

NON-PRICE PROPOSAL CITY OF SOMERVILLE

PARKING DATA INVENTORY STUDY

RFP # 20-36

November 19, 2019



Cover Letter

November 15, 2019

City of Somerville, Purchasing Department
Attn: Thupten Chukhatsang, Procurement Analyst
93 Highland Avenue
Somerville, MA 02143

RE: RFP # 20-36 Parking Data Inventory Study

Dear Thupten Chukhatsang,

On behalf of Nelson\Nygaard Consulting Associates, Inc., I am pleased to submit this proposal to the City of Somerville for a Parking Data Inventory Study. Given our prior work on numerous parking and transportation projects in Somerville, we are excited about the possibility to once again work with the City and are committed to the project's success.

We have assembled a team that combines national expertise with local knowledge of parking, curbside management, and emerging mobility to complete the study. Our team will be led by **Project Manager Matt Smith**. In addition to his recent work assessing resident parking permit patterns in the City of Somerville, his work in parking management and economic development has helped communities around the Commonwealth to develop efficient, well-utilized and connected parking and curbside management systems. As the former director of traffic and parking for the City of Salem, Matt also brings real world experience with municipal curbside management policy and implementation.

Evan Costagliola will serve as **principal-in-charge**. Evan brings over 12 years of experience in multimodal transportation policy and demand management strategies. He is also the co-leader of the firm's Emerging Mobility practice, working on projects and with agencies across the globe to advance multimodal and emerging mobility policy and strategy. **Jason Novsam**, who also worked on the recent resident permit analysis, will **lead the data analysis tasks**. Jason not only has considerable experience leading parking inventory and utilization data collection efforts, his expertise in developing innovative transportation and parking models and analysis tools will ensure the project outputs and deliverables will be of the highest quality. Nelson\Nygaard Associates will also lead Street Teams (as described in the scope of work) to ensure all data collection is completed efficiently, consistently, and accurately.

We hope you will recognize the strengths of our proposal, staff capabilities, and firm experience as indications of our capacity to carry out this project. We submit our proposal in accordance with the terms and conditions outlined in the Request for Proposal, and our offer will remain in effect for at least ninety (90) days from the date of submittal, November 19, 2019.

We have reviewed the terms of the RFP and City of Somerville Standard Contract General Conditions in Appendix A and find them to be well-drafted provisions that will be a reasonable basis for final negotiation and inclusion in a services agreement upon our selection.

If we can provide any additional information about our firm or this proposal, please do not hesitate to contact Matt Smith at msmith@nelsonnygaard.com or 857-305-8016, or me at lriley@nelsonnygaard.com or 503-488-2247. I am authorized to negotiate and bind the firm contractually with the City in connection with this effort.

Sincerely,



Leah Riley
Managing Director

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Qualifications and Experience

We Put People First

Nelson\Nygaard Consulting Associates, Inc. is an internationally recognized firm committed to developing transportation systems that promote vibrant, sustainable, and accessible communities. Founded by two women in 1987, Nelson\Nygaard has grown from its roots in transit planning to a full-service transportation firm with over 140 people in offices across the United States. We have identified four key staff and their experience and information can be found in the Personnel section on page 15 of this proposal.

In keeping with the values set by our founders, Nelson\Nygaard puts people first. We recognize that transportation is not an end by itself but a platform for achieving broader community goals of mobility, equity, economic development, and healthy living. Our hands-on, national experience informs but doesn't dictate local solutions. Built on consensus and a multimodal approach, our plans are renowned as practical and implementable.

Nelson\Nygaard specializes in:



Transit

Designing and developing great transit services for people



Streets and Cities

Balancing the mobility needs of everyone to create thriving places



Emerging Mobility

Collaborating on solutions for people in a new era of mobility



Mobility Management

Coordinating and enhancing an individual's access to more mobility options



Parking and Demand Management

Creating livable places with better management of parking supply and demand



Active Transportation and Safety

Making places better for people to walk, bike, and gather



Engineering Design and Development

Analyzing movement to improve connectivity and reduce environmental impacts



Paratransit and Community Transportation

Achieving service/cost performance and ADA compliance for demand-responsive services



Campus Mobility

Improving mobility choices at university, corporate, and medical workplaces

Parking Planning Qualifications



Our approach is to find a cost-effective blend of solutions specific to local needs. We challenge perceptions, build consensus, and win community support for policies, regulations, and plans that put parking needs in the context of desired outcomes. In doing so, we help communities save money, conserve resources, and achieve their larger goals for economic development and improved quality of life.

Nelson\Nygaard sees innovative management of parking supply and demand as an opportunity to create livable places. We have pioneered an approach that demystifies the real costs of parking and develops strategies for sharing resources, reducing trips, integrating new technology, and appropriately pricing parking. Our multimodal skillset also helps us to proactively and flexibly respond to the mobility impacts of emerging technologies.

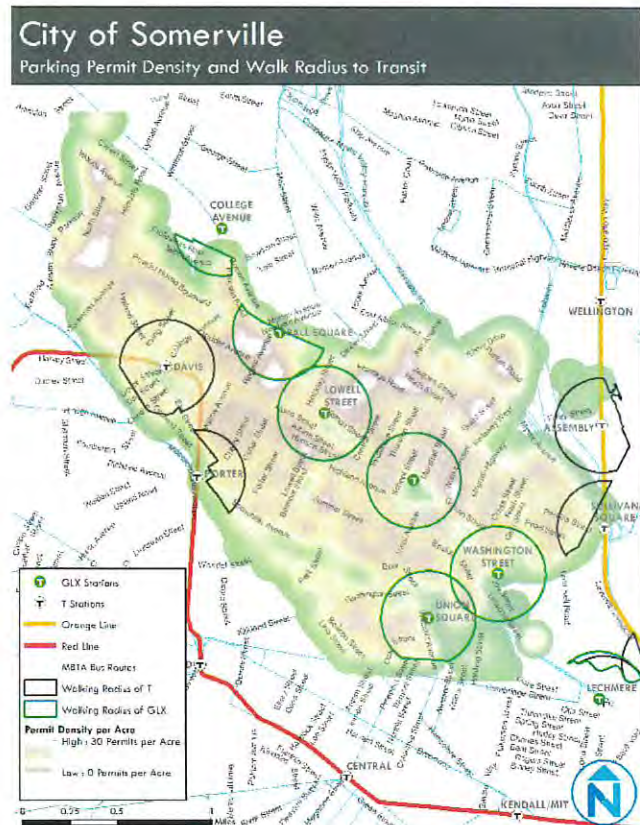
Past Performance and Experience

RESIDENT PARKING PERMIT ANALYSIS

2018–2019

Challenges: Located outside of Boston, Somerville is one of the nation’s densest municipalities. The city is increasingly playing a central role in the economic strength of the Boston metropolitan area and is receiving national recognition as a model for municipal innovation and progressive planning. With the anticipated arrival of a new rapid transit line, the Green Line Extension, which would greatly improve transit accessibility in certain areas, the time was right for an updated residential on-street parking permit system.

Solutions: Nelson\Nygaard worked with the City of Somerville to conduct an analysis of spatial patterns and bottlenecks in the current citywide residential parking permit. The firm also analyzed permit systems in comparable cities around the country to create a list of best practices that could easily be customized to serve Somerville’s needs and guide the creation of a new permit system. Our GIS analysis revealed that Somerville’s parking demand was under pressure from the increased population density taking place citywide, evidenced by a majority of parking violations in walking radius from transit hubs and permit demand hotspots located in residential areas where the majority of off-street parking is provided.



Nelson\Nygaard's recommendations included a tiered pricing system, creation of parking zones and restrictions, increasing costs or limiting permit eligibility for households with off-street parking options, and creating an option to opt-out of the annual permit to receive transit incentives. The recommendations built upon parking policies that proved to be successful in case study cities that saw a significant reduction in on-street parking demand and nuisance. These strategies were developed to inform decision making around parking requirements in mixed-use transit zones as part of a new zoning system for the City.

UNION SQUARE REDEVELOPMENT

2014–2018

Challenges: The City of Somerville is increasingly playing a central role in the economic strength of the Boston Metropolitan Area and is receiving national recognition as a model for municipal innovation and progressive planning. It was recently recognized by the Boston Globe as “the best run city in the Commonwealth.” Union Square is at the hub of the city’s growth and with higher density development



and a new rapid transit station proposed, there is significant demand for an upgraded multimodal transportation network that also mitigates potential neighborhood impacts. The Somerville Redevelopment Authority (SRA) selected developer US2, as a partner to spearhead the redevelopment of Union Square including mixed uses and connections to the future Green Line Station. Nelson Nygaard was subsequently retained by US2 to develop the master transportation plan and worked on multimodal planning, analysis, policy, and guidance.

Solutions: During Phase 1 Nelson\Nygaard focused on transportation planning, infrastructure, design, policy, and operations to identify issues and develop recommendations and strategies for the US2 development and Union Square itself. During this phase of work the team analyzed vehicular, circulation, pedestrian, bicycle, and transit connections, as well as parking and overall land use policy. Key tasks focused on regular coordination meetings with the development team and presentations to the City of Somerville and at public meetings. Nelson\Nygaard also assessed draft City of Somerville zoning including a new transportation demand management (TDM) ordinance and Somerville by Design streetscape plans.

The next phase of work continued with more detailed analysis of transportation and parking. This includes construction of Synchro networks, reviewing potential impacts of new roadway alignments, and an assessment of level of service for multiple modes. The analysis will examine both local and regional travel demands and will support the development of D2 parcel, drilling down to detail access management, driveway locations, pedestrian entries, and access to the future Green Line.

