TOWN OF ARLINGTON

SUSTAINABLE TRANSPORTATION PLAN

RFP #19-50

November 5, 2019

NELSON NYGAARD

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Submitted by:

Matthew Smith, Principal
Nelson\Nygaard Consulting Associates, Inc.
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In association with:

BETA
IMPROVING COMMUNITIES TOGETHER

November 5, 2019

Adam W. Chapdelaine, Town Manager
Town of Arlington
730 Massachusetts Avenue
Arlington, MA 02476

RE: RFP #19-50 Sustainable Transportation Plan

Dear Mr. Chapdelaine,

On behalf of Nelson\Nygaard Consulting Associates, Inc., I am pleased to submit this proposal to the Town of Arlington for the Sustainable Transportation Plan. We know Arlington well and are excited about the possibility of working with the Town on this long-range, forward-thinking transportation strategy. Nelson\Nygaard specializes in helping communities transform their transportation systems by changing the way people think about mobility.

In Massachusetts, we have worked with the City of Newton to reimagine existing transportation and curbside contexts, inform their housing and economic development strategies, and move the conversation forward to allow more transit-oriented and parking-light mixed-use development. We've worked with the City of Everett to develop ambitious, implementable plans to offer all residents access to congestion-free mobility options, while supporting new development without increasing car trips. For the City of Salem, we studied intra-city shuttle options able to equitably serve riders of all ages and abilities and recommended an on-demand micro-transit system over traditional fixed-route systems. Finally, we have developed curbside strategies that balance parking supply and demand with the need to accommodate emerging mobility and service needs in over a dozen local communities, including in Arlington Center.

We have considered the needs of the Town and have assembled a team that combines national expertise with local knowledge to complete this plan. **Project Manager Matt Smith** has been in your shoes as the Director of Traffic and Parking for the City of Salem, where he was responsible for planning and implementing transportation initiatives citywide. **Alyson Fletcher**, who delivered the Newton in Motion project and works on street network and active transportation plans across the country, will lead active transportation, multimodal planning, and outreach tasks. Matt and Alyson will be supported by a deep bench of transportation data analysts and visual designers led by Suzie Birdsell and Jacob DeGeal. **Principal-in-Charge Bill Schwartz**, who assessed the Dallin School as part of the Massachusetts Safe Route to Schools program, is currently working on transportation plan for the Town of Winchester, and brings over 35 years of experience in all aspects of transportation planning to ensure all products meet the highest quality standards. **BETA Group**, whose team brings decades of experience in capital planning, design, land use planning, and engineering, will ensure strategies are aligned with Arlington's goals and capital planning efforts.

We hope you will recognize the strengths of our proposal, staff capabilities, and firm experience as indications Nelson\Nygaard is qualified and the firm to carry out this plan. 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.

If we can provide any additional information about our firm or this proposal, please do not hesitate to contact Nelson\Nygaard's primary contact for this project Principal Matt Smith at msmith@nelsonnygaard.com or 857-305-8016, or me at lriley@nelsonnygaard.com or 503-488-2247.

Sincerely,

Leah Riley
Managing Director

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TOWN TAVERN
The Muse's Window

FIRM AND TEAM 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 130 people in offices across the United States.

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'S SPECIALIZATIONS ARE:

TRANSIT

Designing and developing great transit services for people

ACTIVE TRANSPORTATION AND SAFETY

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

STREETS AND CITIES

Balancing the mobility needs of everyone to create thriving places

ENGINEERING DESIGN AND DEVELOPMENT

Analyzing movement to improve connectivity and reduce environmental impacts

EMERGING MOBILITY

Collaborating on solutions for people in a new era of mobility

PARATRANSIT AND COMMUNITY TRANSPORTATION

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

MOBILITY MANAGEMENT

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

CAMPUS MOBILITY

Improving mobility choices at university, corporate, and medical workplaces

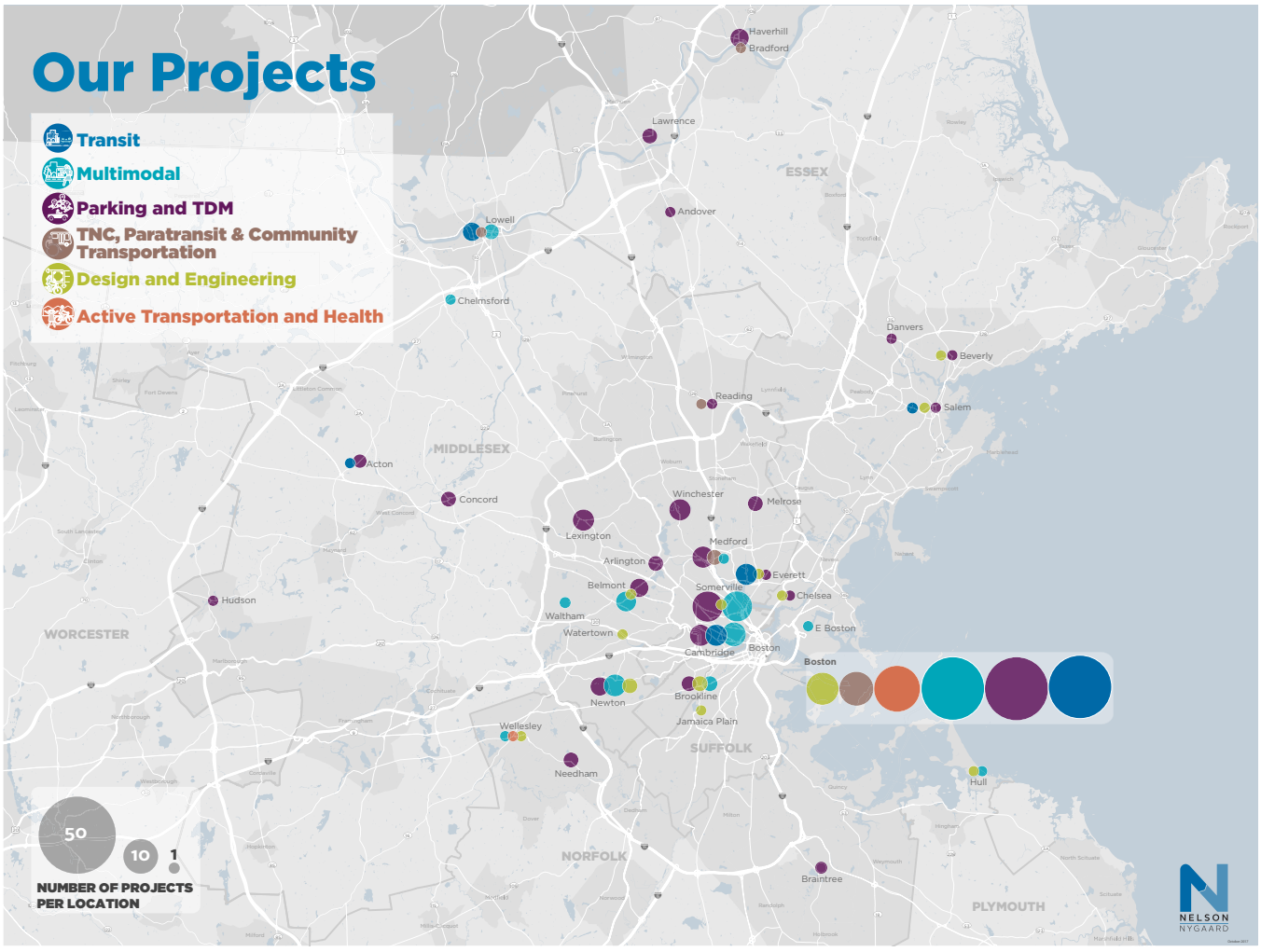
PARKING AND DEMAND MANAGEMENT

Creating livable places with better management of parking supply and demand

TRANSIT CORRIDORS

Building vibrant, equitable communities with high-quality transit at the center

We know how Arlington fits into its regional transportation context because we have worked with almost every community in Greater Boston. Every one of our local parking projects has evaluated economic development, housing equity, and multimodal access considerations. We know how to move the conversation when it comes to discussing the bigger picture of a given transportation context. The following map demonstrations our depth of experience and knowledge of the region.



MULTIMODAL TRANSPORTATION PLANNING QUALIFICATIONS AND EXPERIENCE

We know how Arlington fits into its regional transportation context because we have worked with almost every community in Greater Boston. Every one of our local parking projects has evaluated economic development, housing equity, and multimodal access considerations. We know how to move the conversation when it comes to discussing the bigger picture of a given transportation context. The following map demonstrations our depth of experience and knowledge of the region.

SUSTAINABILITY

Sustainability is a principle that cuts across all of our work. By developing balanced multimodal transportation systems, Nelson\Nygaard's work helps to create vibrant, active communities that are less dependent on single-occupancy vehicle travel. Our analytical tools allow communities, transit agencies, developers, and employers to measure the environmental impact of the transportation and land use choices they make.

QUANTIFYING VEHICLE TRIP REDUCTION

Nelson\Nygaard has a long history of helping our clients understand the reduction in automobile trips that can result from multimodal transportation planning and compact land uses. For example, our URBEMIS model quantifies the benefits of mixed-use, transit-oriented and New Urbanist housing development. By quantifying reductions in traffic and parking demand, we help developments succeed with less parking and roadway infrastructure than conventional auto-oriented projects.

GREENHOUSE GAS EMISSIONS ANALYSIS

By helping our clients understand how transportation systems affect travel behavior, we allow them to quantify the impact of their decisions on greenhouse gas emissions and global climate change. We also help our clients determine the most cost-effective ways to reduce emissions. We have helped diverse clients ranging from major transit agencies to universities and large employers understand the reductions in greenhouse gas emissions that can result from the policies they choose.

