

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

FAA 2024 Statewide Disparity Study
Packet A

Prepared for:

Washington State Department of
Transportation
310 Maple Park Avenue SE
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**KEEN
INDEPENDENT
RESEARCH**

SECTION A1. Qualifications and Expertise of Firms

Keen Independent is pleased to present Packet A, beginning with responses to Scoring Criteria 1.

A. Proposed Study Team

Below, we introduce each member of the study team. These brief introductions are followed by an organization chart of the proposed study team.



Keen Independent Research (prime consultant). Keen Independent is an economic consulting and policy analysis firm with a primary focus on disparity studies and design of MWDBE programs for government entities. David Keen co-founded the firm in 2011 after serving as Managing Director of BBC Research & Consulting (BBC), where he launched and led the firm’s disparity study practice since the 1980s. Keen Independent has provided these services for the past decade since its founding in 2011. The firm numbers 23 people, which makes us the largest dedicated disparity study consulting team of any company in the country. Our diverse staff combine strong quantitative and qualitative research expertise. To date, Keen Independent study team members have participated in about 200 disparity studies and related studies, some of which were performed in as little as six months.

Holland & Knight

Holland & Knight LLP (H&K). H&K is an international law firm that was established in 1968 and has provided legal counsel for more than 50 years. The firm has expertise in state and local government procurement, government contracts, and public policy and regulation. Keen Independent retains H&K to develop the legal analysis and framework for disparity studies and to consult on legal issues.



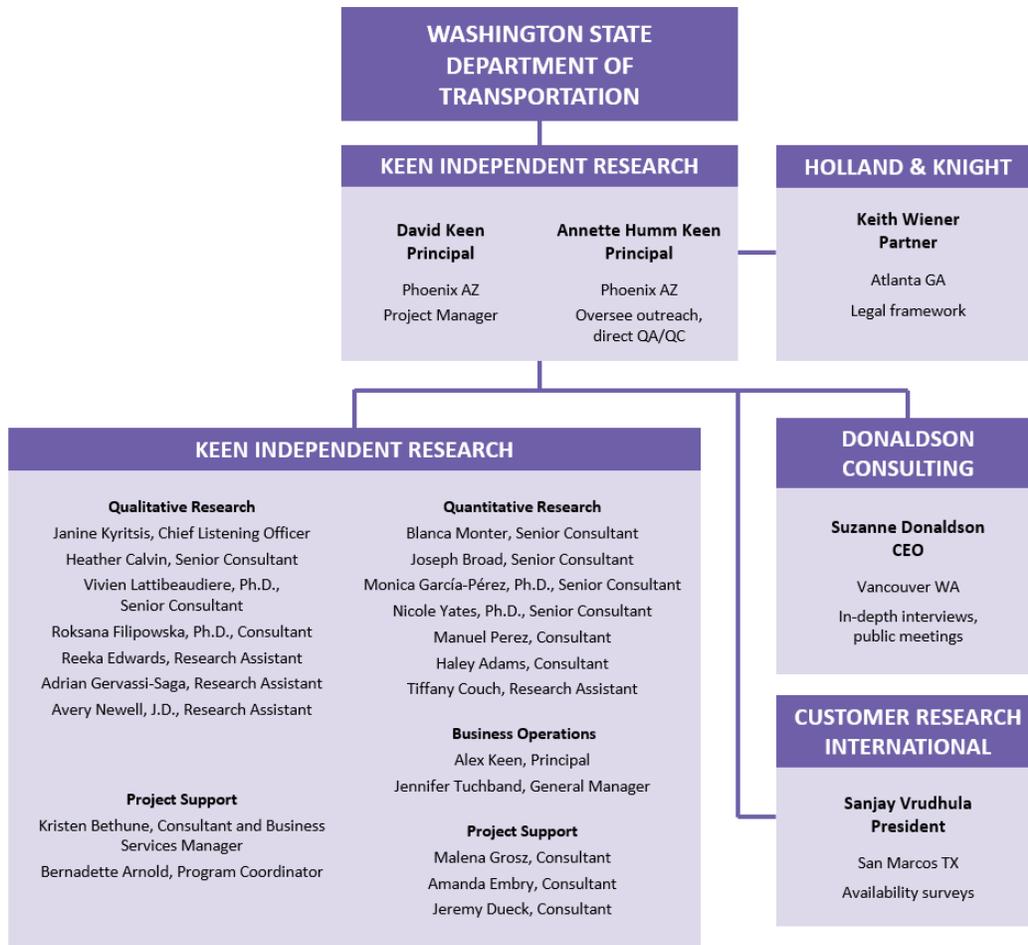
DONALDSON CONSULTING, LLC

Donaldson Consulting, LLC. Donaldson Consulting is a Native American-owned and State of Washington-certified DBE, MBE and WBE based in Vancouver, Washington. Donaldson Consulting has 20 years of expertise in public outreach and qualitative research. Suzanne Donaldson, Principal, will be the firm’s staff person assisting on this project. She has considerable background in conducting focus groups, public meetings and anecdotal interviews for disparity studies.



Customer Research International (CRI). CRI, a minority-owned and State of Washington-certified DBE telephone survey research firm, is a leading provider of full-service market research services throughout the United States and abroad. With 28 years of experience, CRI has conducted telephone survey research for more than 100 disparity studies.

A-1. Study team organization



B. Team Member’s Offices Within the State of Washington

The following team members have office locations in Washington state or the Greater Portland Metropolitan Area.

- **Keen Independent.** Keen Independent team member, Tiffany Couch, is located in the Greater Portland Metropolitan Area and has expertise in quantitative data collection and analysis.
- **Holland & Knight.** Holland & Knight has a Portland office with 28 local attorneys. That staff has expertise in Washington state law concerning public contracting.
- **Donaldson Consulting.** Donaldson Consulting has one office location in Vancouver, Washington with two staff members with expertise in conducting in-depth interviews and focus groups.

C. Previous Experience Working with Proposed Subconsultants

Holland & Knight, Donaldson Consulting and CRI have participated in many Keen Independent-led studies in Washington state, Oregon and across the country. As just one example, all three firms participated in Keen Independent’s Oregon Department of Aviation (ODA) 2021 Statewide Airport

DBE Disparity Study. The study was initiated in September 2019 and was completed on time and on budget in March 2021.

- Keith Wiener of Holland & Knight, provided the legal framework;
- Suzanne Donaldson of Donaldson Consulting performed in-depth interviews with business owners and trade associations; and
- Customer Research International (CRI) conducted the availability interviews.

Each team member has performed in a similar capacity as part of other Keen Independent studies across the country, including current studies for the City of Vancouver and the City of Tacoma, Washington.

D. Availability of Key Staff and Resources

Figure A-2 below identifies the current availability of key staff and resources for each firm on the proposed project team. The hours available assume a 12-month project schedule.

A-2. Availability of key staff and resources

| Key team member | Responsibility | Hours available per month |
|--|----------------------------------|---------------------------|
| Keen Independent | | |
| David Keen, Principal | Project Manager | 40 |
| Annette Humm Keen, Principal | QA/QC | 34 |
| Janine Kyritsis, Chief Listening Officer | Qualitative research lead | 18 |
| Senior Consultants | Quantitative research lead | 42 |
| Consultants | Research assistance | 98 |
| Project Assistants and Research Assistants | Project support | 80 |
| Holland & Knight | | |
| Keith Wiener, Partner | Legal framework and analysis | 4 |
| Donaldson Consulting | | |
| Suzanne Donaldson, CEO | In-depth interviews and outreach | 40 |
| Customer Research International | | |
| Sanjay Vrudhula, President | Availability interviews | 2 |
| Interviewers | Availability interviews | 130 |

E. Examples of Similar Projects Completed

As requested in the RFQ, this section details projects completed by each firm within the past three years for which work similar to the proposed study has been performed.

Oregon Department of Aviation (ODA) 2021 Disparity Study. Keen Independent conducted the 2021 Statewide Airport DBE Disparity Study for ODA. This study assisted 48 airports in Oregon in their operation of the Federal DBE Program as they set their overall annual goals for DBE participation in federally funded contracts and determined whether they need to apply DBE contract goals. The study team contacted each participating airport and their consultants to

identify prime contracts and subcontracts related to FAA-funded projects. The study team examined more than 1,000 prime contracts and subcontracts awarded by ODA and local airports, as well as analyzed the distribution of contract dollars by location and types of work. Telephone surveys were completed with 4,889 businesses in the market area to determine availability for work at airports in different regions. The study team also collected qualitative information via in-depth interviews and other input from Oregon businesses, trade associations and other groups.