DOWNTOWN MANSFIELD PARKING STUDY

2018–ONGOING

Downtown Mansfield has seen many changes as ridership at the town's commuter rail station has risen significantly. In addition to new multi-family residential developments with ground-floor retail uses, the existing retail environment has seen changes and turnover. More mixed-use development in, around, and near the station is planned or proposed. **Challenges:** These factors have resulted in increased parking pressure at the station and across downtown, contributing to growing vehicular congestion during peak commuting hours. A key challenge of this study is to cooperatively integrate two separate parking systems—a commuter parking system and a downtown parking system—that are physically divided by the train tracks, and create a cohesive, connected system that improves the downtown and commuter parking experience for all users. Many commuter parking concerns and issues are a direct result of a complicated system of public and private parking lots adjacent to the station with different owners, restrictions, rates, hours, and more. The current system is not predictable; access in and out of the facilities is circuitous, confusing, and encroaches on a residential neighborhood; and regulatory signage is poor. At the same time, the surface commuter lots adjacent to the station hold promise for transit-oriented development (TOD)—walkable, transit-accessible development with residential and retail located within walking distance of public transit service.



Solutions: Nelson\Nygaard is helping Mansfield proactively manage its parking inventory to ensure that the downtown provides enough parking at the right times to support existing businesses and attract new ones. Nelson\Nygaard developed strategies to improve connectivity to and from the commuter rail station and downtown as well as add consistency, convenience, and predictability to the parking experience through shared parking agreements between public and private lots. The study also identified land use practices, as well as other policies and investments, that would reduce parking demand and car use. The firm is currently advising the town on the scale and design of replacement commuter parking spaces in advance of TOD on surface lots to aid in parking management during construction and after buildout.

AMHERST PARKING STUDY

2016–2017 (PHASE I); 2018–2019 (PHASE II)

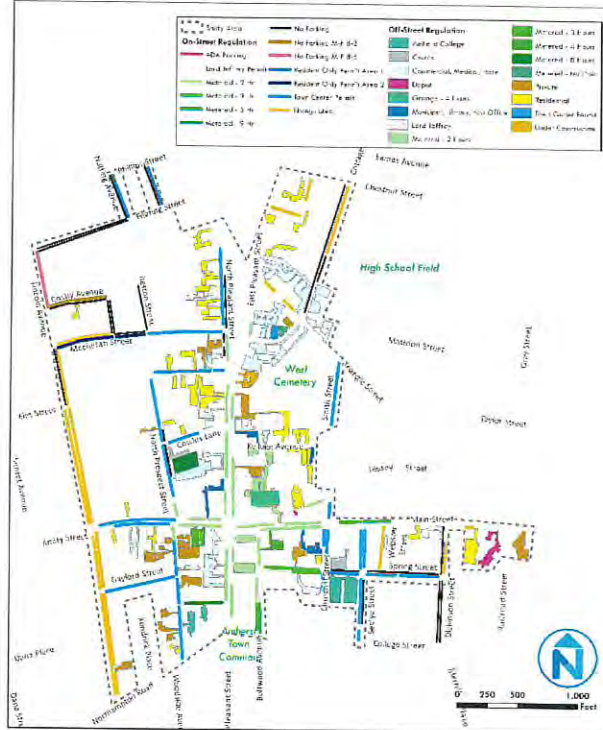
Challenges: Amherst is a vibrant town in western Massachusetts. The historic character and vibrant retail and restaurant environment of Amherst’s downtown draws a variety of visitors from around the state. The town also features the primary university campus for the University of Massachusetts system. These factors combined create significant pressure on the limited parking facilities in downtown Amherst. The need to accommodate a wide variety of user groups including visitors, small business employees, residents, and students creates a serious challenge for parking management.

Nelson\Nygaard conducted an initial parking study focused on collection of detailed parking regulation, inventory, and utilization data. The study introduced key parking management practices such as demand-based pricing, shared parking, and other progressive structures meant to better control demand.

The second phase of the study began in late 2018 and is currently ongoing. This phase will add a robust public input process including stakeholder and public meeting events to foster improved collaboration and understanding among key parking user groups. Following this input, the study will propose a full implementation process intended to guide Amherst’s leaders toward a parking future that better serves all users. The implementation framework will include guidance and best practices from around the nation as well as specific task assignments and costs for each parking strategy.

Solutions: The Amherst Parking Study is set for completion in late 2019 and is expected to result in a complete implementation framework that includes short-term and long-term parking implementation strategies. These will include management, pricing, organizational structure, and new supply strategies including the potential construction of a new parking garage facility in the downtown area.

Downtown Amherst Parking Inventory, 2016



DOWNTOWN MEMPHIS PARKING STUDY

2018–2019

Memphis is a culturally rich city with a vibrant and historic downtown that offers a mix of land uses, transportation options, and a walkable environment. Well known for its strong local and regional brand of arts, culture, food, and music, the downtown has added more than 4,000 new residents over the last two decades and is growing nearly three times faster than the rest of Shelby County.



Challenges: During that period, downtown Memphis has seen great increases in development and tourism, and this popularity and success has spilled over to the parking system, creating a challenge for residents, employees, and visitors to find available parking, particularly in the downtown core.

With millions of square feet of office and residential projects in the pipeline, the Downtown Memphis Commission (DMC) hired Nelson\Nygaard to provide technical analysis to identify areas of high parking demand, facilitate productive dialogue, and develop recommendations. We comprehensively documented the more than 71,000 existing public and private parking spaces, from individual blocks to large private garages, as well as how parking assets in eight downtown neighborhoods are utilized at different times of day.

Solutions: By identifying the downtown's future parking need within the context of numerous planning efforts and specific development projects, Nelson\Nygaard developed an integrated set of 10 parking and management recommendations that ensures parking facilitates continued growth across downtown. We also created a parking investment mapping tool to identify a clear decision-making framework for where and how to invest in public parking facilities.

DMC staff, in coordination with the Memphis Medical District Commission (MMDC), Memphis Area Transit Authority, and the City, have begun to implement the plan. In September 2019, the Downtown Parking Authority adopted a change in bylaws to become the Downtown Mobility Authority, enabling a larger focus on transit and multimodal investments. The DMC has begun brokering shared parking agreements in their own and private garages to allow residential access after hours. The DMC and MMDC are also investigating the operational feasibility of a park-and-ride shuttle route through downtown.

PRINCETON PARKING STRATEGY

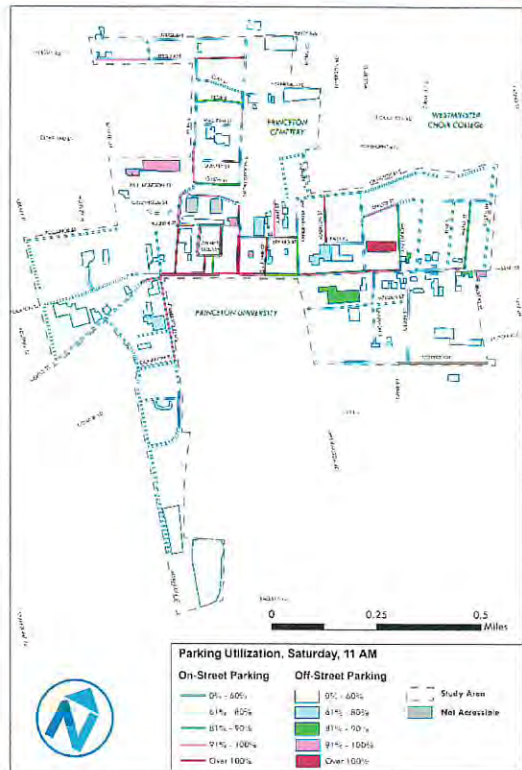
2016–2018

Downtown Princeton’s historic charm, vibrant retail outlets and restaurants, and walkable environment combine to make a lively atmosphere at all times of the day. The municipality continues to prosper as an active community, with a walkable commercial center, the economic and civic vitality of Princeton University, as well as strong, multimodal connections to the surrounding region.

Challenges: Of course, this success has created challenges in balancing the desire for walkable, transit-oriented stability and growth, with the common need or preference for convenient private automobile accommodation.

Nelson\Nygaard evaluated the state of parking in Princeton to enhance the accessibility and vibrancy of the downtown and protect residential neighborhoods from detrimental parking effects. Coordination with municipal project leaders, key stakeholders, and the public was an integral part of this process. The outreach effort included an open house, online survey, focus groups and interviews, and a parking workshop event with a variety of interactive stations to promote conversation and innovative thinking, including a “parking confessional,” where parkers anonymously mapped their favorite parking spot, usual parking spot, and secret parking spot. The firm also created projections for future development in the downtown and the consequent parking demand projections and impacts on current parking capacities. These projections were used to propose a flexible and progressive set of “Access Management Requirements” to replace traditional minimum parking requirements during future development reviews.

Solutions: The firm’s recommendations provide strategic accommodations for biking and walking, address the particular challenges facing downtown employees, and identify key solutions to address the current imbalance between the supply and demand for parking in the downtown. The study identifies strategic opportunities for parking to preserve the best of Princeton today while facilitating opportunities for appropriate, desirable, and sustainable development and growth.



TOWN OF READING COMPREHENSIVE PARKING PROGRAM

2008–2009

Challenges: Parking has frequently been a complaint of both businesses as well as residents seeking to shop in downtown. The downtown area of the Town of Reading is an historic business area with commercial and retail activity typical of small New England downtowns. While the town has grown and prospered, little new development has occurred in the downtown in decades. To stimulate development, the Town obtained a \$6 million Downtown Improvement Project grant to improve streets and sidewalks. It is also considered the adoption of a new “Smart Growth” zoning district in the downtown that would lead to an increase in the intensity of land uses. Both efforts immediately triggered heightened fear of an increase in the demand for parking spaces.



