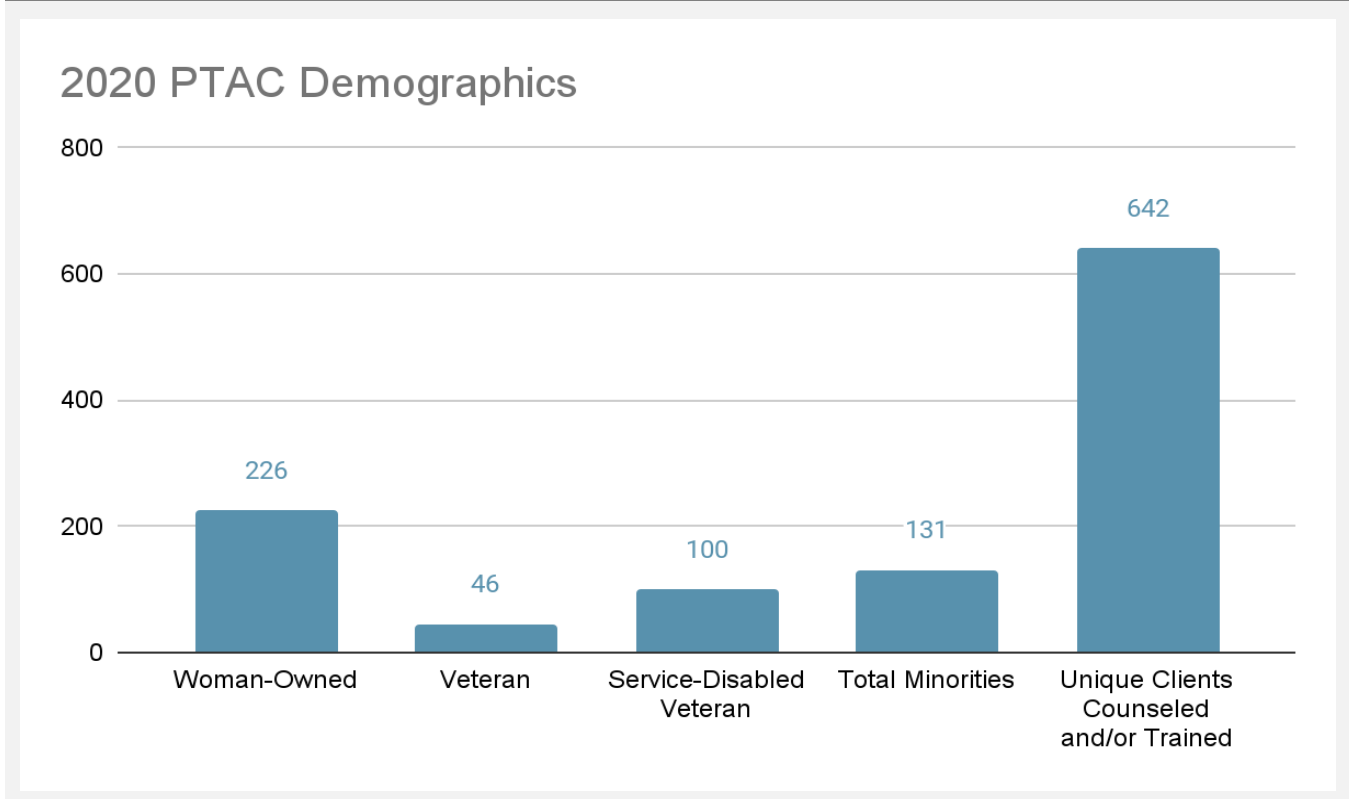
- KEC lift-off
 - A series of seminars that target all areas of new business.
- The Works
 - A program that incubates startups over a 12-week period for software and hardware companies.
- BrandCamp
 - A one-day program for new businesses or product lines in Knoxville that helps define what the business's brand should be.
- *What's the Big Idea?*
 - This yearly startup competition allows founders to pitch their ideas and win cash prizes for their new businesses.
- CO.starters
 - A ten-week program for new business incubation. The goal is to change small business ideas into operating firms in this period of time.

In addition to its own programs, KEC partners with many other local economic development nonprofits. They do not specifically work with SMWBEs; instead, KEC works with all businesses with diversity and underserved businesses as a priority target audience.

Procurement Technical Assistance Center (PTAC)

PTAC is an organization that was developed to assist businesses in successfully procuring contracts with local, state, and federal agencies. PTAC is completely free to use and is hosted by the University of Tennessee's Center for Industrial Services. The center is funded partly by the Department of Defense and administered through a cooperative agreement with the Defense Logistics Agency. In the FY 2020 PTAC assisted businesses in securing 1,898 prime contract awards for businesses being assisted and the total value of those awards was \$450,051,926. The following figure represents a breakdown of small businesses and SMWBEs services rendered in its most recent Annual Report filing:

Figure 11.5. 2020 PTAC Demographics



Source: PTAC 2020 Demographics Scorecard

11.3.2 Financial Assistance Organizations

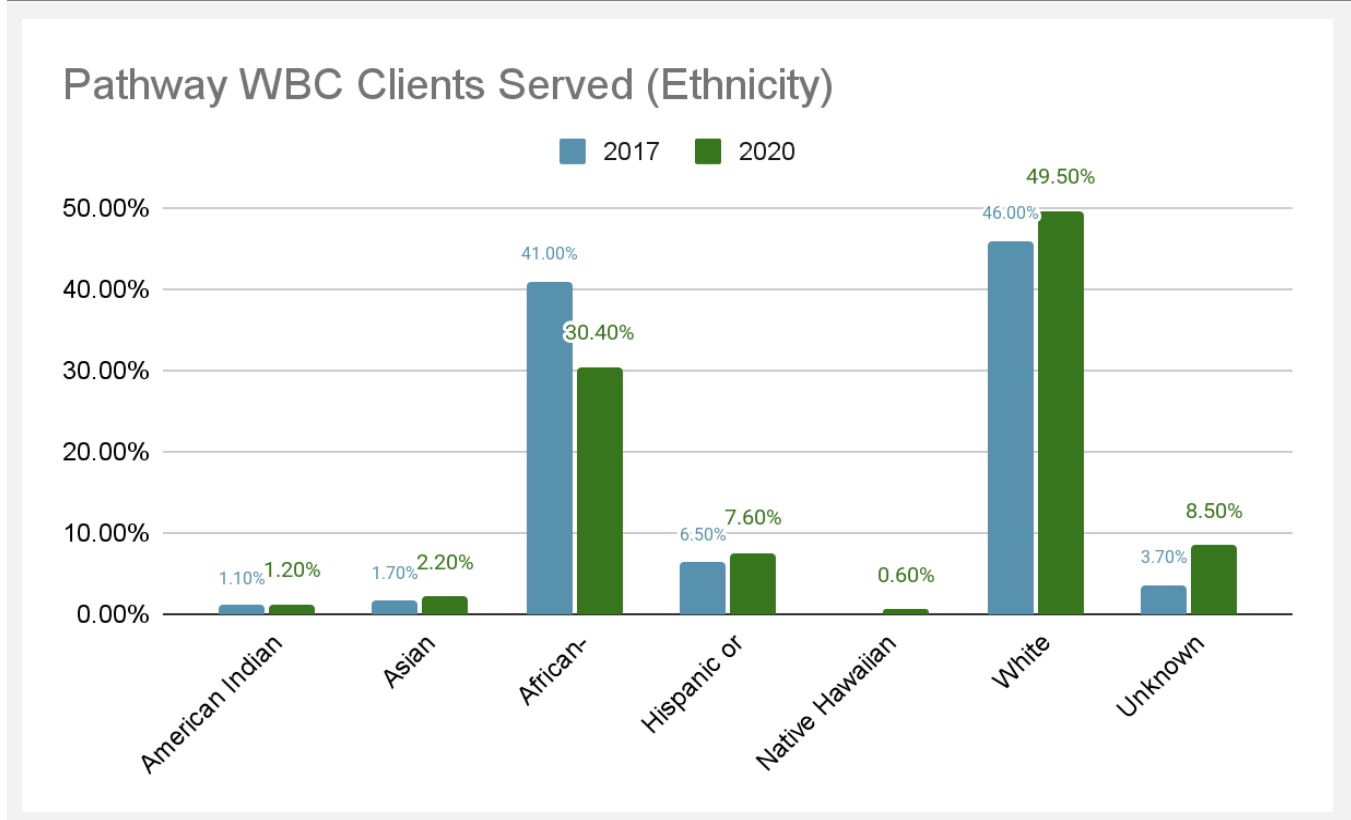
Organizations in this category primarily focus on capital provision or financial consulting for small businesses.

Pathway Lending

Pathway Lending is a Community Development Financial Institution (CDFI) established in 1999 and certified by the US Treasury to bring access to capital for underserved markets and individuals. It focuses on serving areas that traditionally have been left behind in loan receipt in low-to-moderate census tracts. Pathway Lending is headquartered in and primarily serves Tennessee, but it also lends in Alabama and has a veterans' branch in Kentucky, as well. Pathway Lending generates its income through loan interest. Pathway Lending has a specific mission to help grow and assist African American-owned businesses in Tennessee as well as focused programming directed toward women and minority-owned businesses. Special capital-based programming includes (I) Coaching to Capital - Capital access preparation; (II) Technical Assistance - On-Demand Online learning; (III) Classroom education in-person and online; and (IV) Access to Capital - Term Loans, Lines of Credit, and Commercial Loans.

Pathway Lending is an SBA micro-lending partner, meaning it borrows capital from the SBA and relends it under specified guidelines to small businesses. Pathway Lending's impact reports show promising numbers and have high levels of market share in the DBE lending sector. The following figure represents a breakdown of Pathway Lending clients served by ethnicity according to its most recent Annual Report filing:

Figure 11.6. Pathway WBC Clients Served by Ethnicity



Source: Pathway WBC Annual Report 2017 and Pathway WBC Annual Report 2020

Brightbridge Capital

Brightbridge Capital is located in Chattanooga, Tennessee, and helps fund startups and small businesses. While Brightbridge Capital does not have a local office in Knoxville, its loan programs are offered to SMWBEs in the area. As a non-profit, its goal is to help stimulate economic activity for SMWBEs or otherwise. Brightbridge Capital is also a Community Development Financial Institution (CDFI) which supports the fact it invests non-discriminately. Four different loan types are offered with caps being upwards of \$5 million.. Three of those loan options are specifically for businesses in counties/census tracts with low economic activity. In addition to financial support, technical services are also provided. Brightbridge Capital has a wide network of business planners and financial experts that are available to SMWBEs.

11.3.3 Networking, Outreach, and Advocacy Organizations

This section includes agencies that have a high level of networking or outreach as a part of their mission. They may also focus on the procurement of resources for businesses.

Knox County Business Outreach Program

The Knox County Business Outreach Program (KCBOP) was established internally by Knox County's government to promote the inclusion and support of small and disadvantaged businesses to its own departments. The KCBOP staff also meets regularly with business and professional associations within Knox County to learn what types of businesses are in the community in order to seek out and encourage their participation in upcoming procurements.

Additionally, the KCBOP's staff works one-on-one with small businesses to register them as vendors and provide technical assistance on how to navigate Knox County's registration and bidding process. KCBOP specifically states its office's commitment to assisting the development of MBEs, SBEs, WBEs, and DBEs as a part of its mission to promote diversity in Knox County government. The KCBOP does not have any published goal-based initiatives for SMWBE participation in Knox County projects.

University of Tennessee System Small Business Office

UTS-SBO aims to help stimulate business activity within the UT system with SMWBEs. It is a part of the UT system which means it is funded in part by state, federal, and donors' money. UTS-SBO publishes a monthly newsletter that is used to inform small businesses of events and frequently asked questions. They allow other partnering organizations and agencies share their events through the newsletter as well. The UT-SBO has three primary programs and operates workshops, including:

- Teaching bidders how to register with UT system's schools and how to understand the process.
- Explaining policies and procedures along with how payouts work.
- Demonstrations on how bids work and how to make RFP responses.

Currently, there is no separate office to support supplier diversity. Instead, the UTS-SBO is run as a program within the department's procurement office and is administered by one staff person.

100 Knoxville

The 100 Knoxville is a program that was originally a separate entity from other small business development programs in Knoxville. However, in order to continue to grow, it was moved under the Knoxville Chamber and then under KEC. Its goal is to grow African American-owned businesses in Knoxville by \$10,000,000 in five years. 100 Knoxville has one cohort every season following its 5x5x5 model. It takes five founders and matches them with five mentors for five weeks. At the end of the five-week period, it gives each company \$5,000 to invest in

their businesses however they see fit. As a relatively new program and a subsidiary under KEC, it does not yet publish annual reports. However, it announces new cohorts and other news on its website to show that the model is working.

The Women LLC

The Women LLC is a cohort of six women with the goal of providing guidance and programs for African American business owners who do not have access to the funding available. It primarily focuses on creating pathways to funding such as crowdsourcing, community funding, and real estate investment. The Women LLC also partners with many other organizations in this list to provide guidance on areas such as business loans and planning. The organization is also a registered non-profit as a 501(c)3 and is funded through donations and grants.

The Women LLC has expressed plans to provide more lending services over time. Currently, it does provide no-interest microloans for businesses that meet its requirements:¹

- You must live in Knoxville, TN
- You must be 21 years of age or older
- You must use this loan for business purposes
- Your business must not be engaged in any of the following activities:
 - multi-level marketing/direct sales
 - illegal activities (e.g. gambling, scams)
 - pure financial investing (e.g. stocks)
- You must be willing to demonstrate your social capital by having a small number of your friends and family make a loan to you
- You cannot currently be in foreclosure, bankruptcy, or under any liens
- Your business must be 51% or more African American-owned

11.3.4 Trade Organizations and Business Associations

Black Business Contractors Association (BBCA)

The BBKA was founded in 1984 to assist minority businesses with construction opportunities in COK and to help with other barriers to entry that minority businesses face doing business in Knoxville. BBKA also advocates for certain positions, projects, and programs to public entities including COK, Knoxville Utilities Board (KUB), and

¹ The Women LLC., 2022, <https://thewomenofknoxville.org/apply-for-funding/>

Knoxville's Community Development Corporation (KCDC). The BBCA also provided a free-of-charge plan room for its members which would typically cost contractors out-of-pocket for use. The BBCA was instrumental in working with COK to establish its Title VI Office and meeting with COK Mayors for a period that extended over two decades advocating for minority participation in city projects. The BBCA also established a fully comprehensive construction trade program through which it trained over 200 participants in plumbing, electrical, and carpentry work. Additionally, the BBCA provided training services to its members on how to prepare for the test and acquire contractor's licenses.

Knoxville Black Business Directory (KBBD)

The Knoxville Black Business Directory was founded initially to assist Black-owned businesses with the economic devastation and challenges of surviving through the COVID-19 pandemic. The KBBD is a new database of Black businesses in Knoxville and surrounding areas created to give Black businesses a platform to be located, supported, and to promote products. It was created with the goals of increasing job opportunities and contributing to the economic stability of the Knoxville community. Currently, there are approximately 300 Black-owned businesses registered in the directory and it receives 1,700 visits per month from inquirers looking to support Black businesses. COK, Knoxville Entrepreneurship Center, and KAUL are among the sponsors and supporters of the KBBD.

The founder of KBBD is also a business owner in tandem with this database. Because of its age, there is no annual report or impact report available. However the founder has experience with the RFP process in Knox County.

11.3.5 Chambers of Commerce

Knoxville Chamber

The Knoxville Chamber is an economic prosperity organization located in Knoxville, Tennessee. As a regional and economic driver of East Tennessee, the Knoxville Chamber holds a host of roles in the region. The Knoxville Chamber is instrumental in creating economic conditions that foster small businesses, infrastructure, entrepreneurship, and diversity growth. The Chamber has also been integral to talent retention and growth in Knoxville. They have conducted research into what age groups are lacking in the area and enacted a plan to retain those age groups in the Greater Knoxville area. The Knoxville Chamber does not directly administer SMWBE programs. Its mission is to promote and help grow and strengthen minority businesses in the region by allocating resources and funding to economic, financial, and technical agencies whose primary service offerings target SMWBEs.

The Knoxville Chamber is committed to driving regional economic prosperity. Its five-year strategic vision, Path to Prosperity, prioritizes the creation of a vibrant, innovative economic ecosystem for the entire Knoxville region that considers today's realities while contemplating tomorrow's aspirations. The strategic plan includes a six-pronged approach covering economic development, infrastructure, branding, workforce, talent retention, and small

businesses. Of the organizations helping build small businesses, the Knoxville Chamber is among the top three largest in the county. The following table represents a breakdown of the Knoxville Chamber's activities and resources application in the Greater Knoxville area according to its most recent Annual Report filing:

Table 11.1. Knoxville Chamber Annual Report 2021-2022

	Facilitated Incentives	Ribbon Cuttings	Jobs Created	Capital Investment	Campaign Impressions	Business Visits
Totals	\$3,048,515	\$97,600,000+	490+	\$15,000,000	790,000+	330+

Source: Knoxville Chamber Annual Report 2021-2022

11.3.6 Small Business and Goal Based Programs

City of Knoxville Small Business & Diversity Outreach Office

COK has a division in its Purchasing Department that actively seeks out and cultivates relationships with small, women-, minority-, service-disabled-, and veteran-owned businesses. COK's Small Business & Diversity Outreach office was established to help increase the amount of City contracts with SMWBEs. Two primary procurement staff, an Assistant Purchasing Manager and a Small Business Specialist, make up the office and are tasked with working both internally and externally to help create contract opportunities for the above categories of small businesses. COK also publishes quarterly newsletters and has a website dedicated to explaining how to begin doing business with COK. Outreach events such as the annual Diversity Business Expo are also held throughout the year and allow for networking opportunities where SMWBEs learn about upcoming projects and meet COK departmental staff. Currently, COK's Small Business & Diversity Outreach Office is collaborating with the East Tennessee Purchasing Association's Diversity Business Alliance Committee to create an extensive database of SMWBEs to help local governments and agencies identify and recruit more diverse small business vendors and increase spending therein. COK's most recently published Goals and Actuals Summary of Awards for FY-2022 were as follows:

Table 11.2. Goals and Actuals Summary of Awards for FY-22

FY22 Goals		FY22 Actuals	
Program	%	Program	%
MBE	4.3	MBE	3.77
WBE	10.3	WBE	10.54
SBE	37.1	SBE	19.32

Source: COK Goals and Actuals Summary of Awards

Governor's Office of Diversity Business Enterprise (GO-DBE)

The Governor's Office of Diversity Business Enterprise has the task of certifying SMWBEs across the state of Tennessee. It is an official Tennessee government agency and is funded purely by state and federal funds. It follows the statewide guidelines on what an SMWBE is based on Tennessee Code Annotated, Sections 12-3-401, 514 and

1102 through 1107 and 1112(a) through (e). In addition to the certification services, GO-DBE also focuses on assisting DBEs with becoming successful and viable businesses. GO-DBE also acts as an office that can assist with setting and achieving annual agency goals for SMWBEs. The following table represents the breakdown of the State of Tennessee contract awards by ethnicity based upon its most recent Annual Report Filing:

Table 11.3. State of Tennessee Governor’s Office of Diversity Business Enterprise FY 2022

Category & Ethnicity	MBE (\$)	WBE (\$)	SDVBE (\$)	SBE (\$)	DSBE (\$)	Ethnicity Totals (\$)
African American	129,598,786.51	101,431.21	23,282,116.07	374,498.67	132,896.94	153,489,729.40
Asian American	329,084,271.23	695,747.06	0.00	0.00	0.00	329,780,038.09
Hispanic American	16,501,057.16	5,337,002.37	0.00	0.00	0.00	21,838,059.53
Native American	837,238.49	288,626.49	0.00	0.00	0.00	1,125,864.98
Non-Minority Female	0.00	210,759,032.44	0.00	19,431,195.51	0.00	230,190,227.95
Non-Minority Male	0.00	0.00	253,889.47	247,138,942.97	0.00	247,392,832.44
Totals:	543,021,353.39	217,181,839.57	23,536,005.54	266,944,656.95	132,896.94	1,050,816,752.39

Source: Governor's Office of Diversity Business Enterprise, 2022

Small Business Administration

The Small Business Administration (SBA) is the federal overarching entity over small business development resources in the United States. It provides guides for new businesses and resources on finding funding and federal contracting. In the event a small business wants to do federal contracts they would start by going through the SBA's list of prerequisites. As a federal entity, it has no focus on only one group of businesses, but it does provide resources for women-owned and veteran-owned businesses. The SBA does have to adhere to federal guidelines such as the Civil Rights Act of 1964 provisions that the TDOT Civil Rights Office enforces. Rather than providing explicit goals for the entirety of the SBA's network, the SBA publishes goal guidelines every year. It serves as an outline on what each organization should base their goals on combining a variety of factors in their locality.²

² Source: FY 2022 Goal Guidelines SBA, Office of Policy, Planning & Liaison, https://www.sba.gov/sites/default/files/2022-06/FY22%20Small%20Business%20Goaling%20Guidelines_Final_220623%28R%29.pdf

Metropolitan Knoxville Airport Authority

The Metropolitan Knoxville Airport Authority (MKAA) established a Disadvantaged Business Enterprise Program (DBEP in accordance with U.S. Department of Transportation (DOT), 49 CFR Part 26, Exhibit A, to help ensure all contracts are awarded without discrimination. The MKAA receives federal financial assistance from the Department of Transportation (DOT) to ensure that strict non-discrimination guidelines are followed and that DBEs have equal opportunity to receive and participate in DOT-assisted contracts. The MKAA also receives local, state, and private funds. The funds are managed and tracked by the accounting department of the organization and allocations are internal files.

MKAA has a DBE Liaison/Program Manager whose office works to complete the following tasks and guidelines:

1. Gathers and reports statistical data and other information as required by DOT.
2. Reviews third-party contracts and lease agreements for compliance with this program.
3. Works with all departments to set overall annual goals.
4. Ensures that bid notices and requests for proposals are available to DBEs in a timely manner.
5. Identifies contracts and procurements so that DBE goals are included in solicitations and monitors results.
6. Analyzes the Metropolitan Knoxville Airport Authority's progress toward goal attainment and identifies ways to improve progress.
7. Participates in pre-bid meetings.
8. Advises the CEO/governing body on DBE matters and achievement.
9. Chairs the DBE Advisory Committee.
10. Participates with the legal counsel and project director to determine contractor compliance with good faith efforts.
11. Provides DBEs with information and assistance for the preparation of bids, obtaining bonding and insurance.
12. Plans and participates in DBE training seminars.
13. Certified DBEs according to the criteria set by DOT and participates in the Uniform Certification Process for the state.
14. Provides outreach to DBEs and community organizations to advise them of opportunities.
15. In cooperation with the State of Tennessee's Unified Certification Program, assists with the oversight of the directory for certified DBEs.

MKAA established DBE Goals as represented in its most recent FY 2021-2023 Notice of Publication are 6.8% for

Race-Conscious participation and 4.0% for Race-Neutral participation.³

TDOT Civil Rights Office

The Tennessee Department of Transportation (TDOT) Civil Rights Office oversees the compliance of federal mandates on DBEs and small businesses. TDOT uses three primary programs administered out of its Civil Rights Office to help ensure that DBEs are educated, trained, and utilized on TDOT contracts. In addition to its three programs for small businesses and DBEs, the office has resources outlining the goals of TDOT in awarding contracts to DBEs. It also provides a catalog of the regulations and various resources about plans for the state over the next three years. All of its funding comes from the federal and state governments. As such, its spending reflects the goals and guidelines in place for all federal and state organizations.