Keen Independent provided a methodology and data for how ODA and other airports can apply the above data to establish future overall DBE goals for FAA-funded contracts and project the portion of those goals to be met through race- and gender-neutral means. This information can be used to update current overall DBE goals and program operation as well.

Team members and roles. Keen Independent was the prime consultant, Holland and Knight performed legal analysis, Suzanne Donaldson performed in-depth interviews and CRI administered the availability survey.

Amount received. \$1,000,000

Arizona Department of Transportation (ADOT) Availability and Disparity Studies. The Arizona Department of Transportation retained Keen Independent Research to perform its 2022 Availability Study to help set overall annual disadvantaged business enterprise (DBE) goals for its FHWA-, FTA- and FAA-funded contracts (ADOT owns and operates an airport). Keen Independent also performed the ADOT 2014 and 2017 availability studies and its 2015 and 2020 disparity studies. For the 2022 Availability Study, Keen Independent examined ADOT FHWA-, FAA- and FTA-funded transportation-related contracts awarded over a three-year period. The study team conducted telephone surveys of businesses within the relevant geographic area and with the types of work that ADOT procures; dollar weighted the results of the contract-by-contract availability analysis to determine overall DBE availability for FHWA contracts; developed information for a base figure analysis for a possible overall DBE goal for FHWA-, FAA- and FTA-funded contracts; and prepared DBE goal methodology documents suitable for USDOT submittal.

The 2020 Disparity Study examined the disparity between the utilization and availability of minority- and woman-owned firms (MBEs and WBEs) in federally funded and state-funded prime contracts and subcontracts. The study team also analyzed ADOT contracting processes and conditions in the Arizona marketplace and conducted in-depth interviews with local trade associations and MBE and WBEs firms. Keen Independent's study team completed a legally defensible study supported by relevant case law and industry-recognized social science and statistical methodologies. They also examined the existence and extent of any disparity relative to the USDOT DBE Program and made recommendations for actions that ADOT should take to remedy such disparity and be consistent with the provisions of 49 CFR Parts 23 and 26.

Team members and roles. Keen Independent was the prime consultant, Holland and Knight performed legal analysis, and CRI administered the availability survey.

Amount received. \$259,385 (2022); \$587,819 (2020)

Oregon Department of Transportation (ODOT) 2022 Disparity Study. Keen Independent recently directed the 2022 ODOT Disparity Study. The firm also conducted the previous ODOT disparity study in 2016 and an availability study in 2019. The 2022 Disparity Study analyzed whether there

was a level playing field for minority- and woman-owned businesses in the Oregon transportation contracting industry. The study team collected prime contract and subcontract data regarding ODOT and subrecipient transportation contracts, focusing on construction and architecture and engineering contracts. Contract data included FHWA- and state-funded projects from October 2017 through September 2020.

Based on the contract data obtained, Keen Independent study team members determined ownership of utilized firms; examined marketplace conditions through telephone and online surveys and other research, as well as from in-depth interviews; and prepared analyses to determine if disparities existed in the utilization of minority- and woman-owned enterprises. The study team also assessed ODOT's experience with race-neutral measures and explored whether ODOT needed to continue implementation of race-conscious program elements such as DBE contract goals. ODOT used study results and recommendations to improve its operation of the Federal DBE Program and set its overall three-year FHWA DBE goals for federal fiscal years 2023 through 2025.

Team members and roles. Keen Independent was the prime consultant, Holland and Knight performed legal analysis, Suzanne Donaldson performed in-depth interviews and CRI administered the availability survey.

Amount received. \$658,610

State of Colorado 2020 Disparity Study. Keen Independent completed a statewide disparity study for the State of Colorado that compared utilization with availability benchmarks for minority- and woman-owned firms, firms owned by persons with disabilities and LGBT-certified firms (collectively "HUB" businesses).

Keen Independent examined procurements awarded from July 2014 through June 2018 for all State executive agencies and community colleges. The study team examined data from State procurement information systems to identify contracts and subcontracts awarded. Keen Independent also reached out to prime contractors to secure additional subcontract information. In total, Keen Independent analyzed contracts and subcontracts totaling \$3.2 billion. After completing surveys with 17,000 businesses in Colorado, the study team developed a database of businesses reporting that they were available for specific types of State contracts and subcontracts. Keen Independent then determined the availability of HUBs and other businesses for each of the more than 21,000 State contracts and subcontracts examined in the study.

The study team also obtained input from more than 700 business owners, trade associations, agency staff and others, including in-depth interviews conducted by Suzanne Donaldson.

Team members and roles. Keen Independent was the prime consultant, Holland and Knight performed legal analysis, Suzanne Donaldson performed in-depth interviews and CRI administered the availability survey.

Amount received. \$1,068,316.06

SECTION A2. Qualifications of Proposed Project Manager

David Keen, Keen Independent Principal, will serve as the project manager for the 2024 WSDOT FAA Disparity Study. David Keen has over 30 years of experience with more than 180 disparity studies. He performed one of the first disparity studies in the country in 1989 immediately after the U.S. Supreme Court decision in *Croson*. David Keen has also pioneered court-approved methodology and testified as an expert witness in the successful defense of MWBE and DBE programs, including *AGC, San Diego v. Caltrans*. David Keen has directed statewide availability and disparity studies such as:

- The Oregon Department of Aviation (which included 48 airports);
- 16 state DOTs including Arizona, California, Colorado, Delaware, Hawaii, Idaho, Indiana, Georgia, Minnesota, Missouri, Montana, Nevada, New Mexico, Oklahoma and Oregon;
- The 2017 Minnesota Joint Disparity Study, the largest of its kind, for nine entities including the Minnesota Department of Transportation; and
- The 2020 State of Colorado Disparity Study, one of the largest studies conducted within an accelerated time frame (less than 10 months).

A. Examples of Demonstrated Experience as a Project Manager

As project manager on most Keen Independent disparity studies, David Keen is well qualified to serve in this role for the WSDOT FAA 2024 Disparity Study. His responsibilities and tasks when acting as project manager include:

- Efficiently organizing, planning and executing project on time and on budget;
- Leading the project team, including overseeing task assignments;
- Serving as the main point of contact for the client and stakeholders;
- Evaluating and mitigating project risk;
- Resolving any issues or conflicts that arise during the study;
- Ensuring legal compliance;
- Reviewing all deliverables;
- Maintaining positive internal, client and stakeholder relationships; and
- Evaluating project performance and implementing lessons learned for future projects.

David Keen has performed the above responsibilities and roles as project manager on more than 100 disparity studies, including:

- ODA 2021 Statewide Airport DBE Disparity Study (September 2019 to March 2021);
- ADOT 2020 Disparity Study (February 2019 to March 2020); and
- 2022 ODOT Disparity Study (September 2021 to June 2022).

B. Examples of Project Manager's Ability to Manage Project Tasks

The role of project manager is vital to the success of a study and requires effective management of the project schedule, scope, budget and any changes that arise during the course of the study. The following three examples of David Keen's project management approach demonstrate his aptitude to perform in this role for the proposed study.

Project schedule example. Keen Independent recommends bi-weekly check-in meetings with all clients (led by David Keen) to provide updates on the study progress, which aids in accountability for deadlines and deliverables. Additionally, we provide written monthly project updates that include project status and percentage completed for each task. To ensure studies remain on schedule, David Keen conducts regular monitoring of the project tasks and schedule using Asana, a project management software, which includes all tasks, sub-tasks, internal and external due dates and staff assignments related to every aspect of the project. Team members update their progress via Asana which allows David to easily supervise each component of the project.

For example, in the 2022 ODOT study, the contract was awarded in June 2021 but the agency had delays in issuing a notice to start work. Keen Independent was able to adjust the timing of activities to complete a draft report in nine months rather than the 12 months initially planned. Through expert project management skills and the depth of David Keen’s experience conducting disparity studies, Keen Independent was still able to meet a May 2022 deadline for publishing a draft report and proposed DBE goals for public comment, which allowed ODOT to meet its August 1 deadline for submitting goals to FHWA.

Project scope example. During the first project meeting, the project scope is reviewed and confirmed by Keen Independent and the client. This ensures that all parties are clear on the scope of the project, which decreases the likelihood of scope creep. If changes arise over the course of the study, regular meetings can be used to discuss any scope modifications.

The 2020 State of Colorado Disparity Study provides an example of how the scope needed to be tightly controlled to meet schedule constraints outside our control but expand when necessary to accommodate data collection needs. By state statute required the study be delivered to the State Legislature by December 1, 2020. There was an original start date of December 2019, but State delays pushed the start to January 21, 2020. Keen Independent successfully redesign tasks to accommodate an accelerated schedule and still maintain a process for State review of analyses and draft report sections well in advance of the final report due date.