Solutions: Nelson\Nygaard was retained to produce a “comprehensive parking program” to help the Town evaluate parking operations in downtown and consider if and how a parking garage could be constructed. Much good work had been done by an ad hoc committee, which created a parking inventory and had surveyed business owners. Nelson\Nygaard supplemented this with broad surveys of parking users as well as a detailed parking utilization study across all hours of the day. The feasibility and cost of a parking garage sited on a municipal lot also was evaluated.

The analysis demonstrated that, contrary to popular belief, there was plenty of parking supply in the downtown to support all existing uses as well as the entire amount of future growth under the maximum Smart Growth development scenario; rather than a parking supply problem, Reading had a supply management problem. Nelson\Nygaard recommended a phased implementation strategy to unlock underutilized public and private assets in and near the downtown through simple adjustments to existing permit programs, time limits, and signing. Zoning incentives to share parking were developed and new practices to maximize perceived availability were recommended, including extended enforcement hours and reverse angle parking.

Technical and Management Approach

Project Understanding

Somerville is a rapidly changing city in the heart of the Boston region. Long known as one of the densest residential communities, a booming local economy and new transportation investments (rail, bus, bike, etc.) have resulted in considerable recent (and proposed) development that includes a mix of residential units, businesses, offices, and lab buildings. With this new investment comes more people, and without policies to discourage their use, more cars. Based on our previous parking and transportation planning work for the city, Nelson\Nygaard is well aware of the many opportunities, and yes, challenges, that come with growth, particularly as related to parking and curbside uses. The city needs a consultant team that not only has experience in gathering and assessing parking/curbside inventory and utilization data, it requires a team that understands why and how that information will be used to best manage parking and other competing and evolving curbside needs, now and in the future.

Given a rapidly evolving mobility sphere with more choices and competition for curbside space – from parking to transportation network company (TNC) pick-up and drop-off; commercial loading to service delivery (i.e., the “Amazon Effect”); bus priority lanes to bicycle lanes, storage, and new e-mobility storage – understanding the city’s curb use and management is more important than ever. To that end, this phase of the process must include a thoughtful approach to data collection and analysis that answers the following (including but not limited to):

- What curbside data is most important to analyze and collect?
- How can existing data be used to more efficiently develop the curbside inventory? What methods will be used to ground truth it?
- What new data needs to be collected?
- How can that new data be collected in a way that is accurate but still cost-efficient?
- What technologies will assist in the collection of curbside inventory and utilization data?
- What methods/redundancies will be used to confirm accuracy of data collection and analysis?
- Can sample/pilot areas serve as proxies for larger areas, or does every inch of curbside need to be assessed?
- How will the inventory and utilization data be used after the project is complete, and how does that relate to project deliverables?
- What data formats will allow the city the greatest flexibility and value over time? What are the advantages and disadvantages of proprietary data formats?

Given this study is just one phase of a larger effort to more efficiently use, manage, and adapt the city's public curbside in a manner that serves the many competing needs highlighted above (and ones not yet known), we also know that all analysis methodologies and outputs must be understood, and that data and findings must be open source and editable and owned by the City of Somerville. Technology changes rapidly, including transportation and parking technologies and the companies that provide them. Ensuring that curbside data is open source and can be used with different systems is essential.

Based on our considerable experience leading innovative curbside data collection and analysis efforts as well as forward-thinking curbside management policies, we are confident that the scope approach detailed on the following pages will provide the City of Somerville with a comprehensive curbside inventory and utilization analysis of the highest quality.

Scope of Work

TASK 1 PROJECT INITIATION & COORDINATION

1.0 Kickoff Meeting

The team will convene a kickoff meeting with City of Somerville staff to confirm project goals and refine the proposed work plan and schedule. This meeting will also provide an opportunity to identify additional and/or updated available data relevant to Somerville's parking resources and transportation plans and policies relevant to the parking study.

This meeting will allow the team to review existing policies and practices, enforcement (both residential and commercial/metered and signage), curbside policies (existing and proposed), etc. Our team will seek to identify:

- What are the stakeholders' current visions for Somerville's parking system and how do they plan to use the parking inventory for future parking analyses?
- What data is the most critical to collect? Where should the greatest scrutiny be placed during the data collection process?
- What are the data collection pilot process and parameters for success?

1.1 Bi-Weekly Project Coordination Meetings

Our project manager will provide oversight throughout the duration of the project and guarantee that the City receives a quality product by assuring that:

- The Scope of Work is adhered to, and the project is on schedule
- The team is regularly informed of project status and is an active partner in the execution of the inventory project
- Data collection efforts remain on schedule, capture all desired information, and react to conflicts from construction, weather, and other irregular events
- The collected data, analysis, and deliverables are provided in a format of the highest quality that is open source and editable

The project manager will host bi-weekly conference calls and in-person meetings as needed with City staff to provide ongoing project updates, review project deliverables, and troubleshoot any data collection and analysis issues. Up to three of meetings will be in-person to discuss key deliverables. We anticipate these upon completion of the Pilot, the Curb Inventory and Utilization tasks as described below.

DELIVERABLES

- Final Scope and Schedule
- Meeting Notes as needed
- Data deliverables and formats

TASK 2 PILOT DATA COLLECTION

2.1 Data Collection and Regulations

The first step of the project process will be to collect all existing parking and curbside spatial data and policy information from the City and other sources to inform the initial collection pilot and citywide curbside inventory analysis. These existing data may include but are not limited to the following:

- Parking regulations
- Parking meter zones and post locations
- Resident parking zones
- Public off-street parking lots
- Sidewalk and curb cut locations (if available)
- Commercial loading zones
- Bicycle facilities (lanes, bike parking, and more)
- Curb edge
- Transit routes and stops (including shelters)
- Bus lanes
- Sign locations

2.2 Pilot Data Collection Methodology

2.2.1 Parking and Curbside Data Criteria

Nelson\Nygaard will develop a list of criteria to be inventoried as part of the analysis. Criteria will be divided into two categories—existing spatial criteria and field confirmation criteria.

Existing Spatial Criteria

All datasets already geocoded and in shapefile format will be identified and uploaded into an existing conditions map to be integrated into the data collection application tool. This would include datasets that we know exist – for example, meter pole locations, curb lines, etc.

Field Confirmation Criteria

All data not already geocoded will be included in the data collection tool as criteria to be documented. For example, this could include curb cut locations, signage locations, no parking zones, etc. The final inventory dataset could include all of the following, whether from existing data or new data collected in the field:

- Curb ramps
- Fire hydrants
- Meter poles
- Curb extensions
- Curb cuts
- Bus stop signs
- Bicycle facilities
- Fire lanes
- All curbside regulations and permissible durations by time/day
- Parking prices

2.2.2 Data Collection Tool

Based on the RFP and the need to collect data that results in an output that is stable, open source, and platform/software-agnostic, we will identify the appropriate tool to meet the needs of the City. Nelson\Nygaard has completed curbside inventories using many methods, including mobile applications that provide consistency, ease, and efficient data collection. Two data collection platforms have been identified as leading options:

1. ESRI Collector App: Nelson\Nygaard has used the ESRI application for numerous parking utilization exercises. The application is customizable, can output data that can be used across platforms, and integrates seamlessly into products that the City of Somerville uses extensively.
2. Coord Collector App: Nelson\Nygaard has assessed the Coord surveyor application and tested its feature set. The application includes innovative methods to streamline data collection across numerous curbside data points, including image-based recognition of regulations and license plate tracking for utilization studies. Coord also offers the ability to select a core set of data points to be collected from its broader capabilities in order to refine and streamline field data collection.

Prior to confirmation of the final data collection platform to be used, Nelson\Nygaard would provide an overview to City staff of the pros and cons of each, based on the final set of inventory criteria to be collected, the ability to provide the desired outputs in an open source and editable format, etc. At this point, the final platform would be selected.

2.3 Pilot Data Collection

2.3.1 Pilot Development

Nelson\Nygaard will identify up to three pilot areas, not to exceed four curb-miles each, to pilot the data collection methodology. To ensure the inventory collection methodology is successful in the areas where utilization will be collected later in the project, we propose piloting the data collection in each of the neighborhood typologies as described in the RFP – Residential Area, Business Area, and a Transit Zone.

2.3.2 Pilot Data Collection

The Nelson\Nygaard team will inventory each of the pilot areas. First, all available datasets will be imported into the collection tool (e.g., meter locations, regulations, etc.). Second, field surveyors will conduct inventory site visits to collect all information included in the application. Each area will be surveyed up to two times to confirm/ground truth the parking and curbside data collection.

2.3.3 Pilot Data Analysis

The project team will analyze all data collected in GIS, the Coord product system, or a combination of both, as needed. This will include manual ground-truthing both in GIS and in person. For example, curb cuts as documented using the tools will be compared over an orthophoto to determine if the information gathered is accurate.

Summary maps of each pilot area, parking, and curbside data characteristics will be developed along with a summary memorandum describing efficiencies and potential threats in the data collection process based on field team experiences.

2.3.4 Data Collection Refinement

Threats to the data collection process identified during the pilot program will be resolved in collaboration with City of Somerville staff to ensure that the final data collection methodology meets the needs of the City. Nelson\Nygaard will review the experiences of field teams, the congruency of collected data with City expectations, and the time and effort required to gather desired data. Nelson\Nygaard will then revise the data collection application or output methodology as needed prior to conducting the full citywide inventory.

DELIVERABLES

- Technical Memorandum: Data Collection Methodology and Application Selection
- Technical Memorandum: Pilot Data Collection Results, Findings, and Final Collection Method

TASK 3 CURB INVENTORY

3.1 Citywide Parking and Curbside Inventory

The Nelson\Nygaard team will develop an inventory collection methodology and program that ensures every block face is captured. Based on our extensive experience in collecting parking and curbside inventory, approximately one mile of curb frontage can be inventoried each hour (more or less depending on final criteria to be collected). With 125 miles of street centerlines, this would require a survey of 250 miles of curb faces.