EMERGING MOBILITY QUALIFICATIONS AND EXPERIENCE

Nelson\Nygaard understands and develops emerging mobility solutions to address mobility challenges and improve access for all. We craft solutions that are locally appropriate, fiscally sound, and immediately implementable. Our experience includes facilitating public-private partnerships for transit and paratransit services, improving first/last mile access, planning for shared mobility and analyzing trip data, updating curb management policies to reflect the changing demands for access, and developing taxi and ride-hailing regulation that balances the needs of all stakeholders.

INNOVATIVE TRANSPORTATION TECHNOLOGY

The rapid emergence of new innovative transportation technology has already begun to shift transportation trends. Looking ahead, Nelson\Nygaard's goal is twofold: first, to help communities understand the full impact that these technologies have on mobility and local transportation goals, and second, to facilitate collaboration, idea sharing, and innovation in transportation.

DYNAMIC TRANSIT (E.G., TRANSLOC, RIDECELL)

Dynamic transit has already begun to disrupt established demand-response scheduling with innovative technologies that allow for truly on-demand service and up-to-the-moment vehicle tracking. This has large implications for suburban transit systems in particular, but also for campus-based and paratransit systems.

RIDESOURCING (E.G., UBER, LYFT)

We work as an advocate for communities and vulnerable populations to ensure that private companies put people first. While urban markets are well-established, we expect to work with suburban areas, campuses, and health/medical locations to allow transportation network companies to function as a benefit to the community, not a detriment.

AUTONOMOUS VEHICLES

There is much speculation about how, where, and when fully autonomous vehicles will come to market. Big changes here can be expected in the next five years, and will likely have implications for parking, multi-mobile, transit, street design, and mobility. We have experts in each of these specialties who have solutions that strike a balance between community needs, market desires, and responsible regulation.

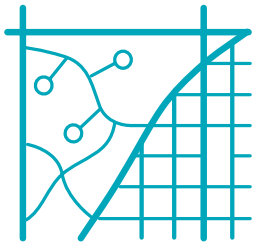
PARKING (E.G., LUXE VALET, ZIRX)

New parking apps seek to gamify and commoditize parking. Big players have used technology to create publicly available, universal valets within zones. Our parking experts work with developers, employers, hospitals, and universities to ensure that these programs work in conjunction with existing transit, multimodal, and pedestrian infrastructure.

BICYCLE AND PEDESTRIAN PLANNING

Whether the task is a town-wide plan, a multimodal neighborhood plan, or a specific intersection design, Nelson\Nygaard maximizes the attractiveness and safety of cycling and walking. We develop design requirements, quantify bicycle and pedestrian levels of service and, most importantly, balance the inevitable tradeoffs between non-motorized transportation, automobiles and other modes.

MASTER PLANS



Working with cities, neighborhoods, and public parks, we identify bike and pedestrian investments that improve public safety and serve larger goals of economic development, social equity, and natural resource preservation.

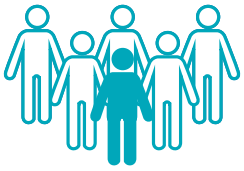
TRAFFIC CALMING AND STREET DESIGN

Street redesign demands a blend of technical rigor and political sensitivity. Nelson\Nygaard has successfully mediated projects where improvements stalled over competing interests, antiquated regulations, and inaccurate technical information. Using education, consensus building, and phased approaches to implementation, we have moved plans from dissension to adoption and execution.

PEDESTRIAN AND BICYCLE PLANS

We help municipalities understand the complex matrix of changes to existing infrastructure, policies, and design guidelines needed for a functional pedestrian and bike network. We document weak linkages in existing pedestrian networks, prioritize locations for new infrastructure and amenities, and rewrite municipal codes and standards.

EDUCATION AND OUTREACH PROGRAMS



Nelson\Nygaard has led a broad range of safety education programs including the award-winning Safe Routes to Schools in Marin County and New York City. We also conduct intensive workshops that teach municipal leaders about the core principles of effective pedestrian and bike planning.

SUBCONSULTANT INFORMATION

BETA
IMPROVING COMMUNITIES **TOGETHER**

BETA Group, Inc. (BETA) was established in 1982 and has grown to become a regional leader in the fields of civil/site engineering, stormwater management, transportation, environmental engineering, landscape architecture, asset management/GIS, and environmental science.

BETA employs a staff of more than 165 engineers, scientists, certified soil evaluators, LEED professionals, landscape architects, planners, construction managers and support personnel. They take pride in a reputation for high quality technical services, on-time performance, and a strong commitment to meeting the needs of our clients.

Their goal is to have and maintain long-term relationships with clients. BETA's approach for successful projects is to establish close working relationships with their clients so that critical decisions become a collaborative effort. Their clients agree and the result is that the majority of their practice is repeat engagements with existing clients. The concept of providing quality technical services to maintain clients is ingrained in the fabric of BETA.

Landscape Architecture

Transportation Engineering

Civil Engineering

Stormwater Management

GIS/Asset Management

Environmental Engineering

Structural Engineering

Environmental Science

Construction Services


77 HARVARD
943 GH8

EXPERIENCE WORKING WITH MUNICIPALITIES

We have completed similar projects for municipalities across the country.

Project experience examples provided are similar to the experience required to provide the Town of Arlington's Sustainable Transportation Plan. We have successfully completed similar projects within the last five years with public and private municipals agencies, and our most relevant similar experience is outlined in this section.

NEWTON TRANSPORTATION STRATEGY

Duration: 2015–2017

Client: City of Newton

Newton continues to attract new residents due to the ease of its small-town scale, paired with ready connectivity to the resources and opportunities of the greater metropolitan area. Encapsulating Newton's challenges is a desire to welcome new residents, while maintaining the characteristics that make the City appealing: its distinct neighborhoods and villages, each with a unique sense of place. Concerned that the inevitable congestion associated with this growth will have negative impacts on Newton's high quality of life, the City sought to devise a forward-looking, multimodal transportation strategy.

Nelson\Nygaard was hired to develop not only a transportation strategy for Newton but also a citywide action plan to realize this vision. The firm created a public participation plan to engage Newton residents in the development of the strategy's goals and metrics, then provided opportunities for feedback on dynamic transportation demonstrations and initial recommendations. Nelson\Nygaard also produced an exhaustive data-driven survey of existing socioeconomic, environmental, and transportation conditions. This Fact Book visualizes and communicates this data and findings in a web-friendly format, intended for public audiences. The Transportation Strategy builds on these findings to offer recommendations for safe travel, transit and shared mobility, active transportation, parking management, and congestion reduction. This report concludes with an Action Implementation Plan, which prioritizes short-term, mid-term, and long-term steps, as well as the costs and leadership associated with each action item.

The City is currently working towards implementation of initial recommendations through its Capital Improvement Plan. Director of Transportation for the City, Nicole Freedman, said of the recommendations, "The items in the plan are very good, solid, and put us on a good track." The work of this project also dovetailed with the other Housing, Economic Development, and Parking strategy project efforts on which Nelson\Nygaard worked.

MIAMI MODE SHARE

Duration: 2019–Ongoing

Client: City of Miami, FL

The City of Miami Beach's 2017 Transportation Master Plan includes a mode share vision which sets mode share goals for the year 2035 to be achieved through an interconnected multi-modal network that is appealing, reliable and safe for all travelers.

While the City has set aspirational mode share goals, Nelson\Nygaard was contracted to develop a comprehensive methodology to collect, analyze, track, and provide an accurate mode share within the City of Miami Beach over time. Critical to the success of the project is developing a right-sized approach that will allow City staff to replicate the mode share analysis methodology by collecting, analyzing, and tracking data over time.

Unlike other mode share analyses completed to date, which typically focuses only on work trips, the Miami Beach Mode Share analysis will assess all trips—work, school, convenience, social, visitor—by all modes (auto, bike, pedestrian, transit, emerging options, etc.) To accomplish this task, Nelson\Nygaard is assessing and comparing all available datasets and methodologies for mode share tracking, developing the framework for selecting the final methods, and creating a performance monitoring plan that incorporates best and practical practices in mode estimation for the City's ongoing use.

Ultimately, the mode share analysis will be used to measure the impact on mode choice as a result of non-SOV transportation initiatives completed within the city.