In addition, Keen Independent immediately identified gaps in the subcontract data for state contracts collected by state agencies, so we designed and successfully executed an outreach campaign to directly contact and obtain subcontract data from prime contractors that had performed state contracts. We were successful in doing more work within a shortened performance period by (a) shifting additional Keen Independent staff members to the project and (b) implementing new project management tools to organize the expanded outreach, maintain control over expedited document review (including with State staff), and track overall study progress on a weekly basis.

Project budget example. All Keen Independent projects are completed on time and within budget. We present progress reports detailing tasks and progress each month. Monthly project updates, described above, are sent with each invoice. This practice allows Keen Independent and our clients the ability to regularly assess the budget alongside study progress. Any anticipated budget concerns can be discussed during check-in meetings, as well as budget implications of any proposed changes in the scope or schedule.

For example, the COVID-19 pandemic hit during the close of the ADOT study. Concerns were raised about whether overall DBE goals would need to be adjusted given potential funding shortfalls and expected reductions in projects during the time period for the three-year goal. To help ADOT

consider this issue, Keen Independent expanded the scope to include sensitivity analyses that were used to verify that overall DBE goals would not need to be changed to account for potential funding shifts. We were able to do this additional work by internally reallocating budget resources so that there was no increase in study cost for the client. We aim to closely follow the scope for all projects, however, when the need arises, we work with our clients to redirect our work within our budget so that their needs are met.

Ability to overcome and adapt to changes. As the examples above demonstrate, one of David Keen’s strongest project management skills is the ability to direct a study that is methodologically rigorous and meticulously planned, while maintaining flexibility and adaptability. The firm’s reputation for delivering high quality and legally defensible studies on time and on budget is a testament to David’s experience, expertise, leadership and project management abilities.

SECTION A3. Key Team Members Qualifications

Each member of the Keen Independent study team has extensive experience conducting disparity studies for large government organizations. All study team members have participated in a disparity study for a state DOT, in addition to contributing to the firm's current disparity studies for the cities of Vancouver and Tacoma in Washington. As such, all team members understand the regulatory and procedural requirements for public agencies nationally and in Washington state, have experience communicating with a wide range of individuals and understand the educational, psychological and social impacts of discrimination in construction, contracting and employment.

Keen Independent Key Study Team Members

The following Keen Independent staff will be assigned to the WSDOT FAA 2024 Disparity Study.



David Keen, Principal, will lead the Washington State DOT Disparity Study as project manager and will serve the primary point of contact. At Keen Independent, David Keen is the lead project manager for all disparity studies. He has directed statewide availability and disparity studies for state DOTs in Arizona, California, Colorado, Delaware, Hawaii, Idaho, Indiana, Georgia, Minnesota, Missouri, Montana, Nevada, New Mexico, Oklahoma and Oregon. He is currently serving as project manager for the firm's studies for Tacoma, Vancouver and the University of Washington.

David Keen is a national MBE/WBE/DBE Program expert with more than three decades of experience leading more than 160 contract disparity studies. He has developed, reviewed, implemented and defended socially and economically disadvantaged business programs for public agencies across the country. He has designed procurement processes and prepared procurement manuals for public sector clients, as well as testified as an expert witness in federal court. David is the main author of marketplace analyses in the firm's disparity study reports that analyze the geographic, economic, educational, psychological and social impact of discrimination in public contracting and employment. He has participated in two past assignments for WSDOT.

David Keen was the first consultant to employ Monte Carlo simulation to determine statistical significance of observed disparities. He is also a frequent speaker on these topics and conducts in-depth research on procurement processes in each disparity study.

David Keen is a co-author of the State of Colorado Economic Development Strategic Plan. He has also previously served as an adjunct faculty member at the University of Denver.

Publications. David Keen has authored or co-authored several publications related to equity and transportation including the following:

- *Resource Guide for Improving Diversity and Inclusion Programs for the Public Transportation Industry*, Transit Cooperative Research Program, Transportation Research Board, 2021.
- *Compendium of Successful Practices, Strategies, and Resources in the FHWA Disadvantaged Business Enterprise (DBE) Program*, National Cooperative Highway Research Program, Transportation Research Board, 2019.

- *Current Practices to Set and Monitor DBE Goals on Design-Build Projects and Other Alternative Project Delivery Methods*, National Cooperative Highway Research Program, Transportation Research Board, 2014.

Disparity study examples. David Keen oversaw all aspects of the following studies as the Project Manager: 2021 ODA Disparity Study (September 2019 to March 2021), 2020 ADOT Disparity Study (February 2019 to March 2020) and 2022 ODOT Disparity Study (September 2021 to June 2022).

Education. David Keen earned a Master’s in City and Regional Planning from Harvard University, and a business degree from University of Arizona.



Annette Humm Keen, Principal, will supervise quality assurance and quality control and assist with data collection and policy review for the WSTD 2024 FAA Disparity Study. Annette Humm Keen has a long history of directing survey, interview and focus group research relevant to DBE and M/WBEs, having participated in over 80 disparity studies. She has also been an educator and research partner in collaborations regarding equity in contracting, workforce and public service delivery.

Annette Humm Keen has specialized expertise designing survey, interview and focus group research and has conducted outreach, data collection and QA/QC tasks on the firm’s availability and disparity studies and related assignments, including past studies for the Oregon Department of Aviation, Transportation Research Board and state DOTs in Arizona, Colorado, Hawaii, Minnesota, Missouri and Oregon.

She has collaborated with diverse communities across the country, including many throughout the State of Washington, assessing qualitative input from stakeholders regarding their experiences in public contracting, employment and business ownership and the impact that discrimination has had on the lived realities of these individuals. Annette Humm Keen has applied innovative community outreach strategies including feedback through performance art, virtual workshops and ethnographic observation. For example, she led community meetings and other outreach with diverse groups to help reach agreement on the facts concerning the state of equity in the local business community for the City of New Orleans disparity study.

Publications. Annette Humm Keen is a co-author of *Compendium of Successful Practices, Strategies, and Resources in the FHWA Disadvantaged Business Enterprise (DBE) Program*, National Cooperative Highway Research Program, Transportation Research Board, 2019.

Disparity study examples. Annette Humm Keen directed QA/QC and assisted with policy review for the following studies: 2021 ODA Disparity Study (September 2019 to March 2021), 2020 ADOT Disparity Study (February 2019 to March 2020) and 2022 ODOT Disparity Study (September 2021 to June 2022).

Education. Annette Humm Keen earned her MLA from Harvard University and her B.A. in Anthropology from St. John’s University, where she graduated summa cum laude.



Janine Kyritsis, Chief Listening Officer, will lead the collection and analysis of qualitative information from in-depth interviews and public meetings for this assignment, as well as supervising subconsultants. Janine leads the firm’s qualitative research team. Over the past ten years she has participated in more than 65 studies for state agencies throughout the country including state DOT disparity studies. As a result, Janine has an intimate understanding of regulation impacts on small businesses, having analyzed results of focus groups with DBEs and small business owners. She has assisted David Keen in past assignments for WSDOT.

Due to her past roles in leading qualitative collection and analysis for disparity studies, Janine has extensive experience conducting outreach to hard-to-reach populations, which often requires effective collaboration with diverse communities. This includes the coordination and administration of focus groups and in-depth interviews with business owners who are people of color, women, persons with disabilities and members of the LGBTQIA+ community.

Her extensive work on disparity studies and contracting processes includes many state DOTs. For example, she conducted policy development research and analyzed program compliance for Keen Independent’s Ohio Title VI Program Review and Analysis assignment. Janine has also investigated Title VI and DBE Program complaints filed by DBEs, including her work on disparity studies for the Oregon Department of Aviation and state DOTs in Arizona, California, Colorado, Hawaii, Illinois, Minnesota, Montana, Nevada and Oregon.

Publications. Janine Kyritsis is a co-author of:

- *Compendium of Successful Practices, Strategies, and Resources in the FHWA Disadvantaged Business Enterprise (DBE) Program*, National Cooperative Highway Research Program, Transportation Research Board, 2019.
- *Resource Guide for Improving Diversity and Inclusion Programs for the Public Transportation Industry*, Transit Cooperative Research Program, Transportation Research Board, 2021.

Disparity study examples. Janine Kyritsis led qualitative collection and analysis for the following studies: 2021 ODA Disparity Study (September 2019 to March 2021), 2020 ADOT Disparity Study (February 2019 to March 2020) and 2022 ODOT Disparity Study (September 2021 to June 2022).

Education. Janine Kyritsis completed her M.S. in Counseling and College Student Development at Long Island University and her B.A. in Anthropology/Sociology at St. John’s University.