3.2 Citywide Parking and Curbside Analysis

Upon completion of the data collection, Nelson\Nygaard will assess and combine all spatial information to provide a comprehensive curb inventory of the entire city. The inventory will be presented in map form and supplemented by summary tables, charts and written findings.

3.1.1 Inventory Street Teams

We propose a Street Teams approach to the inventory analysis. Two street teams would be used, each comprised of up to three contracted data collectors and one Nelson\Nygaard Associate supervisor. These teams typically use local planning students and/or contract workers with familiarity with transportation planning concepts.

DELIVERABLES

- Completed citywide curbside inventory dataset (data format to be determined in Tasks 1 and 2), map and summary findings



As uncovered in Nelson\Nygaard's analysis of Somerville's resident parking, permit densities differ throughout the city. A comprehensive curbside inventory would provide greater insight into where competition for curbside use is greatest, and to develop policies to better manage how they are used.

TASK 4 PARKING UTILIZATION

4.1 Utilization Surveys

Using the same data collection platform as used for the inventory task, the team will conduct field surveys of parking accumulation and utilization in pre-determined areas representing the neighborhood typologies as described in the RFP.

4.1.1 Utilization Area Identification

The project team—both consultant and City staff—will identify areas in which parking utilization will be assessed. We propose to collect up to 12.5 miles of curbside utilization (5% of all Somerville curb-miles) in business districts (squares) and transit areas with an emphasis on metered and timed on- and off-street public spaces. Abutting residential blocks will also be included. (Private spaces will not be assessed but could be included as an add-on if desired.)

For residential areas, we propose identifying up to 50 total blocks (20 curb miles, or 8% of all Somerville curb-miles) for utilization study. Blocks selected should be dispersed in residential areas throughout the city to ensure that utilization characteristics that may result from geographic context and/or transportation network connectivity are captured. All residential areas to be surveyed will be determined with input from City staff to ensure those selected represent “typical” conditions.

4.1.2 Utilization Collection

Once utilization areas are confirmed, Street Teams will perform the utilization count surveys. These surveys will establish the peak daily parking accumulation and daily utilization within the selected areas. Counts would occur on both one (1) weekday (Tuesday through Thursday) and one (1) Saturday, throughout the data at two hour intervals, during a time period to be determined based on the expected activity types in each study area (e.g., nighttime hours to assess residential peak parking, or midday hours in areas that capture daytime employment patterns).

If the City would like more sample utilization counts, the team can conduct them on a time and materials basis (through an add-on task), or the team will provide materials and train City interns or staff to conduct the counts. Alternatively, to cover more area, City staff or interns could be included as part of the Street Teams.



Upon completion of the data collection, Nelson\Nygaard will develop summary maps highlighting curbside utilization like the example above from our work in Amherst, MA.

4.2 Utilization Analysis

Utilization data collected will be analyzed by Nelson\Nygaard staff. Each business, commercial corridor, and transit zone utilization output will reflect the actual areas surveyed. For residential utilization, the sample counts (blocks within each residential area or zone) will be applied to all surrounding areas to derive an estimated peak utilization.

Upon completion of this subtask, the team will have compiled at a minimum:

- Daily peak accumulation and occupancy counts for a 12-hour period on a weekday and a weekend day
- Within squares, categorization of parking supply by time period (short- and long-term), including duration of stays where available and parking utilization rates (every 4 hours)

Our team will develop detailed maps of parking supply versus utilization for the study areas by facility and type of parking to identify patterns of use over time and space.

DELIVERABLES

- Technical Memorandum: Utilization Analysis Areas and Utilization Summary Findings
- Utilization Maps
- Completed parking utilization datasets for each selected study area (data format to be determined in coordination with City staff)

TASK 5 FINAL REPORT WITH METHODOLOGY

5.1 Draft Report

All technical memoranda and mapping developed in previous tasks, which will include detailed methodologies, will be formatted in a manner that can be combined and/or incorporated into a draft report. This will provide a more efficient process that allows for the majority of project hours to focus on the inventory and utilization analysis and findings. An executive summary will be developed to provide an overview of the project process, methodologies, and findings. The Draft and Final Report will also include complete metadata and a data dictionary for all curbside inventory and utilization data to ensure that City staff may make full use of all collected information even after project completion.

5.2 Final Report

Based on one set of combined, non-conflicting comments of the Draft Report, the Nelson\Nygaard team will revise the document for final delivery. The Final Report will assess, in plain language, existing curbside inventory and utilization patterns to the full extent possible given the collected data.

DELIVERABLES

- Draft Report and Methodology
- Final Report and Methodology

TASK 6 DATA COLLECTION OUTPUTS

All data collected and analyzed for this project will be provided to the City of Somerville upon completion of the project and/or task as required. As described in the RFP, outputs will be delivered in a stable and editable format that is open source and platform/software-agnostic to ensure flexibility of use on current and future platforms, and to ensure data is not lost to the City should a platform expire. As described in Task 5, the Final Report will include a data dictionary which defines all fields and values contained in the data deliverables as well as metadata, including the dates of creation and update of each data point.

To ensure the success of the above, the Nelson\Nygaard team will coordinate closely with City data analytics staff to ensure data formatting and outputs are consistent, legible, and meet the needs and expectations of the City.

DELIVERABLE

- Full Data Package with Metadata

Personnel

To ensure our management approach is executed properly and meets the needs of this parking data inventory study, we have assembled a team of experts with relevant experience in developing a wide range of parking planning and outreach projects in cities across the United States. We have identified personnel who possess a high level of experience and demonstrated ability to complete the project tasks. All proposed personnel are currently performing the proposed functions for this study and have relevant experience in order to successfully perform the duties.

Our proposed project team is presented with resumes of staff provided in Appendix A.



Matt Smith, Principal Project Manager

Matt's work in multimodal and parking management planning has helped communities develop efficient, connected, and safe transportation networks for all users—pedestrians, bicyclists, transit riders, and drivers.

Matt has more than a decade of public- and private-sector experience in transportation and urban planning, working closely with municipalities, state and regional agencies, and private-sector clients on transportation initiatives, redevelopment planning, economic analyses, and environmental assessment. As the former director of traffic and parking for the City of Salem, he brings on-the-ground experience in the identification, development, and implementation of municipal parking and transportation needs, policy, and implementation efforts.



Evan Costagliola, Principal Principal-In-Charge

Evan is considered a national thought leader in emerging transportation technology policy, regulation, and pilot delivery.

Evan has over 12 years of experience in multimodal transportation policy, planning, and concept design. He is experienced in transit-oriented community strategies, transit access, demand management strategies, and complete streets design and policy development. As co-leader of the firm's Emerging Mobility practice, he is adept at developing and delivering on mobility strategy and offers expertise in shared mobility and mobility hubs. Evan works with agencies across the globe to advance multimodal and emerging mobility policy and strategy.



**Jason Novsam, Associate
Data Analysis Task Lead**

Jason applies his technical expertise to projects that engage the local community and promote walkable, livable downtowns while supporting parking and other transportation modes.

A resident of Somerville, Jason specializes in parking and curbside management, complete streets design, and traffic operations analysis. He brings experience in parking and transportation demand management plans, complete streets and corridor studies, downtown revitalization plans, and multimodal neighborhood and corridor studies, as well as the development of innovative data collection methods to maximize field team efficiency and data integrity. Jason works with municipalities across the nation to achieve successful outcomes for all street stakeholders.



**David Perlmutter, Associate
Project Planner**

David specializes in crafting parking and travel demand management solutions suitable for a variety of urban and suburban contexts.

David's experience as a planner includes leading parking and travel demand management studies for communities throughout the United States including for healthcare campuses, downtown districts, rail station areas, and citywide comprehensive parking studies. He brings the strong GIS and data analysis skills needed to create short-range parking and travel demand forecasts as well as transportation impact assessments that support transit-oriented developments.

References

Nelson\Nygaard has served hundreds of clients and we are proud of our record of positive relationships with clients, enjoyed both during and after completion of project engagements. For each reference, we have included dates of work performance, client information, references (which the City can contact), contract amount, the volume of the work performed, and a description of the nature of work relationship and work performed.

DOWNTOWN MANSFIELD PARKING STUDY

2018–ONGOING

Client: Town of Mansfield, 6 Park Row, Mansfield, MA 02048
Reference: Kevin Dumas, Town Manager, 508-261-7370, kdumas@mansfieldma.com
Contract Amount: \$79,000
Volume of Project Performed: 95%

Nelson\Nygaard is helping Mansfield proactively manage its parking inventory to ensure that the downtown provides enough parking at the right times to support existing businesses and attract new ones. Nelson\Nygaard developed strategies to improve connectivity to and from the commuter rail station and downtown as well as add consistency, convenience, and predictability to the parking experience through shared parking agreements between public and private lots. The study also identified land use practices, as well as other policies and investments, that would reduce parking demand and car use. The firm is currently advising the town on the scale and design of replacement commuter parking spaces in advance of TOD on surface lots to aid in parking management during construction and after buildout.

AMHERST PARKING STUDY

2016–2017 (PHASE I); 2018–2019 (PHASE II)

Client: Amherst Department of Public Works, 586 South Pleasant Street, Amherst, MA 01002
Reference: Geoff Kravitz, Economic Development Director, 413-259-3079, kravitzg@amherstma.gov
Contract Amount: \$95,000 (Phase I); \$50,170 (Phase II)
Volume of Project Performed: Project Completed

Nelson\Nygaard conducted an initial parking study focused on collection of detailed parking regulation, inventory, and utilization data. The study introduced key parking management practices such as demand-based pricing, shared parking, and other progressive structures meant to better control demand.

The second phase added a robust public input process including stakeholder and public meeting events to foster improved collaboration and understanding among key parking user groups. Following this input, the study proposed a full implementation process intended to guide Amherst's leaders toward a parking future that better serves all users. The implementation framework included guidance and best practices from around the nation as well as specific task assignments and costs for each parking strategy.