TDOT's Civil Rights Office does not directly facilitate interactions, but it does oversee compliance. TDOT's three programs include:⁴

- **Title VI Program**
 - Title VI is a program that ensures entities adhere to the Civil Rights Act of 1964. This includes a sweeping prohibition on discriminatory activities from facilities to financial allocations.
- **Small Business Development Program**
 - The Federal Highway Administration started a program that aims to increase the amount of DBEs to work in the highway/bridge industry. TDOT administers the program and reaches over both state and federal projects.
- **Affirmative Action Program**
 - The Affirmative Action Program facilitates the employment practices of firms that are conducted in a fair manner. This includes federal and state compliance guidelines in Equal Employment Opportunities and Affirmative Action Plans.

SCORE

SCORE is a national 501(c)(3) organization that consists of the nation's largest network of volunteer, expert business mentors. SCORE has been providing assistance to emerging businesses and entrepreneurs since 1964 and has helped more than 11 million entrepreneurs start, grow or successfully exit a business⁵. SCORE's volunteers provide free, expert mentoring, resources, and education in all 50 U.S. states and territories. Their headquarters in Herndon, VA consists of a cohort of 50 men and women business owners who collaborate and coordinate with 364 SCORE chapters throughout the U.S. with 12,400 volunteers nationwide. The volunteers include both working and retired executives and business owners who donate time and expertise as business counselors and help consult new businesses for free. In addition to the consultation, it offers free and low-cost workshops that feature the following:

³<https://flyknoxville.com/DBE-GOAL-2020-Notice-of-Publication>

⁴ TDOT, "Civil Rights Division," <https://www.tn.gov/todot/civil-rights.html>

⁵ <https://www.score.org/>

- **SCORE for All**
 - This Affirmative Action Program that is based in the notion that anyone can start a small business with the right support. The SCORE for All Program features resources curated for different Entrepreneur types while promoting the employment practices of firms that are conducted in a fair manner. This includes federal and state compliance guidelines in Equal Employment Opportunities and Affirmative Action Plans.
- **Startup Roadmap**
 - The Startup Roadmap outlines each step in starting a business with detailed information and resources and provides the right tools needed for a new firm to begin their startup journey—including free online webinars.
- **Small Business Resilience Hub**
 - A unique program that discusses lessons learned, strategies for growth, and stories of business resiliency that drive economic resurgence. The Small Business Resilience Hub is designed for small businesses to not just survive a disaster, like COVID-19, but thrive by offering guidance on what to do when businesses face challenges such as natural disasters, pandemics, and bankruptcy.

In addition to its workshops, SCORE offers a library of resources to help with any questions an entrepreneur may have on their business journey.

11.4 Anecdotal Comments From Agency Executives, Managers, and Directors

As an integral part of the race-neutral analysis, interviews were conducted with the leadership of 20 organizations that oversee and manage race-neutral programs and initiatives. The information gathered from the interviews was used to identify common themes, gain an understanding of the current business culture for SMWBEs, and to note anecdotal experiences of the agency's interactions with small businesses in COK. To maintain the anonymity of the agencies and representatives, comments are simply noted as Interview 1-20 in no chronological order.

- **Theme 1-** Lack of Government Race-Based Remedies Preventing Growth
- **Theme 2-** Lack of Capital is a Barrier
- **Theme 3-** Lack of Meaningful Goals and Requirement Key Cause for Lower Number of Contract Awards in Knoxville
- **Theme 4-** Lack of Connection and Relationships with Purchasers and Decision-Makers
- **Theme 5-** Lack of Shared Stakeholder-to-Stakeholder Best Practices and Initiatives
- **Theme 6-** Lack of Personnel and Capacity

Theme 1: Lack of Government Race-Based Remedies Preventing Growth

Addressing a period in Knoxville's history when Black business contractors suffered significantly because some local public procurement departments canceled contract incentives where points had been given to minority firms and prime contractors for using minority subcontractors:

Interviewee #1, Black Male, Board Chairman of Black Contractors Association

Interview 1 states, "We have discovered that the non-racial remedies do not work in Knoxville, Tennessee, and it has not only hampered the growth of minority businesses as for contractual types of opportunities. But it has also hampered the growth of minority businesses to be able to compete on a normal basis in the City."

Interviewee #14, Black Female Director of Small Business Program

Interviewee #14, when asked if SMWBEs' challenges and issues with winning local contracts can be eliminated by their race-neutral program efforts alone without set-aside government requirements put in place, stated "no... there's not a level playing field for minority-owned firms (competing) against non-minority owned firms. There's just not a level playing field."

Interviewee #13, Black Male Director of Technical Assistance Center

Interviewee #13 stated, "You do need to have some set-asides, you know, but again is that possible in City

government to make the distinctions around that? But if you are serious about it, that's the step you need to take, okay?"

Theme 2: Lack of Capital is a Barrier

85% (17 of 20) of the interviewed agency leaders identified that the lack of capital and capital resources were paramount obstacles facing start-up and seasoned SMWBEs in the Knoxville area. There were a litany of reasons mentioned, such as training, bonding and insurance, credit issues, lack of equity, current historical poverty levels for African Americans in Knoxville, and the recent COVID-19 ramifications as to why lending money to SMWBEs presented a unique challenge. These challenges exist while many of the financial institutions' high-priority goals and objectives, particularly for Community Development Financial Institutions (CDFIs), are to assume higher risks and seek out opportunities to lend capital to SMWBEs and in underserved census tracts in the Knoxville area.

Interviewee #18, White Male, Founder/Executive of an African-American Owned Start-up Initiative in Knoxville

Interviewee #18, speaking on why African American businesses have to turn to alternative programs vs. traditional ones for start-up capital stated, "There is no argument that your (traditional banks and CDFIs are) not available.. right? The door is open. So in principle, someone, anyone could walk through... The reality, however, is that a good portion of our community is not coming."

Interviewee #19, Black Female, Executive Director of Grass Root Start-Up Capital Investment I Agency

Interviewee #19 alluding to some hidden barriers to accessing capital in traditional banks, states, "For some reason, people were not visiting those particular organizations." When asked why, they stated, "Part of it is relatability. You also have to have those conversations. You have to be in the community. You can't just have a door waiting for people to walk in. Oftentimes, you have to go to them in different creative ways. Some of the locations may not be a place where Black people and minority owners feel comfortable going. That's a barrier, right?"

Interviewee #12, White Female, Executive of Certified Development Financial Institution

Interview #12, speaking about what they have witnessed to help SMWBEs work successfully through barriers with traditional lenders, states, "It's about actually inviting the business and demonstrating the ability to help them before trying to put a loan there. It's about a foundation partner, private capital through a bank, a public partner, and then a CDFI who can do really the best job."

Theme 3: Lack of Meaningful Goals and Requirement Key Cause for Lower Number of Contract Awards in Knoxville

Interviewee #4, Black Female, Manager of DBE Outreach Program

When addressing the successes of contract awards to SMWBEs in Memphis, Chattanooga, and Nashville compared to Knoxville Interviewee #4 stated, "They've all done disparity studies. And because of the fact that they did the disparity study, now they have teeth and they can put project goals. That is the big difference to what I am seeing to what the City's able to do currently under the rules and regulations that we're abiding by and what the rest of the State is doing."

Interviewee #11 Black Male, Program Manager of DBE Outreach Office

Interviewee # 11 states that... "The only way we have to enforce inclusion is our regulations. The federal regulations we operate under give us teeth to our enforcement... We have actually done that." Speaking about going to a second-lowest prime bidder on contract award because of the SMWBEs' efforts, they stated, "I'm sure it sent shockwaves through primes, and they quickly learned that we meant business about our goals."

Interviewee #5 Black Female, Program Director of Diversity Outreach Office

Interview #5 expressed that, "Hopefully, they'll see that there is a disparity amongst non-minority and minority businesses so that they can work to equal the playing field. Because at the end of the day, that is really the essence of what we're here to do. But if it's not an equal playing field, that's done for nothing."

Theme 4: Lack of Connection and Relationships with Purchasers and Decision-Makers

SMWBEs are often disconnected from the organization's bid process, face challenges accessing and responding to procurement documents, and have challenges building strong relationships and credibility for their company with purchasers and decision-makers despite the internal and external best efforts of diversity officers.

Interviewee #13 Black Male, Executive of Technical Assistance Center

Interviewee #1 stated, "There seems to be not a lot of internal connection, and again, this is not just Knoxville between the diversity person who is trying to make things happen and increase the goals, with the, you know, procurement officers who make the final decisions... There normally is no debriefing set up so that they (SMWBEs) can gain information and better understand."

Interviewee #3 Hispanic Female, Translation Center Agency Owner

Interviewee #3, speaking to the access of information from COK when it comes to legal matters such as licensing,

bonding, and bidding with COK for Hispanic American companies, states, "There aren't really any resources that are available in Spanish to fully explain what those processes are. So while there are a lot of outreach things that are available in English and programs that are working to have more diversity in bidding there, it's not really culturally relevant when it comes to language, which is really the biggest barrier when it comes to fully being able to understand the legalities that come with working with the City."

Interviewee #4 Black Male, Owner of African American Marketing/Networking Directory

Interviewee #4, speaking on why more African American businesses are not having success at COK, stated, "Because I did not think they know how to. They're not intentional about doing it... Intentionality is everything... If there is intentionality from the leadership to do business with Black-owned businesses, it would be done and pushed through, and people held accountable... Because if you allow people to just do what they've always done, then they are going to hire the companies that they've always hired."

Theme 5: Lack of Shared Stakeholder-to-Stakeholder Best Practices and Initiatives

The large majority of the interviewed leaders (90%) indicated that, due to restricted budgets, technology, or programmatic objectives, their service offerings for SMWBEs are focused solely on the client of the agency or public entity. The services are not offered on behalf of or with a focus on the agency/entity's objectives. Leadership stated that, either by preference or restriction, they do not implement specific initiatives on behalf of COK solely based on helping Knoxville increase its SMWBE contract awards. The tracking and measurement of SMWBEs' successes or failures and the implementation/sharing of best practices are not cohesively identified and shared from one agency to the next.

Interviewee #13 Black Male, Technical Program Director for DBE Outreach Center

Interviewee # 13, when asked to comment about helping COK implement SMWBE best practices and programmatic successes occurring in other areas, stated, "Well, we don't see the City as a client. We see the small business as a client. And so, we're trying to help them."

Interviewee #6 White Female, Executive of Public Partnering Agency of the City of Knoxville

Interviewee #6, when asked if their economic development organization provided services or implemented specific initiatives for SMWBEs on behalf of COK, stated, "No, we do not... We have so many people doing that in that space." In the context of the interview, it became apparent that interviewee #6's inference to "others" that provide specific initiatives for SMWBEs on behalf of COK was a reference to the Knoxville Chamber. The chamber

provides financial support to other organizations that provide SMWBE services and should be tracking the data, but there is no indication that any tracking is occurring. The Chamber has a research and statistical expert on staff who is available to be consulted for statistics, economic research, and the like, but there is no data available to quantify the degree to which SMWBE firms are availing themselves of the resources or if it is being specifically marketed to them.

Theme 6: Lack of Personnel and Capacity

The leadership of public agencies also identified capacity issues due to a lack of departmental personnel and antiquated technology, software, and tracking systems as obstacles to effectively track, measure, and report on SMWBEs. and to implement widespread recruitment and outreach initiatives.

Interviewee #11 Black Male, Program Manager of Public DBE Outreach Office

Interviewee #11 states that, "I may be the only one in town that is a solo act... That's an important factor for capacity of whatever agency. If they're serious about achieving goals and providing inclusion, you have to have ample staff..."

11.5 Summary of Findings

There is a vast race-neutral programmatic ecosystem for SMWBEs in the Knoxville area. The collaborative corporate culture of Agency Executives, Managers, and Directors servicing SMWBEs is positive. The technical, managerial, and capital organizations are providing everything from business planning, loans, networking, mentorship, and outreach covering nearly every aspect of running a business and winning contracts awards. Despite the valiant efforts of these race-neutral programs to launch new SMWBEs and increase the capacity and growth of existing ones to thrive in the Knoxville area, SMWBEs still face many challenges in gaining access and being utilized by COK and other public and private entities.

After analyzing the Anecdotal Comments of Agency Executives, Managers, and Directors servicing SMWBEs in Knoxville, the following Summary of Findings highlights areas that are working well and by contrast highlights shortfalls and opportunities for improvements:

A. Best Practices and Tracking of SMWBEs Are Generally Not Being Shared

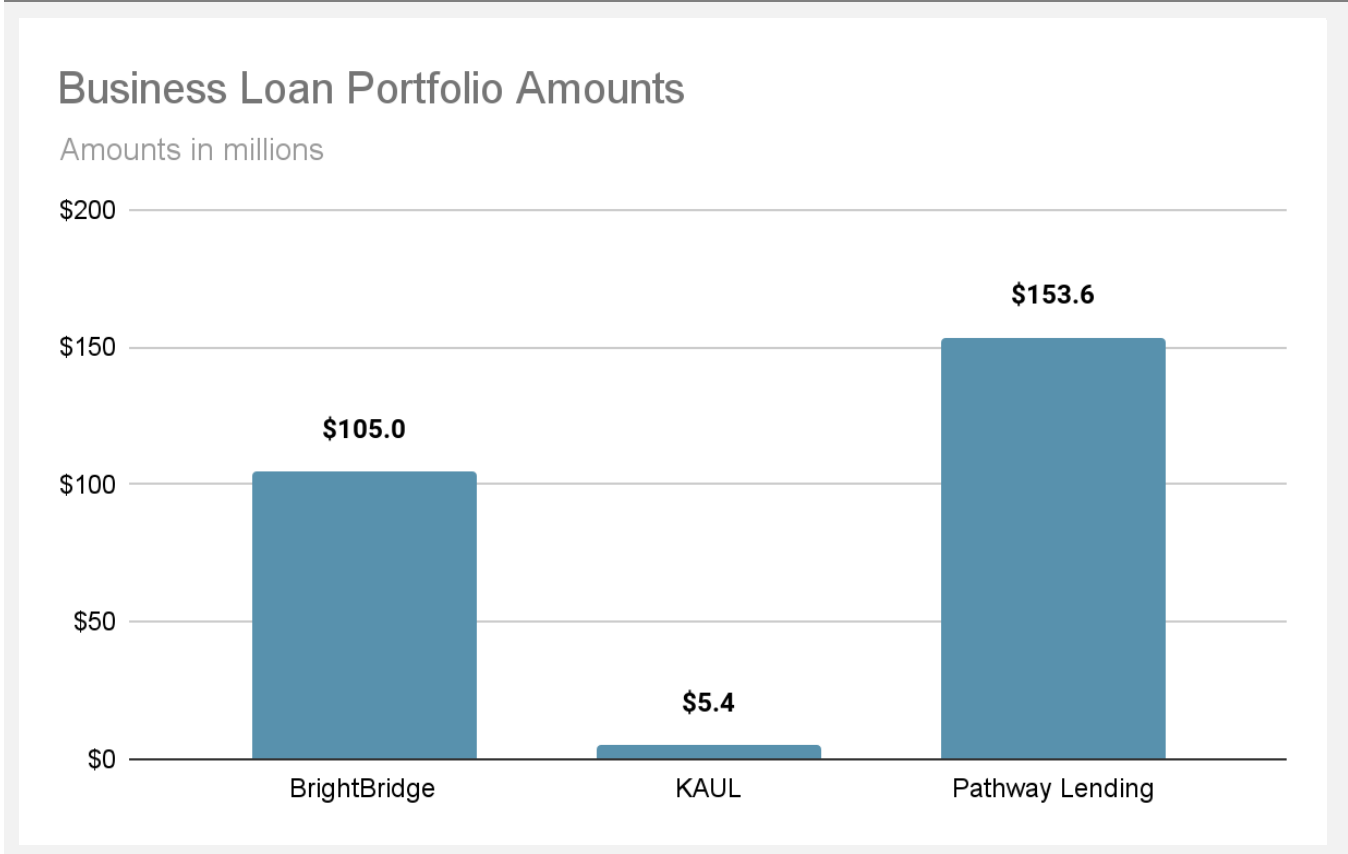
- I. **Areas that are working well:** There is a positive collaborative ecosystem between COK and its local, state, and federal partners related to providing race-neutral services to SMWBEs. The leadership of these programs comes together through a Diversity Business Alliance. The Diversity Business Alliance is a consortium of agencies including COK, Knox County, KUB, University of Tennessee (UT) System Business Outreach, Metropolitan Knoxville Airport Authority, and others who come together periodically to collaborate on Diversity Business Enterprise (DBE) outreach events, such as the COK's annual Business Breakfast. These events promote introductions and networking while information regarding upcoming projects is shared with the SMWBE firms in attendance. These collaborations make it easier for SMWBEs to meet diversity officials and project managers in order to obtain critical information that their businesses use to determine whether or not to pursue an opportunity.
- II. **Shortfalls/Opportunities for improvement:** While the collaboration between COK and its affiliate partners providing race-neutral services is positive, in many cases their activities have not equated to the desired impact. The sharing of best practices, proven programs, and tracking of SMWBEs and their failure or success stories amongst the partners was lacking. For example, Interviewee #13 has experienced success with his agency's SMWBE-focused Mentor-Protégé Program. When asked why the success of this program was not shared with COK, he responded, "Well, we don't see the City as a client.. He went on to add that COK "did not ask" for help. In an additional case in point, interviewee #10 whose organization administers business programs for COK, was asked if the failure and success stories for SMWBEs were being tracked for COK. The response was "...that is just not something that we do". This lack of sharing is indicative that there is no follow-up to determine what areas SMWMBE vendors who are receiving Managerial and Technical Assistance (MTA) services need to improve in order to have better outcomes. Additionally, if SMWBEs receiving services from affiliate Knoxville partners are having success winning contracts in other cities, there is no way of determining why they are not bidding or having the same success with COK given the fact that they are not being recruited or tracked.

B. Lack of Accessing Capital is a Barrier for SMWBEs, but Not the Availability of Capital

- I. **Areas that are working well:** COK has well-respected CDFIs prospecting and marketing loans and other capital resources to SMWBEs. These agencies receive targeted funding from traditional banking

institutions to make higher risks loans to small businesses and SMWBEs that meet the Community Reinvestment Act (CRA) guidelines. The following Figure represents the portfolio accounts of three CDFI agencies servicing Knoxville in their most recent Annual Report filings.

Figure 11.7. Business Loan Portfolio Amount in Millions



Source: BrightBridge, KAUL, and Pathway Lending Annual Reports

- II. **Shortfalls/Opportunities for Improvement:** While the agency leaders nearly unanimously identified the lack of capital as a barrier for start-up and seasoned SMWBEs growth, the numbers above indicate that there is enough available capital for SMWBEs in East Tennessee. It is problematic to surmise from the above portfolios that the lack of capital available presents more challenges for SMWBEs than the barriers they face such as systemic racism, stringent underwriting criteria, credit and collateral requirements, and being deemed high risk when trying to access capital traditionally.
- C. **Lack of Investment in, and Resources Made Available for DBE Offices**
- I. **Areas that were working well:** There were no resource areas deemed acceptable.
 - II. **Shortfalls/Opportunities for Improvement:** Many of the managers, directors, and executives of the public agencies are performing technical services for SMWBEs with antiquated technologies and software systems. Additionally, unlike other COK and participating race-neutral organizations' priority service departments, the staff personnel and resources allocated to diversity and DBE services were inadequate. Most of the Small Business and Diversity Outreach Offices in Knoxville had one or fewer staff members dedicated to SMWBEs with the responsibility of covering the entire city, region, or state. Here is the staff

makeup of several SMWBE offices in Knoxville: (*) Denotes if a DBE director or manager staff member also serves in a dual role position with other responsibilities in addition to diversity outreach.

- Knox County Small Business Outreach (1)
- Metropolitan Knoxville Airport Authority (1*)
- University of Tennessee System Small Business Outreach (1*)
- Knoxville Chamber: No dedicated SMWBE Diversity Outreach Office (0)
- Tennessee Small Business Development Office (1)
- COK (2*)

During the anecdotal interviews of various COK vendor community members and MTA service-provider executives, they alluded to challenges such as not being contacted by COK even though their offices were near or located downtown. Additionally, they reported being chosen to work for large private firms, Prime Contractors, and other cities outside of Knoxville, but never gaining any traction with COK. These are all issues that may be traced back to inadequate diversity departmental resources that have led to a disconnection with SMWBEs in the Knoxville community. Additionally, participating MTA providing Managers and Directors admitted that often they do not have the staff and resources bandwidth to adequately recruit, train, track, measure, and report on SMWBE progression simultaneously which causes one area or the other to suffer given the timing and priorities of the moment. If COK and its affiliate partners are going to increase their SMWBE bidders and subsequent contract awards, increased investments in office, technological, and personnel resources must be made.

D. Goal-Based Programs Are Not Taken Seriously Without Race-Based Remedies:

- I. The interviewed Managerial and Technical Assistance Service Provider Program executives, managers, and directors agreed that the imbalance in percentages of public contracts awarded to majority-owned firms vs. SMWBEs could never be abated with race-neutral remedies alone. They also agreed that a level playing field could never be achieved on contracting opportunities in which a large majority of firms compete directly against SWMBEs without ethnicity and gender-conscious remedies and policy changes. Goal-based Program Directors working under guidelines such as COK, by their own admittance, emphasized that there were "no teeth" behind their project-based SMWBE contract goals. Mainly, because the current application of policy does not penalize or hold Prime Contract awardees (or their own internal departments) accountable if the goals were not achieved. By contrast, Federal Program Directors such as Interviewee #11, stated that the only way their authority achieves inclusion is via the ability to enforce the federally regulated guidelines that allow them to select another prime contractor awardee—who may not be the lowest bidder—if the goals for diversity participation are not being met during solicitation. Additionally, there are multiple successful SMWBEs headquartered in COK choosing not to pursue contracts in their headquartered city. These small business owners stated that they are pursuing contracts elsewhere (i.e. Memphis, Nashville, Chattanooga) because of Knoxville's historically low percentage of awards to DBE primes and the success that they are having elsewhere.

12.1 INTRODUCTION

Miller³ Consulting, Inc. (M³ Consulting) was commissioned by the City of Knoxville (COK) to conduct a Comprehensive Disparity Study to determine the level of availability of Diversity Business Enterprises (DBEs) which comprises of Small, Minority and Woman-Owned Business Enterprises (SMWBEs) in the COK’s relevant market and the actual utilization of those firms in COK’s procurement opportunities for Architecture & Engineering, Construction and Construction-Related Services, Non-Professional Services, Professional Services, and Goods & Supplies. In order to execute the Study, M³ Consulting conducted the following analyses:

Industry Analysis	Statistical Analysis	Market Analysis	Conclusions	Recommendations
<ul style="list-style-type: none"> • Legal Analysis • Procurement and MWBE Program Operational Analysis 	<ul style="list-style-type: none"> • Relevant Market • Availability Analysis • Utilization Analysis • Disparity Ratios • Capacity Analysis 	<ul style="list-style-type: none"> • Anecdotal and Survey Analysis • Race-Gender Neutral Analysis • Marketplace Analysis 	<ul style="list-style-type: none"> • Finding discrimination passive or active, if any • Identification of barriers to MWBE participation 	<ul style="list-style-type: none"> • Race Conscious and Race Neutral Recommendations • Post Study Support and Implementation

These analyses provide an overall picture of the environment faced by DBEs attempting to do business with, and in the COK, which leads to the recommendations in this chapter.