BEVERLY PARKING STRATEGY AND MOBILITY HUB DESIGN

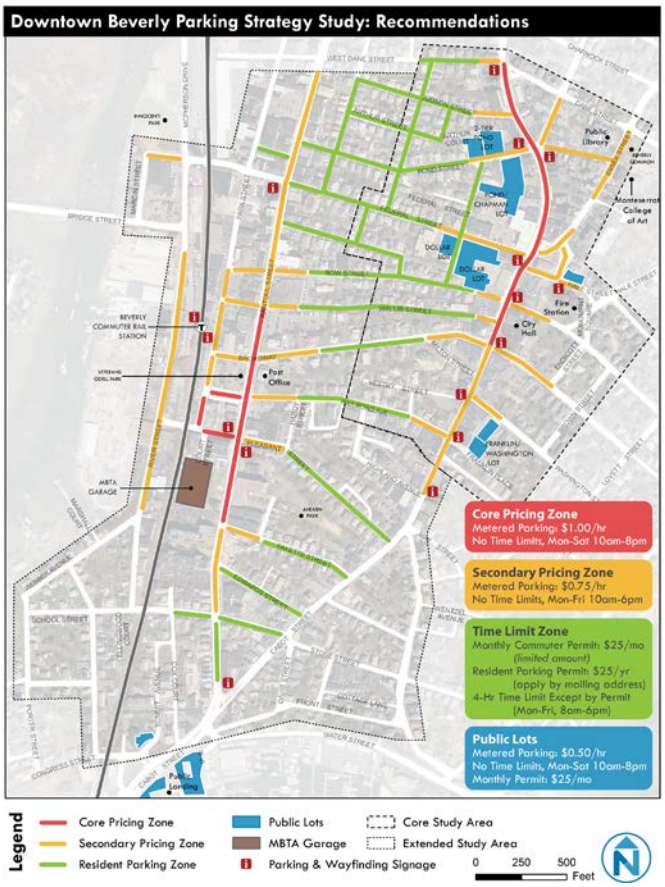
Duration: 2017–2018 and Ongoing

Client: City of Beverly, MA

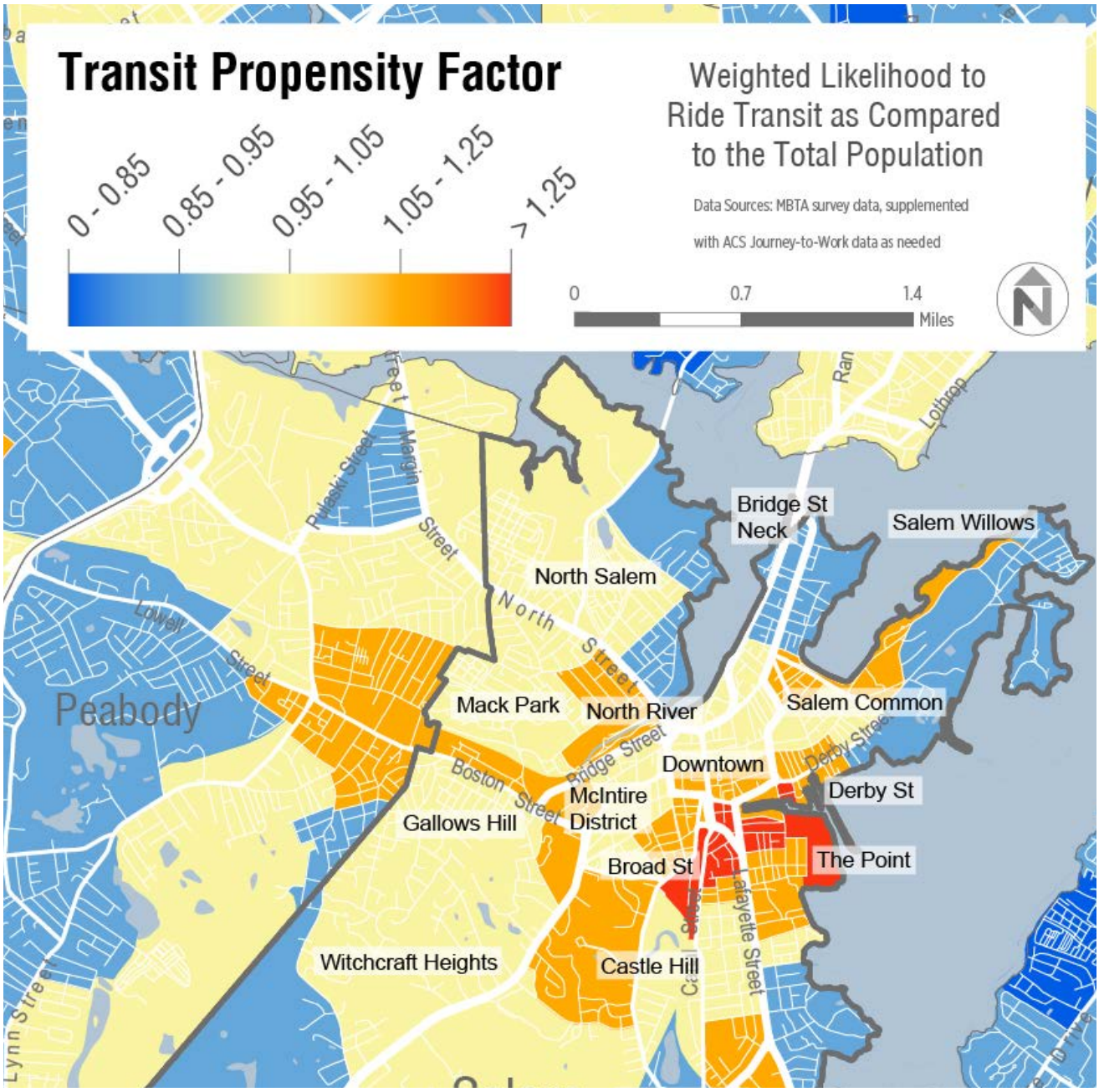
In order to accommodate the changing transportation needs of downtown residents, employees, and visitors, the City of Beverly has proactively sought to create a more robust downtown transportation strategy to maintain a high-quality of life. One of these initiative was a comprehensive parking strategy for the downtown and TOD area, which Nelson\Nygaard completed and we are currently at work to design a mobility hub and public realm improvement plan to enhance first-\last-mile connectivity from the station to downtown, nearby job centers (like the 2+MSF Cummings Center), and residential neighborhoods.

As a leader in downtown parking plans, Nelson\Nygaard was first hired to develop a data-driven, forward-thinking downtown parking strategy to balance the needs of the evening downtown visitor as well as the long-time resident. The result included not just a downtown parking management plan but a comprehensive set of strategies to improve downtown transportation for all users. Recommendations included updated parking regulations and payment mechanisms, new street designs, branded signing and wayfinding, and a updated residential parking permit structures. The City of Beverly expanded the original scope of the project beyond the downtown area to include the Beverly Depot TOD area to not only address parking concerns in the area, but more importantly, to enhance access to and from Cabot Street, the city's downtown spine.

The City is now working with Nelson\Nygaard to rethink public ROW around the Beverly Depot station with the goal of creating a multimodal mobility hub that will more intuitively and comprehensively enhance first-\last-mile connectivity but also enhance the public realm to create a civic center for the area's growing residential population living in new, under construction, and proposed mixed-use developments. For the study, Nelson\Nygaard has assessed all existing transportation infrastructure, services, studies, and conducted a design charrette with key stakeholders. We are currently working with the city on the design phase of the project. When complete, the project will include a conceptual mobility hub design and strategic implementation plan to enhance connectivity for all modes to the area.



NELSON NYGAARD

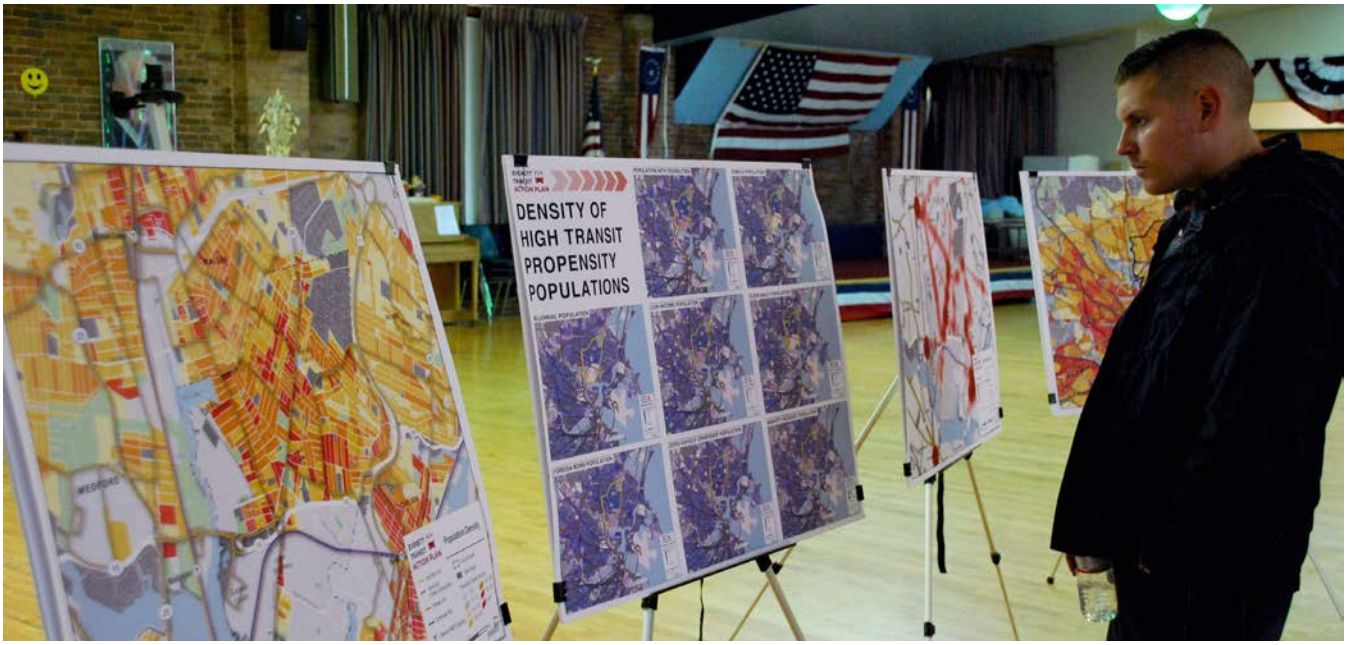


SALEM ON-CALL TRANSPORTATION SERVICES AND SHUTTLE ANALYSIS

Duration: 2019–Ongoing

Client: City of Salem Traffic and Parking Department

Based on the success of its 2010 Downtown Parking Study, Nelson\Nygaard is currently providing on-call transportation and parking planning services to the City of Salem. Project work has included tactical transportation project planning, data collection and outreach strategies to ensure projects are carried out successfully; parking data collection and analysis support; and resident parking analysis and strategy development. For transit, Nelson\Nygaard's conducted an analysis of potential local intracity shuttle options, with a recommendation to pilot a micro-transit, on-demand node-based shuttle. The City will issue an RFP for this shuttle in the coming weeks.