DOWNTOWN MEMPHIS PARKING STUDY

2018–2019

Client: Downtown Memphis Commission, 114 N. Main Street, Memphis, TN 38103
Reference: Brett Roler, Vice President, Planning and Development, 901-575-0574,
roler@downtownmemphis.com

Contract Amount: \$215,394

Volume of Project Performed: Project Completed

Downtown Memphis Commission hired Nelson\Nygaard to provide technical analysis to identify areas of high parking demand, facilitate productive dialogue, and develop recommendations. We comprehensively documented the more than 71,000 existing public and private parking spaces, from individual blocks to large private garages, as well as how parking assets in eight downtown neighborhoods are utilized at different times of day. By identifying the downtown's future parking need within the context of numerous planning efforts and specific development projects, Nelson\Nygaard developed an integrated set of 10 parking and management recommendations that ensures parking facilitates continued growth across downtown. We also created a parking investment mapping tool to identify a clear decision-making framework for where and how to invest in public parking facilities.

PRINCETON PARKING STRATEGY

2016–2018

Client: Municipality of Princeton, 400 Witherspoon Street, Princeton, NJ 08540
Reference: Deanna Stockton, Municipal Engineer, 609-921-7077 x.1138,
dstockton@princetonnj.gov

Contract Amount: \$35,603

Volume of Project Performed: Project Completed

Nelson\Nygaard evaluated the state of parking in Princeton to enhance the accessibility and vibrancy of the downtown and protect residential neighborhoods from detrimental parking effects. Coordination with municipal project leaders, key stakeholders, and the public was an integral part of this process. The outreach effort included an open house, online survey, focus groups and interviews, and a parking workshop event with a variety of interactive stations to promote conversation and innovative thinking, including a “parking confessional” where parkers anonymously mapped their favorite parking spot, usual parking spot, and secret parking spot. The firm also created projections for future development in the downtown and the consequent parking demand projections and impacts on current parking capacities. These projections were used to propose a flexible and progressive set of “Access Management Requirements” to replace traditional minimum parking requirements during future development reviews.

The firm's recommendations provide strategic accommodations for biking and walking, address the particular challenges facing downtown employees, and identify key solutions to address the current imbalance between the supply and demand for parking in the downtown. The study identifies strategic opportunities for parking to preserve the best of Princeton today while facilitating opportunities for appropriate, desirable, and sustainable development and growth.

COMPREHENSIVE PARKING PROGRAM

2008–2009

Client: Town of Reading, Reading Town Hall, 16 Lowell Street, Reading, MA 01867

Reference: Jean Delios, Assistant Town Manager, 781-942-9001,
jdelios@ci.reading.ma.us

Contract Amount: \$28,000

Volume of Project Performed: Project Completed

Nelson\Nygaard was retained to produce a “comprehensive parking program” to help the Town evaluate parking operations in downtown and consider if and how a parking garage could be constructed. We supplemented this with broad surveys of parking users as well as a detailed parking utilization study across all hours of the day. The feasibility and cost of a parking garage sited on a municipal lot also was evaluated. Nelson\Nygaard recommended a phased implementation strategy to unlock underutilized public and private assets in and near the downtown through simple adjustments to existing permit programs, time limits, and signing. Zoning incentives to share parking were developed and new practices to maximize perceived availability were recommended, including extended enforcement hours and reverse angle parking.

APPENDIX A

Complete Resumes

Matt Smith

Principal



Matt Smith has more than a decade of public and private-sector experience in transportation and urban planning, working closely with municipalities, state and regional agencies, and private-sector clients on transportation initiatives, redevelopment planning, economic analyses, and environmental assessments. Throughout his career, Matt's work has focused on the integration of transportation and land use planning and policy to enhance community livability, economic opportunity, and sustainability. His work in multimodal and parking management planning has helped communities develop efficient, connected, and safe transportation networks for all users—pedestrians, bicyclists, transit riders, and drivers. Matt recently joined Nelson\Nygaard's Boston office after serving as Director of Traffic and Parking for the City of Salem, MA, where he led implementation of Nelson\Nygaard's Downtown Parking Plan, the city's Complete Streets and Neighborhood Traffic Calming programs and successfully launched and grew the city's bike share program.

EDUCATION

Master of Urban Planning, Hunter College of the City University of New York
B.S., Communications, Syracuse University

EXPERIENCE

Nelson\Nygaard Consulting Associates, Inc.
Principal, 2018–Present

- **Beverly Depot Mobility Hub, City of Beverly (Beverly, MA) 2018-Ongoing.** Matt is working with the City of Beverly to plan and design a multimodal mobility hub at the Beverly Depot, one of the busiest stations in the MBTA commuter rail network. The project incorporates a review of existing transportation conditions and services (shuttle, TNC's, bike share), infrastructure conditions in and around the station, and connectivity to and from the station for all modes of travel. The plan and design will be informed by design workshops and public feedback to ensure the mobility hub meets current and future (emerging) mobility needs of residents, workers and employers. This iterative planning process will result in a 25% design of a preferred alternative, which will allow the City to seek additional funding to complete and implement the design.
- **Reading TNC and Car Share Strategy, City of Reading (Reading, MA) 2019.** Matt is working with the Town of Reading to identify downtown locations most suitable for TNC pick-up and drop-off zones and locations for dedicated on-street car share. Among the options under study is a central mobility hub to serve the growing downtown population to encourage a "car light" lifestyle. In addition, the project will incorporate strategies to incentivize or require car share spaces and vehicles within private developments within the downtown Smart Growth zoning district.
- **Esplanade Pathway Improvement and Safety Plan, Esplanade Association (Boston, MA) 2018-2019.** As Project Manager, Matt is working with the Esplanade Association to develop a multimodal vision and action plan for all active transportation users within, to, and from the Esplanade. The plan will establish a set of design guidelines to guide overall pathway improvements for pedestrians, runners, bicyclists, and other users as well as identify specific infrastructure projects and priorities, and implementation strategies. The overarching strategy will improve the current pathway system, enhance safety, but also respect the Esplanade's landscape character and history.
- **Mansfield Downtown Parking and Connectivity Study, Town of Mansfield (Mansfield, MA) 2018-Ongoing.** As Project Manager, Matt is working with the Town of Mansfield to develop a parking strategy that is responsive to changing commuter parking, land use and retail patterns (e.g. mixed use redevelopment) in its downtown. A key component of the strategy are strategies to relocate over 700 surface commuter parking spaces to allow for a proposed TOD adjacent to the Town's MBTA Commuter Rail station. Specifically, the plan will look to disperse commuter parking in a manner that remains

convenient to rail commuters, but also enhances connectivity (and patronage) to downtown businesses to support economic development and revitalization goals.

- **Hyannis Downtown Parking and Connectivity Implementation Plan, Town of Hyannis (Hyannis, MA) 2018-2019.** Matt is working with the Town of Barnstable to develop a strategic plan to implement the Town's 2017 Nelson\Nygaard-developed, Downtown Hyannis Parking Strategy. As Project Manager, Matt is developing strategies to implement demand-based pricing, initiate shared parking, recommend improved technologies, and establish a remote park and shuttle system to support seasonal visitors. Design and capital projects to enhance downtown's public realm, wayfinding and connectivity to and from the waterfront will also be developed and identified.

City of Salem (Salem, MA)

Director of Traffic and Parking, 2016–2018

- **Downtown Parking Plan Management.** Matt implemented and updated Nelson Nygaard's Parking Strategy for Downtown Salem by integrating parking technology systems (smart meters, payment kiosks, mobile payment app, garage automation), reviewing and updating parking policies and regulations, analyzing parking data to maximize utilization of existing assets, and identifying opportunities for additional capacity. Matt also oversaw all operations and maintenance of City-owned garages, on- and off-street parking facilities, and parking enforcement operations.
- **Salem Complete Streets Policy and Program:** Matt was responsible for implementing the City's complete streets policy to ensure the City's roadways were designed to accommodate all users including drivers, pedestrians, bicyclists, transit riders and people with disabilities. In addition to completing several retrofit projects that included enhanced bicycle and pedestrian accommodations, Matt developed the City's Complete Street Prioritization Plan, advised the City Engineer on project design, and successfully received MassDOT's maximum Complete Streets project award of \$400,000 for a project that would improve mobility for all users in South Salem adjacent to Salem State University.
- **Zagster Bike Share.** Matt oversaw implementation of the City's Zagster Bike Share, a City-funded initiative to provide an active, intra-city transportation alternative for residents, workers and visitors; and a key initiative to improve first/last mile connectivity to the MBTA and surrounding neighborhoods. After a successful launch in May 2017 with 3 stations and 18 bicycles, Matt successfully worked with Blue Cross Blue Shield of Massachusetts and Salem State University to join as project sponsors, tripling the system in three months and increasing ridership by over 200 percent. In 2018, Matt worked with Zagster to relaunch the system as a hybrid dock and dockless system. The hybrid system now allows users to begin and end rides at or from public bike racks throughout the city, in addition to primary hub stations.
- **Haunted Happenings Visitor Shuttle Pilot.** In October 2017, Matt initiated, developed and implemented the City of Salem's "Haunted Happenings Shuttle" pilot, a free remote park and shuttle service aimed at diverting auto trips from the City's downtown during the month-long festival that attracts half a million visitors. Over two weekends, and using four small school buses, more than 9,000 trips were taken by visitors and residents, diverting more than 2,000 auto trips from downtown.
- **Salem, MA Bicycle Master Plan and Other Bicycle Initiatives.** Matt served as the Project Lead on the Bicycle Master Plan project, supervising City staff and the consultant. The plan identifies key policy and project priorities to improve bicycle connectivity throughout the city and encourage mode shift. Other bicycle projects completed during his tenure resulted in a threefold increase of bike facility mileage, including new on-street bike lanes and buffered lanes along key entrance corridors, and improvements to multi-use paths. Working with MassDOT, Matt proposed and implemented a buffered bike lane connecting Downtown Salem with Downtown Beverly over the Salem/Beverly Bridge, a key regional connector. He also advised on the design of new downtown bike lanes, the Canal Street Bike Path project (Phase I currently under construction), and more.
- **Neighborhood Traffic Calming Program.** Matt developed and launched the City's traffic calming program which emphasizes neighborhood-initiated, responsive tactical and semi-permanent infrastructure projects to improve safety through the slowing or reducing of vehicular traffic. Projects included intersection redesigns/alignment through striping; bump outs using flex posts, parking stops and paint; and other mechanisms.