12.2 CONCLUSIONS REGARDING RACE- AND GENDER-CONSCIOUS GOALS

Based on the statistical findings in the disparity chapter, Table 12.1 presents the utilization of qualified firms as reflected by the percentage of contracts for purchase orders awarded and payments made. When compared to the availability of Ready, Willing and Able (RWASM) firms, the Chapter 6 utilization is lower than expected. M³ Consulting draws an inference of discrimination against the following race, ethnicity, and gender groups that are illustrated by the blue highlights representing statistically significant underutilization.

Table 12.1.
Inference of Discrimination Based on Findings of Statistically Significant Disparity
By Race/Ethnicity/Gender
By Procurement Type

Race/Ethnicity	Architecture & Engineering (Purchase Orders)	Construction & Construction-Related Services (Payments)	Non-Professional Services (Purchase Orders)	Professional Services (Purchase Orders)	Goods & Supplies (Purchase Orders)
African American	Disparity	Disparity*	Disparity*	Disparity*	Disparity*
Asian American	Disparity	Disparity*	Disparity*	Disparity	Disparity*
Hispanic American	ND	Disparity*	Disparity*	Disparity	Disparity*
Native American	ND	Disparity*	Disparity	Disparity	Disparity*
WBE	Disparity*	Disparity*	Disparity*	Disparity*	Disparity*

Source: M³ Consulting

*Statistically Significant

Light Purple – Underutilization

Red – Overutilization

Unshaded – Non-Significant Underutilization

ND – Not Determined (Zero Availability)

12.3 RECOMMENDATIONS

Considering the findings discussed in the previous chapters and the disparity findings above, M³ Consulting is providing the following recommendations to the COK. The recommendations contain both race- and gender-neutral and race- and gender-conscious elements. The recommendations are grouped within the following categories:

- Organizational and Procurement Adjustment Recommendations
- Recommendations for Targeted Initiatives—Race- and Gender-Conscious and Race- and Gender-Neutral
- Diverse Supplier Program Recommendations

These recommendations consist of a listing of pertinent options from which the COK may select in narrow tailoring its efforts in response to the findings of this report. The options combine agency specific and best practices recommendations that are legally defensible considering the factual findings of this study. The COK should consider adoption of those recommendations that are considered most appropriate in terms of cost, resources required, likely effectiveness, community acceptance and organizational feasibility.

12.3.1 Organizational and Procurement Adjustment Recommendations

Below are recommendations to the COK for organizational, cultural, structural, and programmatic enhancements. These enhancements will lead to sustainable change in the COK's procurement operations, bringing an inclusive procurement environment that ensures regulatory compliance and alignment with best practices.

A. Procurement Systems and Culture Changes

A.1 Change inclusion focus from programmatic (compliance with DBE regulations) to organizational (commitment to inclusive procurement environment)

Outreach Office which resides within the Purchasing Department. The COK currently sets aspirational goals at 15% of its total procurements to be attained by DBE firms. While collectively referred to SMWBEs as DBE firms, COK also sets goals for Minority-owned Business Enterprises (MBEs) Women-owned Business Enterprises (WBEs), and Small Business Enterprises (SBEs). Businesses owned by service-disabled veterans (SDVOB) are identified for reporting purposes. COK's current goal-setting model allows separate goals for MBEs, WBEs, and SBEs while counting them in every category for which they qualify. This results in double or triple counting. The Purchasing Division (SDBO Office) submits this report to the Finance Director. Staff indicated that there is also a separate report that goes to Council that does not include instances of double/triple counting. For this report a hierarchy of minority-owned first, then women-owned, then small business designation is followed. The COK Contracts

Manager has responsibility for this annual fiscal year-end report. The report details DBE spend and percentages for the **Goods & Supplies**, **Construction**, and **Professional Services** procurement types.

These data capture and reporting efforts, while important to the issues of inclusion, are programmatic (related to the operation of a specific program) and functional (focused on department function) in nature. An alternate effort would focus on organizational and city-wide change. These types of programmatic and functional efforts lack impact on the level of procurement and contracting operations that can lead to real and sustained change in organizational culture and practices. Failure to achieve this sustained change can result in barriers for SMWBEs wanting to do business with the COK. Furthermore, the effectiveness of COK’s programmatic efforts will not be maximized until underlying organizational issues, impacting the inclusiveness of COK’s procurement operations, are addressed.

Many of the recommendations below focus on city-wide organizational changes that can lead to enhancements to COK’s procurement system to allow it to become more inclusive. The recommendations for inclusion do not depend on the COK’s decision to employ race- and gender-conscious or race- and gender-neutral programmatic initiatives. When implemented, these recommendations will also enhance the effectiveness of DBE inclusion initiatives. As noted in Chapter 4, Statistical Methodology, under Equal Employment Opportunity (EEO) requirements, employers must be able to “track” their decision-making points—applicants, promotions, terminations, etc. Similarly, the COK should be able to “track” its procurement and contracting-related decision-making points to more effectively determine if the COK’s current practices in any way promote active discrimination or other exclusionary practices. In consideration of the COK’s current focus, M³ Consulting recommends the COK eliminate the duplicative report and focus on producing the version of the report currently produced for Council.

The importance of leadership commitment and organization-wide implementation cannot be underestimated in either a race- and gender-conscious or race- and gender-neutral environment. Most of the COK’s major vendors perform work statewide, nationally and/or internationally and are intimately familiar with responding to inclusion efforts at the various public sector levels. The degree of responsiveness often correlates to the public entity’s commitment to inclusion in which these firms are pursuing opportunities. The ongoing construction of the new downtown Knoxville baseball stadium serves as a representative example of the importance of leadership commitment and organization-wide implementation. Around 154 subcontractors (32.4%) of the 476 subcontractors invited to prequalify for the stadium were classified as disadvantaged businesses, but the released quarterly report indicated that just 23 disadvantaged businesses indicated intent to engage bidding process. Ultimately, only 9 of the 23 DBE subcontractors actually submitted bids¹. The M³ Consulting study effort finds that diverse businesses struggle to acquire necessary funding needed to build financial capacity and carry out contracts at the prime level. As such, until additional inroads are made in the access to capital and training arenas, M³ Consulting recommends that the COK make engagement of DBEs at the subcontractor level an elevated priority.

¹ Knoxnews.com - Knoxville Stadium

Training in the diversity and inclusion space allows for a broader understanding of tools and techniques designed to enhance and achieve organizational goals related to the development of an inclusive ecosystem. Resources required to ensure staff are adequately prepared to carry out leadership’s mission should be considered and allocated. This allocation need resonates within M³ Consulting’s recommendations. M³ Consulting finds that the need to publicly demonstrate that Knoxville takes diversity inclusion seriously is very much needed in COK’s case. This is in part due to anecdotal feedback from the community detailing historical distrust within the city’s minority communities.² Training and engagement are keys to dispelling some of these negative perceptions. M³ Consulting provides training that educates and guides organizations on the necessary elements to create sustainable ecosystems that are supported by M³ Consulting’s four pillars of inclusive procurement.

A.2 Four Pillars of Inclusive Procurement

To achieve the Vision, Mission and Goals as articulated in the COK’s 5- year consolidated plan, procurement plays a pivotal role, along with proper planning and budgeting, which starts the execution and implementation of the process that actualizes leadership’s objectives. The Purchasing Division and the Office of Small Business & Diversity Outreach (SBDO) Office must operate in a manner that is both consistent with the policy objectives established by the Mayor and City Council and programmatically sound. The COK can do so through striving toward inclusive procurement, which focuses in an ongoing manner on working to ensure that all vendors—regardless of race, ethnicity, gender, national origin, sexual orientation or disability—have the opportunity to bid – and win - the COK’s procurement and contracting prime and subcontracting opportunities. Vendors should have a defined formal process and opportunity to learn from COK staff how to become more effective when unsuccessful in pursuing opportunities, thereby participating in the economic prosperity of the Knoxville Metropolitan Statistical Area. In demonstrating best practices, an inclusive procurement environment will incorporate the following elements:

- **Mission Driven**—The procurement and DBE objectives are tied directly to the overall Vision, Mission and Goals of the COK.
- **Opportunity Driven**—The SBDO Office, along with the Purchasing Division, is driven by the COK’s opportunities—identifying them, understanding them, managing them and communicating them.
- **Relationship Driven**—With the foundation that being opportunity driven provides, the COK will be in the relationship development business. The SBDO Office and the Purchasing Department will know its businesses that can do the COK’s work and ask the business community to share its goal of inclusive economic development.
- **Data Driven**—Sound data and fully integrated systems will provide senior management with the information it needs to report on successfully meeting its objectives and maximizing economic development, equity and organizational performance, along with the other objectives established by the Mayor and City Council.

² Knoxville’s Urban Renewal: Historians, Community Members Answer Questions

A.3 Four Pillars of Inclusive Procurement

M³ Consulting recommends that the COK conduct a culture audit to assist the COK in moving toward an organizational culture that will more readily support the Mayor and City Council’s Vision and Mission, as well as a more inclusive procurement environment. The culture audit will allow examination and explanation of the common rules of behavior and underlying beliefs of the COK that drive its organization and the way people approach their work. It also will assist in determining whether the COK’s current organizational culture is an asset or liability in achieving its Vision and Mission and provides actual evidence for establishing the appropriate direction for the COK.

As a tool for diversity and inclusion, a culture audit identifies sources of diversity tension and leverage points that shape culture. It will provide a precise measure of employee perceptions and recommendations for cultural and system interventions for more effective diversity management to support organizational goals. If bias—implicit or unconscious—is one of the factors significantly impacting COK’s organizational and procurement culture, a culture audit will support identification to root it out. The benefit of the culture audit is that bias is not isolated but viewed in conjunction with other factors. Regressions can then be run to determine the degree to which bias is a primary factor.

A.4 Training and Development

Many organizations engage their staff in diversity training and sensitivity training. However, skills-based training is needed to create an inclusive procurement environment. We must emphasize that inclusivity is an integral part of an efficient procurement process. As such, to create a baseline of knowledge, the following training should occur:

- All SBDO Office, Purchasing Division and other appropriate department staff should be provided with opportunities to pursue enhanced, ongoing training beyond standard procurement operations to include SMWBE engagement. M³ Consulting noted that the COK has staff who are members of the National Institute of Governmental Purchasing (NIGP) and hold CPP, CCPB, and CPPO certifications. M³ Consulting recommends that staff should also seek to obtain accreditation as certified compliance officers through organizations such as the American Contract Compliance Association.
- All COK staff engaged in procurement activity should attend a seminar on the components of a SMWBE program and collaboratively make strategies for achieving established objectives.
- Once the SBDO Office, Purchasing Division and other appropriate department staff have enhanced training, the SBDO Office Manager and the Purchasing Manager are then positioned to train on higher-level negotiating strategies and tactics in the various procurement categories and for types of goods and services that can be deployed, consistent with the tenets of sound procurement laws and regulations at both the formal and informal levels.

A.5 The Nature of the COK’s Centralized Procurement Process and Impact on DBE Participation

M³ Consulting does not advocate for a centralized or decentralized procurement process. We seek to determine the impact of either process on the ability of SMWBEs to contract with a public entity. Without appropriate infrastructure, management and operational support, an unwieldy bureaucracy can be created that serves as a de facto barrier to SMWBEs. As it relates to the COK, M³ Consulting’s analysis found that the procurement function for Architecture & Engineering, Construction and Construction-Related Services, Goods & Supplies, Non-Professional Services, and Professional Services are procured mostly in a centralized manner. COK’s Purchasing Division serves as the focal point of their center-led purchasing structure. The Purchasing Division is responsible for developing purchasing policies and standard operating procedures for the entire municipality. M³ Consulting found that the policies are well organized in their procurement manual and made available throughout the COK. Although not completely centralized their center-led structure still has departments or divisions maintain some purchasing duties and responsibilities independent of the Purchasing Division. In the absence of formal reporting requirements across the board, even the few decentralized procurement activities that occur at the department level can have the impact of decreasing accountability and transparency as it relates to DBE participation. Robust infrastructure and integration, coordination, and delegation can help to safeguard against any negative impactors. While the SBDO Office within the Purchasing Division has the responsibility to monitor and report activity across the enterprise, based on the COK’s mostly centralized procurement system, M³ Consulting recommends the SBDO Office and the Purchasing Division work more collaboratively with buying departments’ leadership to ensure COK policy and practices are adhered to, including the leveraging of technologies that enable regular DBE monitoring and spend reporting to flow from the Departments to the Purchasing Division offices.

A.6 Training and Development

While COK currently engages a number of outreach efforts that seek to notify and inform the vendor community, on a quarterly basis, the COK should develop a forecasting process appropriate for each procurement category that provides project information necessary for planning its activities as it relates to DBE participation. Master construction schedules should also be available. From these sources, the COK can make transparent:

- Type of possible opportunities at prime and subcontractor levels, as well as formal and informal levels;
- Funding source; and
- Timeframe that opportunity may be available.

With this information, the COK can begin to (a) project the impact of the COK’s purchases on economic, business and employment growth in the Knoxville, TN Metropolitan Statistical Area (MSA), (b) conduct networking and matchmaking sessions, and (c) identify areas where increases in local capacity is needed among both DBEs and Non-DBEs to begin capacity building efforts well ahead of when the contraction opportunities come to fruition.

A.7 Contracting Vehicles

The types of contracting vehicles utilized by the COK and the degree to which they are utilized can impact the level of SMWBE participation pre- and post-award.

For many of the lower dollar threshold purchases, COK's procurement vehicles do not include any policy-mandated consideration of race, ethnicity or gender when conducting outreach or evaluating respondents to select the awardee for the opportunity. However, for procurement of Construction, A&E, Professional/Non-Professional Services, and Goods and Supplies where disparities have been identified in this study, there is a basis for initiating race and gender-conscious initiatives to supplement race and gender-neutral initiatives like the implementation of an SBE sheltered market program.

The COK should review the usage of all its contracting vehicles for ways to:

- Ensure that the best contract vehicle for achieving COK's inclusion policies, procurement and project objectives is part of their contract vehicle selection process.
- Determine the best level of engagement regarding the SBDO Office's involvement in the post award development and execution of work plans. This should include the ability for the SBDO Office to sign off on final DBE participation within the approved work plans and give final authorization or permission before approved plans are altered.
- Identify and deploy other management tools, such as rotating lists of successful firms and implementing "Sheltered Market" reserved competition solicitations to promote a greater distribution of vendor utilization.
- Dedicate resources to elevate post award DBE monitoring, auditing and tracking tasks.

A.8 Monitor Contracts for Issue of Concentration

Modeling federal statute 49 CFR Part 26.33, the COK should monitor its contracts to ensure that DBEs are not overly concentrated in certain procurement areas as a means of the COK meeting its MWBE and SBE goals. Contracts should be continuously reviewed to ensure that (1) the same Non-DBEs and DBEs are not securing a significant percentage of the COK contracts and that (2) the same DBEs are not accounting for a significant percent of the COK's MBE, WBE and SBE participation.

Concentration can be addressed in the following ways:

- Ensure that there is no steering of contracts at the prime or subcontractor levels;
- Expand pool of available firms;
- Expand capacity of available firms; and
- Ensure that firms repeatedly submitting low bids are not requesting change orders post-award or providing substandard work.

The COK should constantly monitor its contracting activity to determine whether contract awards are concentrated among a small group of firms and design strategies to increase the level of competition on the COK procurement and contracting opportunities.

A.9 Deeper Dive of Bid/RFP/RFQ, Award and Payment Process

The COK should consider a deeper dive into bid, Request for Proposal (RFP), Request for Quote (RFQ), selection and evaluation results to ensure that the outcomes reflected in the Availability and Utilization chapters reflect a procurement process that is open, fair, transparent and inclusive. This deeper dive to review actual practices would include a review by an independent party of:

- **Pre-award activity**—BID/RFP/RFQ and award documents for individual opportunities, including vendor solicitation, bid tabulations, applicable DBE forms, selection committee, evaluation score sheets, Guaranteed Maximum Price (GMP), and other contract negotiation documents, prime contractor selection and evaluation score sheets for subcontractors, and prime contractor solicitation list for subcontractors.
- **Post-award activity**—Selection process on multi-awardee contracts, DBE utilization through phases of project, payments to sub-contractors, impact of bonding on both prime and sub-contractors.

We emphasize that this deeper dive is not an audit of policies and procedures but the execution of those policies and procedures (actual practices) and their impact on the outcomes reflected in the Disparity Study.

This deeper dive would also provide greater insight into the competitiveness of different race/gender/ethnic groups and provide the SBDO Office with additional information on which to target and customize its support efforts.

To facilitate this deeper dive, certain data capture issues should first be addressed:

- The bid/Invitation to Bid (ITB)/RFP number established at the point of bid should follow the awarded firm. Upon completion of negotiations with the awarded firm, the bid/ITB/RFP number should become an available and required data field within the Purchase Order (PO) data and assigned a PO number, subject to extraction. The addition of the bid/ITB/RFP number will allow for tracking of the project/contract from the point of award, the point of contract through actual payments.
- All payments that are attached to an underlying PO should have the PO number captured in the Accounts Payable (AP) system that can be viewed and extracted in standard or ad hoc reporting.
- Direct disbursements (payments without an underlying PO) should be identified in AP data. Direct disbursements are typically non-encumbered expenditures which may not be budgeted for. POs are encumbered expenses and therefore budgetarily can be accounted for at the department/fund level.

A.10 Conduct Economic Impact Analysis

A Disparity Study provides critical quantitative and qualitative data on the participation of DBEs in the COK opportunities and the factors impacting their ability to do so. An Economic Impact Analysis shows the impact on

economic growth in a locale of procurement spend and of major capital improvement projects. This economic impact analysis can be conducted to further reflect the impact on economic growth in minority communities of the COK procurement and contracting dollars flowing to minority businesses. The analysis would assist in changing the outlook on supporting minority communities from one of simply addressing discrimination to one of promoting growth and development. While relatively new, some cities and states, such as the State of Maryland, have conducted economic impact analysis by race/gender to determine whether the benefits of tax dollars utilized for procurement and contracting of goods and services is benefitting its citizens in an equitable manner.

B. Address Data Capture/Enterprise Resource Planning (ERP) Issues

Critical to creating an inclusive procurement operation at the COK is an efficient and integrated procurement data infrastructure. These data recommendations are necessary because:

- Poor data systems can mask discriminatory actions or disparate impact, even where race and gender-conscious goals are utilized. Immediately addressing data issues is critical to protecting against unfairly discontinuing the COK’s DBE programs due to temporary or permanent injunctions or internal decisions based on incomplete data that may allow the organization to continue to discriminate. Sound, accurate and complete data supports the Mayor’s Office, City Council and City Attorney’s Office in fairly balancing all legal and regulatory implications, potential challenges, etc., arising from the COK’s ability to sufficiently state, in this disparity study and any time thereafter, the level of DBE participation in its procurement and contracting activity at prime and subcontractor levels.
 - We note that in the EEO environment, under 29 CFR Ch. XIV, Part 1607.4.D, a finding of an inference of adverse impact can be drawn from poorly maintained data systems not in conformance with data tracking requirements of the regulations. While 49 CFR Part 26 does not have similar language, Section 26.47 covers Bad Faith Administration of the Disadvantaged Business Enterprise (DBE) Program.
- More refined and detailed procurement spend analysis cannot be performed without better data capture and tracking. This inability limits programmatic activity, including expansion of the pool of available firms through outreach; setting project-based goals; determining participation at the purchase code level (NIGP/North American Industry Classification System [NAICS]/Commodity) and tracking decision-making activities at procurement solicitation, evaluation, awards and commitments and post-award utilization.
 - To operate a race- and gender-neutral procurement operation, the COK must be able to adequately track levels of SMWBE participation to anticipate necessary adjustments. Further, under a race- and gender-conscious SMWBE program, tracking allows for proactive and real-time responses that allow the COK to utilize race- and gender-conscious programs when necessary and to respond quickly when tracking reveals that participation is dropping in a race- and gender-neutral environment.
 - Data efficiency promotes the COK’s ability to respond to DBE opportunities and challenges quickly and nimbly, such that it does not unnecessarily and perhaps unintentionally perpetuate “bureaucratic inertia” referenced by Justice Sandra Day O’Connor in the *Croson* decision.

M³ Consulting recommends that the COK address the following data issues outlined below to better support ongoing transparent monitoring, tracking, and reporting. Once these changes are implemented, the COK will be better positioned to have more robust datasets to analyze SMWBE utilization at the price and subcontractor levels in addition to ensure MWBE data capturing efforts are optimized.

B.1. Expand data capture on vendor portal by classifying the entry of NIGP and NAICS codes as a required field during vendor registration

The COK should require all firms interested in doing business with the city to register through its online vendor portal, Bidnet Direct, including certified SMWBEs, to which the COK has identified from outreach and matchmaking efforts. The vendor portal should capture both NIGP/NAICS code and vendor contract size preferences. It will be critical for registration to be contingent on all data points being provided to allow for the establishment of guardrails to ensure data uniformity and integrity. The portal should also capture annual gross receipts and age of firm on all bidders and sub-bidders. By capturing both sets of information for all vendors, COK now has capacity data that can be utilized as it solicits vendors for both quotes and bids. In other words, the COK has the rudimentary information needed to transition vendors from simply “ready and willing” to “ready, willing and able.” Having NIGP/NAICS codes assigned for each vendor will also allow for well-targeted notification of procurement opportunities.

The COK should also consider the best means of uploading already certified SMWDBEs, into the vendor registry portal, such that project availability and project/contract-based goals can be established real-time and inclusive notifications, solicitations and outreach can easily occur.

B.2. Mandatory completion of all applicable DBE forms during the bid solicitation process:

Although COK has various DBE forms to be completed at the point of bid submission, it is currently not a mandatory requirement for bidders to fill these forms. As a result, many of the bid documents reviewed did not have complete sub-bidder information. M³ Consulting recommends making the completion of all applicable DBE forms a mandatory requirement for bid submission. This will enhance COK’s ability track subcontractor utilization from the point of contract solicitation and enable the identification of post-award subcontractor substitution.

B.3. Assign commodity codes to bids, POs, and Payments

The City of Knoxville did not utilize NIGP/NAICS codes on any of COK’s procurement activities during the study period. For this disparity study to accurately reflect procurement activity, M³ Consulting had to manually assign procurement types from account codes that used a “dump all” for various procurement activities. This led to a reassignment of \$135M from the “dump all” account into procurement categories. M³ Consulting recommends that COK develops an enterprise-wide defined coding scheme and make assignments of commodity codes to bids, proposals, qualifications or quotes, POs and Payments a mandatory requirement.

By properly assigning commodity codes to bids, proposals, qualifications or quotes, POs and Payments, the COK will increase the accuracy of commodity code tracking, which is essential to reporting DBE participation in specific

areas. Moreover, the usage of an enterprise-wide defined coding scheme allows for the necessary connectivity for assessing availability and utilization. We note that commodity codes are product specific and NAICS codes are industry specific. NAICS codes do not always sufficiently address the product-specific needs of procurement agents, particularly around planning. M³ Consulting recommends that public sector clients utilize the coding system established by NIGP for two reasons:

1. The coding system is designed specifically for public sector procurement operations.
2. Licensed members of NIGP have access to their crosswalk to both NAICS codes and UNSPSC codes. This crosswalk will be useful to the COK for disparity study analysis and M-WBE and SBE goal setting, as the COK will not rely on different consultants to change procurement decisions on the use of commodity codes to NAICS codes, purely for the purposes of the disparity study.