Blanca Monter, Senior Consultant, will lead quantitative research and data collection for the WSDOT FAA 2024 Disparity Study. Blanca currently leads Keen Independent’s quantitative research team, spearheading data collection, data quality control, calculation of utilization and availability ratios and estimation of measures of discrimination using advanced econometric methods. She also conducts statistical analyses on ethnic and gender inequality using IPUMS-USA and IPUMS-CPS data. An expert in studying discrimination in procurement and contracting, Blanca has participated in more than 60 disparity studies and related assignments.

Prior to joining Keen Independent, Blanca served as a Deputy Director of Economic Policy Analysis for the Mexican Ministry of Finance and Public Credit where she performed econometric analyses using income-expenditure and employment survey data for studies on labor market reform and consumption tax reforms. As an Associate Program Director for the Roy Wilkins Center, University of Minnesota, Blanca Monter was responsible for data collection, data quality control, utilization and availability analysis and the estimation of measures of discrimination using advanced econometrics for the last six FTA DBE goal settings for New Jersey Transit and FHWA DBE goal settings for Minnesota Department of Transportation.

Blanca contributes to marketplace analyses in the firm's disparity study reports that analyze the geographic, economic, educational, psychological and social impact of discrimination in public contracting and employment.

Publications. Blanca is a co-author of *Compendium of Successful Practices, Strategies, and Resources in the FHWA Disadvantaged Business Enterprise (DBE) Program*, National Cooperative Highway Research Program, Transportation Research Board, 2019.

Disparity study examples. Blanca Monter led quantitative data collection and analysis for the following studies: 2021 ODA Disparity Study (September 2019 to March 2021), 2020 ADOT Disparity Study (February 2019 to March 2020) and 2022 ODOT Disparity Study (September 2021 to June 2022).

Education. Blanca Monter holds a Master's degree in Public Policy from the University of Minnesota, a Master's degree in Public Policy and Social Politics from Universitat Pompeu Fabra, Barcelona, and a Bachelor's degree in Economics from the Instituto Tecnológico Autónomo de México, Mexico City.



Joseph Broad, Senior Consultant, will oversee data automation and perform quantitative analyses. He has served in this role for more than 20 disparity studies and similar projects, including studies for the Oregon Department of Aviation, Oregon Department of Transportation, State of Colorado, Arizona Department of Transportation and Missouri Department of Transportation. Joseph also contributes to marketplace analyses in the firm's disparity study reports that analyze the geographic, economic, educational, psychological and social impact of discrimination in public contracting and employment.

Joseph Broad joined Keen Independent with an extensive background in quantitative methods, economic and political science research, machine learning and working for the federal government. He is trained in both frequentist and Bayesian statistical inference and has applied advanced quantitative machine learning methods in his research. Over the past nine years, Joseph Broad has been conducting political science research in public opinion and ideology, particularly around the subjects of social, economic and environmental justice. His research focuses on new technology in social science research with an emphasis on cutting edge machine learning methods, information retrieval, automation and data visualization.

Prior to joining Keen Independent, Joseph Broad spent years working for Harry Reid, the former United States Senate Majority Leader, in Washington, D.C. There he managed constituent outreach

and cooperated in senior political strategy meetings. He also drafted media materials such as press releases, opinion columns and scripts for the Senator’s video addresses.

Disparity study examples. Joseph Broad lead data automation and performed quantitative analysis for the following studies: 2021 ODA Disparity Study (September 2019 to March 2021), 2022 ADOT Disadvantaged Business Enterprise Availability Study and Overconcentration Analysis (April 2022 to January 2023) and 2022 ODOT Disparity Study (September 2021 to June 2022).

Education. Joseph Broad is a Ph.D. candidate in Political Science at the University of California, Davis and earned his B.A. in Political Science and Philosophy from the University of Nevada.



Dr. Mónica García-Pérez, Keen Independent Senior Consultant, will contribute to quantitative analyses of marketplace conditions. She has served in a similar role for past disparity studies with Keen Independent and the University of Minnesota. Dr. García-Pérez joined the firm as an economist and has extensive experience conducting research and teaching on topics of econometrics, labor economics, immigration and health economics.

Dr. García-Pérez has examined the impact of immigration on business creation and the expansion of local labor demand. She has worked with confidential longitudinal data provided by the U.S. Census Bureau and other sources, as well as publicly available large microdata to evaluate different perspectives regarding immigration and its local impact. Previously, she worked at the Center of Economics Studies at the U.S. Census Bureau where she participated in a long-standing project on self-employment and small businesses. She also participated in the 2016 New Jersey Transit Disparity Study.

Publications. Dr. García-Pérez is published in many peer-reviewed journals, including *Demography*; *American Economic Review*; *Review of Black Political Economy*; and *the Journal of Economics, Race, and Policy*. Relevant publication topics include transitions to business ownership, the impact of business owners’ birthplace and race, concentration of racial and ethnic groups in labor markets, hiring patterns and other topics.

Disparity study examples. Dr. García-Pérez assisted with quantitative data analysis for the following studies: 2023 VIA Metropolitan Transit Disparity Study (December 2022 to November 2023), State of New Jersey Disparity Study (2014 to 2016).

Education. Dr. García-Pérez holds a Ph.D. and a Master of Arts in Economics from the University of Maryland. She also earned a Master of Science in Economics from University College London and a Bachelor of Science in Economics from Universidad Central de Venezuela, Caracas, Venezuela.



Dr. Nicole Yates, Senior Consultant, will facilitate quantitative analysis and data collection. She has facilitated quantitative analysis and data collection, conducted qualitative analysis and performed quality assurance and quality control for over 20 disparity studies and similar projects. Dr. Yates joined Keen Independent as a researcher with a passion for creating equitable educational and employment opportunities for historically marginalized groups. She seeks to utilize her analytical and interpersonal skills to execute

inclusive initiatives in organization management. Her experience includes quantitative and qualitative analyses as well as equity, diversity and inclusion.

Previously, Dr. Yates served as Senior Research Analyst and Director of Membership at the National Society of Black Engineers. During her tenure, she conducted research in support of STEM diversity and equity initiatives, visualized quantitative and qualitative data, and directed membership where she collected and leveraged recruitment data to increase the membership pool. She also previously taught in the Mathematics department at Grand Canyon University.

Publications. Dr. Yates has authored and co-authored several publications, including *Paving the way: Engagement strategies for improving the success of underrepresented minority engineering students* in the *Journal of Women and Minorities in Science and Engineering*.

Disparity study examples. Dr. Nicole Yates facilitated quantitative analysis and data collection for the following studies: 2022 City of Columbia Disparity Study (April 2021 to October 2022), 2022 Caddo Parish Disparity Study (July 2021 to May 2022) and 2023 Opportunity Home (formerly City of San Antonio Housing Authority) Disparity Study (March 2022 to February 2023).

Education. Dr. Yates earned a Ph.D. in Urban Education Policy from the University of Southern California. She also holds a Master of Arts in Psychology and a Bachelor of Arts in Dance from Stanford University.



Dr. Vivien Lattibeaudiere, Keen Independent Senior Consultant, will facilitate qualitative analysis and program design. Dr. Lattibeaudiere has 30 years of equity program experience, including her prior work at the Arizona Department of Transportation and higher education institutions.

As the former Employee and Business Development Administrator at ADOT, she operated the Federal DBE Program and supervised availability and disparity studies conducted during her tenure. Dr. Lattibeaudiere is the recipient of Harvard University John F. Kennedy Foundation and Western Association of Highway Officials Civil Rights innovation awards.

Disparity study examples. Dr. Lattibeaudiere performed contract administration duties for the following studies: 2020 ADOT Disparity Study (February 2019 to March 2020), 2015 ADOT Disparity Study (February 2014 to July 2015) and 2017 ADOT Availability Study (November 2016 to September 2017). She is currently developing a new MBE/WBE program for a school district.

Education. Dr. Lattibeaudiere holds a B.A. in Psychology and M.A. in Community & Applied Psychology from Fairleigh Dickinson University and a Ph.D. in Higher Education and Administration and Leadership from the University of Tennessee.