CITY OF EVERETT PROJECT EXPERIENCE

Duration: 2015–2016

Client: Massachusetts Department of Transportation/City of Everett

Since 2015, Nelson\Nygaard has supported the City of Everett in its efforts to foster a sustainable and equitable mobility network within its rapidly growing neighborhoods:

Everett Transit Action Plan: In 2015, under contract with MassDOT, Nelson\Nygaard developed a transformative long-range transit master plan designed to connect Everett's residents and jobs to the Greater Boston region. The project included an extensive market analysis, service analysis, and stakeholder outreach effort. Project recommendations focused on short-term changes to local bus routes, as well as larger scale projects including Silver Line extensions to Cambridge and Downtown Boston (now under planning by MassDOT). At the conclusion of the study, Nelson\Nygaard worked with the City of Everett and MassDOT to justify and plan the successful Broadway Bus Only Lane tactical transit pilot. Transit lead Dan Berez served as the deputy project manager for this effort, leading the technical work for all major project tasks, developing the final plan recommendations, and creating the service plan for the Broadway pilot.

Everett Transportation Improvement and Management Plan: In 2018, the City of Everett hired a team including Nelson\Nygaard to complete a citywide multimodal master plan. The plan focused on developing a comprehensive mobility strategy that will enable Everett to support significant additional development without an increase in private car trips. Nelson\Nygaard created implantation plans for a series of "Transit Main Streets" that use transit priority interventions. Transit lead Dan Berez served as the overall Deputy Project Manager and NelsonNygaard lead for this effort.

Everett Parking Study: In 2019, the City of Everett engaged Nelson\Nygaard to complete a citywide parking management plan. The project initially focused on a rapid action program to maintain community access to parking as the Encore Casino began operation. Nelson\Nygaard then developed a residential and commercial permit program, and is currently working with the city to create specific code language, signage, an enforcement plan, and other associated policies. Matt Smith served as the project manager for this effort, with Dan Berez as a project advisor focused on the interaction between parking and transit priority interventions.

ADDITIONAL SIMILAR RELEVANT PROJECT EXPERIENCE

In addition to the projects examples provided, we have completed numerous projects with similar scope and for similar public and private municipal agencies as the Town of Arlington. We have included additional project experience as examples of abilities to provide the Town of Arlington with a successful Sustainable Transportation Plan.

PROJECT NAME	CLIENT	DATES	RELEVANCE
Winchester Master Plan	Town of Winchester	2019–Ongoing	• Supporting a town-wide masterplan effort in a suburban driving-oriented context • Integrating multimodal recommendations with land use planning
Bentley University Transportation Demand Management Plan	Bentley University	2018–2019	• Access and transportation management plan to help a university in Waltham achieve charted sustainability goals • Shuttle system redesign recommendations already implemented
Lexington Parking Plan	Town of Lexington	2013–2014	• Curbside management plan with economic development focus • Geared on implementation, with many recommendations already in place
Concord Comprehensive Parking Study	Town of Concord	2012–2013	• Created recommendations to manage parking demand in Concord Center and West Concord, addressing unique commuter and tourist challenges • Provided implementation support through wifi issues affecting meters and evaluating post-implementation to address strategy redesign accordingly
Somerville Resident Parking Permit Analysis	City of Somerville	2018–2019	• Evaluating the citywide permit system policy as it relates to trip generation and impact on sustainable mode choices • Examining trends in permit usage based on density and modeshare • Recommending customized permit exceptions for transit-oriented development areas
Boston Charles River Esplanade Pathway Improvement Plan	Esplanade Association	2018–2019	• Examined modal priority and safety on trails, trail intersections, and crossings within a limited right-of-way area • Recommended strategies to address the above, prioritized for implementation
Boston Transportation Department Implementation Tools	Boston Transportation Department	2019–Ongoing	• Performed organizational assessment to address and overcome hurdles to implementation of citywide transportation plan • Designed decision-making tools for cross-department coordination on transportation tasks

SUBCONSULTANT BETA PROJECT EXPERIENCE

Placemaking Historic Lexington Center / Battle Green

Lexington, Massachusetts

REFERENCE
John Livsey, PE
Town Engineer
201 Bedford Street
Lexington, MA 02420
781.274.8300 x8305

SERVICES PROVIDED
- ✓ Planning
- ✓ Traffic Analysis/Modeling
- ✓ Extensive Streetscape Design
- ✓ Community Outreach

PROJECT COST
Total Construction Cost $6M

PROJECT BENEFITS
- ✓ Enhanced Pedestrian Environment
- ✓ ADA Compliance
- ✓ Traffic Signal Upgrades
- ✓ Improved Street Lighting
- ✓ Historic Preservation

Lexington Town Center is a vibrant public place with a significant amount of commercial retail and institutional land use, as well as numerous national historic landmarks. Lexington Center was one of the first town centers to undergo a high level of pedestrian friendly streetscape treatment over 50 years ago. Through a very competitive qualification-based process, BETA was selected to undertake the comprehensive upgrade of the Center, as well as enhancements to the historic Battle Green.

BETA's in-house Landscape Architects and Traffic Engineers collaborated together and partnered with the Town's steering committee to develop an integrated plan of improvements that respects the history of the area, enhances the pedestrian experience, addresses ADA compliance, while meeting the transportation and commercial needs of the area. Given the mix of vehicles, tour buses, transit buses, cyclists and pedestrians, BETA utilized VISSIM (a highly sophisticated micro simulation model) to assess alternatives. Additionally, the project required an extensive community outreach process.

BETA

Massachusetts Avenue Traffic & Transportation Improvements

Lexington, Massachusetts

REFERENCE
William Hadley
Director of Public Works
201 Bedford Street
Lexington, MA 02420
781.274.8314

SERVICES PROVIDED
- ✓ Planning
- ✓ Concept Development
- ✓ Preliminary Design
- ✓ Final Design

PROJECT STATUS
Completed

PROJECT COST
Total Construction Cost $5M

PROJECT BENEFITS
- ✓ Traffic Safety Improvements

Lexington Town Center is a vibrant public place with a significant amount of commercial retail and institutional land use, as well as numerous historic landmarks. The Center consists of three different sections, the Civic Area to the East, the Battle Green Area to the West and the Commercial Area in between.

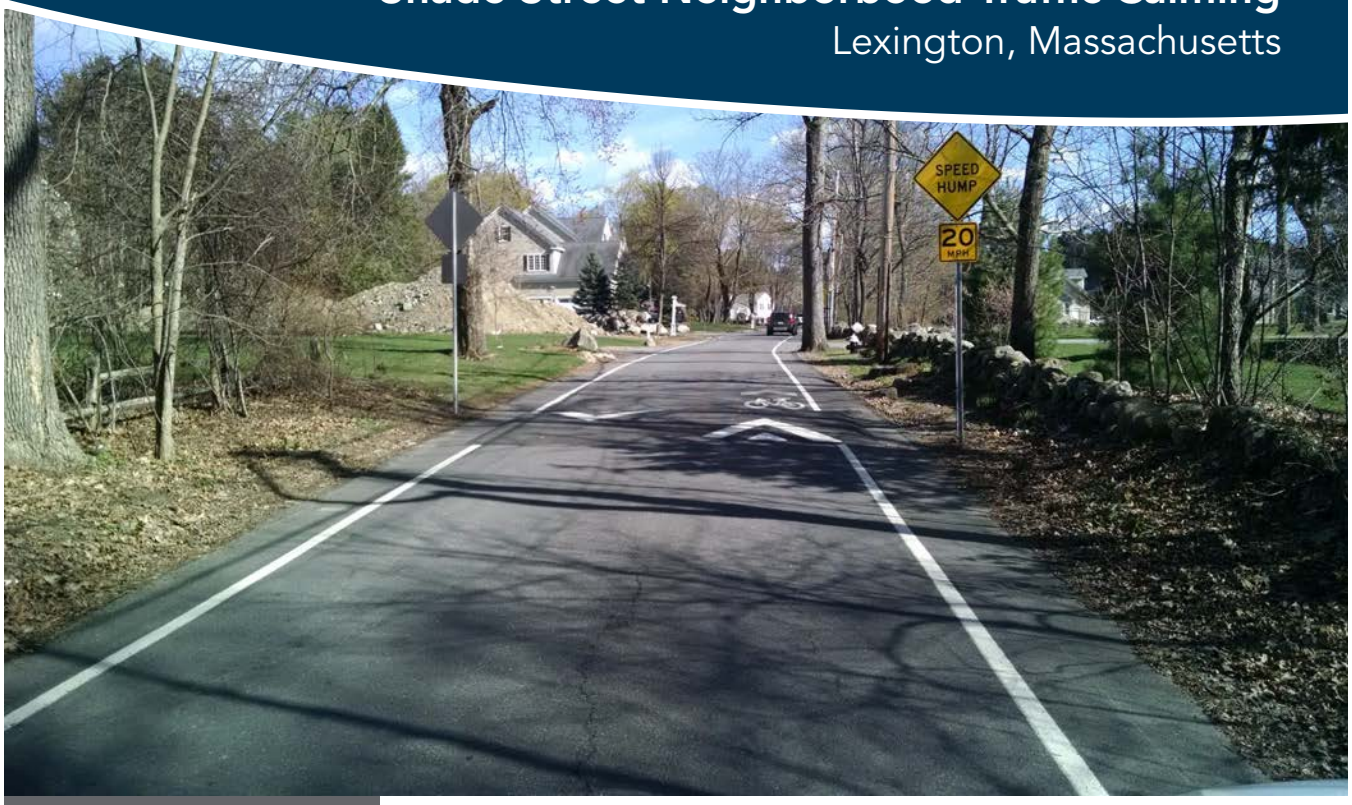
The core project includes the Massachusetts Avenue corridor from the intersection of Woburn Street, west to including the intersection of Meriam Street, an overall distance of 2,400 LF. The effort includes traffic and transportation assessments beyond the limits of this core area, spanning from Woburn Street to Worthen Street to the west. These assessments encompass traffic operations at key locations, as well as the inclusion of parking, transit and tourism activities. The Project is executed in three distinct phases: Phase 1- Overall Traffic/Alternatives Study, Phase 2 - Development of 25% Plans for the core project area and Phase 3 Final Design.