M³ Consulting further recommends that the COK preassign a Procurement Category to the commodity codes in one of five categories:

- Architecture & Engineering;
- Construction and Construction-Related Services;
- Professional Services;
- Non-Professional Services; and
- Goods & Supplies.

B.4. Consider removing monthly charge and further utilization of e-procurement portal to capture bid and quote information

While we recognize that the COK currently utilizes Bidnet Direct, it requires vendors to pay some monthly fee to access the full functionality of the portal which includes bid notifications.³ This payment requirement may hinder small and minority- owned businesses from registering on the portal. M³ Consulting recommends that COK explores avenues to remove this registration cost. In addition, COK should further leverage the Bidnet Direct system to capture response to all solicitations advertised through it. This process reduces workloads while at the same time increasing detailed information available to the COK on both bids/proposals and quotes. These programs should integrate with Oracle, the City's ERP system. The portal should have the capacity to be programmed to meet the DBE requirements of federally funded projects on bidder and sub-bidder tracking as well.

1. The bid portal should also allow prime vendor access to upload bids/bid tabulations for sub-bid opportunities the prime vendor is letting on the COK contract. A bid portal can also facilitate Good Faith Efforts determinations and compliance with 49 CFR Part 26.11.

³ Get Access to 1000's of Bid Opportunities & State Contracts | BidNet Direct

2. The SBDO Office will need to determine the impact of using the online portal on small businesses who may not be familiar with the technology; training programs and access to technical assistance providers for assistance should be made available to the degree necessary to minimize any negative impact.

B.5. Consider activating subcontractor modules in Oracle or utilizing an off-the-shelf DBE tracking system

The City of Knoxville should consider activating and utilizing the subcontractor modules within the current ERP system. If this cannot be done because they are cost prohibitive to activate, the COK should consider an off-the-shelf DBE tracking system as a less expensive option. The tracking system should facilitate easy retrieval of data by the SBDO Office from other systems utilized by the COK, *not replace* changes necessary to vendor, bid, project management and payment systems. Several off-the-shelf software packages have been developed for SMWBE tracking, monitoring and reporting. These systems should integrate with Oracle, the COK's vendor portal and the COK's chosen bid portal—to the degree that current systems can be maximized. This tracking system should also have the capacity to track formal joint venture and mentor-protégé agreements. Further, this system should have the capacity to track awards, commitments at the point of contract execution and payments at both the prime and subcontractor level.

B.6. Develop computerized formats for evaluation score sheets

The COK should digitalize its evaluation rubric and score sheets for general services and professional services, such that the COK is positioned to determine that these evaluations are scored in a fair and non-discriminatory manner and that the decision-making process is transparent. By digitizing evaluation rubric and score sheets, the COK is also able to assess the fairness of its selection process over time.

B.7. Track awards, commitments and payments separately

Decisions made at the point of award can change before a contract is executed or after contract execution, due to requests for best and final offers, change orders and other contractual adjustments. As such, the COK should ensure that it can track awards, commitments and payments separately, at both the prime and subcontractor level. This detailed tracking also allows the COK to quickly identify changes to DBE subcontractors by prime contractors are City-approved and executed in a non-discriminatory fashion.

1. Given the size and contract duration of many of the COK's Architecture & Engineering and Construction projects, the COK should be able to report on commitments at prime and subcontractor level, as well as payments. Awards are determined from bids or qualifications submitted, as the case may be. Commitments reflect total utilization based upon the original contract amounts, change orders and work plans, as reflected in signed and executed contractually binding agreements. Payments may overstate or understate DBE utilization on open contracts, based on project scheduling.

2. In developing this tracking process, the COK should ensure that there are common identifiers, i.e., vendor numbers, vendor tax ID, project numbers, contract numbers, that facilitate easy tracking of individual vendors, as well as projects, from the point of requisition and solicitation to project closeout.
3. As the COK determines project management systems that are part of a fully integrated data system, the COK should also consider requesting vendor invoices in both PDF *and* spreadsheet formats to allow the COK project managers and resident engineers to upload detailed commitment and payment information into the subcontractor module in Oracle or any off-the-shelf DBE tracking system purchased by COK.

By being able to track these areas separately at the prime and subcontractor level, the COK is positioned to determine areas where closer scrutiny and deeper dives into its decision-making processes and those of its prime vendors are required to ensure that these decisions are being made in a non-discriminatory manner.

B.8. Performance Overview and Real-time Access

Developing a dashboard would enhance staff's ability to react and respond in real-time to DBE participation performance. As the COK assesses appropriate systems and software packages to utilize, the COK decision makers should be sure that these systems accommodate appropriate access by staff in Purchasing, Finance, SBDO Office and Operational Departments.

12.3.2 Recommendations for Targeted Initiatives—Race- and Gender-Conscious and Race- and Gender-Neutral

A. Race- and Gender-Conscious Initiatives

A.1 Establishment of Race- and Gender-Conscious Goals

When effectively implemented, the existence of established goals is a useful mechanism for achieving the desired outcomes for the COK's objective of increasing DBE participation. However, if operations are inflexible, the use of goals may be construed as a quota.

The concept of separate goals for SBE, MBE, and WBE participation, which is tied to the availability of those firms as identified in this study, should be tied to documented Good faith Efforts (GFEs) to achieve the goals on a contract-by-contract and program-by-program basis. Race-neutral SBE program opportunities should be separated from race-conscious MWBE program opportunities. Reviews against these program goals can be utilized by the COK to evaluate the effectiveness of its overall DBE program and its project-specific efforts. These segregated goals should be listed on the published attainment reports such that the reader has a visual when evaluating actual attainment within a given fiscal year. This approach also allows COK to gauge whether it is appropriate to increase or decrease the mix of more aggressive remedies. The goals can be used to inform more specifically tailored goals by procurement category, department, etc. To be legally defensible, the goals should be a *minimum achievable standard* for DBE inclusion and not a maximum barometer of exclusion.

In certain categories and for particular groups, race and gender-conscious means are supportable activities toward the achievement of established goals, based on the findings of statistically significant disparity, reflected in Table 12.2 below.

As significant disparity is eliminated in the race and gender-conscious categories, the utilization of race- and gender-neutral means in attaining the established goals should be increased. However, in all instances where race- and gender-neutral means are utilized, if significant disparity reemerges, then race- and gender-conscious techniques can be utilized on a non-permanent basis to correct identified disparities.

While the COK should utilize race and gender-neutral means to address participation of groups where there is no statistically significant disparity, that does not mean or condone passive or no outreach to these groups, as significant disparity can emerge or reemerge. The COK should continuously focus on an inclusive procurement environment that considers SMWBEs and narrow the focus, when necessary, based on meeting established goals.

Availability, Utilization and Disparity measures should be tracked on an annual basis and annual goals set as discussed above, as the recommendations below are implemented. RWASM Availability is significantly impacted by bidding patterns and practices. The COK's RWASM Availability analysis revealed 47.46% of bids had one bidder and 74.39% had three or fewer bidders. If the bidding patterns of the COK vendors are altered, due to internal adjustments within the COK or marketplace factors, the impact of those changes should be captured. Similarly, utilization reflects issues that require further analysis and potential changes to increase competitiveness, provide opportunities where capacity is not an issue and eliminate issues of concentration brought about by the low number of bidders.

Table 12.2. Categories for Race/Ethnicity/Gender-Conscious and Race/Ethnicity/Gender-Neutral Means of Addressing Disparity By Procurement Type		
Procurement Type	Race- and Gender-Conscious	Race- and Gender-Neutral
Architecture & Engineering	<ul style="list-style-type: none"> • WBEs 	<ul style="list-style-type: none"> • African American • Asian American • Hispanic American • Native American
Construction and Construction-Related Services	<ul style="list-style-type: none"> • African American • Asian American • Hispanic American • Native American • WBEs 	
Non-Professional Services	<ul style="list-style-type: none"> • Hispanic American • WBEs 	<ul style="list-style-type: none"> • African American • Asian American • Native American
Professional Services	<ul style="list-style-type: none"> • African American • WBEs 	<ul style="list-style-type: none"> • Asian American • Hispanic American • Native American
Goods & Supplies	<ul style="list-style-type: none"> • African American • Asian American • Hispanic American • Native American • WBEs 	

Source: M³ Consulting

Table 12.3.
Inference of Discrimination Based on Findings of Statistically Significant Disparity
By Race/Ethnicity/Gender

Race/Ethnicity	Architecture & Engineering (Purchase Orders)	Construction & Construction-Related Services (Payments)	Non-Professional Services (Purchase Orders)	Professional Services (Purchase Orders)	Goods & Supplies (Purchase Orders)
African American	No Significance	Significantly Underutilized	Significantly Overutilized	Significantly Underutilized	Significantly Underutilized
Asian American	No Significance	Significantly Underutilized	Significantly Overutilized	No Significance	Significantly Underutilized
Hispanic American	No Availability	Significantly Underutilized	Significantly Underutilized	No Significance	Significantly Underutilized
Native American	No Availability	Significantly Underutilized	No Significance	No Significance	Significantly Underutilized
WBE	Significantly Underutilized	Significantly Underutilized	Significantly Underutilized	Significantly Underutilized	Significantly Underutilized

Source: M³ Consulting
 Light Purple - Statistical Significance (Underutilization)
 Red - Statistical Significance (Overutilization)
 Unshaded – Non-Significant Underutilization

Currently the COK’s SBDO Office sets goals for MBE, WBE and SBE participation, but attainment of DBE participation is measured against an overarching 10% aspirational goal. Regarding compliance to the goals and utilization measures, the SBDOO Manager produces an annual Utilization Tracking Report and serves as chairperson of the 12-member Diversity Business Advisory Council (DBAC). The mission of the DBAC is to serve in an advisory capacity to help direct the COK in the development of, assistance with, and the implementation of various initiatives that seek to increase the level of contracting success realized by COK’s DBE vendor community.

M³ Consulting recommends properly staffing the SBDO Office such that it can fully execute the COK’s stated aims regarding engagement of its DBE community. There are opportunity areas regarding monitoring to determine whether an awarded contractor has improperly terminated, replaced or reduced the work of a qualified DBE and whether the contractor is in compliance regarding any contract amendments, renewals or additions to scope. M³ Consulting recommends that Knoxville's SBDO office conduct periodic audits to ensure that that firms that are claiming self-performance are verifiably performing the scope as well as audits to ensure that any engaged DBE subcontractors for which a Prime is claiming participation credit are truly performing a Commercially Useful Function (commonly referred to as the CUF test). Currently, there are no formal regular reporting requirements of the departments into the SBDO office or other real-time tracking that speaks to the event that an awarded contractor or subcontractor has failed to meet its DBE commitments under the awarded contract. M³ Consulting recommends that the SBDO Office is given the authority to require such real-time reports.

A.2. Goal-Setting Formulas and Techniques

The COK has options for SMWBE goal-setting formulas and techniques, including:

- SMWBE Goals;
- SMWBE evaluation factors.

The actual setting of race- and gender-conscious or race- and gender-neutral goals is a policy decision that requires action by the City Council. The Council can establish overall annual policy goals by industry. Project-by-project goals could then be established by staff based upon the relative SMWBE availability for performance of the specific contract. This type of goal setting would probably be considered the most legally defensible flexible form of goal setting available to the COK. The U.S. Department of Transportation (DOT), under 49 CFR Part 26, allows five approaches to establishing DBE goals/availability:

- DBE Directory + U.S. Census;
- Bidders List;
- Disparity Study data;
- Goal from Another DOT recipient; and
- Alternative Methods.

M³ Consulting adds to this list of offerings its own goal-setting formula, which is described below.

ATMSM Formula

The Annual Target Method (ATMSM) formula, developed exclusively by M³ Consulting, allows entities to develop goals based on both market conditions (availability) and actual levels of participation by the COK (utilization). The ATMSM formula also allows the COK to forecast the necessary DBE participation levels to achieve the desired outcome, correcting for stated disparity, by an established date. This methodology has been designed to assist the COK to determine its goals through a realistic and statistically valid model.

To ensure that goals properly reflect the opportunity being bid and that goals do not appear to be set-asides because the same goal for a procurement category is applied to every trade or commodity area within that procurement category, M³ Consulting recommends that the COK implement project-by-project goals. The ATMSM formula can still be used, but availability should be computed for each project type and then that availability measure used in the ATMSM formula. To calculate availability by project-type, the COK must have a well-functioning Central Bidder Registry or Vendor Registry List.

In the ATMSM formula, G_p or the target goal is either availability, weighted availability or a goal established above availability. When calculating the project goal using the ATMSM formula, the project goals become a function of correcting disparity and bringing overall utilization in line with overall availability for a particular procurement category. As such, the project goal will reflect the volume of dollars in a particular trade, commodity or project area and thus calculate its appropriate weight in assisting in correcting overall disparity.

The calculation of ATMSM is a two-step process:

1. A weighted availability measure is developed by using Sum of the Year’s Digits method, which results in a higher amount of weight being given to an availability measure which is ranked higher or deemed more reliable or important than other weighted availability used to calculate an average. The following formula: $\{N*(N + 1)\}/2$, will calculate the sum of the number of availability measures being averaged.
2. This weighted availability measure is then used in the computation process identified below to establish the actual target goal.

Calculating the ATMSM Formula

For Computing Annual Targets for Minority and Female Participation

$$ATM = G_p (TCE_t) - TME_p , TE_a$$

$$T - P$$

Where:

- G_p = target goal for SMWBE participation. When the policy goal is used to bring utilization in line with availability, then
- TCE_t = total cumulative expenditure at time frame
- TE_a = total annual City of Knoxville expenditure
- TME_p = total minority cumulative expenditure at present
- T = time frame year
- P = present year

A.3. Race- and Gender-Conscious Tools

The COK should first exhaust all race- and gender-neutral means to achieve any established target, goal or benchmark. Again, to be legally defensible, race- and gender-conscious contract goals should be subject to a variety of limitations:

- Race- and gender-conscious goals, where allowable at the COK, should not be applied to every contract across all purchasing types.
- Race- and gender-conscious goals should generally be “good faith efforts” subject to waivers.
- Race- and gender-conscious goals should be reviewed by the SBDO Office and the Purchasing Division to ensure that such goals do not disproportionately fall on one class. For example, awards of all painting subcontracts to minority firms would impose an undue burden on non-DBE painting subcontractors.
- Race- and gender-conscious goals (in purchasing) for subcontracting should apply to both Non-DBE and DBE prime contractors.
- Firms eligible to benefit from race- and gender-conscious goals at the COK should be subject to graduation provisions.

- The COK race- and gender-conscious elements should be subject to annual review and sunset provisions.

A.4. Goal Setting by Threshold

M³ Consulting's threshold utilization analysis suggests that, where capacity is not an issue, certain race/ethnic/gender groups are still reflecting disparity. The threshold utilization analysis was based on PO data. M³ Consulting recommends that the COK continue to conduct spend analysis by threshold. In conducting this spend analysis, the COK will obtain a greater understanding of the individual opportunities and the dollar values associated with them. The spend analysis allows the COK to review these individual opportunities by size. This process is different from unbundling, where the organization starts with the larger contracts and attempts to break them down into component parts or smaller contracts. When individual opportunities are sorted by size, appropriate programmatic efforts by the SBDO Office can be established. Furthermore, there is more transparency in contracts awarded, particularly on contracts where more firms are fully capable of competing.

B. Race- and Gender-Neutral Initiatives

The COK should continue to utilize and document race and gender-neutral efforts and utilize race and gender-conscious programs for the groups whose disparities were statistically significant, as identified in Table 12.1. Race and gender-neutral goal-based programs are an important tool to be utilized. Use of these programs in concert with race and gender-conscious initiatives are not an either/or decision on the part of the jurisdictions. Many public entities utilize race and gender-neutral programs in conjunction with their race and gender-conscious initiatives. Public entities maximize the opportunity for inclusion and work to ensure that DBEs who reflect overutilization or nonsignificant disparity do not slip to a state of disparity because the public entity has focused all its efforts on the DBEs providing services in procurement types where there is significant disparity. Race and gender-neutral goal-based and set-aside programs and related initiatives for the COK's consideration include the following:

B.1. Small Business Enterprises/Micro Business Enterprises Goals

The COK should engage efforts to establish a "sheltered market" opportunities program on a project-by-project basis. Many small business and micro business programs are designed to ensure greater DBE availability, capacity development and contract participation in the public entity's procurement and contract opportunities.

B.2. Acknowledgement of Local Business Preference Opinion

Local bidder preference programs allow a jurisdiction to establish goals, bid preferences, a points system, and opportunity markets targeted to local firms within the jurisdiction's MSA. Implementing a local business preference program for select procurements allow jurisdictions to seek the benefits generally associated with these programs such as positively impacting local unemployment rates, demonstrating the jurisdiction's intentional support its local businesses, and increasing the jurisdiction's tax base. These programs are usually focused on spurring economic growth and the development of locally based firms' ability to scale and effectively compete against non-native, larger state, national, or international firms, thereby supporting the jurisdiction's

interest in growing its own local economy. M³ Consulting is aware that a local business preference approach is unavailable to the COK because of Tennessee AG Opinion No. 13-92, which opines that - a municipal policy that gives a preference to local businesses bidding on municipal contracts would violate the competitive bidding provisions of Tenn. Code Ann. § 6-56-304. As a result of the conflict, a municipality would not have the authority to adopt such a policy.

B.3. Disadvantaged Business Enterprise/Socioeconomic Enterprises

Depending on the definition utilized for Disadvantaged Business Enterprises (DBE) --- the federal definition is different from COK’s use of the term *Diversity Business Enterprises* (DBE) to collectively refer to its’ Small, Minority, and Women-owned business community (SWMBEs) --- these programs, if inclusive of socioeconomically disadvantaged Non-SMWBES, will be considered race- and gender-neutral. Additionally, these programs can establish small business goals as a means of meeting its federal DBE goals. To the extent that the COK pursues any federal grant funding to support its projects and procurements, often times the grant funds include DBE participation requirements that must be met and reported back to the granting agency. M³ Consulting recommends that the COK make it a practice to include any diversity attainment achieved while utilizing federal grant funds into its contractor/vendor diversity inclusion dashboard reporting.

B.4. “Other Protected Class” Inclusion Programs In Public Contracting

Should the COK desire to contemplate the conscious inclusion of goals for other protected class contracting groups or vendors, the city must first put in the infrastructure required to quantify the volume and availability of these groups before commissioning an analysis that would result in establishing specific conscious inclusion goals for the groups. This would also entail identifying, vetting, and accepting certifications from accredited certifying bodies for the groups being contemplated.⁴ Examples of programs for other protected class groups include:

- **Veteran/Service-Disabled Veteran Enterprise Programs**—Establishes goals, bid preferences, points, sheltered markets and/or set-asides targeted to veterans or service-disabled veteran programs, which are not members of a protected class subject to strict scrutiny.
- **Disabled Person Business Enterprise Programs**—Establishes goals, bid preferences, points, sheltered markets and/or set-asides targeted to disabled business owners, which are not members of a protected class subject to strict scrutiny.
- **Lesbian, Gay, Bisexual, Transgender, Questioning (LGBTQ) Business Enterprise Programs**—Establishes goals, bid preferences, points, sheltered markets and/or set-asides targeted to LGBTQ Businesses, which are not members of a protected class subject to strict scrutiny.

B.5. Good Faith Efforts

Good Faith Efforts (GFEs) are defined as activities and actions that are required by a bidding business to demonstrate its efforts to remove barriers to DBEs to participate in the bidding business’s procurement and

⁴ Tennessee Pride Chamber; The National LGBT Chamber of Commerce; and the Knoxville local chapter of the Small Business Administration.

contracting opportunity responses. It is important to note that good faith efforts are also applicable to a business's employment opportunities as well. Examples of contracting-related good faith efforts include but are not limited to:

- **Pre-bid meetings**—Prime level bidders should attend and invite solicited subcontractors (including DBE subcontractors) to applicable pre-bid meetings or matchmaking sessions.
- **Identification of subcontracting opportunities**—Prime bidders must engage a process to identify work categories for subcontracting opportunities and identify certified and capable DBEs within these work categories; bidder must document its efforts.
- **Advertisement**—Prime bidders must advertise subcontracting opportunities no less than 21 days prior to bid opening date, public entity's bid schedule permitting. Advertisements must be placed in daily or weekly minority or women focused trade organization newspapers, publications, or other media.
- **Direct Communications with DBE Firms**—Prime bidders will email or mail registered or certified letters no less than 21 days before bid opening to no less than 10 (or 100% of those available) DBEs capable of performing the identified work categories with which the bidder is willing to subcontract. Email blasts are commonly utilized to fulfill this requirement.
- **Follow-up of initial solicitation**—A prime bidder's Trade Responsible Engineer (TRE) or other representative with knowledge of the project will follow up with DBEs within 10 days of the initial outreach contact attempt and ensure that proper documentation of the follow-up(s) are maintained.
- **Responses from interested DBEs**—Bidder must maintain an appropriate record of responses.
- **Prime bidder evaluation of interested DBEs**—Each prime bidder will submit documentation of its evaluation of bids or proposals received.

B.6. Non-discrimination program

The purpose of a non-discrimination program is to ensure that contractors do not discriminate in the award of subcontracts based on race, national origin, color, ethnicity or gender. Under a nondiscrimination program, elements may include, but are not limited to, the following:

- A mechanism for determining whether bidders have included sub-bidders at anticipated availability targets, and if not, determining if the provided rationale for the short fall is acceptable.
- Requiring clearly documented evidence of good faith efforts.
- Reviewing, spot auditing, and/or investigating bids to determine whether any discrimination has occurred.

12.3.3 Diverse Supplier Program Recommendations

In Chapter 3, Procurement Analysis, M³ Consulting outlined the Six Elements of an SMWBE program. We also reviewed the COK’s DBE program against these six elements. Based on the model and the procurement findings, M³ Consulting recommends the following:

Table 12.4. M³ Consulting’s Six Essential SMWBE and SBE Program Elements	
1. Outreach and Matchmaking	Increase efforts to raise the business community’s awareness of COK’s procurement and contract opportunities via periodic targeted outreach events and host match making sessions with DBEs and larger Primes around specific contracting opportunities.
2. Certification	The COK Contracts manager is responsible for tracking and documenting all required clauses, qualifications, certifications. COK does not administer its own business certification process for DBE firms. Instead, the COK allows for self-certification of DBE status or accepts certification from a number of other certifying agencies. The COK must highlight the connection between being certified and gaining participation in COK contracting opportunities.
3. Technical Assistance	Formally strengthen relationships with COK area Management, Financial, Technical Assistance (MFTA) providers to pave the way for informational and formal strategic support of businesses to specifically meet the COK’s DBE inclusion plan objectives.
4. DBE Inclusion in Bid Opportunities	Empower the SBDO Manager and the SBDO Office to ensure that material consideration of DBE participation is given in the award of each applicable contracting opportunity.
5. Contract Compliance	Empower the SBDO Manager and the SBDO Office to ensure adherence to DBE plan goals on all applicable contracts after execution of the contract. Consider the advent of real-time contract monitoring tools and regular i.e., monthly, attainment reporting from departments to the SBDO office.
6. Organizational Performance Evaluation	Institute a mechanism for comparison of performance results to the COK’s goals to determine policy successes, strengths and weaknesses, and performance improvement areas. Consider adding a diversity and inclusion Key Performance Indicator (KPI) metric to appropriate staff’s form performance review process. This KPI would not be used in consideration of continued employment, but rather as a tool to assist in inclusion strategy development.