Additional support staff. Keen Independent has the largest dedicated disparity team of any firm in the country, with 23 staff members who have experience in disparity studies and training in relevant skills and methodologies. This ensures that key study members can be supported, as needed, by additional qualified staff. The following staff will provide project support:

- **Haley Adams, Consultant,** assist with qualitative research collection, analysis and report writing. Haley has performed a similar role on 12 disparity studies. She holds an M.S. in Geographic Information Systems, a B.A. in Geography and a B.A. in History, all from Arizona State University.
- **Kristen Bethune, Keen Independent Consultant and Business Services Manager,** will assist with community engagement, report writing and quality control. Since joining Keen Independent earlier this year, she has performed a similar role on eight disparity studies. Kristen holds an M.A. and B.A. in Sociology from the University of North Carolina.
- **Manuel Perez, Keen Independent Consultant,** will assist with qualitative and quantitative research. He has participated in more than 30 disparity studies and similar projects. Manuel Perez holds a M.S. in Economics from Purdue University and a B.S. in Economics from Arizona State University.
- **Avery Newell, J.D., Research Assistant,** will assist with policy review and qualitative analysis. She has served in this role for 15 disparity studies and similar projects. Avery holds a J.D. from Vermont Law School and a Bachelor of Arts in Sustainable Development from the University of St. Andrews.
- **Tiffany Couch, Research Assistant,** will assist with quantitative research and provide availability survey support. She has performed this role in over 10 disparity studies and similar projects. Tiffany has a M.S. in Conflict and Dispute Resolution from the University of Oregon School of Law and a B.A. in Political Science from the University of Oregon. Tiffany is a resident of Portland, Oregon.



Subconsultant Qualifications

The subconsultants selected for this project have extensive experience working with Keen Independent on disparity studies.



Keith Wiener, Holland & Knight Partner, will provide the legal framework for this study.

Keith Wiener is Holland & Knight’s national Government Representation and State and Local Procurement Team Leader. Keith Wiener has more than 30 years of experience representing businesses and governments related to public contracting, M/WBE and other small business programs.

Keith Wiener has been the legal team leader and provided the legal methodology and analysis for more than 80 of David Keen’s availability and disparity studies for government entities. He has also developed the legal framework as part of Keen-led disparity studies for transportation agencies across the country, including ODA, ODOT, ADOT, Missouri DOT, Hawaii DOT and Nevada DOT. In addition, Keith Wiener provided litigation support for Caltrans’ successful defense of its implementation of the Federal DBE Program.

Publications. Mr. Wiener has co-written several publications on disparity-related topics including *Current Practices to Set and Monitor DBE Goals on Design Build Projects and Other Alternative Delivery Methods*, National Academy of Sciences for the Transportation Research Board, National Cooperative Highway Research Program; *Complying With the Federal Disadvantaged Business Enterprise Program: Guidance from a Recent Major Court Decision* for the National Contract Management Association; and *Federal Court Declares 8(a) Program Unconstitutional as Applied to Military Simulation and Training Contracts* for a Government Contracts Blog.

Disparity study examples. Keith Wiener developed the legal framework for the following studies: 2021 ODA Disparity Study (September 2019 to March 2021), 2020 ADOT Disparity Study (February 2019 to March 2020) and 2022 ODOT Disparity Study (September 2021 to June 2022).

Education. Keith Wiener earned his B.A. magna cum laude in political science from Syracuse University. He earned his J.D. from Emory University School of Law in Atlanta.



Suzanne Donaldson, Donaldson Consulting CEO, will conduct in-depth interviews and outreach for this study. A proud member of the Cowlitz Indian Tribe, Suzanne has 20 years of experience as a Diversity Consultant Practitioner working with large general contracting and engineering firms, small businesses and woman- and minority-owned firms as well as government agencies. She is recognized in the construction and design community for her work related to underserved businesses and for her ability to collaborate effectively with multiple stakeholders.

Suzanne has extensive experience working on disparity studies, including for state DOTs, which has provided her with unique insights into discrimination in public contracting in several states. For example, as part of Keen Independent projects, she conducted statewide in-depth interviews with business owners and trade associations as part of disparity studies for state agencies in Oregon, Hawaii and Colorado. Suzanne conducted in-depth interviews and coordinated, managed and facilitated public hearings and focus groups for the Alaska Department of Transportation 2014 Disparity Study. She was also responsible for conducting and managing airport and vendor surveys,

as well as providing highly detailed and summarized reports of all findings included in the disparity study. Suzanne also worked on a disparity study for John Wayne Airport, Orange County, CA where she was responsible for managing and facilitating public meetings and focus groups. For this study, Suzanne conducted 50 in-depth interviews with business owners and stakeholders, and created an extensive database of certified firms and stakeholders.

Disparity study examples. Suzanne Donaldson collected qualitative data for the following studies: 2021 ODA Disparity Study (September 2019 to March 2021), 2019 HDOT Disparity Study (April 2018 to March 2020) and 2022 ODOT Disparity Study (September 2021 to June 2022).

Education. Suzanne earned an A.A. in General Studies from Centralia College and continued her studies at the University of Puget Sound and Washington State University.



Sanjay Vrudhula, Customer Research International President and Founder, will lead CRI's efforts to conduct availability surveys for this study. Since 2004, he has provided availability survey administration on disparity studies directed by David Keen nationwide, including both telephone and online survey administration.

Sanjay Vrudhula has worked on over 65 disparity studies, supervising CRI interview staff who have participated in Keen-led disparity studies for state DOTs in Oregon, Arizona, Hawaii, Nevada, Montana, Indiana and Georgia, among others. CRI's interviewing staff have also participated in Keen-led disparity studies for the multi-jurisdictional disparity study in Minnesota, which included Minnesota DOT.

Disparity study examples. Sanjay Vrudhula oversaw the administration of availability interviews for the following studies: 2021 ODA Disparity Study (September 2019 to March 2021), 2020 ADOT Disparity Study (February 2019 to March 2020) and 2022 ODOT Disparity Study (September 2021 to June 2022).

Education: Sanjay earned a B.S. in Information Systems from Southwest Texas State University.

SECTION A4. Firm's Project Management System

In this section, Keen Independent describes the firm's project management system.

A1. Quality Assurance/Quality Control Processes

Keen Independent has developed strong quality assurance/quality control (QA/QC) processes for projects based on their combined experience leading large, complex, highly visible projects. The QA/QC process involves evaluating adjustments to activities or tasks, ensuring all work done by study team members meets Keen Independent's high standard for quality of work and validating deliverables for completeness and accuracy.

In addition to our internal controls, Keen Independent will review processes, initial data and preliminary results with WSDOT and key stakeholders to ensure comprehensiveness, accuracy and quality of the analyses and resulting report. To maintain cost efficiency, Keen Independent has automated some manual processes, while still maintaining the highest quality standards. Our studies are completed on-time, on-budget and with accurate, fully reviewed information.

A2. Tracking and Monitoring Systems

Keen Independent has a strongly developed business practice and utilizes an agile project methodology with scrum practices. The scrum methodology focuses on the development and completion of smaller tasks that lead up to the larger ones. The time frame surrounding each task is emphasized as it effects the start time of tasks ahead. We utilize project management tools to facilitate project activity in the form of checklists, dashboards, software, etc. For example, project management software Asana is used as a digital checklist. Project team leaders create dashboards based on all tasks identified in the workscope to avoid scope creep and meet deadlines throughout the contract. The study team tracks project progress using project dashboards which are assessed bi-weekly and then communicated with the client at meetings and in monthly progress reports.

A3. Scheduling Program

Keen Independent uses Asana as a project management tool for all firm projects, including disparity studies for Oregon Department of Aviation and Arizona Department of Transportation.

A4. Internal Communications

David Keen and Annette Humm Keen, Keen Independent Principals, discuss, review and approve staff assignments and all deliverables with lead team members before the team proceeds to next steps and before any work is submitted to the client. Janine Kyritsis maintains frequent communication with subcontractors, meeting weekly to review their work and assess study progress. Messaging software is used internally to communicate daily project updates.

A5. External Communications

Keen Independent proposes regularly scheduled project check-in meetings, as well as additional meetings as needed, in addition to a project kick-off meeting. Regularly scheduled meetings provide the opportunity for frequent updates on the study progress which increases accountability for deadlines and deliverables. In addition to project meetings, Keen Independent provides written monthly project updates that include each task, task progress over the last month and the percentage of completion for each task.

SECTION A5. Project Delivery and Approach

A.1. Development of Work Plan

Washington Department of Transportation (WSDOT) wishes to know whether there is evidence of a disparity between the utilization and availability of minority- and woman-owned (M/WBEs) firms in the 64 Washington Airports included in the federal National Plan of Integrated Airport Systems. Keen Independent developed a work plan following a court-approved approach and experience with other successful statewide disparity study projects, such as the Oregon Department of Aviation Statewide Aviation Disparity Study.

Keen Independent's approach for conducting a disparity study has been reviewed and approved by the Ninth Circuit in *AGC, San Diego Chapter v. Caltrans*, by the U.S. Department of Transportation and the U.S. Department of Justice. We then adapt that court-approved methodology to client needs, the unique data and processes of a client and the nature of the local area marketplace.

A.2. Involvement in the Decision-Making Process for the Development of the Work Plan.