The Battle Green area was assessed for the application of traffic calming measures, particularly given its magnetism for a high level of pedestrian activity. The intersection of Bedford Street and Massachusetts Avenue is a location of particular interest, particularly the pedestrian traffic, many of who are visitors and perhaps not as familiar with the area, interacting with various lines of traffic movement and negotiating somewhat unfavorable geometry.

The project involves coordination with many stakeholders and public presentations including meeting with the Historical Society, Historians, Chamber of Commerce, Economic Development Department and Tourism Committee.

Shade Street Neighborbood Traffic Calming

Lexington, Massachusetts



REFERENCE
John Livsey, PE
Town Engineer
Town of Lexington
201 Bedford Street, Rm 202
Lexington, MA 02420
781.274.8300 x8305

SERVICES PROVIDED
- ✓ Assessments
- ✓ Neighborhood Outreach
- ✓ Construction Assistance

PROJECT COST
Total Construction Cost $250K

PROJECT BENEFITS
- ✓ Enhanced Safety
- ✓ Neighborhood Support

BETA was retained by the Town of Lexington to design traffic calming features and related roadway improvements to slow speeds and enhance pedestrian, bicycle, and vehicular safety along a very narrow 4,100' stretch of residential roadway. Residents were heavily involved in the planning process. BETA assisted the Town at several neighborhood group meetings presenting options and arriving at a consensus on the Traffic Calming Plan. The project included five speed humps, a raised intersection with textured pavement, 400' of new sidewalk, as well as revised geometry at two intersections and the modification of a section of the roadway for safety reasons. The first phase of the program has been constructed.

BETA

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Canton Street Neighborhood Traffic Calming

Westwood, Massachusetts

REFERENCE
Todd Korchin
DPW Director
Town of Westwood
50 Carby Street
Westwood, MA 02060
781.251.2578

SERVICES PROVIDED
- ✓ Traffic Assessment
- ✓ Neighborhood Outreach
- ✓ Follow-Up Study

PROJECT STATUS
Completed August 2016

PROJECT COST
Total Construction Cost $1.5M

PROJECT BENEFITS
- ✓ Enhanced Safety
- ✓ Improved Aesthetics

BETA has been working in the Town of Westwood, Massachusetts to develop a traffic calming plan designed to mitigate the traffic impact associated with University Station, a 4.5 million square foot mixed use development adjacent to the neighborhood. Resident concerns included an increase in cut-through traffic, heavy vehicle traffic, potential future increase in traffic volume, and higher vehicle speeds. BETA worked closely with the Town and neighborhood residents during the process.

Construction was completed in August of 2016 and BETA was retained to perform a follow-up study. The BETA team presented the results of this study at a very successful public meeting attended by close to 60 residents and Town personnel. The Town was incredibly happy with the final outcome as confirmed by Todd Korchin, Westwood Director of Public Works. “We just wanted to send a special thank you out to you and your team for the hard work and efforts throughout this project,” he said. “The past couple of years haven’t been the easiest and we truly appreciate all your help and assistance with this project.”

The traffic calming area includes gateway design, speed humps, 11 intersection locations traffic calming devices with raised medians, landscape features, imprint and texture pavements, and 10 mid-block median island locations. In addition, work included providing vertical and sloped granite curb with streetscape features to add to aesthetics. One of the neighborhood roads is a Scenic Road and care was taken during the design to maintain the “scenic nature” of the roadway, while obtaining the goal of calming traffic. BETA’s work also included extensive neighborhood meetings and posting plan materials to the Town website for resident reference.

Given the delicate neighborhood consensus building effort put in by the project team, it was rewarding to hear applause and positive reactions from the crowd. The success of this project is a direct result of extensive and close working relationships with the neighborhoods involved.

DETAILED WORK PLAN

PROJECT UNDERSTANDING AND APPROACH

Arlington's unique location puts it close enough to the Commonwealth's major employment centers to make the commute sustainable, but distant enough for the Town to have retained a close-knit, community feel. Crossing the Alewife Brook Parkway from Cambridge into Arlington brings with it a feeling of comfort and ease – the congestion lessens, conflicts are fewer, and more distance is perceived between streets and driveways. City becomes Town.

Arlington as a community is mainly residential, with the obvious exceptions in East Arlington, Arlington Center, and the Heights. Arlington residents tend to work nearby – Boston, Cambridge, Lexington, Burlington – but the travel time differences between driving and other modes of transportation is great, and the travel time reliability of transit is poor. There are three main reasons for this, each informing the Sustainable Transportation Plan:

1. Unlike many similar and nearby towns such as Newton, Belmont, and Winchester, Arlington does not have rapid transit service. The old trolley line has been lovingly converted to a multi-use trail and access to the nearest rapid transit investments (Alewife on the red line, West Medford commuter rail) can be difficult due to traffic congestion and parking supply.

2. Transit investments in Arlington have been more slanted towards operations (the provision of service) and less on capital (transit-only lanes, queue jumps, etc.), meaning that MBTA buses in Arlington serve the employment centers but operate in congested traffic. Buses serving Alewife are choked in congestion upon entry and exit, or they travel along Massachusetts Avenue (or Appleton Street) stopping frequently due to boardings, congestion, and stop lights.

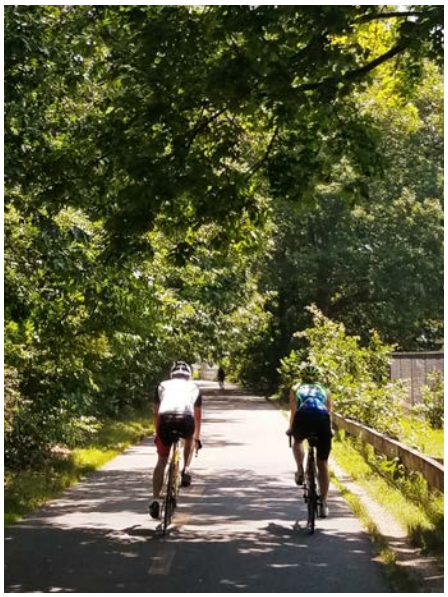
3. Arlington's topography makes work-related walking and bicycling a challenge. Yes, Massachusetts Avenue is situated in a valley, but connections between Arlington and Belmont, or Arlington and Watertown, or even Arlington and Winchester, are a challenge. The Minuteman Path is a gem, but one used far too infrequently for utilitarian commute-related journeys. In part due to its large residential mass and part due to the high-quality school systems Arlington is a desirable place to raise a family. Yet the simple act of dropping children off at school and going to work is difficult to do for any mode of transportation other than driving. Many of the elementary schools—Brackett, Thompson, Dallin, Stratton—are located in the hilly sections of Arlington which make it difficult for walking or bicycling—and for time-consuming transit connections.

But Arlington's citizenry is committed to sustainability. From Sustainable Arlington to Green Arlington, the Arlington Sustainability Action Plan to Arlington Vision 2020—responding to the climate change challenge is near and dear to the hearts of many of Arlington's residents. Sustainability and community are themes at Town Day every year, and it's seen at Porchfest and Open Studios. The Sustainable Transportation Plan will provide the Town with a toolkit of transportation strategies that help align opportunity—to try something different—with the reality of busy lifestyles. Our approach to this Sustainable Transportation plan will be to assess and address how Arlington's attributes work within the town and fit into the regional context. Our process is largely informed by Arlington's history, and how its transportation system evolved over time.

In order to meet sustainability goals and address changing needs, this project must also identify transportation initiatives and policies that address congestion, increase person throughout and respond to emerging and rapidly changing mobility options. At the same time, changing demographic and social conditions—a generational shift of sorts with more families with school-aged children, as well as increasing empty nesters and seniors, and growing income equality—presents additional challenges to create a transportation system that best serves these diverse needs in a manner that is implementable, sustainable, and equitable. And while new residents are attracted to Arlington due to its proximity to the jobs and the regional highway network, Arlington is part of a larger regional transportation network, one that is increasingly strained by the need to move hundreds of thousands of workers to new jobs in a booming economy.

Our team lives and works in this community and those adjacent to it. Recent lessons learned from our work in nearby Newton and Winchester have looked to address the substantial through traffic both communities experience. We anticipate similar challenges in Arlington, where restaurants, local businesses, and entertainment venues are a regional draw. The charge of this plan is to understand these trends and to design a system that works as well for current as well as new residents and businesses.

In every project, we value transparency and interactive community and stakeholder involvement. Plans are more likely to success when people are fully involved in the process and when they reach consensus around a clear vision. Our process emphasizes actively engaging citizens throughout the process. We empower municipal leaders and citizens to visualize key tradeoffs (e.g., space, costs, and environmental impacts) to make better-informed transportation decisions.



SCOPE OF SERVICES

TASK A PROJECT INITIATION AND MANAGEMENT PLAN

A.1 Kick Off Meeting

Nelson\Nygaard recommends beginning projects with a kickoff meeting to bring together Town staff, advisory committee members, and key members of the consulting team. The intent of this initial work task is to craft and finalize a framework for carrying out the Arlington Sustainable Transportation Plan project. In this meeting, we will discuss the final scope of work, clarify key roles, confirm project schedule, establish communication protocols.