Source: M³ Consulting

A. Outreach and Matchmaking

A.1 Outreach

As reported in the Availability Analysis, sometimes, there is a significant difference, in terms of numbers and sometimes percentages, between potential availability and actual availability (RWASM). Additionally, 47.46% of the COK's contracts had only one bidder while 74.39% of contracts had three or less bidders. As noted in the Statistical Methodology, potential available firms may not desire or be interested in providing goods or services to the COK.

As highlighted in the report, the COK's relevant market is defined as the area where 70% to 75% of the vendors the COK utilized during the study period are located. The relevant market for all procurement types was consistent with expectations except for Non-Professional Services, which fell nationwide. M³ Consulting recommends that the COK focus its outreach efforts on expanding vendor and bidder pools. This should include firms within the Knoxville, TN MSA from sources such as other agency certified lists, business license data and Data Axle lists that reflect potential availability. These firms would have to meet the certification requirements of COK's acceptable Certifying bodies to be counted toward any of the COK's goal-based program targets. Furthermore, the inclusive outreach should pay special attention to ensuring that firms capable of bidding on informal contracts, small contracts or any sheltered market opportunities, are included in the vendor/bidder pool.

A.2 Matchmaking

Matchmaking is fundamental to a successful inclusive procurement program, whether race and gender-conscious or race and gender-neutral. Essential to matchmaking is giving advance notice of the universe (pipeline) of upcoming contracting opportunities, as determined during forecasting, budgeting and scheduling. This advance notice must occur well in advance of solicitation advertisement.

Currently, the COK has implemented an annual Business Opportunity Breakfast, participates in the East Tennessee Purchasing Association (ETPA) Annual Business Matching & Tradeshow, hosts an Annual Diversity Business Enterprise Awards Ceremony, and is slated to facilitate a future Diversity Business Expo in the upcoming fiscal year. M³ Consulting cautions that while hosting or participating in other entities' matchmaking programs, COK must ensure that its' matchmaking content is specifically tailored to the dynamics of COK's particular procurement operation. Failure to do so will result in the COK vendor community failing to connect the matchmaking sessions to specific COK contracting opportunities. M³ Consulting emphasizes that matchmaking sessions are not for the purpose of steering particular vendors to a buyer or particular subconsultants to a Prime Vendor.

COK's Purchasing and SBDO Office personnel will be required to grow a detailed awareness of the capabilities of the pool of certified COK DBEs to fully maximize any matchmaking process. The COK can craft matchmaking sessions that target the inclusion of only DBEs, Non-DBEs, or both. Effective matching sessions should include the following:

- Coordinate matchmaking sessions with construction schedules and plans, forecast release and/or solicitation schedule, and hold session as early as possible. Matchmaking sessions can also be utilized to identify available firms for projects in planning stages. While not called matching sessions, the federal government often allows vendors to provide qualification information in pre-bid research to determine the level of competitiveness it can expect once the bid is let.
- Focus on specific commodity areas in the procurement categories, allowing vendors specializing in specific goods and services to have the opportunity to meet with buyers responsible for those commodities.
- COK purchasing agents and contract specialists should have procurement projections such that they can discuss specific upcoming opportunities and the requirements and procurement mechanisms that will be utilized to procure the contract, good, or service. This specificity is the key factor that distinguishes matchmaking sessions from outreach and vendor fairs.
- Identify informal and formal opportunities during the matching session so that vendors can determine where they have the greatest likelihood of successfully marketing to the COK.

Subcontractor Matchmaking

Matchmaking takes on a team-building dynamic at the subcontractor level. Prime contractors/consultants can use matchmaking sessions to identify potential DBEs team members for inclusion on upcoming opportunities that will be procured by the COK. To be most effective, the COK SBDO Office personnel will be required to increase their understanding of the capabilities of certified DBE firms. The SBDO Office also needs to collaboratively work with MFTA providers to enhance business development skills within the certified vendor community. Any matchmaking session involving prime bidders and potential subcontractors should focus on a particular project opportunity. It is critical for success that matchmaking sessions occur as early in the planning process as possible.

In addition to establishing matchmaking initiatives planned around budgets and forecasts, the COK should consider the legality of determining responsiveness by considering matchmaking efforts as an indication of good faith under the COK's DBE inclusion initiatives. As a general illustration, anecdotal interviews across various jurisdictions suggest that, while prime vendors attend city sponsored matchmaking sessions, prime vendors often do not communicate with or make themselves available to Small, Minority, and Women-owned firms after the sessions, thus opportunities for these groups do not often materialize.

A.3 Availability and Capacity Building Initiatives

To increase availability of DBEs, the COK should consider efforts aimed at increasing the pipeline of available firms. DBEs can face discriminatory or exclusive practices in the general marketplace - aside from their pursuits of municipal opportunities - that inhibit their growth and development and thus their capacity. The COK should mitigate against practices that are not promoting growth but rather encourage inclusion in its procurement and contracting opportunities. The recommendations in this section are focused on how the COK can utilize both its resources and opportunities to contribute to the growth and development of DBEs, in addition to increasing the number of contract awards.

Impact of Prequalification and Certification on Availability Pipeline

As a general observation, pre-qualification processes can be exclusive and limit the number of available firms. This can cause problems when a municipality is seeking to maximize its ability to identify SMWBEs to compete at the prime level in Construction opportunities. As such, in Construction, prequalification can be a contributory factor to low DBE attainment at the prime contractor level. This generally results in higher levels of DBE participation at the subcontractor level. The contract awards data analyzed during the study period for the COK indicates DBE participation deficits at both the prime and subcontractor levels. Except for Non-Professional Services, MBE utilization does not reach 5%. Other observations included that total MBE utilization in A&E, Construction and Professional Services is below 1%, and at 2.69% for Goods & Supplies. SBE utilization is more substantial than total MWBE utilization except in Non-Professional Services where they are almost equal.

Although, the COK rarely utilizes prequalification, certification and pre-qualification requirements can deter DBEs from even attempting to do business with a municipality. When pre-qualification is a necessary part of the COK procurement processes, the SBDO Office should work to ensure that pre-qualification and certification processes are not counter-productive to promoting inclusion. M³ Consulting supports this effort by providing the master directory of DBE firms compiled for the study. While all the firms appearing on the lists may not meet the RWASM standard, the firms on these lists represent a starting point for the curation of the COK's pipeline of available firms.

Before proceeding to other initiatives, the SBDO office should:

- Review the compiled list of community organizations, Chambers of Commerce and Management and Technical Assistance (MFTA) providers in the study to determine whether the list is comprehensive. To construct the most exhaustive list of firms, organizations with private membership lists should also be encouraged to participate.
- For vendors/contractors on the provided Master DBE list that are not certified, COK could outreach to them or conduct survey to obtain data on type of goods and services they provide and further gauge their interest in doing business with the COK.
- Create and institute measures of the COK's progress toward increasing the number of certified and prequalified firms.
- For those available firms that do not meet DBE inclusion policy and pre-qualification requirements, work to include as many available firms as possible on the COK vendor registry and in the COK's race- and gender-neutral programs, and then collaborate with MFTA provides to develop targeted race and gender-neutral initiatives aimed to grow these firms' capabilities accordingly.

The Starting Point: Youth Entrepreneurship

Croscon makes it clear that public entities cannot address social discrimination solely through race and gender-conscious remedies. However, the COK is positioned to support local school systems to begin to reshape some of the social dynamics that impact their success.

Entrepreneurship requires a certain skill set that is cultivated over time. Young people with no access to entrepreneurial education and training are less likely to obtain these skill sets on their own. And by the time that these young people may have an opportunity to obtain these skills, they are close to adulthood and well behind young people who have access to parents with entrepreneurial and/or managerial skill sets. As discussed previously in Chapter 8, Capacity Analysis, Fairlie and Robb (2007) found that Black business owners were much less likely than White counterparts to have had a self-employed family-member owner prior to starting their business and are less likely to have worked in that family member’s business. Fairlie and Robb noted that the lack of prior work experience in a family business among Black business owners, perhaps by limiting their acquisition of general and specific business human capital, negatively affects Black business outcomes.⁵

Efforts can include:

- Youth entrepreneurship and financial literacy programs.
- Mentorship and apprenticeship programs with the COK vendors/contractors/consultants.
- Targeted entrepreneurship career tracks—with emphasis on exposure to entrepreneurs, as opposed to large corporations—in conjunction with local technical colleges.
- Expanded access to entrepreneurship and financial literacy programs to students’ parents/family members.

M³ Consulting recommends that the COK work collaboratively with Knoxville City Schools to cultivate and promote opportunities to create businesses that link to City of Knoxville’s procurement needs.

B. Certification

Augment Certification Efforts to Further Identify Qualified Firms

The COK currently does not administer its own certification process. Moreover, many of the firms that are familiar with the processes for the certifying bodies that the COK accepts and opt to pursue the certificate indicate that they struggle to see the linkage between obtaining the certification and successfully securing contracting opportunities.

Certification of firms as minority- or woman-owned is part of narrow tailoring, designed to ensure that only firms discriminated against have access to race/gender conscious goal-based remedies. Because of a few non-DBEs that have attempted to illegally access these programs, over time, the certification application process has become increasingly burdensome to the DBEs that public entities are trying to reach. As a result, the certification process is increasingly seen as a bar that Minority and Women-owned Businesses should reach to gain access to these race- and gender-conscious “benefits.” Goals are a remedy, not a benefit. This framing of goals and how the

⁵ See Chapter 8, Capacity and Regression Analysis, p. 8–65. Knoxville, working with local school systems, is in an invaluable position to impact values, behaviors and attitudes toward discrimination and bias and to cultivate a culture of entrepreneurship. By inculcating students early, it allows minority and women communities to expand their social capital and the Knoxville community to begin the change the narrative of the historical, social and economic factors that have ultimately stunted the natural growth and development of minority and women entrepreneurs.

certification process supports the “remedy” should be included in the COK’s training protocols. Furthermore, a burdensome certification process can reduce the number of *available* MWBEs.

As a matter of practice, when the COK staff and prime vendors search for available Minority and Women-owned businesses, they should have the benefit of the largest pool of MWBEs that are available. Firms that may be capable of executing the work, may not be considered because they cannot be *counted* toward goal attainment. The SBDO Office should work collaboratively with MFTA providers and others, to provide the vendor community with resources to assist with preparing for and navigating the processes for COK’s accepted certifying bodies.⁶

C. Technical Assistance

Management, Financial, and Technical Assistance providers (MFTA) providers can support DBEs in increasing their capacity, obtaining critically needed financial assistance, networking and even responding to the COK’s procurement and contracting opportunities. The COK’s SBDO Office should establish or strengthen relationships with the 27 identified organizations servicing the Knoxville, Greater Knoxville, and East Tennessee Region. The MFTA providers identified during this study effort are providing services ranging from business planning, loans, networking, mentorship, and outreach. When collaborating with the providers, COK can share the educational and preparation responsibility to the community and cover many aspects of preparing the COK vendor community to be competitive. This will enhance their prospect of winning or participating on COK contracting opportunities.

M³ Consulting offers additional technical assistance initiatives for COK’s consideration below:

C.1. Bonding Assistance

Four approaches may be taken to remove the barriers that bonding requirements sometimes can represent. *The efficacy of these programs must be reviewed considering bonding requirements from the State of Tennessee* wherein Tennessee Code §12-4-207 holds that all contractors performing contracts for public works in the state must be secured by a surety bond guaranteeing payment for all materials and labor provided. M³ Consulting was asked to do a brief comparison as part of our efforts and discovered that unlike other states such as Alabama, where a performance and payment bond is required only on contracts at \$50,000 or above, Oregon, where the state may waive the bond requirements on contracts for its public works not in excess of \$200,000, or Washington, where performance and payment bonds may be waived for projects under \$50,000 using a limited public works process, no exception is made for COK contracts.

M³ Consulting’s offers recommendations for consideration regarding bonding assistance as detailed here:

- **Waiving bonding requirements**—While bonding may be required by local, state or federal statute in particular instances, all governmental entities have some latitude in requiring a bond in the first place. Typically, small dollar-value contracts are not required to have bonds. M³ Consulting recommends COK perform an honest assessment of the actual risk involved to the project owner before deciding to always

⁶ TDOT, Tennessee Governor’s Office of Diversity, Small Business Administration, National Business Supplier Development Council, Women’s Business Enterprise National Council, or Tristate Minority Supplier Development Council

require a bond on every job. Bid bonds, when required, are due with submittal of the bid and often present a barrier to inclusion for DBE firms.

- **Removing or discouraging bonding stipulations at subcontract level**—Typically, on larger construction jobs, the jurisdiction requires bonds of the prime contractor. This means that the total job is bonded. The practice of prime contractors requiring bonds from subcontractors should be discouraged. The COK may consider developing a policy that does not permit a prime’s requirement of a subcontractor to bond their work scope. To mitigate exposure to the prime, the COK and the awarded prime contractor must be willing to undertake special activities to monitor subcontractors’ performance and lend technical assistance to abate loss/claim potential. The COK should review its processes to ensure that its bonding policy is appropriate for the given opportunity and is administered in a manner that is fair to all.
- **Reducing bonding**—Rather than requiring a 100% payment and performance bond, consideration also can be given to reducing the dollar coverage of the bond. A 50% bond, for example, can be required, thus reducing the size and cost of bonding. In this way, a company’s bonding capacity is not reached so quickly, and bonding is made more affordable.
- **Phased bonding**—This technique can be used in instances where bonding cannot be waived but where there are limitations of the low bidder to obtain a full bond. For example, the COK can divide the job into phases, each requiring a separate notice to proceed. The successful bidder is then required to obtain a bond for each phase. Upon completion of the first phase of the work, the bond is released, and the contractor is required to provide a second bond in a like amount. This process is then repeated through the completion of the project. This approach can accommodate a DBE firm that might not otherwise qualify. The COK is still protected from risks, and the contractor builds a track record of completing work under multiple bonds, thereby building bonding capacity and lowering the cost of bonding. (Note that on local government construction contracts where State law requires 100% payment and performance bonds, the amount of these bonds cannot be reduced.)

In addition to the above, several governmental bodies have worked with local banking and other financial institutions to create bonding programs underwritten by the local government. A key to the programs’ success is establishing a contractor performance monitoring function to provide early warning of any problems encountered. The monitors are empowered to mobilize necessary assistance to ensure completion of the work and to minimize financial and other risk to the underwriter.

C.2. Owner Controlled Insurance Programs (OCIP) Wrap-Up Insurance

This represents an approach to affording all contractors the necessary insurance to perform public work, while guaranteeing a project owner that needed insurance coverage is in place in all critical areas of contracting. Under an OCIP insurance plan, the COK would establish a subsidiary organization, usually made up of a consortium of insurance brokers. Insurers are normally eager to compete for this business and will offer competitive rates to secure it. The arrangement also represents an excellent opportunity to involve DBEs in this business. Once in place, the owner offers blanket insurance coverage to all contractors through the wrap-up program.

C.3. Working Capital Loan Programs

The tenets of a well-structured working capital loan program allow a public entity to leverage its contracting activity with DBEs to secure bids from banks to provide those DBEs with working capital loans against their awarded contract. Vendors pointed to capital and cash flow as a major inhibitor to pursuing COK opportunities and promoting further growth of their businesses. M³ Consulting recommends that the COK form partnerships with, market, and promote its partnerships with any contractor funding providers.

C.4. Prompt Payment Programs

Prompt payment programs provide a framework for the timing of payments to SMWBEs by both the COK and its prime contractors. The time frame is usually a short period (i.e., 7–30 days) after receipt of invoice. For the prime contractor, the period begins when it receives payment from the public entity. When jurisdictions enact prompt pay provisions there is typically oversight to regulate the timely payment of contractors and subcontractors. These provisions help small businesses by ensuring that they receive payment for their work within a reasonable time frame. Some programs go a step further by assessing penalties to prime contractors for late or non-payment. Prompt pay provisions also protect small businesses from unfair contract clauses that make payment contingent on factors beyond their control.

D. SMWBE Inclusion in Bid Opportunities

D.1 COK's DBE Program Addressing Requirements of Capital Improvement Projects (CIP) Solicitations

As The COK's DBE Inclusion policy provides that SBDO Office establishing the COK's Goals for MBE, WBE and SBE firm inclusion. All certified participating firms are counted toward a total aspirational goal of 10%. Developing project-based MWBE and SBE goals for large capital improvement/development projects requires an understanding of planning, budgeting, and scheduling opportunities available on Construction projects. To facilitate opportunity identification and goal setting, M³ Consulting developed the Seven Phases of a Development ProjectSM that can guide the COK's SBDO Office to meet its planning, procurement and DBE needs across the life cycle of large development projects.

The Seven Phases of a Development ProjectSM, along with possible opportunities (list intended to provide examples, not be exhaustive) at each stage are:

- **Planning**—Opportunities exist in the acquisition of right-of-way, acquisition of property, legal services, environmental studies, land use studies, geotechnical studies and feasibility studies. The SBDO office should facilitate outreach to the various businesses with NAICS codes for these types of services.
- **Financing**—Opportunities may include investment banking, lobbyists, grant proposers and legal services.
- **Designing**—Design services include architectural, surveying, geothermal/geotechnical and related testing, engineering services, with other additional services that may be required such as environmental services.

Design services may also include the development of a bulk purchasing plan. Construction Management services would also be included here.

- **Constructing**—These services include prime contractor/subcontractor activities, including general contractors, tradesmen and soil testing.
- **Equipping Furniture, Fixtures and Equipment (FF&E)**—Involves engagement of firms that execute the furnishing of offices, facilities and buildings.
- **Maintaining**—Involves the maintenance of equipment, facilities, and buildings.
- **Operating**—Covers the provision of those services that contribute to the overall continued function of the facility and buildings.

When DBE participation is viewed within the construct of the phases of a development project, unbundling becomes a natural part of the project planning process.

D.2 Promoting DBE Participation at the Prime Contractor Level

The responsibility for DBE participation is shared by *both* the COK and its prime vendors. The COK should take steps to ensure that DBEs are involved in COK procurement opportunities at the prime level. Based on PO data, below the formal procurement threshold of \$25,000 where capacity is not an issue, the COK had prime MBE participation levels of less than 6%. The only exception to this was in Non-Professional Services where MBE participation was at 12.27%, driven mainly by Asian American-owned firms at 9.71%. WBEs fared slightly better with participations levels ranging from 4.54% in Non-Professional Services to 15.69% in Construction and Construction-Related Services.

M³ Consulting recommends the following for consideration as efforts the COK can undertake:

- Identify prime-level procurement opportunities where a significant pool of DBEs are available based on the NAISC code of the dominant trade area in the procurement;
- Establish prime-level participation targets to ensure that the COK is focused on securing participation at the prime level, as well as subcontracting level;
- Improve procurement forecasting to allow for inclusive planning, matchmaking and outreach well ahead of Solicitation advertisement;
- Utilize race and gender-conscious initiatives, such as goals, evaluation factors, joint venture incentives, price preferences, and targeted solicitation for the impacted groups where an inference of discrimination was identified.
- Consider the utilization of Small/Micro Business and sheltered market opportunities, where the availability of these firms supports doing so;
- Provide advance notice of specific small business opportunities the Knoxville vendor community (below the COK's formal procurement threshold of \$25,000) and ensure that DBEs are included in pool of firms being solicited;

- Consistently review pool of DBEs sub-bidders and subcontractors to determine those that have done a significant level of subcontracting with the COK and/or other public agencies, thereby building a track record to support prime level awards;
- Seek opportunities to unbundle larger contracts into smaller commercially viable contracting opportunities, where feasible and practicable;
- Consider the use of joint ventures on applicable contracting opportunities.
- Develop and encourage mentor/protégé program opportunities and recognize prime opportunities for distributors;
- Review and revise all technical specifications to exclude proprietary language that discourages DBEs from bidding; and,
- Develop evaluation mechanisms for measuring the COK's staff's efforts toward DBE participation in the COK's contracting opportunities. This evaluation should extend across the COK enterprise.

D.3 Increase Small Business Set-Asides and Sheltered Market Projects

The recommendations below will assist the COK in increasing the success of its small business inclusion initiatives. The COK should:

- Consistently establish SBE goals, small business set-asides and sheltered market projects; and keep the separate from the administration of any race/gender conscious efforts.
- Frequently forecast and deliver lists of anticipated small business procurement opportunities to the Knoxville vendor community.
- Provide notice of small business opportunities on its website;
- Allow for online submission of quotes and bids/proposals; and provide system navigation assistance to smaller firms as applicable.
- Work collaboratively with and provide incentive to (where allowable) prime vendors to refer small businesses capable of performing small prime-contracting opportunities.

D.4 Joint Ventures, Mentor-Protégé Programs and Distributorships

The COK should develop specific procedures for verifying, counting and tracking the participation of DBEs in:

- Joint Ventures;
- Mentor-Protégé; and
- Distributorships.

The SBDO Office should review and sign off on any teaming arrangements where the awarded team anticipates receiving DBEs participation credit. The COK may look to Federal Aviation Administration (FAA) advisory documents available online for guidance.

E. Contract Compliance

COK's Procurement manual and staff feedback demonstrate that many (not all) of the tasks traditionally associated with contract compliance fall within the purview of the COK Contracts Manager. Other compliance tasks are assigned to various departmental project managers and contract administrators. Post award contract administration and compliance involves maximizing and monitoring performance to ensure that all contractual obligations are met. The best practices of post award contract management are to ensure that the contract is being executed in accordance with the terms and conditions. Effective post award contract management is crucial in achieving the planned outcomes, managing costs, and maintaining positive relationships between a municipality and the vendor awardee throughout the contract period. The COK procurement and contract administration documents detail contracts workflow from conception to Notice to Proceed (NTP) but lacked some critical detail for day-to-day post-award administrative procedures. Staff feedback acknowledges opportunities for improvement regarding keeping up with change orders and insurance renewals. Staff is also hopeful that the advent of a new contract management system will enhance COK's ability to execute a truer form of contract compliance and tracking.

Timely notice of contract award must be communicated to the COK's SBDO Office. With respect to day-to-day post-award contract administration, individual departments have no formal requirement to regularly report DBE activity up to the SBDO Office. Additionally, M³ Consulting found no procedural documents that detailed specific formal processes for monitoring a vendor's progress or performance through the life of a contract. However, we did note that the provided Procurement Manual states that the COK is under no obligation to have notified businesses of poor past performance prior to receiving their bids, quotes, or proposals for new opportunities. However, the Purchasing Agent must document such rationale, based on departmental input, and must include this rationale in the bid, quote, or proposal file.

M³ Consulting outlined issues contributing to the COK's inability to effectively monitor and track bid/proposal/qualifications, award, and payment data thereby ensuring that vendors are complying with stated DBE objectives. The COK should always be able to determine that the procurement and contracting decision-making is executed in a non-discriminatory manner. It is useful to consider RWASM tracking from the vantagepoint of data supporting applicant flow and compliance reporting:

Table 12.5. EEO Applicant Flow	RWASM and Disparity Analysis Equivalent
Labor Force	Potential Availability from Data Axle Firms, Firms Receiving Business License, certified SMWBE firms, non-certified SMWBE firms, trade organization membership; yellow pages
Potential Applicants	Registered Vendors, Plan Holders, Prequalified Vendors
Actual Applicants	Bidders and Sub-bidders (inclusive of quotes)
Actual Hires	Awardees and Payees
Actual Promotions	Difference between prime and subcontracting opportunities; vendor performance
Actual Terminations	Contract terminations, for convenience and for cause; substitutions

Source: M³ Consulting

In annual reporting on the achievement of DBE efforts to the Mayor and City Council, DBE attainment reports should seek to include the degree to which the COK’s efforts have:

- Promoted and strengthened economic prosperity in Knoxville and the Knoxville, TN MSA;
- Enhanced competition;
- Expanded business capacity; and
- Removed barriers and reduced or eliminated disparities.