David Keen and Annette Humm Keen, Principals Keen Independent are involved in the decision-making process of the development of the work plan bringing in other team members such as Janine Kyritsis, Blanca Monter, Keith Wiener and Suzanne Donaldson for insights as needed.

A.3. Elements of the Proposed Work Plan

Task 1. Statewide outreach and public participation. Task 1 includes the creation of public outreach and internal and external stakeholder groups. Extensive public outreach was a successful strategy to increase the participation of Oregon airports in the ODA study.

a. Develop public outreach plan. Keen Independent, in collaboration with WSDOT, will create an outreach plan with multiple avenues to inform the contracting community and the general public of the study and provide ways they can provide input.

b. Meetings with internal and external advisory groups. We recommend WSDOT consider establishing an Internal Stakeholder Group and an External Stakeholder Group. Keen Independent would provide briefings to those groups through the course of the study and help administer those meetings (preparing agendas, distributing meeting minutes, etc.).

In addition to the above meetings, we will hold one or more informational meetings with groups such as the AGC of Washington, ACEC Washington, COMTO Washington, NAMC Washington and others. The study team will also attend industry-specific meetings such as Aviation Industry Day.

We plan for strong collaboration between WSDOT and individual airports and their operators. Keen Independent will regularly meet with individual NPIAS airports as well as staff from WSDOT.

c. Public meetings. Once draft study results are available for public comment, the Keen Independent project team will assist WSDOT in coordinating, conducting and participating in up to six public meetings. These meetings will provide local business owners, trade association representatives and other knowledgeable individuals the opportunity to share their perceptions and experiences about the local marketplace and working with WSDOT and participating airports.

Participants can also provide recommendations on future WSDOT actions and input on WSDOT's proposed overall DBE goals.

d. Communications. Study information will be disseminated throughout the study process. For example, Keen Independent will draft a fact sheet, press release, create a website for public submission of comments, maintain a dedicated email address and monitor a telephone hotline for the disparity study.

Task 2. Internal coordination meetings. This project management task encompasses all aspects of internal and external coordination and management related to the project.

a. Project management. David Keen, Principal of Keen Independent, will lead the study team and be responsible for coordination with WSDOT and internal team members. He will be assisted in this project management by Annette Humm Keen, Principal, and other team members.

b. Project scoping. After additional discussions with WSDOT concerning project scope and research into contract data availability, protocols for working with local airports and other issues, Keen Independent will further refine the detailed workplan and schedule. We will submit these documents for WSDOT review and hold project scoping meetings to discuss any further adjustments. David Keen will incorporate input from WSDOT in a final scoping document after holding the project scoping meeting. In addition, Keen Independent will provide WSDOT with a detailed schedule illustrating the timeline for tasks and subtasks.

c. Reporting coordination. Keen Independent will submit monthly progress reports to the WSDOT project manager. These reports discuss project status by task, the percentage of each task that is complete, any issues that might affect project tasks or schedule, and other relevant events or information.

In addition, David Keen will conduct monthly status meetings with the WSDOT project manager and any department staff. In addition, Keen Independent will meet with the WSDOT project manager and key staff to review preliminary results.

Task 3. Legal framework and analysis. Keith Wiener of Holland & Knight will develop the legal framework for this study. The study team will review current law and how study methods comport with that understanding, including proper analysis of utilization, availability, bid capacity, disparity calculations, quantitative analyses of marketplace conditions, collection and analysis of qualitative information and DBE goal methodology. Keith Wiener will examine U.S. Supreme Court, Ninth Circuit and other court decisions as well as Washington state constitutional provisions. (He is doing so in the current disparity study for City of Vancouver.) A section of the final report will summarize this analysis. Detailed review of relevant court decisions will be provided in an appendix.

Task 4. Review WSDOT's contracting and procurement methods. Federal regulations require WSDOT and other airport operators to narrowly tailor their implementation of the Federal DBE Program, including maximum use of neutral measures to encourage participation of M/WBEs and other small businesses in FAA-funded contracts. Barriers to small businesses seeking prime and subcontract opportunities at airports can include restrictive specifications and additional security protocols, but leading airports have identified ways to still promote utilization of small businesses. Keen Independent will suggest any areas for improvement for WSDOT and local airports as they implement the DBE Program.

a. Review statutes and WSDOT policies and practices. The study team will research and document the policies and methods used by WSDOT and other operators of NPIAS airports in Washington regarding procurement policies, procedures and practices regarding FAA-funded contracts. Keen Independent and H&K are familiar with Washington procurement law from past studies and will update this information through additional research.

b. Examine local airports' contracting and procurement methods. Study team members will interview a cross-section of individual airports and their owners about purchasing policies, contracting methods, industry conditions, and project management practices such as timely payment.

c. Review WSDOT and airports' current operation of the Federal DBE Program. The study team will conduct a review and analyses of WSDOT-operated and other NPIAS airports' operation of the Federal DBE Program, including various components such as program management, data collection, goal setting, certification process, compliance and DBE outreach programs, as well as other DBE-related programs and efforts as required under 49 CFR Part 26.

Task 5. Collection of prime contract and subcontract data. Keen Independent will compile and examine contract data for WSDOT-managed airports and other NPIAS airports, including federally funded contracts, from October 1, 2016, through September 30, 2021, or a more recent period.

Keen Independent understands that WSDOT maintains prime contract and subcontract data for WSDOT-operated airports. Keen Independent will collect prime contract data and subcontract directly from other NPIAS airports (and from prime contracts and consultants, when needed).

a. Prime contracts. Keen Independent will attempt to examine all federally funded transportation prime contracts. Keen Independent will review the state WSDOT Statewide Capital Improvement (CIP) Plan Project per year and will use it as a base to make individual data requests to each of the participating airports. Keen Independent may revise data collection after the initial meeting with WSDOT project manager and other NPIAS airport representatives.

b. Subcontract data. WSDOT-operated and other NPIAS airports may have some subcontract information. Keen Independent will collect these data from WSDOT and other NPIAS airport records and request any missing data from prime contractors or subcontractors, as needed. (Keen Independent successfully conducted a prime contractor outreach effort as part of our 2021 Oregon Department of Aviation Disparity Study.)

Keen Independent will submit a detailed analysis of the collected prime contract and subcontract data to the WSDOT project manager and key WSDOT staff before proceeding with other tasks.

Task 6. Determination of the relevant geographic market area and subindustries for transportation contracts. The study team will use the prime and subcontract data collected in Task 5 to examine the location of firms providing construction and consultant services at WSDOT and other NPIAS airports and define a geographic market area that captures 75–80 percent or more of those dollars. We expect there could be different definitions of the market area and subindustries for different airports.

To code types of work in each contract and subcontract, Keen Independent will use NAICS (federal industry codes) to identify specific subindustry under one of the following general industries:

construction and consultant services. For example, we will separately identify contracts and subcontracts for subindustries such as surveying and materials testing under “consultant services.” The study team will conduct this coding based on information in WSDOT and other airports’ records and the primary industry of the company providing construction and consulting services. We perform this coding for each prime contract and subcontract after excluding types of work or entities that are out-of-scope (purchases from government agencies or regulated utilities, for example).

Task 7. Availability analysis. A key component of a defensible disparity study is establishing availability benchmarks for specific types of past and future work for each airport by race, ethnicity and gender of the business owner. The availability benchmarks Keen Independent will prepare for construction and consulting services contracts will estimate the expected share of federally funded contract dollars that would go to M/WBEs (by group) if there were a level playing field for all firms in the marketplace. We will then convert those M/WBE availability calculations into DBE availability estimates after considering firms that have or might graduate from the DBE Program or are otherwise ineligible to be counted as current or potential DBEs.

The first step in the availability analysis is to build a list of firms to include in the availability survey. One source will be WSDOT lists of firms that signed up to receive contractor opportunities or any other interested vendors list maintained by NPIAS airports. We will supplement this list with firms identified by Dun & Bradstreet (D&B) within the relevant market area that perform types of work relevant to WSDOT-operated and NPIAS airport procurement.

In our experience, WSDOT and other airports will not have complete information about the ownership of firms on those lists. Furthermore, it is best if Dun & Bradstreet ownership information for firms on its lists is verified.

The study team will attempt to complete availability surveys with **all** of the identified firms. These telephone surveys (supported by online survey options) will include questions for firm owners and managers about their ownership. They will also ask about qualifications and interest in working with WSDOT airports and other airports, specific types of performed, firm revenue and employment size. The surveys will ask about the regions within Washington in which firms are able to perform work or provide goods.

The final portion of the survey will ask about any barriers in the Washington marketplace. Examples of marketplace questions include experiences regarding any business networks; barriers related to financing, bonding and insurance; and difficulties learning about contract opportunities.

Any interested firm can complete a survey. This survey approach is a strength of the Keen Independent methodology.