A key agenda item at the kickoff meeting will be a strategy discussion for the project process. Given the abundance of transportation data and resources available, identifying initial priorities for analysis is essential to delivering the Town with a plan that provides an implementable strategy to address Arlington's specific transportation opportunities and challenges, not one that is either overly generic or unrealistic.

Prior to this meeting, Nelson\Nygaard will coordinate with Town staff to collect studies, data, and other information related to Arlington's transportation network. This will allow us to conduct brainstorming session during the kick-off meeting to guide areas of focus.

A.2 Ongoing Communication

Regular communication between the Town of Arlington and the Nelson\Nygaard team is crucial to the success of this transportation planning process.

We propose holding team update calls every other week as needed to ensure the project remains on schedule and budget, to discuss any data or information gaps, and to discuss findings and strategy options as the project progresses.

DELIVERABLES

- ☐ **Final Scope and Schedule**

TASK B PUBLIC PARTICIPATION AND OUTREACH

B.1 Outreach Support

As indicated in the RFP, Town staff and the Advisory Committee will conduct most of the outreach activity around the Sustainable Transportation Plan. The Nelson\Nygaard team will support these efforts through close coordination with Town staff to ensure that all plan findings, support materials and information needed is provided in advance. Should a higher level of participation from the consultant team be needed at these meetings, we will work with the Town to define the role and provide support on a time and materials basis.

To better ensure a successful planning process and outcome, we will coordinate with Town staff to make sure all communication is coordinated and consistent and outline expected outcomes of the engagement process. Based on the above, our efforts will focus on the following engagement tasks.

B.2 Public Education Campaign and Outreach Materials

With input from Town staff and the Advisory Committee, Nelson\Nygaard will develop information and outreach materials to educate the public about the Sustainable Transportation Plan and how this project and other efforts in Arlington are focusing on multimodal transportation, sustainability, emerging mobility, equity and quality of life.

All materials developed will complement the Town-led public participation and outreach efforts of this project as well as to build support and momentum for the implementation of the final Sustainable Transportation Plan strategies.

For example, implementation of emerging mobility options (e.g. e-assist mobility devices, on-demand micro transit services) can be a significant paradigm shift for some residents, so our education materials will emphasize why it is important to balance all modes of transportation, explain how streets can be redesigned to accommodate all, or prioritize key modes; and how this balance is achieved. This task and the materials will be developed and refined in close collaboration with the Town and Advisory Committee.

B.3 Interviews and Focus Groups

The Nelson\Nygaard team will conduct up to 8 interviews or focus groups with people and/or groups knowledgeable about transportation within Arlington and the region. Interviews and focus groups would ideally be scheduled over one or two days to maximize consultant time, and could include the following:

- Town Staff (including Planning and Community Development, Engineering, Department of Public Works)
- Elected officials
- Neighborhood Groups
- Local transportation advocates
- Residents and business owners
- State agencies

B.4 Mobile Workshops

While the Town will lead the majority of engagement activities, it is important for the consultant team to receive direct input about the transportation strategies and concepts developed and an on-the-ground perspective. This is particularly important given that Arlington is a community with an active, engaged, and educated citizen base.

We recommend the Nelson\Nygaard team's outreach efforts to focus on two "mobile workshops" which will enable our team to reach residents and stakeholders while they are actively moving about and engaging within the community. We propose to integrate with existing events rather than create a separate outreach effort, such as Town Day, the Arlington Farmer's Market, Porch Fest or other events recommended by the Town or Advisory Committee.

Our mobile workshops will employ different engagement techniques, which could include interactive maps, guides, and touchpad-based input tools, likely in a visible pop-up tent that is easily transported by car. We have successfully employed this approach in Newton and Boston and other communities across the county.

Our team will utilize mobile workshops to engage Arlington's residents at festivals, farmer's markets, or other events like Town Day

B.5 Web-Based Engagement

Public outreach workshops, while essential to the planning process, cannot provide ongoing interaction and may not be attended by a representative cross section of the community. An effective project website can help fill in the gaps for those who cannot or who choose not to attend meetings and provide up-to-date study information and solicit feedback in-between meetings.

We will collaborate with Town staff to support a project website and (optional) social media communication strategy. Web-based engagement will provide the public a fast and simple way to keep current with the latest project updates.

These online and mobile communication options provide the Town and our team an ongoing mechanism to elicit public feedback and support.

For example, Nelson\Nygaard has used various interactive website applications including online surveys through Survey Monkey, visual preference polling, and Wikimaps, among others.

Newton » in » motion

A Transportation Strategy for Newton

WHAT'S YOUR TRANSPORTATION VISION?

Missed the Newton-in-Motion visioning workshop? We want to hear from you -- online! Surveys are open until Monday, February 29.

Visit the website at

www.newtonma.gov/transportationstrategy

and share your:

- goals
- questions
- areas of concern
- and more!

SAVE THE DATE FOR FUTURE WORKSHOPS:
Week of April 4th, 2016 and Week of June 13th, 2016

All of our projects are grounded in broad-based public engagement. We will partner with you to customize the right outreach approach for Arlington.

The purpose of the web-based engagement is to:

- Provide a single (website) location for study announcements, updates, contact information, meeting results, and work products
- Educate the community on the state of transportation in Arlington through graphical reports, infographics, and storytelling, through photographs and/or videos
- Hear from the community on issues and opportunities, priorities, and preferences through an interactive interface, including Wikimaps, social media, polling, and more.

DELIVERABLES

- ☐ **Meeting and Interview Summaries**
- ☐ **Memorandum: Public Outreach Strategy**

TASK C EXISTING CONDITIONS AND DATA ANALYSIS

The challenge with analyzing transportation data is the vast quantities of numerical and other data available, much of which may not be particularly relevant in assessing Arlington's specific transportation network needs. As such and as described in Task A, we believe the best approach is an efficient and focused existing conditions assessment that identifies, analyzes and communicates data findings most relevant to Arlington's transportation network based on input from staff, the Advisory Committee and feedback received through public engagement.

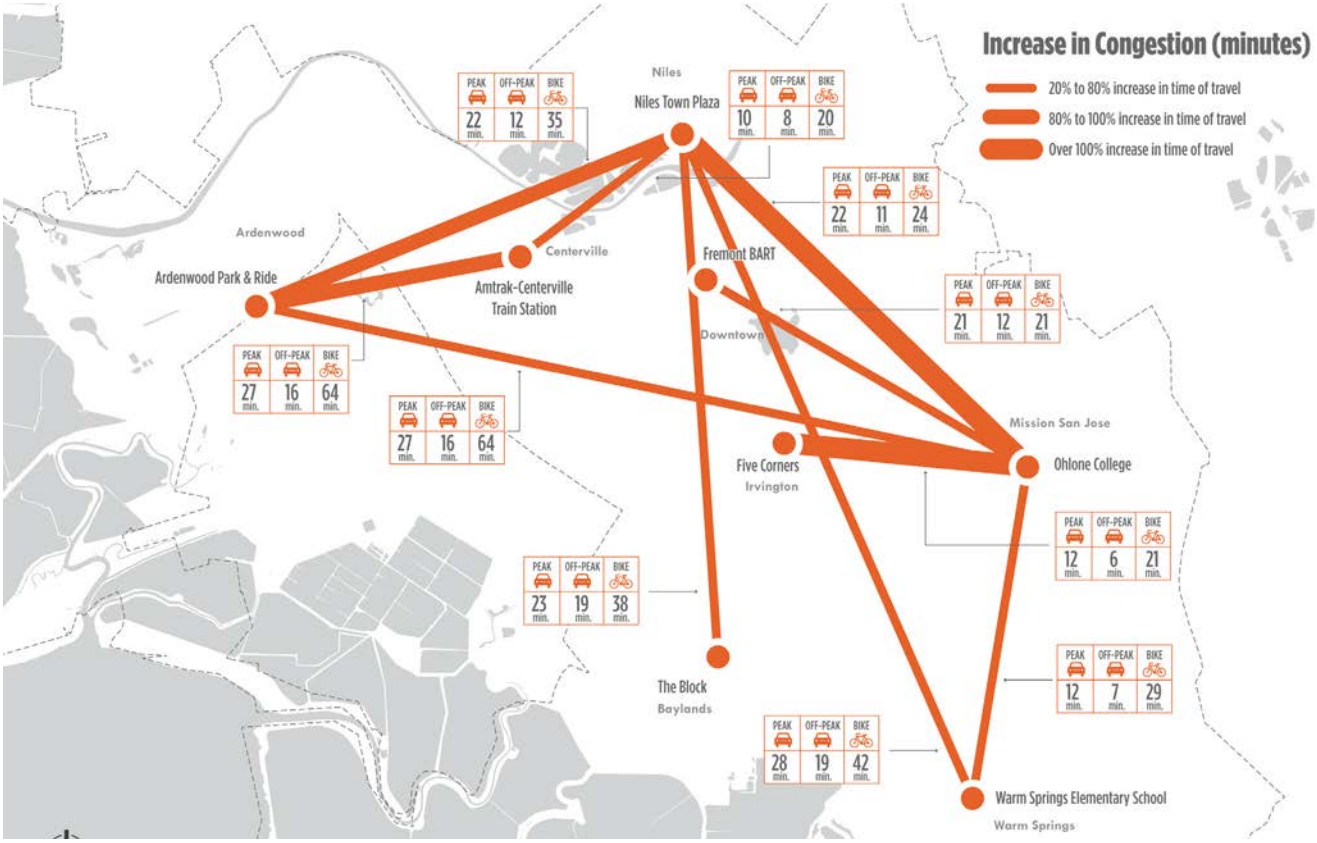
To perform this analysis, Nelson\Nygaard will develop an overview—a database—highlighting available data and information as well as data gaps, upon receiving notice to proceed on the project. This will be presented at the Kick-Off meeting for discussion.