F. Organizational Performance Evaluation - Assess Performance of Personnel with Buying Authority

At the end of the day, increasing DBE participation in the COK is largely determined by the COK personnel making *the buy decision*. The COK should be able to track the performance of individuals with buying authority to determine the degree to which they are making inclusive procurement decisions, such as measuring the effort by buyers in contacting certified RWASM vendors, as well as any effort to identify new vendor sources. An individual with buying authority’s track record should be considered as a performance metric in annual or semi-annual performance evaluations to leverage strategies and techniques aimed at increasing DBE participation, not as a measure impacting employment.

12.4 SUMMARY OF FINDINGS

In summary, M³ Consulting, Inc. conducted the COK Disparity Study with the focus of evaluating the availability and utilization of Small, Minority, and Woman-Owned Business Enterprises (SMWBEs) in the city's contracting opportunities. M³ Consulting considered an acknowledged COK's reference to their diverse-owned business community as Diversity Business Enterprises (DBEs) and included a concentration on identifying barriers that impact COK's DBEs. Our comprehensive analysis of the environment faced by DBEs attempting to do business with, and in the COK, found that DBEs are statistically significantly underutilized in specific procurement areas of the COK's contracting opportunities resulting in disparities in the utilization of DBEs.

The statistical findings detailed in the final report indicate that within some procurement types, there is significant disparity between the availability of Diversity Business Enterprises (DBEs) and their utilization in Knoxville's contracting opportunities. The study finds that MWBEs are underutilized in the construction and professional services industries, with MWBEs receiving a lower percentage of contract dollars than their availability would suggest. For example, in the construction industry, MWBEs received only 1.91% of contract dollars, despite representing 22.49% of available firms. Similarly, in the professional services industry, MWBEs received only 5.73% of contract dollars, despite representing 23.40% of available firms. The study also found that anecdotally, the COK vendor community perceives a lack of transparency in the contracting process, which may contribute to the underutilization of DBEs. In illustration, the study found that the way in which the COK tracks the utilization of DBEs and reports out on attainment makes it difficult to truly determine whether prime contractors are meeting DBE participation goals. The study also found that there is a lack of communication between the City of Knoxville and DBEs, which may prevent these firms from competing for and winning contracts.

M³ Consulting's recommendations, for consideration by the COK, intend to assist the COK in its endeavors to increase the utilization of DBEs in its contracting opportunities. The recommendations can be grouped into four (4) broad categories and consist of options from which the COK may select in narrow tailoring its efforts in response to the findings of this report:

- 1) Policy Recommendations
- 2) Practice-Related Recommendations
- 3) Organizational Recommendations
- 4) Anecdotal Feedback-Related Recommendations

M³ Consulting's exhaustive list of recommendations are contained within the body of the final study report. However, some key recommendations are highlighted here in summary. The Policy Recommendations include efforts by COK to increase awareness and usage of the shareable vendor list readily accessible to internal and external stakeholders and the implementation of additional policy measures to increase vendor awareness of upcoming opportunities. It was noted that opportunity areas are available to have grant fund recipients to share in the responsibility of inclusion. M³ Consulting recommends the COK, where possible, should implement its DBE program with the recipients of grants to increase participation of MWBEs. Additionally, M³ Consulting's policy

recommendations include considerations for the simplification of procurement/contract specifications and terms to increase opportunities for participation by DBEs and the introduction of guard rails for adherence to procurement policies to ensure the enacted polities are upheld.

Organizational and Procurement Practice Recommendations include increasing transparency in the procurement process and considering the incorporation of some the race/gender-conscious goal attainment efforts in the procurement types identified in the Study. The recommendations for targeted initiatives include consideration of mentor-protégé initiatives where feasible, separate activities designed to support small business incubation, including the establishment/maintenance of a separate SBE certified vendor list, SBE sheltered market considerations, and actively working to increase the number of the COK's certified vendor MBE and WBE databases -- making all vendor lists available to both internal and external stakeholders. Additionally, the COK should formalize and memorialize relationships with MFTA providers with an emphasis on assistance to DBEs, implement a standard practice to include the addition of a check list for vendor solicitations, and create formalized documentation process for evaluating contractor performance. The COK Vendor community indicated that it would be useful to have a comment box to submit questions on a rolling basis. The COK would need to ensure that consistent checks are in place to ensure responses are given in a timely manner. It would also be critical for the COK to leverage relationships with Management, Financial and Technical providers to include round table discussions to recognize trends, document and promote best practices.

M³ Consulting has found that the COK's purchasing activities suggest that DBEs continue to have some difficulties obtaining significant contracts with the COK. In submitting specific findings within the Disparity Study, M³ Consulting formulated recommendations that allow the COK to rely upon race and gender-conscious means - when necessary - to address ongoing hindrances and work to eliminate disparities. Concurrently, COK should also address DBE participation through race and gender-neutral efforts. The economic and statistical analyses contained within the body of the study should serve as part of the policy and procedure-making decisions. This would ensure enhanced and legally defensible SMWBE participation in the COK's purchasing processes.



CITY OF KNOXVILLE

City of Knoxville Disparity Study Volume II

October 27, 2023

Prepared by:
Miller³ Consulting, Inc.
260 Peachtree Street, Suite 501
Atlanta, GA 30303
Contact: Dave J. Miller, Jr.
Telephone Number 404-827-9019
www.miller3group.com

KNOXVILLE STATISTICAL TABLES

A.1: TOTAL UTILIZATION COUNTS	A-3
A.2: UTILIZATION BY PROCUREMENT TYPE BY YEAR	A-6
2.1 CONTRACT AWARDS	A-6
2.2 PURCHASE ORDERS	A-16
2.3 PAYMENTS	A-22
A.3 PURCHASE ORDER THRESHOLDS COUNTS	A-31
A.4 PURCHASE ORDERS EXCLUSIVE OF OUTLIERS	A-41
A.5 PUMS ANALYSIS	A-51
A.6 P-CARDS	A-55

APPENDIX A



A.1 Total Utilization Counts

**Table A.1. Total Utilization
Contract Awards— Counts
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Architecture & Engineering		Construction and Construction- Related Services		Professional Services		Non-Professional Services		Goods & Supplies		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	34	51.52	104	43.15	90	70.31	218	51.42	215	55.99	661	53.18
African American	-	0.00	4	1.66	1	0.78	25	5.90	3	0.78	33	2.65
Asian American	-	0.00	-	0.00	-	0.00	11	2.59	6	1.56	17	1.37
Hispanic American	-	0.00	-	0.00	-	0.00	6	1.42	3	0.78	9	0.72
Native American	-	0.00	1	0.41	-	0.00	7	1.65	5	1.30	13	1.05
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	1	0.26	1	0.08
<i>Total Minority</i>	-	<i>0.00</i>	<i>5</i>	<i>2.07</i>	<i>1</i>	<i>0.78</i>	<i>49</i>	<i>11.56</i>	<i>18</i>	<i>4.69</i>	<i>73</i>	<i>5.87</i>
WBEs	5	7.58	29	12.03	7	5.47	33	7.78	39	10.16	113	9.09
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	5	7.58	34	14.11	8	6.25	82	19.34	57	14.84	186	14.96
SBE	27	40.91	101	41.91	30	23.44	124	29.25	104	27.08	386	31.05
SDV/VOBE	-	0.00	2	0.83	-	0.00	-	0.00	8	2.08	10	0.80
Grand Total	66	100.00	241	100.00	128	100.00	424	100.00	384	100.00	1,243	100.00

Source: COK Contracts Data, M³ Consulting

APPENDIX A



**Table A.2. Total Utilization
Purchase Orders—Counts
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Architecture & Engineering		Construction and Construction- Related Services		Professional Services		Non-Professional Services		Goods & Supplies		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	44	54.32	74	51.03	148	51.57	712	69.87	1,581	72.13	2,559	68.72
African American	-	0.00	2	1.38	2	0.70	17	1.67	4	0.18	25	0.67
Asian American	-	0.00	-	0.00	2	0.70	116	11.38	183	8.35	301	8.08
Hispanic American	-	0.00	-	0.00	4	1.39	4	0.39	5	0.23	13	0.35
Native American	-	0.00	1	0.69	1	0.35	2	0.20	11	0.50	15	0.40
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	<i>3</i>	<i>2.07</i>	<i>9</i>	<i>3.14</i>	<i>139</i>	<i>13.64</i>	<i>203</i>	<i>9.26</i>	<i>354</i>	<i>9.51</i>
WBEs	5	6.17	9	6.21	33	11.50	36	3.53	105	4.79	188	5.05
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	5	6.17	12	8.28	42	14.63	175	17.17	308	14.05	542	14.55
SBE	32	39.51	59	40.69	96	33.45	113	11.09	285	13.00	585	15.71
SDV/VOBE	-	0.00	-	0.00	1	0.35	19	1.86	18	0.82	1	0.03
Grand Total	81	100.00	145	100.00	287	100.00	1,019	100.00	2,192	100.00	3,724	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.3. Total Utilization
Accounts Payable —Counts
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Architecture & Engineering		Construction and Construction- Related Services		Professional Services		Non- Professional Services		Goods & Supplies		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	1,282	74.10	984	43.29	6,002	48.59	21,809	61.32	71,838	61.39	101,915	60.33
African American	18	1.04	44	1.94	223	1.81	788	2.22	61	0.05	1,134	0.67
Asian American	1	0.06	-	0.00	34	0.28	434	1.22	362	0.31	831	0.49
Hispanic American	-	0.00	-	0.00	270	2.19	187	0.53	3,217	2.75	3,674	2.17
Native American	-	0.00	3	0.13	204	1.65	173	0.49	626	0.53	1,006	0.60
Other MBEs	-	0.00	-	0.00	4	0.03	-	0.00	-	0.00	4	0.00
<i>Total Minority</i>	19	1.10	47	2.07	735	5.95	1,582	4.45	4,266	3.65	6,649	3.93
WBEs	48	2.77	133	5.85	1,393	11.28	3,257	9.16	12,134	10.37	16,965	10.04
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	67	3.87	180	7.92	2,128	17.23	4,839	13.61	16,400	14.02	23,614	13.97
SBE	381	22.02	1,109	48.79	4,167	33.73	8,862	24.92	27,929	23.87	42,448	25.13
SDV/VOBE	-	0.00	-	0.00	56	0.45	56	.16	849	0.73	102	0.06
Grand Total	1,730	100.00	2,273	100.00	12,353	100.00	35,566	100.00	117,016	100.00	168,938	100.00

Source: COK Payments Data, M³ Consulting

APPENDIX A



A.2 Utilization by Procurement Type by Year

A.2.1. Contract Awards

Table A.4. Architecture & Engineering Utilization
Contract Awards—Dollars
City of Knoxville, FY 2017 – FY 2021

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	398,650	21.77	669,700	77.36	518,918	16.60	107,684	28.54	266,720	27.34	1,961,672	27.34
African American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>
WBEs	32,294	1.76	-	0.00	-	0.00	118,200	31.33	9,900	1.01	160,394	2.24
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	32,294	1.76	-	0.00	-	0.00	118,200	31.33	9,900	1.01	60,394	2.24
SBE	1,400,208	76.47	196,025	22.64	2,607,694	83.40	151,445	40.14	698,950	71.65	5,054,322	70.43
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	1,831,152	100.00	865,725	100.00	3,126,612	100.00	377,329	100.00	975,570	100.00	7,176,389	100.00

Source: COK Contracts Data, M³ Consulting

APPENDIX A



**Table A.5. Architecture & Engineering Utilization
Contract Awards —Counts
City of Knoxville, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	5	27.78	7	70.00	5	83.33	2	20.00	1	25.00	20	41.67
African American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
WBEs	2	11.11	-	0.00	-	0.00	2	20.00	1	25.00	5	10.42
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	2	11.11	-	0.00	-	0.00	2	20.00	1	25.00	5	10.42
SBE	11	61.11	3	30.00	1	16.67	6	60.00	2	50.00	23	47.92
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	18	100.00	10	100.00	6	100.00	10	100.00	4	100.00	48	100.00

Source: COK Contracts Data, M³ Consulting

APPENDIX A



**Table A.6. Construction and Construction-Related Services Utilization
Contract Awards —Dollars
Knoxville, TN MSA, FY 2017 – FY 2021**

Race/ Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	17,295,727	58.87	10,045,049	44.90	12,752,232	65.87	10,976,913	50.61	11,625,390	72.09	62,695,312	57.56
African American	-	0.00	-	0.00	49,049	0.25	249,922	1.15	20,033	0.12	319,004	0.29
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	51,450	0.23	-	0.00	-	0.00	-	0.00	51,450	0.05
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	0.00	51,450	0.23	49,049	0.25	249,922	1.15	20,033	0.12	370,454	0.34
WBEs	1,084,194	3.69	-	0.00	-	0.00	543,350	2.50	460,236	2.85	2,087,780	1.92
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	1,084,194	3.69	51,450	0.23	49,049	0.25	793,272	3.66	480,269	2.98	2,458,234	2.26
SBE	11,000,657	37.44	12,274,721	54.87	6,558,597	33.88	9,920,829	45.74	4,021,427	24.94	43,776,230	40.19
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	29,380,578	100.00	22,371,220	100.00	19,359,878	100.00	21,691,014	100.00	16,127,086	100.00	108,929,776	100.00

Source: COK Payments Data, M³ Consulting

APPENDIX A



**Table A.7. Construction and Construction-Related Services Utilization
Contract Awards —Counts
Knoxville, TN MSA, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	12	22.22	11	47.83	9	40.91	10	32.26	12	33.33	54	32.53
African American	-	0.00	-	0.00	1	4.55	2	6.45	1	2.78	4	2.41
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	1	4.35	-	0.00	-	0.00	-	0.00	1	0.60
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	<i>1</i>	<i>4.35</i>	<i>1</i>	<i>4.55</i>	<i>2</i>	<i>6.45</i>	<i>1</i>	<i>2.78</i>	<i>5</i>	<i>3.01</i>
WBEs	6	11.11	-	0.00	-	0.00	6	19.35	10	27.78	22	13.25
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	6	11.11	1	4.35	1	4.55	8	25.81	11	30.56	27	16.27
SBE	36	66.67	11	47.83	12	54.55	13	41.94	13	36.11	85	51.20
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	54	100.00	23	100.00	22	100.00	31	100.00	36	100.00	166	100.00

Source: COK Payments Data, M³ Consulting

APPENDIX A



**Table A.8. Professional Services Utilization
Contract Awards — Dollars
State of Tennessee, FY 2017 – FY 2021**

Race/ Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	3,071,744	93.41	3,319,745	97.03	2,331,743	80.94	1,051,335	89.46	1,037,962	63.43	10,812,529	87.18
African American	-	0.00	-	0.00	-	0.00	36,650	3.12	-	0.00	36,650	0.30
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>36,650</i>	<i>3.12</i>	-	<i>0.00</i>	<i>36,650</i>	<i>0.30</i>
WBEs	-	0.00	-	0.00	32,000	1.11	-	0.00	17,400	1.06	49,400	0.40
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	-	0.00	-	0.00	32,000	1.11	36,650	3.12	17,400	1.06	86,050	0.69
SBE	216,600	6.59	101,755	2.97	516,978	17.95	87,258	7.42	580,918	35.50	1,503,509	12.12
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	3,288,344	100.00	3,421,500	100.00	2,880,721	100.00	1,175,243	100.00	1,636,280	100.00	12,402,088	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.9. Professional Services Utilization
Contract Awards — Count
State of Tennessee, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	10	52.63	11	64.71	10	52.63	8	66.67	5	55.56	44	57.89
African American	-	0.00	-	0.00	-	0.00	1	8.33	-	0.00	1	1.32
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>1</i>	<i>8.33</i>	-	<i>0.00</i>	<i>1</i>	<i>1.32</i>
WBEs	1	5.26	-	0.00	2	10.53	1	8.33	1	11.11	5	6.58
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	1	5.26	-	0.00	2	10.53	2	16.67	1	11.11	6	7.89
SBE	8	42.11	6	35.29	7	36.84	2	16.67	3	33.33	26	34.21
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	19	100.00	17	100.00	19	100.00	12	100.00	9	100.00	76	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.10. Non-Professional Services Utilization
Contract Awards — Dollars
Nationwide, FY 2017 – FY 2021**

Race/ Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	11,027,593	67.82	3,439,166	48.39	4,431,579	45.47	3,153,907	57.71	3,785,190	70.73	25,837,434	58.81
African American	191,709	1.18	206,995	2.91	251,126	2.58	1,303,036	23.84	34,544	0.65	1,987,410	4.52
Asian American	1,128,293	6.94	386,003	5.43	-	0.00	-	0.00	202,794	3.79	1,717,090	3.91
Hispanic American	142,516	0.88	7	0.00	100,000	1.03	20,079	0.37	24,500	0.46	\$287,102	0.65
Native American	63,650	0.39	19,970	0.28	151,000	1.55	-	0.00	-	0.00	\$234,620	0.53
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total Minority	1,526,168	9.39	612,975	8.62	502,126	5.15	1,323,115	24.21	261,838	4.89	4,226,222	9.62
WBEs	242,880	1.49	1,869,500	26.30	2,458,712	25.23	214,519	3.93	198,400	3.71	4,984,012	11.35
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	1,769,049	10.88	2,482,475	34.93	2,960,838	30.38	1,537,634	28.14	460,238	8.60	9,210,234	20.97
SBE	3,464,099	21.30	1,185,827	16.68	2,353,170	24.15	773,255	14.15	1,106,007	20.67	8,882,358	20.22
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	16,260,740	100.00	7,107,468	100.00	9,745,587	100.00	5,464,796	100.00	5,351,435	100.00	43,930,026	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.11. Non-Professional Services Utilization
Contract Awards — Counts
Nationwide, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	90	55.56	40	54.05	34	43.59	28	45.16	26	54.17	218	51.42
African American	12	7.41	4	5.41	3	3.85	5	8.06	1	2.08	25	5.90
Asian American	4	2.47	5	6.76	-	0.00	-	0.00	2	4.17	11	2.59
Hispanic American	2	1.23	1	1.35	1	1.28	1	1.61	1	2.08	6	1.42
Native American	3	1.85	3	4.05	1	1.28	-	0.00	-	0.00	7	1.65
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>21</i>	<i>12.96</i>	<i>13</i>	<i>17.57</i>	<i>5</i>	<i>6.41</i>	<i>6</i>	<i>9.68</i>	<i>4</i>	<i>8.33</i>	<i>49</i>	<i>11.56</i>
WBEs	6	3.70	5	6.76	10	12.82	8	12.90	4	8.33	33	7.78
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	27	16.67	18	24.32	15	19.23	14	22.58	8	16.67	82	19.34
SBE	45	27.78	16	21.62	29	37.18	20	32.26	14	29.17	124	29.25
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	162	100.00	74	100.00	78	100.00	62	100.00	48	100.00	424	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.12. Goods & Supplies Utilization
Contract Awards — Dollars
Nationwide, FY 2017 – FY 2021**

Race/ Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	14,911,387	86.39	4,304,301	77.99	7,121,573	74.36	7,214,582	89.52	7,739,718	80.74	41,291,561	82.58
African American	51,422	0.30	-	0.00	1,624	0.02	-	0.00	6,578	0.07	59,624	0.12
Asian American	970,996	5.63	13,440	0.24	5,385	0.06	-	0.00	-	0.00	989,821	1.98
Hispanic American	-	0.00	8,770	0.16	-	0.00	28,000	0.35	578	0.01	37,348	0.07
Native American	-	0.00	46,339	0.84	151,000	1.58	-	0.00	49,775	0.52	247,114	0.49
Other MBEs	-	0.00	-	0.00	-	0.00	11,233	0.14	-	0.00	11,233	0.02
<i>Total Minority</i>	<i>1,022,418</i>	<i>5.92</i>	<i>68,549</i>	<i>1.24</i>	<i>158,009</i>	<i>1.65</i>	<i>39,233</i>	<i>0.49</i>	<i>56,931</i>	<i>0.59</i>	<i>1,345,139</i>	<i>2.69</i>
WBEs	134,751	0.78	37,144	0.67	37,057	0.39	81,613	1.01	726,310	7.58	1,016,875	2.03
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	1,157,169	6.70	105,693	1.91	195,066	2.04	120,846	1.50	783,241	8.17	2,362,015	4.72
SBE	1,192,104	6.91	1,081,424	19.59	2,260,182	23.60	709,989	8.81	1,019,782	10.64	6,263,480	12.53
VBE/DVOB	-	0.00	27,935	0.51	-	0.00	13,827	0.17	43,445	0.45	85,207	0.17
Grand Total	17,260,660	100.00	5,519,353	100.00	9,576,821	100.00	8,059,244	100.00	9,586,186	100.00	50,002,263	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.13. Goods & Supplies Utilization
Contract Awards — Counts
Nationwide, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	32	66.67	59	55.14	39	52.70	43	55.84	42	53.85	215	55.99
African American	1	2.08	-	0.00	1	1.35	-	0.00	1	1.28	3	0.78
Asian American	2	4.17	3	2.80	1	1.35	-	0.00	-	0.00	6	1.56
Hispanic American	-	0.00	1	0.93	-	0.00	1	1.30	1	1.28	3	0.78
Native American	-	0.00	1	0.93	1	1.35	2	2.60	1	1.28	5	1.30
Other MBEs	-	0.00	-	0.00	-	0.00	1	1.30	-	0.00	1	0.26
<i>Total Minority</i>	<i>3</i>	<i>6.25</i>	<i>5</i>	<i>4.67</i>	<i>3</i>	<i>4.05</i>	<i>4</i>	<i>5.19</i>	<i>3</i>	<i>3.85</i>	<i>18</i>	<i>4.69</i>
WBEs	3	6.25	7	6.54	8	10.81	11	14.29	10	12.82	39	10.16
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	6	12.50	12	11.21	11	14.86	15	19.48	13	16.67	57	14.84
SBE	10	20.83	34	31.78	24	32.43	17	22.08	19	24.36	104	27.08
VBE/DVOB	-	0.00	2	1.87	-	0.00	2	2.60	4	5.13	8	2.08
Grand Total	48	100.00	107	100.00	74	100.00	77	100.00	78	100.00	384	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



A.2.2. Purchase Orders

**Table A.14. Architecture & Engineering Utilization
Purchase Order—Counts
City of Knoxville, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	5	55.56	9	50.00	4	40.00	5	38.46	2	33.33	25	44.64
African American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
WBEs	1	11.11	1	5.56	-	0.00	2	15.38	1	16.67	5	8.93
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	1	11.11	1	5.56	-	0.00	2	15.38	1	16.67	5	8.93
SBE	3	33.33	8	44.44	6	60.00	6	46.15	3	50.00	26	46.43
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	9	100.00	18	100.00	10	100.00	13	100.00	6	100.00	56	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.15. Construction and Construction-Related Services Utilization
Purchase Order —Dollars
Knoxville, TN MSA, FY 2017 – FY 2021**