Our team will be able to introduce the survey in multiple languages, which has proven successful in minimizing any language barriers when the first person contacted on the phone may have limited English language capabilities. By immediately switching to another language, or re-contacting the firm in another language, this barrier can be removed.

Keen Independent will also collect information about the **relative bid capacity** of businesses by collecting information from firm owners and managers about the largest contract or subcontract they bid on or performed in recent years (e.g., past six years). Keen Independent can then estimate

availability counting those firms as available for contracts within the size range for which they report bidding. (This and other aspects of our availability methodology has been reviewed and approved by the Ninth Circuit Court of Appeals, USDOJ and USDOT.)

Keen Independent will design the surveys and analyze results; Customer Research International (CRI) will perform the telephone interviews. For budgeting, we assumed 20,000 local area firms to be called as part of the availability survey. (Remember, any and all firms can complete a survey.)

Once the surveys are complete, Keen Independent reviews and dollar-weights availability results on a contract-by-contract, subcontract-by-subcontract basis (which creates a more refined availability analysis than produced by most other consultants).

The study team will use results from the availability analysis to prepare overall availability estimates for M/WBEs (by race, ethnicity and gender) for the disparity analysis and current and potential DBEs for the assessment of overall DBE goals. We will develop additional availability estimates for different sets of contracts and groups of airports, as needed.

Keen Independent understands that this availability methodology considers more factors than included in the availability analyses for WSDOT's recent studies of FHWA-funded contracts or its previous study of airports in Washington. We take these extra steps to align with relevant court decisions. So that WSDOT and others can understand the differences in results between approaches, Keen Independent proposes to perform the following additional sensitivity analyses:

- Compare the racial, ethnic and gender ownership composition of all firms available for WSDOT and other airports using the approach in the prior airport study for WSDOT with results from the Keen Independent study; and
- Compare the dollar-weighted availability results for WSDOT and other airports (by group) with the results of the Keen Independent study.

Task 8. Utilization analysis. Keen Independent will use multiple data sources to identify race, ethnicity and gender ownership of utilized firms. Sources will include the DBE directory, State Certification directory, results from other Washington state studies, results from the availability survey, and interviews with the owners and managers of utilized firms.

Keen Independent will determine ownership for the following groups: African American-, Asian-Pacific American-, Subcontinent Asian American-, Hispanic American-, Native American- and white woman-owned firms. Keen Independent will also code firms based on their certification as DBEs, MBEs, WBEs and whether they qualify as small businesses.

Keen Independent expresses utilization as the percentage of contract dollars going to a particular group (e.g., hypothetically, 5.0 percent of construction contract dollars going to African American-owned firms). Keen Independent will report utilization results for different racial/ethnic and gender groups, procurement contracts (construction, professional services, goods and other services), and prime and subcontracts (and prime/subcontracts combined).

Task 9. Disparity analysis. Keen Independent will determine whether there is a disparity between the utilization and availability of MBEs and WBEs (by group) in federally funded contracts. The

study team will report disparity results separately by funding source, types of work, and considering prime and subcontracts.

The study team will use disparity indices to further analyze whether any disparities are “substantial” according to case law. We will also determine whether any disparities are “statistically significant,” or whether they can be explained by chance in the procurement process, through sophisticated statistical analyses such as Monte Carlo simulation.

Task 10. Quantitative analysis of local marketplace conditions. Keen Independent will examine any disparities in the areas of entry and advancement, business ownership/formation, access to capital, bonding and insurance, success of businesses, business earnings and other outcomes.

These analyses will indicate whether there is evidence of disproportionate impacts or unequal outcomes indicating that minority- and woman-owned businesses do not have the opportunities to be hired and advance as employees, form businesses, or to sustain and expand their businesses and successfully compete for work.

Keen Independent will collect Census data as well as other federal data to perform these analyses. We will also use data collected through the study team’s surveys of businesses in the local marketplace. Certain analyses will be disaggregated for construction, services and commodities.

The study team will develop regression models and perform other statistical analyses to determine the statistical significance of any identified disparities in the marketplace.

But for analyses. Keen Independent will use results of the marketplace analyses to examine whether the availability of minority- and women-owned business in the transportation contracting industry in Washington state would be different “but for” the effects of any race or gender discrimination. This type of information can quantify certain “step 2” adjustments that may be appropriate when establishing overall DBE goals for FAA-funded contracts.

Task 11. Collection and analysis of anecdotal information. The study team will collect and analyze qualitative information about potential barriers that M/WBEs and DBEs face in the local marketplace and in WSDOT and other airport contracting. We will use multiple approaches to compiling this information, as discussed below.

a. Availability telephone surveys with business owners and managers. Keen Independent’s availability surveys will include questions concerning marketplace conditions, including potential barriers associated with financing, bonding and receiving payment. (We anticipate responses from thousands of businesses.)

b. In-depth anecdotal interviews and virtual workshops with business owners and managers, and trade association representatives. The project team will conduct in-depth interviews and business advisory group meetings with up to 60 business owners and trade association representatives across different industries in the local marketplace. These interviews will include perceptions of local marketplace conditions, including barriers to doing business with WSDOT, any allegations of unfair treatment, bid shopping, price discrimination and insights regarding race-, ethnicity- and gender-based measures. Interviews will include large and small minority-, woman-, majority-owned businesses, certified and non-certified M/WBEs.

Courts have reviewed and approved the proposed methods to collect and analyze qualitative information. Proposed local subconsultant Donaldson Consulting will conduct these interviews under the direction of Janine Kyritsis of Keen Independent.

c. Review other relevant studies. Review of relevant reports, public hearings, judicial findings and historical information . The study team will also conduct a review of other disparity studies and similar research that may provide additional information regarding marketplace conditions.

d. Analysis of information. The study team will review information from Tasks 11-a through 11-c to prepare an overall assessment of qualitative evidence. The report will present key results by topic, including excerpts from the interviews, telephone survey responses and public meetings. Keen Independent will identify the interviewee by number rather than by name in the written analysis.

Task 12. DBE goal setting. Federal regulations in 49 CFR Part 26.45 outline a two-step process for agencies to set their overall DBE goal, starting with a “base figure.”

a. Calculate base figure and Step 2 adjustment. Keen Independent will develop base figure calculations and examine potential Step 2 adjustments for each WSDOT-operated airport for consideration by WSDOT. We will provide needed data for goal calculation for each other airport.

b. Determine anticipated goal to be met through race-conscious/neutral measures. Keen Independent will assess study findings and provide information to WSDOT to project the portion of its overall DBE goals to be achieved through race- and gender-conscious measures such as DBE contract goals.

This assessment will include analysis of any contemporaneous effects of past discrimination, including whether there are any disparities in outcomes that reflect such discrimination. It will include examination of factors other than discrimination that might account for disparities in outcomes, an analysis of race- and gender-neutral initiatives, an overconcentration analysis and any other analyses regarding assessment of conclusions and potential WSDOT actions. We will also provide needed data for potential step 2 adjustments for each other airport.

c. Review program elements. For WSDOT’s review, the study team will identify specific race- and gender-conscious remedies that may be necessary to address effects of any race or gender discrimination affecting firms in the transportation and aviation contracting market. Keen Independent will review neutral efforts currently in place and recommend additional measures for WSDOT’s and other NPIAS airports’ consideration.

Keen Independent will recommend any changes to NPIAS airports’ implementation of the DBE Program to improve program effectiveness and compliance with applicable regulations and relevant court decisions.

Task 13. Reports and presentations. Keen Independent will be the primary author of the FAA Statewide Disparity Study Report, assisted by other study team members.

a. Individual draft report chapters and appendices. As they are developed, Keen Independent will share draft disparity study report sections with the WSDOT project manager and others as appropriate. Keen Independent will submit a full draft Disparity Study Report for WSDOT’s review in Month 11 of the disparity study.

b. Public meetings. As discussed in Task 1, Keen Independent proposes six public forums to present disparity results and proposed overall DBE goals. Testimony from the public forums and any written comments that the project team collects will be analyzed and included, as appropriate, as part of corresponding report appendices. (Individuals can also submit written comments and recommendations separate from attending a meeting.) Keen Independent will work with Donaldson Consulting to coordinate a combination of in-person and virtual meetings.

c. Final report. Keen Independent will review public comments and recommendations and incorporate them, as appropriate, into the final report. Keen Independent will deliver a final report to WSDOT in Month 12 of the disparity study.

d. Study documentation. The study team will provide appropriate underlying data and other materials that fully document the results of the study.

A.4. How the Work Plan Addresses Possible Contingencies

The following list illustrates the types of issues that emerge in a disparity study and how Keen Independent’s workplan addresses them.