Based on our experience working on community transportation planning projects, our analysis will include an overview (and subsequent focus on certain element) of the following:

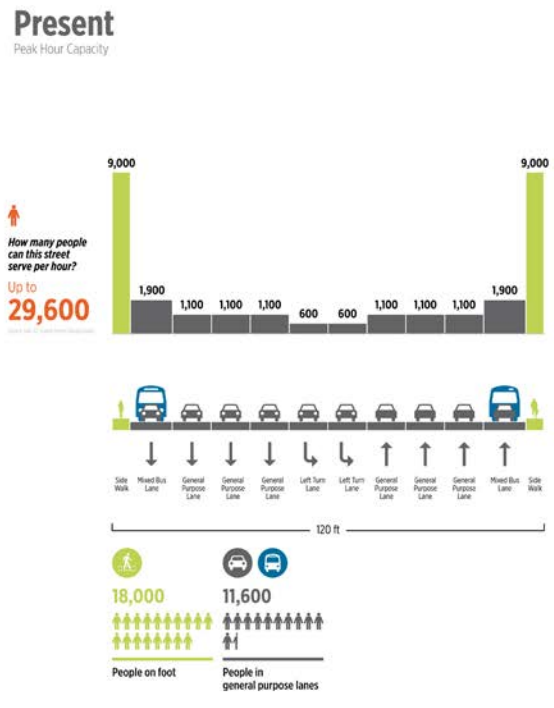
C.1 Review of Previous Planning and Initiatives

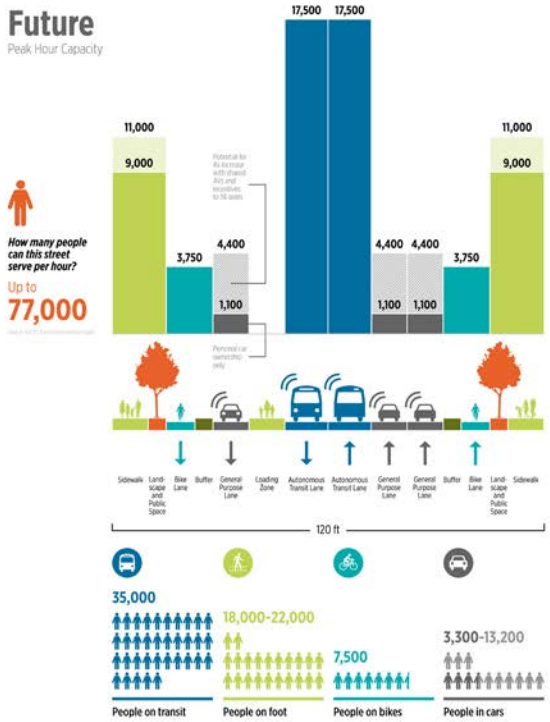
Members of the Nelson\Nygaard team will begin assembling and reviewing relevant planning documents that provide insight into existing transportation needs and priorities. For example, transportation strategies and policy recommendations outlined in the 2015 Comprehensive Plan will be assessed, as will outcomes from recent transportation projects and initiatives (e.g., Mass Ave. bus priority lanes). The purpose of this broad data review step is three-fold:

- Assess previous transportation planning priorities and initiatives and the results of those efforts;
- Review projects underway, in planning phases, or those already funded in the CIP, to provide understanding about existing and near-term Town priorities;
- Assess initiatives and how they relate to a regional context and how Arlington fits into the larger regional transportation network, economy and planning efforts, particularly in terms of housing and jobs access (equity), MBTA bus service (and Alewife Red Line service), traffic and circulation, and more.



Our visual communications team synthesizes multiple data points to help communities see a clear picture of their transportation network and understand how it relates to moving people—no matter how they travel—and to improving their quality of life.





C.2 Existing and Potential Future Conditions, Data Collection, and Analysis

Key Economic, Social, Land Use and Environmental Trends

Nelson\Nygaard will spatially analyze (largely through GIS mapping) Arlington's population, economic attributes, land use patterns and the environment within the context of the transportation network. This will provide insight into how equitably the existing transportation network serves Arlington's current and future residents (where they live), connects them to jobs and opportunity, and how it impacts the environment.

Social indicators such as income distribution, ethnicity, obesity, percentage of household budget spent on transportation will be assessed. Walk Score and Bike Score data may be used for this analysis.

For Arlington's economy, we will assess existing and projected employment patterns and characteristics, transit service options, commercial concentrations, truck/freight movement and more.

The team will consider how growth projections (e.g., population, employment, development) are anticipated to change over time.

Transportation Network Assessment

Building on geospatial information identified, local and state datasets, as well as field observations where necessary, Nelson\Nygaard will map and assess Arlington's existing transportation network including the following:

- Roadway characteristics including functional classification, congestion, and connectivity
- Pedestrian and bicycle infrastructure including existing and proposed facilities and amenities (e.g. paths, lanes, bike racks)
- Transit service including existing routes, stops and amenities; as well as ridership patterns; regional connectivity; and overall system strengths and weaknesses; quality of service (QOS), and more
- Journey to work data to understand how and where Arlington's residents and workers are going to or coming from and how it relates to regional transportation conditions and initiatives
- Curbside use including parking, commercial loading, passenger drop-off and pick-up, transit use/stops and more
- Crash data, clusters and other safety data by mode

The above will enable the Project Team to better understand how Arlington's existing transportation network is able to serve all current and future users by mode, identify critical gaps in connectivity or transit accessibility, and other potential opportunities and challenges that arise from the analysis.

Crash density mapping will help us to identify locations where strategies to enhance safety should be prioritized

We will identify connectivity gaps and mobility impediments for all users. For example, we will identify streets not designed to accommodate all users

Multimodal Analysis

Based on feedback received by Town staff and the Advisory Committee, the Nelson\Nygaard team will conduct a more targeted and detailed multimodal analysis of key system elements, and develop transportation performance indicators related to identified project priority areas and goals. Depending on the initial findings, this could include an assessment of the following:

- Transportation Service Gaps
  - » Vehicular
  - » Transit
  - » Bike and Ped (including bike parking)
- Accessibility Gaps
  - » ADA compliance
  - » Council on Aging services
- Quality of service
  - » Bicycle compatibility index (BCI)
  - » Pedestrian network quality
  - » Transit reliability
- Comfort of service
  - » Transit amenities
  - » Transit technology
  - » Tree coverage and other streetscaping shade/wind effects
  - » Lighting
- Safety
  - » Speed limits
  - » Road diets
  - » Pedestrian and bicycle needs
- Infrastructure Needs
  - » Roadway space by mode, including effects of autonomous vehicles
  - » Opportunity cost associated with using street space for transportation use versus other potential uses of public space
- Mode split trends
- The curb
  - » Assess parking supply and demand
  - » Parking utilization and development trends/change over time
  - » Changing curb demand/ needs (e.g., drop-off/pick-up, delivery, active transportation, bus priority, emerging mobility options)
- Emerging mobility integration
  - » E-assist devices
  - » TNCs
  - » Car share
  - » Microtransit

C.3 Mobility Fact Book

We will integrate findings from the above analyses into a Mobility Fact Book, a highly graphical alternative to often unwieldy and overwhelming technical existing conditions reports.

The Fact Book will be a product of field study and review of existing and anticipated future conditions completed in the subtasks above.

It will be designed to provide key findings with a graphical, internet-ready focus, employing maps, illustrations, and photo imagery, with sample details/facts for areas where particular aspects of the transportation system's performance, operations, or infrastructure should be highlighted as call-out examples.

The Fact Book will serve as the foundation to inform transportation vision and strategies for the Sustainable Transportation Plan. We will submit this in draft form and incorporate up to two rounds of consolidated, non-conflicting Town edits.

Once identified and assessed, we will present all information in a compelling and easy-to-understand manner (see Task B.2.S. for more). The purpose of collecting the transportation data is three-fold:

- To educate and share with the public the state of transportation and related factors in Arlington (including regional connectivity)
- To identify key transportation network assets, issues/gaps and opportunities, and
- To create a baseline from which the Town can measure future progress

DELIVERABLES

- ☐ **Database of GIS, datasets, etc.**
- ☐ **Mobility Fact Book, including Town-wide maps of key findings.**

TASK D VISIONING AND TRACKING

D.1 Transportation System Vision and Principles

Given the complexity and rapidly changing characteristics of Arlington's and the region's transportation network, developing a shared, community wide understanding and future vision for what that network will be is paramount to the successful completion of this process. We think of this as where the "magic" happens, where local experience and perceptions, community aspirations and analysis findings by the project team intersect and are discussed with one desired outcome—a shared vision that will guide transportation planning and inform plan recommendations.

The public vision process will require prioritizing community-based goals and objectives. As the consultant team working with the Town to develop this strategy, we need to understand what is most important to Arlington's residents and stakeholders? What do they find most challenging about getting around Arlington? What best serves their transportation needs, and what impedes their movement? How does transportation impact their daily life—be it getting to work, to basic services and needs, or getting their children to school safely and on time. What should be done now, in 5 years, or later?

This is why it is important for the consultant team to develop educational materials and present findings in clear, concise, and easily digestible formats. To develop a vision, the public needs to comprehend the complex nature of how the components of its multimodal transportation network function as one, so that project goals, once set, lead to implementable strategies and outcomes that can be measured based on evaluation criteria/metrics developed as part of this process (e.g. time savings, mode split, health impacts) and based on best practice research.

Based on feedback received through the public visioning process—which the Town will lead as part of its engagement strategy and could include the first of two mobile workshops—the Nelson\Nygaard team will create a vision for what transportation looks like in the next 5 to 25 years within Arlington. The vision document should be bold yet broad, and relate to expected future investments and practical, achievable solutions.