Evan Corey Costagliola

Principal



Evan Corey Costagliola has over 12 years of experience in multimodal transportation policy, planning, and concept design, and he is considered a national thought leader in emerging transportation technology policy, regulation, and pilot delivery. Evan is experienced in transit-oriented community strategies, transit access, demand management strategies, and complete streets design and policy development. As co-leader of the firm's Emerging Mobility practice, he is adept at developing and delivering on mobility strategy and offers expertise in shared mobility and mobility hubs. Evan works with agencies across the globe to advance multimodal and emerging mobility policy and strategy.

EDUCATION

Master of Planning, Land Use & Sustainability Specialization, University of Southern California
B.A. in Geography, University of California, Los Angeles

EXPERIENCE

Nelson\Nygaard Consulting Associates Inc.

Principal and Emerging Mobility Sector Co-Lead, 2019–Present; Senior Associate, 2016–2013; Associate, 2013–2010; Intern, 2010–2009

- **Emerging Mobility Management.** National leader in emerging mobility policy and management tool development for right-of-way management. Currently the project manager for Los Angeles Department of Transportation (LADOT) Dockless Compliance Services project, where he is leading the development of groundbreaking enforcement and management tools for dockless providers including compliance methods built off the Mobility Data Specification (MDS). He is supporting LADOT's Code the Curb Asset Management Strategy, which is foundational to the agency's active mobility management strategy. He is also serving as a policy lead and thought leader on TCRP's Transit and Micromobility research project and working with Caltrain to develop a shared micromobility policy framework.
- **Shared Mobility and Last Mile Planning.** Technical and facilitation lead for shuttle planning and on-demand last mile options from transit to employment sites in Oregon's Washington County, Rochester, MN (home of the Mayo Clinic), and Honolulu. Developed plans for range of last mile solutions including bike share, on-demand rideshare, shuttle, transportation network companies, and public flex bus services. Managed bike share feasibility studies, business plans, and organizational assessments for San Francisco Bay Area, New Orleans, Honolulu, Seattle, and Rochester (MN). Developed nation's first comprehensive transit integration strategy for a bike share program (Bay Area Bike Share). Helped develop a statewide administrative non-profit to deliver bike share services in Honolulu (dba Bikeshare Hawaii), drafting the program's Request for Proposal to secure bike share vendor/operators services and developing the job description for the non-profit's Executive Director selection process.
- **Urban Mobility Plans.** Managed or led substantial tasks for urban mobility plans, downtown mobility and access strategies, and congestion studies in Portland, Seattle, Honolulu, Minneapolis, Calgary, and Rochester, MN. This includes the Seattle DOT Center City Surface Transportation Plan, Portland Development Commission Broadway Corridor Framework Plan, and Rochester (MN) Downtown Mobility Plan, among others.
- **TDM Plans.** Developed detailed TDM strategies for campuses and cities including specific performance metrics, data collection plans, and monitoring requirements. Worked on many projects that help institutions manage complex employee access challenges including recent work on the Destination Medication Center initiative in Rochester, MN—the headquarters for the Mayo Clinic—and campus planning work for major employers like the University of Hawai'i at Manoa and the Olympia, WA Capitol campus.
- **Complete Streets and Active Transportation Plans.** Extensive experience developing Complete Streets policy frameworks, design concepts, and design guidelines. Expertise in weighing and communicating tradeoffs and benefits of Complete Streets. One of Nelson\Nygaard's leaders in active transportation and transit access planning with experience in bicycle and pedestrian network planning, policy and program development, facility design, and corridor analysis including conflict analysis and

multimodal alternatives evaluation. Developed pedestrian and bicycle plans, implementation strategies, and Complete Street designs in some of North America's most walkable cities, including Portland, OR, Santa Monica, CA, Seattle, WA, Vancouver, BC, Minneapolis, MN, Calgary, AB, and Honolulu, HI, among others.

- **Transit-Oriented Strategies and Transit Plans.** Developed transit master plans and transit-orientation strategies including the Seattle Transit Master Plan and subsequent corridor studies. Developed transit community design strategy as part of TMP. Lead planner for 2016 supplement and evaluation of seven BRT corridors. Planner and lead designer for TMP-generated corridor studies, including Madison Corridor BRT Concept Design and Delridge Way SW Multimodal Corridor Design Study. Developed Seattle's RapidRide BRT Toolkit with minimum and preferred design elements for BRT corridor design and operation. Produced TOD/complete community strategies in Honolulu, Portland, Calgary, Rochester (MN), and many other communities.
- **Outreach and Stakeholder Facilitation.** Led innovative and engaging outreach processes that focus on going to the community to gather input and provide education. Successfully facilitated community cinemas, bus stop outreach, farmer's market events, walk audits, storefront workshops, and numerous other in-person outreach events. Experience with online engagement tools like wikimaps and social media. Particularly interested in working to educate stakeholders about transit access and last mile connectivity, and to engage potential transportation program partners from public, private, and non-profit sectors.

PREVIOUS EXPERIENCE

Lime, Seattle, WA

Global Director of Transportation Partnerships, 2018-2019

- Co-developed the company's 2019 government relations strategy and managed data and app integration policy. Aligned the company to support the Mobility Data Specification data sharing standard. Contributor and technical reviewer for [Transportation for America's Shared Micromobility Playbook](#).
- Co-led quarterly GovTech prioritization and coordinated GovTech initiatives across the government relations, product, and engineering teams.
- Oversaw Lime's RFP response and permit application strategies and developed Lime's transportation partnership and pilot strategy and advised on pilots globally.

Seattle Department of Transportation, Seattle, WA

New Mobility Manager, 2016-2018

- **New Mobility Strategy and Policy.** Served as the project manager and primary author of Seattle's *New Mobility Playbook*, the nation's first strategic vision and action plan to shape new mobility and emerging transportation technology. Directed City policy and strategy on a variety of emerging transportation technology issues, including shared mobility services, new mobility/transit integration, MaaS and open data, electric mobility, and automated mobility, among others.
- **Program Management and New Mobility Initiatives.** Established one of the nation's first new mobility programs, managing and growing a staff of six as well as various matrix managed project teams (\$3 million annual budget). Oversaw and advised numerous pilot partnerships, permit programs, and demonstrations with mobility providers, transit agencies, major employers, and other partners. This includes SDOT's Shared Mobility Hub program and citywide shared mobility programs and policy direction for free-floating bike share, free-floating car share, and transportation network companies, and the nation's first curbside electric vehicle charging policy framework and permit.
- **TNC Management and Policy.** Served as the Department's lead for TNC policy, strategy, and pilot delivery. Collaborated with the department's curb management team to advance strategies, pilots, and development requirements for TNCs, including the Seattle Key Arena Redevelopment and the Convention Center Redevelopment. Also served as the department's point person for state legislation efforts to maintain local control of TNC policy and right-of-way management. Led the development of various congestion management, safety, and first-/last-mile pilots related to Alaskan Way Viaduct removal, major event access management, and curb management experimentation.

Jason N. Novsam

Associate



Jason specializes in parking management, active transportation, complete streets design, and traffic operations analysis. He has experience in parking and transportation demand management plans, complete streets and corridor studies, downtown revitalization plans, and multimodal neighborhood and corridor studies. Jason applies his technical expertise to projects which engage the local community and promote walkable, livable downtowns while supporting parking and other transportation modes. His diverse skillset and focus on actionable policies allow him to add value to transportation projects which require innovative solutions.

EDUCATION

M.C.R.P., City and Regional Planning, Georgia Institute of Technology, Atlanta, GA
B.A., History and Russian Studies, Emory University, Atlanta, GA

EXPERIENCE

Nelson\Nygaard Consulting Associates Inc.
Associate, 2016-Present

- **RISD Transportation Management Plan, Rhode Island School of Design (Providence, RI) 2019–Ongoing.** Jason serves as the deputy project manager for this campus plan focused on strategies and updates with respect to information systems, incentives, and wayfinding for parking, transit, walking and biking systems. This plan addresses unique issues related to the attraction and complications of its context within a highly-urbanized location adjacent to other academic institutions.
- **Somerville Resident Parking Permit Program Analysis, City of Somerville (Somerville, MA) 2018–2019.** Jason led permit program analysis and strategy development for this project in Somerville, a dense inner suburb of Boston. Strategies were selected to support Somerville's goal of better managing residential parking while supporting transit and dense business districts. The impact of multi-family buildings on adjacent parking supply was analyzed and permit policies proposed to mitigate ongoing issues.
- **Amherst Parking Plan, City of Amherst (Amherst, MA) 2018–2019.** The Amherst Parking Study is a comprehensive effort to develop new parking management policies in downtown Amherst, including rates, time limits, enforcement, and departmental organization. This plan emphasizes the development of an implementation framework for the City to effectively move toward a better parking future. Jason serves as the deputy project manager for this project and leads public engagement and analysis efforts.
- **Lawrence Strategic Parking Management Plan, City of Lawrence (Lawrence, MA) 2018–2019.** Jason led parking program and strategy development for this project in Lawrence, a former industrial hub with a historic downtown in need of revitalization. Parking strategies emphasized user-friendly operations, support for users of all income and age groups, and flexible enforcement to promote business vitality. Jason also assisted the City with a restructuring of its existing parking utility and professionalization of parking staff.
- **Honolulu Ala Wai Crossing Alternatives Analysis, City of Honolulu (Honolulu, HI) 2018–2019.** This ongoing project will select and design a new bicycle and pedestrian crossing of the Ala Wai Canal. The new crossing will link critical parks infrastructure, Waikiki beach, and key commercial areas for pedestrians and cyclists. The new crossing will be designed to enhance the public realm, economic vitality, and walkability of the adjacent neighborhoods. Jason led the alternatives selection process and will support the design process to ensure that the completed crossing meets Honolulu's goals.
- **Bentley University TDM Plan, Bentley University (Waltham, MA) 2018–2019.** Jason led parking data collection and analysis efforts for this campus study. He will support the project team in the development of parking and TDM strategies to better serve the needs of the University's diverse affiliate groups.
- **Transportation and Parking Plan, University of Vermont (Burlington, VT) 2018–2019.** Serving as project planner, Jason drafted the existing parking and TDM conditions report to identify issues and opportunities for the Transportation, Parking, and Sustainable Transportation Department. Using stakeholder interview input, Jason helps to draft strategies to more efficiently operate a shrinking parking supply through improved enforcement and data management and to better align shuttle campus services.