Adjustments related to contract data issues. The most frequent cause for some redirection in a disparity study relates to prime contract and subcontract data. Keen Independent proposed study timeline accommodates for this. We include time for collection of prime contract and subcontract data directly from WSDOT-operated airports and each other individual NPIAS airport and their consultants. As described in Task 5, the study team will be able to collect data in electronic form from WSDOT-operated and other NPIAS airports, to be supplemented as needed with contract and subcontract data directly collected from prime contractors and subcontractors, as needed.

Adjustments related to resources. Our experience with past studies is that Keen Independent team members and subconsultant resources are often shifted between priorities to ensure best completion of the project in a timely manner. We have built that into the proposed study.

B. Approaches to Resolve Issue(s)

Approach within the project team. The subconsultants selected for this project have extensive experience working with Keen Independent on disparity studies. Keen Independent maintains weekly communications with subconsultants to discuss study tasks and any challenges that may arise. David Keen, as study project manager, will be responsible for providing final resolutions to any issues that may arise.

Approach with clients. David Keen, a Principal of Keen Independent, is the project manager and responsible for all aspects of the study. David Keen and Annette Humm Keen will communicate directly with WSDOT to discuss project status, any challenges and proposed remedies. Task 2 discusses meetings and progress reports.

Approach with stakeholders. David Keen and Annette Humm Keen will communicate study process and results with internal and external stakeholders. Tasks 1 and 2 discusses meetings and communications that Keen Independent will participate.

C. Work Breakdown Structure

Table 1 provides WSDOT and Keen Independent deliverables per proposed task.

5-1. Project deliverables

| Task | WSDOT deliverable | Keen Independent deliverable |
|--|--|--|
| 1. Statewide outreach and public participation | Coordinate meetings Review of communication materials | Communication materials Statewide outreach Meeting notes |
| 2. Internal coordination meetings | Attend meetings Review of materials | Progress reports Meeting notes |
| 3. Legal framework and analysis | Review of materials | Legal framework |
| 4. Review of WSDOT and NPIAS airports contracting and procurement methods | Compilation and delivery of information retained by WSDOT and NPIAS airports | Review of WSDOT contracting methods |
| 5. Collection of prime contract and subcontract data | Compilation and delivery of data retained by WSDOT and NPIAS airports | NPIAS airports prime contract and subcontract database |
| 6. Determination of the relevant geographic market area and subindustries for transportation contracts | Delivery of vendor information Review of materials | Analysis of geographic market area and relevant subindustries |
| 7. Availability analysis | Delivery of interested vendor lists Review of materials | Availability analysis |
| 8. Utilization analysis | Vendor information Review of materials | Utilization analysis |
| 9. Disparity analysis | Review of materials | Disparity analysis |
| 10. Quantitative analysis of local marketplace conditions | Review of materials | Quantitative analysis of marketplace conditions |
| 11. Collection and analysis of anecdotal information | Review of materials | Qualitative analysis of marketplace conditions |
| 12. DBE goal setting | Review of materials | DBE goal setting methodology for WSDOT-operated airports |
| 13. Reports and presentations | Review of materials Attendance at presentations | Draft and final reports Public meetings |

D. Key Issues and Critical Milestones

Keen Independent will submit a complete draft disparity study report within 11 months of the contract's start date. Keen Independent will review WSDOT comments on the draft report and prepare a final report within 30 days of receiving those comments. The following milestones are based on a start date around March 1, 2024:

- **March 2024.** Statewide outreach and public participation and data collection plan.
- **March–August 2024.** Keen Independent will develop the legal framework analysis, and collect all prime contract and subcontract information retained by the WSDOT-operated and NPIAS airports.
- **September–October 2024.** Keen Independent will conduct the availability survey.
- **October–December 2024.** Keen Independent will analyze the contract data and availability survey results and then calculate availability estimates for WSDOT-operated and NPIAS airport contracts.

Keen Independent will present results from the qualitative and marketplace analyses and submit draft availability tables and draft utilization results in spring 2025 for WSDOT review.

- **January 2025.** Keen Independent will complete disparity analyses and submit a draft report for WSDOT review in January 2025. The draft report will be user-friendly and include a component that summarizes results for each participating airport.

The study team will also prepare a DBE goal methodology for WSDOT-operated airports.

The study team will hold public meetings to collect public comments, which will be incorporated into the final report.

- **February 2025.** Keen Independent will address WSDOT comments on the draft report, incorporate any additional public input and submit a final report within 30 days of receiving WSDOT comments.

SECTION A6. Investigation and Analysis

Keen Independent is proud to provide the following examples to demonstrate the study team's experience and demonstrated capacity for investigation and analysis of discrimination (both current and historical) in government contracting, specifically within the highway construction and consulting industry and the aviation industry.

A1. Experience Conducting Disparity Studies for Transportation Agencies

The Keen Independent study team has participated in more than 200 disparity studies and related studies, many of which are related to the transportation industry. For example, Keen Independent:

- Conducted the 2021 Oregon Statewide Airports DBE Disparity Study for the Oregon Department of Aviation (ODA), which compiled contract data and examined utilization and availability for 48 airports across Oregon. Qualitative research examined barriers to performing airport work and recommended efforts to build DBE and other small business capabilities to perform that work. Conducted the statewide 2016 Availability and Disparity Study, 2019 DBE Disparity Study Update and 2022 Disparity Study for the Oregon Department of Transportation (ODOT). These studies included compiling business owner input on training and other assistance needs and developing partnerships between ODOT and partners others to improve supportive service delivery.
- Directed five disparity studies and DBE program assessments for the Arizona Department of Transportation, including preparing overall DBE goals for FHWA-funded contracts and data to be used to set DBE contract goals.
- Conducted the 2019 DBE Availability Study for the Missouri Department of Transportation that provided results to develop the overall base figure for MoDOT's DBE goal (performed on-time and on-budget in six months). This study compiled input from businesses throughout the state on the types of assistance needed for their success. Keen Independent worked closely with trade associations in performing the program review. (We are currently conducting the 2023 study for MoDOT.)
- Conducted a national study of transit agency DBE and other equity programs for the Transportation Research Board (TRB), including an inventory of supportive services programs. This included research with successful DBEs about the types of assistance that were most important to their growth and profitability. Also for TRB, directed a 50-state study examining how to best apply the DBE Program and related business assistance on alternative delivery method construction programs.
- Developed a resource guide for the Transportation Research Board (TRB) to assist transit agencies improve equity in their operations, including support services and other equity measures in contracting and procurement.
- Analyzed Maryland, Pennsylvania and Delaware construction and engineering firms and assisted the Delaware Department of Transportation with developing its overall DBE goal. Examined potential DelDOT business assistance programs.

A2. Capacity for Investigation and Analysis of Discrimination in Contracting

Keen Independent is known for completing complex, legally defensible disparity studies on time and on budget. Our firm has the capacity and methodology to investigate and analyze any observable disparities.

Capacity for investigation. In addition to the transportation studies above, our team has also conducted some of the largest disparity studies in the country within the proposed timeframe and budget. We have staff with expertise in historical research, sociology and psychology, economics, statistics and policy analysis. Our large staff lets us successfully complete large, complex disparity studies on time and on budget. For example, Keen Independent

Completed the 2020 State of Colorado Disparity Study in just 10 months. For this project, the study team analyzed contracts and subcontracts totaling \$3.2 billion and successfully reached 17,000 businesses in its availability survey.

Led the statewide Minnesota Joint Disparity Study, which is the largest study of its kind. The study examined nine entities, including Metropolitan Council, Minnesota Department of Transportation and the State of Minnesota. Keen Independent compiled input from business owners about barriers to forming, growing and sustaining their businesses and recommended joint efforts across participating entities to better support those businesses.

Analysis of current and historical discrimination. As discussed in Section A5, Keen Independent will review whether there are disparities in business utilization, business ownership and other outcomes within the marketplace and if these disparities may be attributable to discrimination. The study team will examine data collected through the availability survey, the U.S. Census Bureau and related data sources. This quantitative information is supplemented by extensive qualitative research to investigate any potential discriminatory actions or processes that have a discriminatory impact.

Additionally, all Keen Independent disparity studies include a focused historical analysis of discrimination for DBEs and M/WBEs on a local and national scale. We use these findings to help illuminate the historical forces that underpin and influence current circumstances, as well as define strategies to help clients and communities move forward in a way that is culturally conscious and reflects the unique dynamics of the area.

For example, ODT and ODA included analysis of historical conditions for African Americans, Chinese Americans, Japanese Americans, Indian Americans, Latino Americans, Indigenous Americans and women in Oregon, which Keen Independent used as context for our interactions with the staff and community, outreach efforts, equity analysis and final recommendations.