Race/ Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	8,450,741	67.88	10,011,247	55.36	7,523,357	45.71	10,506,379	76.29	11,518,425	72.08	48,010,148	62.56
African American	-	0.00	-	0.00	54,024	0.33	205,067	1.49	-	0.00	259,091	0.34
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	9,985	0.06	-	0.00	-	0.00	-	0.00	9,985	0.01
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	0.00	9,985	0.06	54,024	0.33	205,067	1.49	-	0.00	269,076	0.35
WBEs	507,142	4.07	1,066,879	5.90	-	0.00	63,442	0.46	237,859	1.49	1,875,322	2.44
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	507,142	4.07	1,076,864	5.95	54,024	0.33	268,509	1.95	237,859	1.49	2,144,398	2.79
SBE	3,492,445	28.05	6,995,526	38.68	8,882,448	53.96	2,997,010	21.76	4,223,693	26.43	26,591,122	34.65
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	12,450,328	100.00	18,083,637	100.00	16,459,829	100.00	13,771,898	100.00	15,979,976	100.00	76,745,669	100.00

Source: COK Payments Data, M³ Consulting

APPENDIX A



**Table A.16. Construction and Construction-Related Services Utilization
Purchase Order —Counts
Knoxville, TN MSA, FY 2017 – FY 2021**

Race/Ethnicity/Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	7	35.00	4	23.53	3	18.75	10	50.00	9	47.37	33	35.87
African American	-	0.00	-	0.00	1	6.25	1	5.00	-	0.00	2	2.17
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	1	5.88	-	0.00	-	0.00	-	0.00	1	1.09
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	<i>1</i>	<i>5.88</i>	<i>1</i>	<i>6.25</i>	<i>1</i>	<i>5.00</i>	-	<i>0.00</i>	<i>3</i>	<i>3.26</i>
WBEs	1	5.00	4	23.53	-	0.00	2	10.00	2	10.53	9	9.78
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	1	5.00	5	29.41	1	6.25	3	15.00	2	10.53	12	13.04
SBE	12	60.00	8	47.06	12	75.00	7	35.00	8	42.11	47	51.09
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	20	100.00	17	100.00	16	100.00	20	100.00	19	100.00	92	100.00

Source: COK Payments Data, M³ Consulting

APPENDIX A



**Table A.17. Professional Services Utilization
Purchase Order — Count
State of Tennessee, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	24	40.68	19	54.29	16	36.36	18	47.37	5	22.73	82	41.41
African American	1	1.69	-	0.00	-	0.00	1	2.63	-	0.00	2	1.01
Asian American	-	0.00	-	0.00	-	0.00	1	2.63	-	0.00	1	0.51
Hispanic American	-	0.00	-	0.00	1	2.27	1	2.63	-	0.00	2	1.01
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>1</i>	<i>1.69</i>	<i>-</i>	<i>0.00</i>	<i>1</i>	<i>2.27</i>	<i>3</i>	<i>7.89</i>	<i>-</i>	<i>0.00</i>	<i>5</i>	<i>2.53</i>
WBEs	5	8.47	2	5.71	7	15.91	5	13.16	7	31.82	26	13.13
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	6	10.17	2	5.71	8	18.18	8	21.05	7	31.82	31	15.66
SBE	29	49.15	14	40.00	20	45.45	12	31.58	10	45.45	85	42.93
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	59	100.00	35	100.00	44	100.00	38	100.00	22	100.00	198	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.18. Non-Professional Services Utilization
Purchase Order — Count
Nationwide, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	125	68.68	144	71.64	153	71.50	171	68.95	119	68.39	712	69.87
African American	5	2.75	5	2.49	1	0.47	5	2.02	1	0.57	17	1.67
Asian American	17	9.34	23	11.44	20	9.35	27	10.89	29	16.67	116	11.38
Hispanic American	2	1.10	-	0.00	-	0.00	-	0.00	2	1.15	4	0.39
Native American	1	0.55	-	0.00	-	0.00	1	0.40	-	0.00	2	0.20
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>25</i>	<i>13.74</i>	<i>28</i>	<i>13.93</i>	<i>21</i>	<i>9.81</i>	<i>33</i>	<i>13.31</i>	<i>32</i>	<i>18.39</i>	<i>139</i>	<i>13.64</i>
WBEs	3	1.65	8	3.98	6	2.80	11	4.44	8	4.60	36	3.53
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	28	15.38	36	17.91	27	12.62	44	17.74	40	22.99	175	17.17
SBE	18	9.89	14	6.97	33	15.42	33	13.31	15	8.62	113	11.09
VBE/DVOB	11	6.04	7	3.48	1	0.47	-	0.00	-	0.00	19	1.86
Grand Total	182	100.00	201	100.00	214	100.00	248	100.00	174	100.00	1,019	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.19. Goods & Supplies Utilization
Purchase Order —Count
Nationwide, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	304	72.90	307	66.45	266	69.82	340	76.06	364	75.05	1,581	72.13
African American	1	0.24	-	0.00	2	0.52	-	0.00	1	0.21	4	0.18
Asian American	31	7.43	66	14.29	34	8.92	19	4.25	33	6.80	183	8.35
Hispanic American	-	0.00	1	0.22	-	0.00	-	0.00	4	0.82	5	0.23
Native American	2	0.48	2	0.43	-	0.00	3	0.67	4	0.82	11	0.50
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>34</i>	<i>8.15</i>	<i>69</i>	<i>14.94</i>	<i>36</i>	<i>9.45</i>	<i>22</i>	<i>4.92</i>	<i>42</i>	<i>8.66</i>	<i>203</i>	<i>9.26</i>
WBEs	26	6.24	18	3.90	17	4.46	26	5.82	18	3.71	105	4.79
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	60	14.39	87	18.83	53	13.91	48	10.74	60	12.37	308	14.05
SBE	51	12.23	65	14.07	61	16.01	52	11.63	56	11.55	285	13.00
VBE/DVOB	2	0.48	3	0.65	1	0.26	7	1.57	5	1.03	18	0.82
Grand Total	417	100.00	462	100.00	381	100.00	447	100.00	485	100.00	2,192	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



A.2.3. Payments

**Table A.20. Architecture & Engineering Utilization
Payments —Dollars
City of Knoxville, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	1,283,782	74.70	923,145	77.63	1,721,190	88.84	1,529,741	54.27	1,061,719	48.18	6,519,577	66.07
African American	780	0.05	1,188	0.10	-	0.00	-	0.00	3,000	0.14	4,968	0.05
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>780</i>	<i>0.05</i>	<i>1,188</i>	<i>0.10</i>	<i>-</i>	<i>0.00</i>	<i>-</i>	<i>0.00</i>	<i>3,000</i>	<i>0.14</i>	<i>4,968</i>	<i>0.05</i>
WBEs	18,325	1.07	20,171	1.70	5,943	0.31	48,127	1.71	38,766	1.76	131,331	1.33
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	19,105	1.11	21,359	1.80	5,943	0.31	48,127	1.71	41,766	1.90	136,299	1.38
SBE	415,778	24.19	244,671	20.57	210,348	10.86	1,240,779	44.02	1,100,013	49.92	3,211,589	32.55
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	1,718,664	100.00	1,189,176	100.00	1,937,481	100.00	2,818,647	100.00	2,203,498	100.00	9,867,466	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.21. Architecture & Engineering Utilization
Payments —Counts
City of Knoxville, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	200	71.43	118	67.82	149	64.78	191	70.22	157	59.02	815	66.69
African American	4	1.43	4	2.30	-	0.00	-	0.00	1	0.38	9	0.74
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>4</i>	<i>1.43</i>	<i>4</i>	<i>2.30</i>	<i>-</i>	<i>0.00</i>	<i>-</i>	<i>0.00</i>	<i>1</i>	<i>0.38</i>	<i>9</i>	<i>0.74</i>
WBEs	7	2.50	11	6.32	6	2.61	9	3.31	12	4.51	45	3.68
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	11	3.93	15	8.62	6	2.61	9	3.31	13	4.89	54	4.42
SBE	69	24.64	41	23.56	75	32.61	72	26.47	96	36.09	353	28.89
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	280	100.00	174	100.00	230	100.00	272	100.00	266	100.00	1,222	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.22. Construction and Construction-Related Services Utilization
Payments—Counts
Knoxville, TN MSA, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	71	19.35	79	22.32	103	30.65	156	47.56	114	47.70	523	32.20
African American	5	1.36	12	3.39	5	1.49	16	4.88	3	1.26	41	2.52
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	3	0.85	-	0.00	-	0.00	-	0.00	3	0.18
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>5</i>	<i>1.36</i>	<i>15</i>	<i>4.24</i>	<i>5</i>	<i>1.49</i>	<i>16</i>	<i>4.88</i>	<i>3</i>	<i>1.26</i>	<i>44</i>	<i>2.71</i>
WBEs	17	4.63	48	13.56	37	11.01	18	5.49	10	4.18	130	8.00
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	22	5.99	63	17.80	42	12.50	34	10.37	13	5.44	174	10.71
SBE	274	74.66	212	59.89	191	56.85	138	42.07	112	46.86	927	57.08
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	367	100.00	354	100.00	336	100.00	328	100.00	239	100.00	1,624	100.00

Source: COK Payments Data, M³ Consulting

APPENDIX A



**Table A.23. Professional Services Utilization
Payments —Dollars
State of Tennessee, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	4,295,781	54.61	3,765,936	54.28	3,782,544	50.83	4,861,784	49.70	7,961,347	81.18	24,667,391	58.96
African American	84,636	1.08	50,147	0.72	31,941	0.43	6,150	0.06	4,983	0.05	177,857	0.43
Asian American	4,989	0.06	839	0.01	3,342	0.04	6,819	0.07	2,600	0.03	18,589	0.04
Hispanic American	18,284	0.23	9,317	0.13	9,054	0.12	28,994	0.30	18,954	0.19	84,603	0.20
Native American	1,942	0.02	1,679	0.02	-	0.00	3,831	0.04	250	0.00	7,701	0.02
Other MBEs	-	0.00	-	0.00	-	0.00	5,089	0.05	417	0.00	5,506	0.01
<i>Total Minority</i>	<i>109,851</i>	<i>1.40</i>	<i>61,981</i>	<i>0.89</i>	<i>44,337</i>	<i>0.60</i>	<i>50,883</i>	<i>0.52</i>	<i>27,204</i>	<i>0.28</i>	<i>294,256</i>	<i>0.70</i>
WBEs	761,304	9.68	355,767	5.13	282,103	3.79	1,002,261	10.25	421,049	4.29	2,822,485	6.75
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	871,155	11.07	417,749	6.02	326,440	4.39	1,053,144	10.77	448,253	4.57	3,116,741	7.45
SBE	2,699,389	34.32	2,753,761	39.69	3,330,218	44.75	3,864,704	39.51	1,396,887	14.24	14,044,959	33.57
VBE/DVOB	-	0.00	-	0.00	1,796	0.02	2,880	0.03	303	0.00	4,980	0.01
Grand Total	7,866,325	100.00	6,937,446	100.00	7,440,998	100.00	9,782,512	100.00	9,806,790	100.00	41,834,070	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.24. Professional Services Utilization
Payments —Count
State of Tennessee, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	752	35.88	774	36.44	947	46.15	869	47.02	804	45.66	4,146	41.96
African American	61	2.91	70	3.30	49	2.39	31	1.68	10	0.57	221	2.24
Asian American	7	0.33	4	0.19	9	0.44	4	0.22	2	0.11	26	0.26
Hispanic American	50	2.39	45	2.12	49	2.39	60	3.25	52	2.95	256	2.59
Native American	98	4.68	96	4.52	2	0.10	2	0.11	1	0.06	199	2.01
Other MBEs	-	0.00	-	0.00	-	0.00	3	0.16	1	0.06	4	0.04
<i>Total Minority</i>	<i>216</i>	<i>10.31</i>	<i>215</i>	<i>10.12</i>	<i>109</i>	<i>5.31</i>	<i>100</i>	<i>5.41</i>	<i>66</i>	<i>3.75</i>	<i>706</i>	<i>7.15</i>
WBEs	273	13.02	195	9.18	181	8.82	249	13.47	223	12.66	1,121	11.35
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	489	23.33	410	19.30	290	14.13	349	18.89	289	16.41	1,827	18.49
SBE	855	40.79	940	44.26	813	39.62	626	33.87	667	37.88	3,901	39.48
VBE/DVOB	-	0.00	-	0.00	2	0.10	4	0.22	1	0.06	7	0.07
Grand Total	2,096	100.00	2,124	100.00	2,052	100.00	1,848	100.00	1,761	100.00	9,881	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.25. Non-Professional Services Utilization
Payments —Dollars
Nationwide, FY 2017 – FY 2021**

Race/ Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	4,283,873	63.51	4,459,200	61.78	13,286,238	74.45	6,280,332	58.86	4,636,646	52.15	32,946,290	64.14
African American	312,963	4.64	344,764	4.78	323,382	1.81	291,075	2.73	1,461,002	16.43	2,733,186	5.32
Asian American	153,298	2.27	208,079	2.88	325,409	1.82	333,783	3.13	392,541	4.42	1,413,109	2.75
Hispanic American	95,873	1.42	64,963	0.90	7,754	0.04	12,567	0.12	28,735	0.32	209,892	0.41
Native American	55,106	0.82	30,044	0.42	17,428	0.10	11,499	0.11	24,096	0.27	138,172	0.27
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total Minority	617,240	9.15	647,850	8.98	673,972	3.78	648,923	6.08	1,906,374	21.44	4,494,360	8.75
WBEs	502,130	7.44	584,199	8.09	1,875,758	10.51	1,644,835	15.42	689,625	7.76	5,296,546	10.31
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	1,119,370	16.60	1,232,049	17.07	2,549,730	14.29	2,293,758	21.50	\$,595,999	29.20	9,790,906	19.06
SBE	1,324,492	19.64	1,515,903	21.00	1,975,008	11.07	2,091,903	19.61	1,655,836	18.63	8,563,144	16.67
VBE/DVOB	17,225	0.26	10,139	0.14	34,985	0.20	3,171	0.03	1,698	0.02	67,217	0.13
Grand Total	6,744,960	100.00	7,217,291	100.00	17,845,962	100.00	10,669,165	100.00	8,890,179	100.00	51,367,556	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.26. Non-Professional Services Utilization
Payments —Count
Nationwide, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	3,883	55.86	4,129	59.32	4,270	62.45	4,908	63.10	4,619	65.63	21,809	61.32
African American	132	1.90	195	2.80	160	2.34	127	1.63	174	2.47	788	2.22
Asian American	89	1.28	83	1.19	74	1.08	75	0.96	113	1.61	434	1.22
Hispanic American	38	0.55	62	0.89	40	0.58	30	0.39	17	0.24	187	0.53
Native American	48	0.69	49	0.70	53	0.78	10	0.13	13	0.18	173	0.49
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>307</i>	<i>4.42</i>	<i>389</i>	<i>5.59</i>	<i>327</i>	<i>4.78</i>	<i>242</i>	<i>3.11</i>	<i>317</i>	<i>4.50</i>	<i>1,582</i>	<i>4.45</i>
WBEs	679	9.77	604	8.68	696	10.18	734	9.44	544	7.73	3,257	9.16
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	986	14.19	993	14.27	1,023	14.96	976	12.55	861	12.23	4,839	13.61
SBE	2,059	29.62	1,818	26.12	1,542	22.55	1,888	24.27	1,555	22.09	8,862	24.92
VBE/DVOB	23	0.33	21	0.30	3	0.04	6	0.08	3	0.04	56	0.16
Grand Total	6,951	100.00	6,961	100.00	6,838	100.00	7,778	100.00	7,038	100.00	35,566	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.27. Goods & Supplies Utilization
Payments — Dollars
Nationwide, FY 2017 – FY 2021**

Race/ Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	16,713,897	68.98	22,642,936	74.10	15,780,330	74.48	18,758,149	71.51	18,447,757	67.59	92,343,069	71.31
African American	10,364	0.04	3,416	0.01	58,706	0.28	5,702	0.02	9,721	0.04	87,909	0.07
Asian American	85,077	0.35	1,024,150	3.35	168,121	0.79	73,841	0.28	69,226	0.25	1,420,415	1.10
Hispanic American	125,388	0.52	202,342	0.66	224,281	1.06	170,878	0.65	410,193	1.50	1,133,081	0.87
Native American	118,556	0.49	103,911	0.34	112,258	0.53	74,680	0.28	83,486	0.31	492,892	0.38
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>339,385</i>	<i>1.40</i>	<i>1,333,819</i>	<i>4.37</i>	<i>563,366</i>	<i>2.66</i>	<i>325,100</i>	<i>1.24</i>	<i>572,626</i>	<i>2.10</i>	<i>3,134,298</i>	<i>2.42</i>
WBEs	1,376,808	5.68	1,208,510	3.96	1,274,198	6.01	2,283,756	8.71	4,331,656	15.87	10,474,928	8.09
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	1,716,193	7.08	2,542,329	8.32	1,837,565	8.67	2,608,857	9.95	4,904,282	17.97	13,609,226	10.51
SBE	5,741,129	23.70	5,328,777	17.44	3,480,955	16.43	4,775,154	18.20	3,833,431	14.05	23,159,446	17.88
VBE/DVOB	57,492	0.24	42,425	0.14	89,243	0.42	89,853	0.34	108,315	0.40	387,328	0.30
Grand Total	24,228,711	100.00	30,556,467	100.00	21,188,092	100.00	26,232,013	100.00	27,293,786	100.00	129,499,069	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.28. Goods & Supplies Utilization
Payments —Counts
Nationwide, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	#	%	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	15,642	62.97	14,780	62.46	15,120	64.31	13,580	64.00	12,716	53.48	71,838	61.39
African American	14	0.06	28	0.12	11	0.05	4	0.02	4	0.02	61	0.05
Asian American	50	0.20	139	0.59	57	0.24	65	0.31	51	0.21	362	0.31
Hispanic American	604	2.43	485	2.05	480	2.04	475	2.24	1,173	4.93	3,217	2.75
Native American	148	0.60	142	0.60	147	0.63	88	0.41	101	0.42	626	0.53
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total Minority	816	3.28	794	3.36	695	2.96	632	2.98	1,329	5.59	4,266	3.65
WBEs	3,198	12.87	2,550	10.78	2,424	10.31	2,061	9.71	1,901	7.99	12,134	10.37
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	4,014	16.16	3,344	14.13	3,119	13.27	2,693	12.69	3,230	13.58	16,400	14.02
SBE	4,989	20.08	5,395	22.80	5,110	21.73	4,755	22.41	7,680	32.30	27,929	23.87
VBE/DVOB	197	0.79	144	0.61	163	0.69	192	0.90	153	0.64	849	0.73
Grand Total	24,842	100.00	23,663	100.00	23,512	100.00	21,220	100.00	23,779	100.00	117,016	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



A.3 Purchase Order Threshold Counts

**Table A.29. Architecture & Engineering Utilization Thresholds
Purchase Orders—Counts
City of Knoxville, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Below 5K		5K-25K		25K-50K		50K-100K		100K-250K	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	-	0.00	11	35.48	9	69.23	3	30.00	6	75.00
African American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>
WBEs	-	0.00	3	9.68	-	0.00	2	20.00	-	0.00
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	-	0.00	3	9.68	-	0.00	2	20.00	-	0.00
SBE	1	100.00	17	54.84	4	27.41	5	50.00	2	25.00
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	100.00	-	0.00
Grand Total	1	100.00	31	100.00	13	100.00	10	100.00	8	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.29. (cont.) Architecture & Engineering Utilization Thresholds
Purchase Orders—Counts
City of Knoxville, FY 2017 – FY 2021**

Race /Ethnicity /Gender	250K-500K		500K-1M		1M-5M		Above 5M		TOTAL	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	11	91.67	3	75.00	1	50.00	-	0.00	44	54.32
African American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>
WBEs	-	0.00	-	0.00	-	0.00	-	0.00	5	6.17
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	5	6.17
SBE	1	8.33	1	25.00	1	50.00	-	0.00	32	39.51
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	12	100.00	4	100.00	2	100.00	-	0.00	81	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



Table A.30. Construction and Construction-Related Services Utilization Thresholds
Purchase Orders—Counts
Knoxville, TN MSA, FY 2017 – FY 2021

Race /Ethnicity /Gender	Below 5K		5K-25K		25K-50K		50K-100K		100K-250K	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	-	0.00	8	47.06	3	75.00	8	61.54	12	38.71
African American	-	0.00	-	0.00	-	0.00	1	7.69	1	3.23
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	1	5.88	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	<i>1</i>	<i>5.88</i>	-	<i>0.00</i>	<i>1</i>	<i>7.69</i>	<i>1</i>	<i>3.23</i>
WBEs	-	0.00	3	17.65	-	0.00	1	7.69	2	6.45
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	-	0.00	3	17.65	-	0.00	1	7.69	2	6.45
SBE	2	100.00	5	29.41	1	25.00	3	23.08	16	51.61
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	2	100.00	17	100.00	4	100.00	13	100.00	31	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.30. (cont.) Construction and Construction-Related Services Utilization Thresholds
Purchase Orders—Counts
Knoxville, TN MSA, FY 2017 – FY 2021**

Race /Ethnicity /Gender	250K-500K		500K-1M		1M-5M		Above 5M		TOTAL	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	14	51.85	9	37.50	13	68.42	6	85.71	74	51.03
African American	-	0.00	-	0.00	-	0.00	-	0.00	2	1.38
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	1	0.69
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	3	2.07
WBEs	1	3.70	2	8.33	-	0.00	-	0.00	9	6.21
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	1	3.70	2	8.33	-	0.00	-	0.00	12	8.28
SBE	12	44.44	13	54.17	6	31.58	1	14.29	59	40.69
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	27	100.00	24	100.00	19	100.00	7	100.00	145	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



Table A.31. Professional Services Utilization Thresholds
Purchase Orders—Counts
State of Tennessee, FY 2017 – FY 2021

Race /Ethnicity /Gender	Below 5K		5K-25K		25K-50K		50K-100K		100K-250K	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	19	57.58	54	45.76	12	48.00	23	54.76	11	35.48
African American	1	3.03	-	0.00	-	0.00	1	2.38	-	0.00
Asian American	-	0.00	2	1.69	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	3	2.54	-	0.00	-	0.00	1	3.23
Native American	-	0.00	-	0.00	-	0.00	-	0.00	1	3.23
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	5	4.24	-	0.00	1	2.38	2	6.45
WBEs	2	6.06	14	11.86	5	20.00	2	4.76	8	25.81
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	2	6.06	14	11.86	5	20.00	2	4.76	8	25.81
SBE	11	33.33	45	38.14	8	32.00	15	35.71	10	32.26
SDV/VOBE	-	0.00	-	0.00	-	0.00	1	2.38	-	0.00
Grand Total	33	100.00	118	100.00	25	100.00	42	100.00	31	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.31. (cont.) Professional Services Utilization Thresholds
Purchase Orders—Counts
State of Tennessee, FY 2017 – FY 2021**