Jason N. Novsam
Associate

- **Rome Traffic and Multimodal Master Plan, City of Rome (Rome, GA) 2018.** Jason led the traffic and multimodal impact study for a proposed redevelopment of Rome's historic downtown. This analysis took into account planned future developments, ongoing transportation trends, and the needs of the local community to plan for a more walkable, livable future in downtown Rome.
- **Allina Health Parking and TDM Plan, Allina Health (Minneapolis, MN) 2018.** Jason led development of parking and transportation demand management strategies to support the patient and employee populations of the fast growing Allina Health hospital campus in Midtown Minneapolis. This plan proposed innovative partnerships and programs to help employees reach their place of work without driving and parking, thereby reducing future parking demand and supporting growth.
- **Chicago Lincoln Yards Master Plan, Fleet Portfolio LLC (Chicago, IL) 2018.** Jason developed a comprehensive parking, circulation, and demand management program for the Lincoln Yards development in Chicago, IL. A large scale mixed use development, Lincoln Yards will be the densest neighborhood of Chicago north of Downtown upon its completion. This density requires a robust TDM plan that emphasizes accessibility via all modes while still accommodating parking and special events activity.
- **Montava Master Plan, HF2M (Fort Collins, CO) 2017–2018.** Montava is a mixed-use, master planned greenfield development in Fort Collins, CO. Jason led the transportation impact study for this town-center style development, ensuring that the new development is served effectively by all modes of transportation. Transportation systems design emphasized the walkable, downtown feel of the core development area while providing support for vehicular travel in the lower density areas of the new neighborhood.
- **Allston Developments Transportation Impact Study, CRM Property Management (Boston, MA) 2017–2018.** The Allston Developments consist of five sites in the core of Allston planned for mixed use retail and residential developments. These developments are oriented toward multimodal access and intended to enhance the neighborhood's bicycle, pedestrian, and transit environment. Jason conducted the transportation impact study across motor vehicle, pedestrian, bicycle, and transit modes to fully assess the impacts from the proposed developments under both existing and future conditions.
- **Manchester Comprehensive Plan, City of Manchester (Manchester, NH) 2017.** As the transportation lead for this comprehensive plan, Jason developed bicycle, pedestrian, and transit recommendations intended to realize the master plan's vision for Manchester, a former industrial town with ample development potential and a university setting. He also worked with the land use team to develop pedestrian and bicycle character areas that will enable Manchester to strive toward a more livable, walkable future.
- **Princeton Parking Study, Princeton University (Princeton, NJ) 2016–2018.** This parking study proposed innovative solutions to the unique parking pressures created by the presence of Princeton University in downtown Princeton. With a focus on downtown revitalization and economic development, the study proposed a range of smart parking technologies, zoning code revisions, and resident permit parking options to improve the parking experience for customers, University affiliates, and residents.
- **Columbus Comprehensive Transportation Plan, City of Columbus (Columbus, OH) 2017.** This project developed a Comprehensive Transportation Plan for Columbus, OH, a rapidly growing center of academic, civic, and urban life in central Ohio. Jason led the GIS analysis and mapping effort, producing high quality images and developing a "Thoroughfare Plan" which prioritizes arterial roadways for pedestrians, cyclists, and transit.
- **Union Square Revitalization Plan, Transportation Impact Study, City of Somerville (Somerville, MA) 2017.** Jason led the transportation impact study efforts for a 2.5 million square foot redevelopment in bustling Union Square in Somerville, MA, and inner suburb of Boston. This study analyzed impacts from the proposed development on the transportation network, including transit, bicycle, pedestrian, and automobile modes.
- **Chattanooga Parking Study, River City Company and the Chattanooga Parking Authority (Chattanooga, TN) 2016–2017.** This broad ranging parking study made use of innovative data collection methods to streamline the process of inventorying a large number of underused parking facilities in downtown Chattanooga. Jason led the data collection effort using ArcGIS Online tools for maximum efficiency.

David Perlmutter

Associate



David's experience as a planner with Nelson\Nygaard includes leading parking and travel demand management studies for communities throughout the United States, including healthcare campuses, downtown districts, rail stations areas, and citywide comprehensive parking studies. He also brings the strong GIS and data analysis skills needed to create short-range parking and travel demand forecasts, as well as transportation impact assessments that support transit-oriented development. Based in the New York area, David is also one of the firm's leaders in the field of emerging mobility and is adept at integrating cutting-edge mobility services with legacy parking and TDM programs.



EDUCATION

M.S., Urban Planning, Columbia University, New York, NY
B.A., Geography, University of Washington, WA

EXPERIENCE

Nelson\Nygaard Consulting Associates Inc.

Associate, 2015–Present

- **Santa Clara County TDM Study, Santa Clara County, CA. 2019.** David supported the development of a TDM plan to serve more than 20,000 County employees. As a project planner he developed a baseline assessment of employee commuting and articulated several TDM strategies with potential to reduce employee drive-alone commute miles. These strategies included short- and long-distance commuter shuttles, pooled ride-hailing to improve last-mile connections to transit stations, and carpooling incentives. The assessment also included best practice research and detailed implementation guidelines for the recommended TDM strategies.
- **MTC Windsor Downtown Parking Study (City of Windsor, CA). 2018–2019.** Technical Lead. In a study funded by the San Francisco Bay Area's regional MPO, David is leading analytical evaluations of parking demand and turnover in Downtown Windsor, CA. The study will identify parking management strategies to accommodate future parking demand from a planned SMART commuter rail station and related transit-oriented development.
- **2018 Campus Travel Surveys, San Francisco State University (San Francisco, CA) 2018.** Technical Lead. As the lead technical analyst, David led complex [analysis](#) of a campus-wide travel behavior survey with a statistically representative 4,000-response sample of campus affiliates as part of SF State's compliance with a City vehicle trip cap. Despite SF State's ample TDM programming and sustainable commuting incentives, this analysis highlighted the challenges of achieving campus vehicle trip reduction goals amidst a regional housing crisis that has pushed many campus affiliates to the Bay Area's periphery, where sustainable commute modes are often less viable.
- **160 Aries Parking & TDM Plan, Minkoff Partners (Sunnyvale, CA) 2018–Ongoing.** Articulated strategies for transportation demand management for a large-scale office development near Sunnyvale Caltrain station. Leveraged relevant research and real-estate industry comparables to advocate for reduced parking ratios in exchange for implementation of specified TDM programs such as on-site car-share, bike-share, and ride-hailing/transit pass subsidies.
- **777 West Middlefield Parking & TDM Plan, FortBay/Miramar Capital (Mountain View, CA) 2018–Ongoing.** Prepared short- and long-term strategies for transportation demand management for a large-scale residential development with 20% affordable units. Leveraged relevant research and real-estate industry comparables to advocate for reduced parking ratios in exchange for implementation of specified TDM programs such as on-site car-share, bike-share, and ride-hailing/transit pass subsidies.
- **Rochester DMC Parking TMA Implementation Study, City of Rochester, MN (Rochester, MN) 2016–2018.** This [study](#) evaluated the feasibility of multimodal "mobility hubs" situated at key remote/peripheral parking facilities of the downtown campus of Rochester's Mayo Clinic. The intent of a mobility hub is to facilitate seamless multimodal trips by co-locating various modal access points with a

combination of infrastructure and programmatic investments. The study analyzed the viability of various shared mobility options at each proposed hub location and provided cost estimates and implementation guides for each.