Race/Ethnicity /Gender	250K-500K		500K-1M		1M-5M		Above 5M		TOTAL	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	11	73.33	6	75.00	4	66.67	2	100.00	148	51.57
African American	-	0.00	-	0.00	-	0.00	-	0.00	2	0.70
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	2	0.70
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	4	1.39
Native American	-	0.00	-	0.00	-	0.00	-	0.00	1	0.35
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	9	3.14
WBEs	1	6.67	1	12.50	-	0.00	-	0.00	33	11.50
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	1	6.67	1	12.50	-	0.00	-	0.00	33	11.50
SBE	3	20.00	1	12.50	2	33.33	-	0.00	96	33.45
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	1	0.35
Grand Total	15	100.00	8	100.00	6	100.00	2	100.00	287	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.32. Non-Professional Services Utilization Thresholds
Purchase Orders—Counts
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Below 5K		5K-25K		25K-50K		50K-100K		100K-250K	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	351	68.16	214	75.62	51	69.86	56	77.78	20	51.28
African American	1	0.19	4	1.41	4	5.48	2	2.78	2	5.13
Asian American	97	18.83	15	5.30	-	0.00	1	1.39	2	5.13
Hispanic American	2	0.39	1	0.35	-	0.00	1	1.39	-	0.00
Native American	-	0.00	2	0.71	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>100</i>	<i>19.42</i>	<i>22</i>	<i>7.77</i>	<i>4</i>	<i>5.48</i>	<i>4</i>	<i>5.56</i>	<i>4</i>	<i>10.26</i>
WBEs	4	0.78	19	6.71	5	6.85	5	6.94	1	2.56
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	4	0.78	19	6.71	5	6.85	5	6.94	1	2.56
SBE	42	8.16	28	9.89	12	16.44	7	9.72	14	35.90
SDV/VOBE	18	3.5	-	0.00	1	1.37	-	0.300	-	0.00
Grand Total	515	100.00	283	100.00	73	100.00	72	100.00	39	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.32 (cont.) Non-Professional Services Utilization Thresholds
Purchase Orders—Counts
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	250K-500K		500K-1M		1M-5M		Above 5M		TOTAL	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	4	36.36	2	50.00	4	57.14	3	100.00	712	69.87
African American	2	18.18	-	0.00	1	14.29	-	0.00	17	1.67
Asian American	-	0.00	1	25.00	-	0.00	-	0.00	116	11.38
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	4	0.39
Native American	-	0.00	-	0.00	-	0.00	-	0.00	2	0.20
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>2</i>	<i>18.18</i>	<i>1</i>	<i>25.00</i>	<i>-</i>	<i>0.00</i>	<i>-</i>	<i>0.00</i>	<i>139</i>	<i>13.64</i>
WBEs	-	0.00	-	0.00	2	28.57	-	0.00	36	3.53
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	-	0.00	-	0.00	2	28.57	-	0.00	36	3.53
SBE	5	45.45	1	25.00	-	0.00	-	0.00	113	11.09
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	19	1.86
Grand Total	11	100.00	4	100.00	7	100.00	3	100.00	1,019	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.33. Goods & Supplies Utilization Thresholds
Purchase Orders—Counts
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Below 5K		5K-25K		25K-50K		50K-100K		100K-250K	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	857	76.04	342	62.87	128	74.85	99	77.34	78	73.58
African American	1	0.09	2	0.37	-	0.00	1	0.78	-	0.00
Asian American	164	14.55	17	3.13	1	0.58	-	0.00	-	0.00
Hispanic American	1	0.09	1	0.18	1	0.58	1	0.78	-	0.00
Native American	3	0.27	6	1.10	2	1.17	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	<i>169</i>	<i>15.00</i>	<i>26</i>	<i>4.78</i>	<i>4</i>	<i>2.34</i>	<i>2</i>	<i>1.56</i>	<i>-</i>	<i>0.00</i>
WBEs	18	1.60	55	10.11	8	4.68	9	7.03	3	2.83
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	18	1.60	55	10.11	8	4.68	9	7.03	3	2.83
SBE	76	6.74	114	20.96	27	15.79	18	14.06	25	23.58
SDV/VOBE	7	0.62	7	1.29	4	2.34	-	0.00	-	0.00
Grand Total	1,127	100.00	544	100.00	171	100.00	128	100.00	106	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



**Table A.33. (cont.) Goods & Supplies Utilization Thresholds
Purchase Orders—Counts
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	250K-500K		500K-1M		1M-5M		Above 5M		TOTAL	
	#	%	#	%	#	%	#	%	#	%
Non-SMWBE	26	68.42	20	62.50	9	64.29	2	100.00	1,581	72.13
African American	-	0.00	-	0.00	-	0.00	-	0.00	4	0.18
Asian American	-	0.00	-	0.00	1	7.14	-	0.00	183	8.35
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	5	0.23
Native American	-	0.00	-	0.00	-	0.00	-	0.00	11	0.50
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	<i>1</i>	<i>7.14</i>	-	<i>0.00</i>	<i>203</i>	<i>9.26</i>
WBEs	2	5.26	7	21.88	3	21.43	-	0.00	105	4.79
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	2	5.26	7	21.88	3	21.43	-	0.00	105	4.79
SBE	10	26.32	5	15.63	1	7.14	-	0.00	285	13.00
SDV/VOBE	-	0.00	-	0.00	-	0.00	-	0.00	18	0.82
Grand Total	38	100.00	32	100.00	14	100.00	2	100.00	2,192	100.00

Source: COK Purchase Data, M³ Consulting

APPENDIX A



A.4 Purchase Orders Exclusive of Outliers

**Table A.34. Architecture & Engineering
Purchase Order—Dollars Exclusive of Outliers
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Dollars		Dollars Exclusive of Outliers	
	\$	%	\$	%
Non-SMWBE	5,858,905	50.24	8,736,138	79.09
African American	-	0.00	-	0.00
Asian American	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00
Native American	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>
WBEs	180,005	1.54	180,005	1.63
Unknown M/WBE	-	0.00	-	0.00
Total M/WBE	180,005	1.54	180,005	1.63
SBE	5,622,989	48.22	2,129,817	19.28
SDV/ VOB	-	0.00	-	0.00
Grand Total	11,661,899	100.00	11,045,959	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.35. Architecture & Engineering
Purchase Order—Counts Exclusive of Outliers
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Counts		Counts Exclusive of Outliers	
	#	%	#	%
Non-SMWBE	25	44.64	44	55.00
African American	-	0.00	-	0.00
Asian American	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00
Native American	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>
WBEs	5	8.93	5	6.25
Unknown M/WBE	-	0.00	-	0.00
Total M/WBE	5	8.93	5	6.25
SBE	26	46.43	31	38.75
SDV/ VOB	-	0.00	-	0.00
Grand Total	56	100.00	80	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.36. Construction and Construction-Related Services
Purchase Order—Dollars Exclusive of Outliers
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Dollars		Dollars Exclusive of Outliers	
	\$	%	\$	%
Non-SMWBE	46,701,049	63.07	34,032,856	49.96
African American	259,091	0.35	259,091	0.38
Asian American	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00
Native American	9,985	0.01	9,985	0.01
Other MBEs	-	0.00	-	0.00
<i>Total Minority</i>	<i>269,076</i>	<i>0.36</i>	<i>269,076</i>	<i>0.40</i>
WBEs	486,827	0.66	1,875,322	2.75
Unknown M/WBE	-	0.00	-	0.00
Total M/WBE	755,903	1.02	2,144,398	3.15
SBE	26,591,122	35.91	31,937,830	46.89
SDV/ VOB	-	0.00	-	0.00
Grand Total	74,048,074	100.00	68,115,084	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.37. Construction and Construction-Related Services
Purchase Order—Counts Exclusive of Outliers
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Counts		Counts Exclusive of Outliers	
	#	%	#	%
Non-SMWBE	29	34.52	64	47.41
African American	2	2.38	2	1.48
Asian American	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00
Native American	1	1.19	1	0.74
Other MBEs	-	0.00	-	0.00
<i>Total Minority</i>	3	3.57	3	2.22
WBEs	5	5.95	9	6.67
Unknown M/WBE	-	0.00	-	0.00
Total M/WBE	8	9.52	12	8.89
SBE	47	55.95	59	43.70
SDV/ VOB	-	0.00	-	0.00
Grand Total	84	100.00	135	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.38. Professional Services
Purchase Order—Dollars Exclusive of Outliers
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Dollars		Dollars Exclusive of Outliers	
	\$	%	\$	%
Non-SMWBE	8,027,609	41.61	37,127,055	72.98
African American	56,206	0.29	56,206	0.11
Asian American	9,880	0.05	15,265	0.03
Hispanic American	42,371	0.22	149,871	0.29
Native American	-	0.00	151,000	0.30
Other MBEs	-	0.00	-	0.00
<i>Total Minority</i>	<i>108,457</i>	<i>0.56</i>	<i>372,342</i>	<i>0.73</i>
WBEs	1,788,783	9.27	2,686,986	5.28
Unknown M/WBE	-	0.00	-	0.00
Total M/WBE	1,897,240	9.83	3,059,328	6.01
SBE	9,367,447	48.56	10,594,595	20.83
SDV/ VOB	-	0.00	90,277	0.18
Grand Total	19,292,295	100.00	50,871,256	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.39. Professional Services
Purchase Order—Counts Exclusive of Outliers
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Counts		Counts Exclusive of Outliers	
	#	%	#	%
Non-SMWBE	44	36.07	147	51.40
African American	2	1.64	2	0.70
Asian American	1	0.82	2	0.70
Hispanic American	2	1.64	4	1.40
Native American	-	0.00	1	0.35
Other MBEs	-	0.00	-	0.00
<i>Total Minority</i>	<i>5</i>	<i>4.10</i>	<i>9</i>	<i>3.15</i>
WBEs	20	16.39	33	11.54
Unknown M/WBE	-	0.00	-	0.00
Total M/WBE	25	20.49	42	14.69
SBE	53	43.44	96	33.57
SDV/ VOB	-	0.00	1	0.35
Grand Total	122	100.00	286	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.40. Non-Professional Services
Purchase Order—Dollars Exclusive of Outliers
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Dollars		Dollars Exclusive of Outliers	
	\$	%	\$	%
Non-SMWBE	30,988,563	73.17	39,926,031	72.96
African American	3,218,487	7.60	3,594,537	6.57
Asian American	924,513	2.18	1,337,993	2.44
Hispanic American	18,304	0.04	119,181	0.22
Native American	13,374	0.03	23,774	0.04
Other MBEs	-	0.00	-	0.00
<i>Total Minority</i>	<i>4,174,678</i>	<i>9.85</i>	<i>5,075,485</i>	<i>9.27</i>
WBEs	3,401,082	8.03	3,788,765	6.92
Unknown M/WBE	-	0.00	-	0.00
Total M/WBE	7,575,760	17.88	8,864,250	16.20
SBE	3,727,885	8.80	5,878,286	10.74
SDV/ VOB	56,376	0.13	56,376	0.10
Grand Total	42,348,584	100.00	54,724,944	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.41. Non-Professional Services
Purchase Order—Counts Exclusive of Outliers
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Counts		Counts Exclusive of Outliers	
	#	%	#	%
Non-SMWBE	107	51.20	709	69.78
African American	14	6.70	17	1.67
Asian American	4	1.91	116	11.42
Hispanic American	2	0.96	4	0.39
Native American	1	0.48	2	0.20
Other MBEs	-	0.00	-	0.00
<i>Total Minority</i>	<i>21</i>	<i>10.05</i>	<i>139</i>	<i>13.68</i>
WBEs	15	7.18	36	3.54
Unknown M/WBE	-	0.00	-	0.00
Total M/WBE	36	17.23	175	17.22
SBE	47	22.49	113	11.12
SDV/ VOB	19	9.09	19	1.87
Grand Total	209	100.00	1,016	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.42. Goods & Supplies
Purchase Order—Dollars Exclusive of Outliers
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Dollars		Dollars Exclusive of Outliers	
	\$	%	\$	%
Non-SMWBE	13,911,201	69.88	103,969,115	77.79
African American	-	0.00	64,310	0.05
Asian American	-	0.00	1,384,527	1.04
Hispanic American	123,233	0.62	125,417	0.09
Native American	49,367	0.25	151,153	0.11
Other MBEs	-	0.00	-	0.00
<i>Total Minority</i>	<i>172,600</i>	<i>0.87</i>	<i>1,725,407</i>	<i>1.29</i>
WBEs	1,741,389	8.75	11,828,920	8.85
Unknown M/WBE	-	0.00	-	0.00
Total M/WBE	1,913,989	9.62	13,554,327	10.14
SBE	3,982,496	20.01	15,900,611	11.90
SDV/ VOB	98,241	0.49	228,405	0.17
Grand Total	19,905,927	100.00	133,652,457	100.00

Source: COK Purchase Order Data, M³ Consulting

APPENDIX A



**Table A.43. Goods & Supplies
Purchase Order—Counts Exclusive of Outliers
Nationwide, FY 2017 – FY 2021**

Race /Ethnicity /Gender	Counts		Counts Exclusive of Outliers	
	#	%	#	%
Non-SMWBE	182	54.01	1,581	72.13
African American	-	0.00	4	0.18
Asian American	-	0.00	183	8.35
Hispanic American	4	1.19	5	0.23
Native American	3	0.89	11	0.50
Other MBEs	-	0.00	-	0.00
<i>Total Minority</i>	<i>7</i>	<i>2.08</i>	<i>203</i>	<i>9.26</i>
WBEs	42	12.46	105	4.79
Unknown M/WBE	-	0.00	-	0.00
Total M/WBE	49	14.54	308	14.05
SBE	100	29.67	285	13.00
SDV/ VOB	6	1.78	18	0.83
Grand Total	337	100.00	2,192	100.00

Source: COK Purchase Order Data, M³ Consulting

A.5 PUMS Analysis

Table A.44. “Odds Ratio” For Self-Employment for Minority Groups Relative to Non-Minority Males Controlling for Economic and Demographic Factors – Professional Services Only

Race/Ethnic Group	Odds Coefficient	Odds Ratio Inverse
American Indian or Alaska Native	0.76610	1.30532
Asian or Other Pacific Islander	0.61928	1.61479
Black American	0.51208	1.95281
Other Races	0.92212	1.08446
White Female	0.64148	1.55890

Source: M³ Consulting, Inc.; PUMS US Census Bureau.

APPENDIX A



Table A.45. Results of the Binary Logistic Regression Analysis - Professional Services Only

Dependent Variable: Self-employed (or not) Variables	Coefficient (β)	Standard Error	Significance (p-value)	Significance
(Intercept)	-3.53982	0.57805	0.00000	Yes
American Indian or Alaska Native	-0.26645	0.49799	0.59447	No
Asian or Other Pacific Islander	-0.47920	0.38343	0.21594	No
Black American	-0.66927	0.26489	0.01400	Yes
Others	-0.08108	0.28798	0.77919	No
White Female	-0.44398	0.09301	0.00001	Yes
Age	0.00358	0.02127	0.86688	No
Age Squared	0.00023	0.00021	0.28123	No
Advanced Degree	0.46470	0.15061	0.00300	Yes
Bachelor's Degree	0.47523	0.14596	0.00181	Yes
Some College	0.08465	0.16282	0.60492	No
Disabled	0.24901	0.16949	0.14670	No
Has Health Coverage	-0.51840	0.25681	0.04773	Yes
Property Value	0.00000	0.00000	0.00000	Yes
Personal Earned Income	0.00000	0.00000	0.00031	Yes
Married	0.25466	0.14031	0.07422	Yes*

Source: M3 Consulting, Inc.; PUMS US Census Bureau

*Significant at 90% Confidence Interval

APPENDIX A



Table A.46. “Odds Ratio” For Self-Employment for Minority Groups Relative to Non-Minority Males Controlling for Economic and Demographic Factors – Goods & Supplies Only

Race/Ethnic Group	Odds Coefficient	Odds Ratio Inverse
American Indian or Alaska Native	0.92611	1.07979
Asian or Other Pacific Islander	1.42332	0.70258
Black American	0.84492	1.18354
Other Races	1.38237	0.72339
White Female	0.84712	1.18047
Hispanic vs non-Hispanic	0.90842	1.10082

Source: M³ Consulting, Inc.; PUMS US Census Bureau.

APPENDIX A



Table A.47. Results of the Binary Logistic Regression Analysis - Goods & Supplies Only

Dependent Variable: Self-employed (or not) Variables	Coefficient (β)	Standard Error	Significance (p-value)	Significance
(Intercept)	-5.43703	0.71728	0.00000	Yes
American Indian or Alaska Native	-0.07677	0.42815	0.85827	No
Asian or Other Pacific Islander	0.35299	0.37339	0.34803	No
Black American	-0.16851	0.29479	0.56958	No
Others	0.32380	0.48322	0.50521	No
White Female	-0.16591	0.14372	0.25262	No
Hispanic	-0.09605	0.52675	0.85589	No
Age	0.11554	0.03073	0.00037	Yes
Age Squared	-0.00096	0.00032	0.00388	Yes
Advanced Degree	0.38755	0.30468	0.20799	No
Bachelor's Degree	0.23346	0.21409	0.27961	No
Some College	-0.11831	0.21143	0.57773	No
Has Health Coverage	-0.52824	0.28849	0.07174	Yes*
Property Value	0.00000	0.00000	0.09104	Yes*
Personal Earned Income	0.00000	0.00000	0.33948	No
Married	0.57560	0.17843	0.00198	Yes

Source: M³ Consulting, Inc.; PUMS US Census Bureau

*Significant at 90% Confidence Interval

APPENDIX A



A.6 P-Cards

**Table A.48. Architecture & Engineering Utilization
P-Cards
City of Knoxville, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	-	0.00	-	0.00	-	0.00	-	0.00	800	100.00	800	100.00
African American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Native American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>	-	<i>0.00</i>
WBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
SBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	-	0.00	-	0.00	-	0.00	-	0.00	800	100.00	800	100.00

Source: COK P-Cards Data, M³ Consulting

APPENDIX A



**Table A.49. Construction and Construction-Related Services Utilization
P-Cards
Knoxville, TN MSA, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	-	0.00	11,815	0.43	3,025	0.11	5,085	0.20	428	0.02	20,352	0.19
African American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	-	0.00	-	0.00	-	0.00	3,476	0.13	3,476	0.03
Native American	-	0.00	175	0.01	420	0.02	440	0.02	519	0.02	1,554	0.01
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	<i>175</i>	<i>0.01</i>	<i>420</i>	<i>0.02</i>	<i>440</i>	<i>0.02</i>	<i>3,996</i>	<i>0.15</i>	<i>5,031</i>	<i>0.05</i>
WBEs	-	0.00	-	0.00	101	0.00	1,583	0.06	143	0.01	1,826	0.02
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	-	0.00	175	0.01	521	0.02	2,023	0.08	4,138	0.16	6,857	0.06
SBE	-	0.00	7,563	0.28	3,398	0.12	4,313	0.17	7,824	0.30	23,097	0.22
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	-	0.00	19,552	100.00	6,944	0.00	11,421	0.00	12,390	100.00	50,306	100.00

Source: COK P-Cards Data, M³ Consulting

APPENDIX A



**Table A.50. Professional Services Utilization
P-Cards
State of Tennessee, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	100	100.00	28,970	1.06	48,360	1.77	34,658	1.37	35,913	1.39	148,001	1.40
African American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Hispanic American	-	0.00	80	0.00	-	0.00	-	0.00	-	0.00	80	0.00
Native American	-	0.00	6,805	0.25	2,044	0.07	2,973	0.12	292	0.01	12,114	0.11
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	<i>6,885</i>	<i>0.25</i>	<i>2,044</i>	<i>0.07</i>	<i>2,973</i>	<i>0.12</i>	<i>292</i>	<i>0.01</i>	<i>12,193</i>	<i>0.12</i>
WBEs	-	0.00	-	0.00	830	0.03	6,784	0.27	-	0.00	7,614	0.07
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	-	0.00	6,885	0.25	2,874	0.11	9,756	0.39	292	0.01	19,807	0.19
SBE	-	0.00	1,550	0.06	7,425	0.27	-	0.00	-	0.00	8,975	0.08
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	100	100.00	37,405	100.00	58,659	100.00	44,414	100.00	36,205	100.00	176,783	100.00

Source: COK P-Cards Data, M³ Consulting

APPENDIX A



**Table A.51. Non-Professional Services Utilization
P-Cards
Nationwide, FY 2017 – FY 2021**

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	2,030	100.00	399,226	14.65	478,043	17.52	276,417	10.95	143,925	5.58	1,299,641	12.30
African American	-	0.00	100	0.00	-	0.00	-	0.00	-	0.00	100	0.00
Asian American	-	0.00	-	0.00	-	0.00	-	0.00	152	0.01%	152	0.00
Hispanic American	-	0.00	50	0.00	-	0.00	16	0.00	-	0.00	65	0.00
Native American	-	0.00	1,004	0.04	709	0.03	1,076	0.04	776	0.03%	3,566	0.03
Other MBEs	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
<i>Total Minority</i>	-	<i>0.00</i>	<i>1,154</i>	<i>0.04</i>	<i>709</i>	<i>0.03</i>	<i>1,092</i>	<i>0.04</i>	<i>928</i>	<i>0.04%</i>	<i>3,883</i>	<i>0.04</i>
WBEs	-	0.00	11,559	0.42	19,673	0.72	17,816	0.71	6,898	0.27	55,945	0.53
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	-	0.00	12,713	0.47	20,382	0.75	18,908	0.75	7,826	0.30	59,829	0.57
SBE	-	0.00	6,081	0.22	9,686	0.35	2,839	0.11	4,999	0.19	23,606	0.22
VBE/DVOB	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Grand Total	2,030	100.00	418,021	100.00	508,111	100.00	298,164	100.00	156,749	100.00	1,383,075	100.00

Source: COK P-Cards Data, M³ Consulting

APPENDIX A



Table A.52. Goods & Supplies Utilization
P-Cards
Nationwide, FY 2017 – FY 2021

Race/Ethnicity /Gender	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		Period	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Non-SMWBE	8,487	74.03	1,897,787	69.64	1,778,125	65.17	1,797,617	71.22	2,071,502	80.30	7,553,519	71.47
African American	-	0.00	3,957	0.15	2,939	0.11	4,247	0.17	3,990	0.15	15,132	0.14
Asian American	-	0.00	253	0.01	15,615	0.57	23,990	0.95	4,210	0.16	44,067	0.42
Hispanic American	254	2.22	8,339	0.31	10,256	0.38	24,507	0.97	38,121	1.48	81,476	0.77
Native American	-	0.00	14,543	0.53	3,244	0.12	3,610	0.14	3,935	0.15	25,333	0.24
Other MBEs	-	0.00	-	0.00	1,707	0.06	1,040	0.04	-	0.00	2,747	0.03
<i>Total Minority</i>	<i>254</i>	<i>2.22</i>	<i>27,091</i>	<i>0.99</i>	<i>33,761</i>	<i>1.24</i>	<i>57,394</i>	<i>2.27</i>	<i>50,256</i>	<i>1.95</i>	<i>168,756</i>	<i>1.60</i>
WBEs	346	3.02	178,806	6.56	182,954	6.71	153,149	6.07	114,610	4.44	629,865	5.96
Unknown M/WBE	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00
Total M/WBE	600	5.23	205,897	7.56	216,715	7.94	210,543	8.34	164,866	6.39	798,621	7.56
SBE	247	2.16	143,689	5.27	158,342	5.80	152,795	6.05	137,174	5.32	592,248	5.60
VBE/DVOB	-	0.00	2,856	0.10	1,626	0.06	9,230	0.37	(56)	0.00	13,655	0.13
Grand Total	9,334	100.00	2,250,229	100.00	2,154,808	100.00	2,170,186	100.00	2,373,486	100.00	8,958,043	100.00

Source: COK P-Cards Data, M³ Consulting