- Worthington District Parking Study, Springfield Parking Authority (Springfield, MA) 2017–2018.** Deputy Project Manager. David helped lead a comprehensive parking [study](#) for the downtown area of Springfield, MA, in anticipation of significant transit-oriented development in the area due to the opening of Amtrak’s Springfield-Hartford high-frequency commuter rail service. We reviewed and made recommendations on governance, administration, and organizational structure, plus enforcement and collections program improvements. We suggested key strategies to manage on-street and off-street parking resources including creating availability, equipment upgrades, and formal employee training. Nelson\Nygaard then helped draft an RFP for a new facilities operator that was based on customer-driven performance metrics. We helped the Parking Authority evaluate responses and initiate a contract with a new vendor. Springfield now has a new parking system operator who is providing significant cost savings with noticeably improved operations and customer service, helping Springfield accommodate future development and new visitors to downtown.
- **White Plains Hospital Parking & TDM Plan, White Plains Hospital (White Plains, NY) 2016–2017.** Deputy Project Manager. David was Deputy Project Manager as well as key technical analyst for this [project](#), preparing parking demand forecasts and evaluating a range of travel demand management strategies to mitigate projected parking shortfalls for a healthcare employer in Westchester County, NY. The intent of this study was to illustrate how the Hospital could gradually avoid the ongoing liabilities of building, operating, and maintaining parking facilities through effective management of travel demand, and return to its core business of providing high-quality healthcare to patients. The project included plans for an employer-based shuttle program to support transit trips to/from the nearby Metro-North commuter rail station and reduce employee parking demand at Hospital facilities. In the second phase of the project, David provided strategic insights in the procurement and evaluation of potential campus shuttle operators.
 - **Santa Rosa Downtown/Railroad Square Parking Management Plan, City of Santa Rosa (Santa Rosa, CA) 2016–2017.** Technical Lead. As the project’s lead technical analyst, David evaluated current and future parking demand in the vicinity of a planned commuter rail station in Santa Rosa, CA. The [study](#) evaluated current parking inventory, near-term real estate development forecasts, and rail ridership forecasts to predict future parking shortfalls/surpluses under various scenarios. To mitigate anticipated parking shortages under a scenario with higher rail ridership, the study proposed mitigating travel demand management strategies such as performance-based pricing for on-street parking, further reductions in minimum parking requirements for developers, public-private shared parking agreements, and partnerships with shared mobility services to help riders make first and last mile connections. The most substantial of these recommendations, a performance-based parking pricing program, was approved for implementation by the Santa Rosa City Council in late 2017.
 - **Parking Cruising-Caused Congestion, USDOT, Weinberger Urban Associates (San Francisco, CA) 2015–2016.** Building upon his expertise with GIS gained as a contractor for software companies in the San Francisco Bay Area, David assisted a USDOT research project in performing geospatial analysis of commercial GPS data used to evaluate the prevalence of “cruising” for parking in San Francisco, CA, and Ann Arbor, MI. By evaluating the presence of circling-the-block behavior using observed driver behavior recorded in GPS data, the project helped to quantify a behavior that has long frustrated transportation planners and parking managers, yet had seen little previous academic study. The results of this study showed that the prevalence of cruising for parking has been significantly overestimated in earlier studies, though effective wayfinding/signage and parking pricing signals may help to reduce its occurrence in high-demand locations. These results may influence the future direction of performance-based parking management systems like *SF Park*. Partial results of the study were [published](#) by the *Transportation Research Board* in 2016.
 - **CSU-CI Parking and TDM Plan, CSU-Channel Islands (Camarillo, CA) 2016.** David developed a chapter of bike and pedestrian-oriented strategies aimed at commute trip reduction for a rural university campus setting with few existing alternatives to private vehicular travel. This [project](#) explored administrative policy changes to support biking and walking to campus, street design typologies, bike parking, bike-share feasibility, and parking pricing strategies to improve the distribution of parking demand throughout the day.
 - **Peekskill Downtown Parking Study, City of Peekskill (Peekskill, NY) 2017–2018.** Deputy Project Manager. David facilitated parking occupancy counts and performed parking utilization and turnover analysis for a downtown district about one hour north of New York City. After concluding that a handful of high-



David Perlmutter
Associate

demand parking facilities were responsible for the vast majority of parking shortages and driver frustration, the study recommended various strategies to improve parking turnover, customer satisfaction, and the distribution of parking demand during peak periods.

- **West Hollywood Transportation Impact Fee Study, City of West Hollywood (West Hollywood, CA) 2017–2018.** David spearheaded the development of best-in-class municipal ordinances and policies to support the City's parking management and mobility goals. West Hollywood is a community known for its walkability and commitment to sustainable transportation, and its high construction costs and limited available land make building additional parking supplies inadvisable. David assisted with drafting the city's updated TDM ordinance, intended to provide both developers and major employers with a flexible range of TDM strategies to achieve targeted reductions in vehicle trips. West Hollywood's TDM ordinance was [enacted](#) into law in July 2018.

Appendix B
Cost Details

- ☐ Service rate(s): Per Details Below**
- ☐ Supply rate(s): Per Details Below**
- ☐ Number of payments: Per Details Below**
- ☐ Payment upon completion of deliverables: Per Details Below**
- ☐ Fixed fee: Per Details Below**
- ☐ Other: Per Details Below**

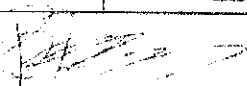
The Vendor shall periodically submit invoices to the City, for which compensation is due under this Contract and requesting payment for goods received or services rendered by the Vendor during the period covered by the invoice. The invoice must agree to the rates/payment schedule as indicated in this contract and must include the applicable Purchase Order number. The invoice shall include the following information: vendor name, vendor remit address, invoice date, invoice number, itemized listing of goods, services, labor, and expenses and indicating the total amount due.

RFP # 20-36
SECTION 4.0
PRICING

By signing this Price Form, the Proposer certifies the following bulleted statements and offers to supply and deliver the materials and services specified below in full accordance with the Contract Documents supplied by the City of Somerville entitled: Parking Data Inventory Study

- The proposals will be received at the office of the Purchasing Director, Somerville City Hall, 93 Highland Avenue, Somerville, MA 02143 no later than **11/19/2019 by 2PM EST**
- If the **awarded** vendor is a Corporation a "Certificate of Good Standing" (produced by the Mass. Sec. of State) must be furnished with the resulting contract (see Section 3.0.)
- **Awarded Vendor** must comply with Living Wage requirements (see Section 3.0; only for services)
- **Awarded Vendor** must comply with insurance requirements as stated in Section 3.0.
- The Purchasing Director reserves the right to accept or reject any or all proposals and/or to waive any informalities if in her/his sole judgment it is deemed to be in the best interest of the City of Somerville.
- The following prices shall include delivery, the cost of fuel, the cost of labor, and all other charges.
- This form to be enclosed in sealed proposal package.

Please provide pricing and include the estimated breakdown of proposed costs and attach additional pages, separately, as needed:

| | |
|--|--|
| <u>Total Project Cost (below)</u> <u>& Estimated Breakdown (attach separate sheet)</u> | |
| Total Project Cost: | \$ <u>73,263</u> |
| Name of Company/Individual: Nelson\Nygaard Consulting Associates, Inc. | |
| Address, City, State, Zip: 77 Franklin Street, 10th Floor, Boston, MA 02110 | |
| Tel # 617-521-9404 | Email: msmith@nelsonnygaard.com |
| Signature of Authorized Individual  | |
| Please acknowledge receipt of any and all Addenda (if applicable) by signing below and including this form in your proposal package. Failure to do so may subject the proposer to disqualification. | |
| ACKNOWLEDGEMENT OF ADDENDA: | |
| Addendum #1 <input checked="" type="checkbox"/> #2 <input type="checkbox"/> #3 <input type="checkbox"/> #4 <input type="checkbox"/> #5 <input type="checkbox"/> #6 <input type="checkbox"/> #7 <input type="checkbox"/> #8 <input type="checkbox"/> #9 <input type="checkbox"/> #10 <input type="checkbox"/> | |

NelsonNygaard Labor Costs

Matthew Smith Evan Costagliola Jason Novsam David Perlmutter Associate 1 Associate 1

Principal 1 Principal 3 Associate 2 Associate 2 Associate 1 Associate 1

Total Billing Rate \$180.00 \$210.00 \$130.00 \$130.00 \$100.00 \$100.00

Hours

| Task Description | Principal 1 | Principal 3 | Associate 2 | Associate 2 | Associate 1 | Associate 1 | Hours |
|--|-----------------|----------------|-----------------|----------------|-----------------|-----------------|-----------------|
| 0 PROJECT MANAGEMENT and QA/QC | | | | | | | 0 |
| 1 Project Initiation and Coordination | | | | | | | |
| 1.1 Kickoff Meeting | 4 | 2 | 4 | | | | 10 |
| 1.2 Bi-weekly Project Coordination Meetings | 16 | 2 | 16 | 2 | | | 36 |
| Task Total | 20 | 4 | 20 | 2 | 0 | 0 | 46 |
| 2 PILOT DATA COLLECTION | | | | | | | |
| 2.1 Data Collection and Regulations | | | 8 | 2 | | | 10 |
| 2.2 Pilot Data Collection and Methodology | 8 | 2 | 12 | 4 | | | 26 |
| 2.3 Pilot Data Collection | 2 | | 4 | 4 | 16 | | 42 |
| Task Total | 10 | 2 | 24 | 10 | 16 | 16 | 78 |
| 3 CURB INVENTORY | | | | | | | |
| 3.1 Citywide Parking and Curbside Inventory | 4 | | 4 | 0 | 80 | | 168 |
| 3.2 Inventory Analysis | | | 16 | 8 | | | 24 |
| Task Total | 4 | 0 | 20 | 8 | 80 | 80 | 192 |
| 4 PARKING UTILIZATION | | | | | | | |
| 4.1 Utilization Surveys | 8 | | 4 | 0 | 16 | | 44 |
| 4.2 Utilization Analysis | 2 | 2 | 16 | 8 | | | 28 |
| Task Total | 10 | 2 | 20 | 8 | 16 | 16 | 72 |
| 5 FINAL REPORT WITH METHODOLOGY | | | | | | | |
| 5.1 Draft Report | 8 | 2 | 16 | 8 | | | 34 |
| 5.2 Final Report | 4 | 2 | 16 | 8 | | | 30 |
| Task Total | 12 | 4 | 32 | 16 | 0 | 0 | 64 |
| TOTAL HOURS | 56 | 12 | 116 | 44 | 112 | 112 | 452 |
| TOTAL LABOR COST | \$10,080 | \$2,520 | \$15,080 | \$5,720 | \$11,200 | \$11,200 | \$11,200 |
| SUBCONSULTANT MARKUP | | | | | | | |
| TOTAL COSTS | | | | | | | |

Appendix C
Forms