This document will be designed to be accessible to all, particularly residents and stakeholders not familiar with national trends in sustainable transportation, written in jargon-free language and including examples and graphics that explain basic transportation ideas. The vision document can be printed and structured as an easily viewable, adaptable online resource, and will include infographics, maps, and other visuals.

D.2 Tracking Progress

While creating a vision is an important to the process, providing methods for the Town to track the Sustainable Transportation Plan's progress is an essential component of this effort. And given the long-term nature of the project, requires more than a check box approach.

There are different options and methods for tracking progress. The Nelson\Nygaard team will work with Town staff and the Advisory Committee to develop a methodology that can be completed with reasonable effort by Town staff over time. For example, one potential strategy could be to develop a report format with set metrics tied to various goals that could reported annually at Town Meeting. This could include an annual crash analysis to see if the network is becoming safer; an annual analysis of average trip times (up or down); or automobile ownership trends. Another could be to create a replicable methodology to track mode share over time. This would provide the Town with a way to track the effectiveness of the policies and initiatives recommended to shift mode choice over time.

DELIVERABLES

- ☐ **Vision Document including Community Goals**
- ☐ **Memorandum: Data metrics and/or tracking methodology**

TASK E DRAFT AND FINAL SUSTAINABLE TRANSPORTATION PLAN

The Sustainable Transportation Plan brings together all work done to date, and officially documents all policies, programs, and projects to achieve the plan vision and enhance connectivity and transportation choice town wide. The plan must reflect both the community goals and priorities as well as real world conditions and implementable projects.

We propose a plan focused on community priorities and initiatives presented as stand-alone strategy and implementation documents that can be used separately or as a complete package. This will ensure that the plan is user-friendly and succession-proof over time. Each will detail the strategy and how it helps to achieve the transportation vision, who is responsible to implement, an approximate timeframe to complete, potential funding programs, and more. We will also provide guidance on how to implement pilot and tactical solutions that provide the Town with potential options to more cost-effectively test initiatives on a short-term or semi-permanent basis.

This format will provide the Town with a strategic document to guide implementation in a manner that is realistic and flexible given the many internal and external influences that affect transportation implementation such as funding limitations, shifting State agency priorities, public opinion, local budgeting/Town Meeting allocations, and more.

E.1 Draft Sustainable Transportation Plan

Nelson\Nygaard will develop a draft plan and implementation strategy that enhances the current transportation network, addresses critical connectivity and service gaps, and provides strategies to adapt to changing mobility needs and services. Strategies and initiatives are likely to be organized by topic – e.g. complete streets, active transportation, transit, and emerging transportation. Although presented by topic area, all strategies will reflect complete streets practices, and look to prioritize person throughput and comfort over vehicle throughput to ensure Arlington's limited, and thus highly valued, transportation right-of-way is used most effectively.

E.1.1 Motor Vehicle and Roadway Design Strategies

Nelson\Nygaard's approach to motor vehicle planning and design is unique. Rather than treating streets solely as transportation corridors, we recognize that "families" of street types are as much dependent on adjacent land uses and their connective function as they are their role in moving people. This family approach underlines our successful work in numerous towns and cities that have rejected blunt terms like "arterial" and "collector" to embrace family names like "neighborhood," "community," and "business" contribute to the overall viability of the Sustainable Transportation Plan.

We will look to develop policies and projects to apply to various road types based on a variety of characteristics. Supportive curbside policies and appropriate transportation demand management strategies will also be explored.

Based on the established vision and project goals, potential strategies could address the following:

- Complete street design to encourage non-auto use (see Active Transportation and Transit Strategies)
- Addressing congestion through improving corridors and intersections most critical to maintaining appropriate traffic flows;
- Vision Zero policies and design initiatives that enhance safety and eliminate traffic fatalities.
- Initiatives that prioritize total person throughput, not vehicle throughput.
- Curbside strategies that balance parking supply and demand with commercial and service loading and delivery, active transportation use, transit amenities and emerging mobility options.
- Placemaking enhancements including shade trees to improve comfort and reduce heat island effects; wayfinding (to parking, key destinations, and more); and other strategies.

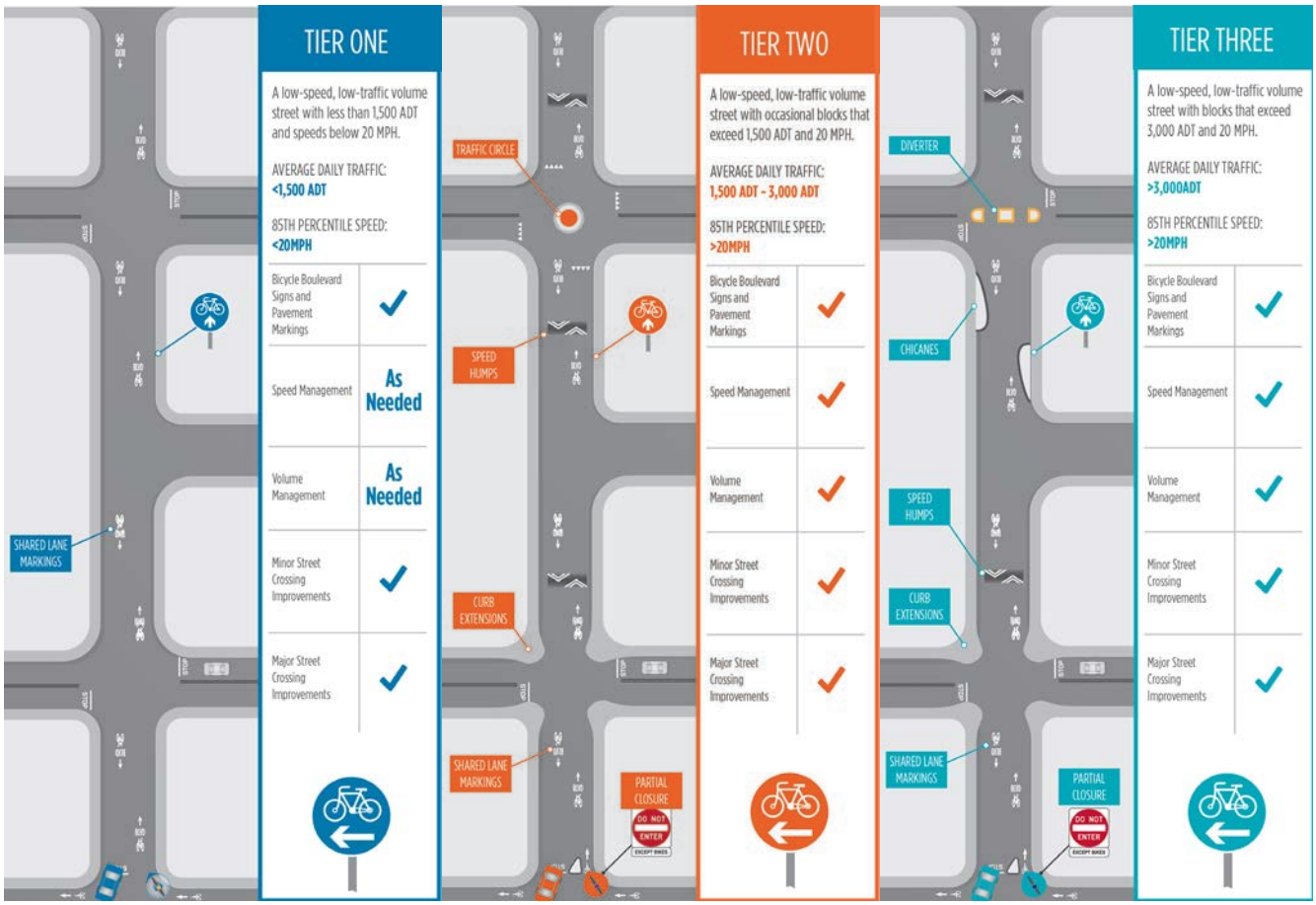
Street Concepts

Based on the families of streets, and led by team member Beta Group, we will develop up to three street sections and conceptual designs for how roadways can be adapted to prioritize person throughput, enhance safety, and prioritize placemaking and quality of life.

D.1.2 Active Transportation Strategies

Both anecdotal and research-related evidence continue to show that bicyclists, runners and walkers want and need facilities separated from motor vehicles. Trails, greenways, bikeways (e.g. Minuteman Bikeway), well-designed public spaces, bicycle lanes, and wide sidewalks and visible street crossings attract a diverse range of people age 8-to-80, who walk and bike for transportation and recreation.

Recommended active transportation strategies and projects will look to develop specific projects to improve walking and biking access and safety (including Safe Routes to School) with a focus on connections to existing multiuse paths, bike lanes, transit services, schools (including Safe Routes to School programs), commercial corridors (e.g. Mass Ave.) and other destinations beyond Town borders (e.g. Alewife Station). Adding more of these facilities, particularly those feeding into existing facilities to fill the gaps, and that prioritize pedestrian and bike safety, will help improve the town's non-motorized mode share, enhance public health and mitigate environmental impact of single-occupant vehicle trips.



We give communities clear options for choosing investments in their streets. This graphic illustrates the tradeoffs for different traffic calming options to ensure that sustainable choices feel safe for people of all ages.

D.1.3 Transit Strategies

Enhanced transit options hold the greatest potential to move more people more efficiently and more equitably than other modes. Potential recommendations to enhance transit services—both within Arlington and within the region—will be developed. Potential strategies could include additional bus priority lanes (e.g. along Broadway), enhanced transit amenities including shelters, information availability, public Wi-Fi, and more. Given poor east-west connectivity, as well as aging populations and challenging topography, emerging intra-town transit options such as on-demand micro-transit, ride hailing service partnerships, may also be included.

D.2 Mobile Workshops

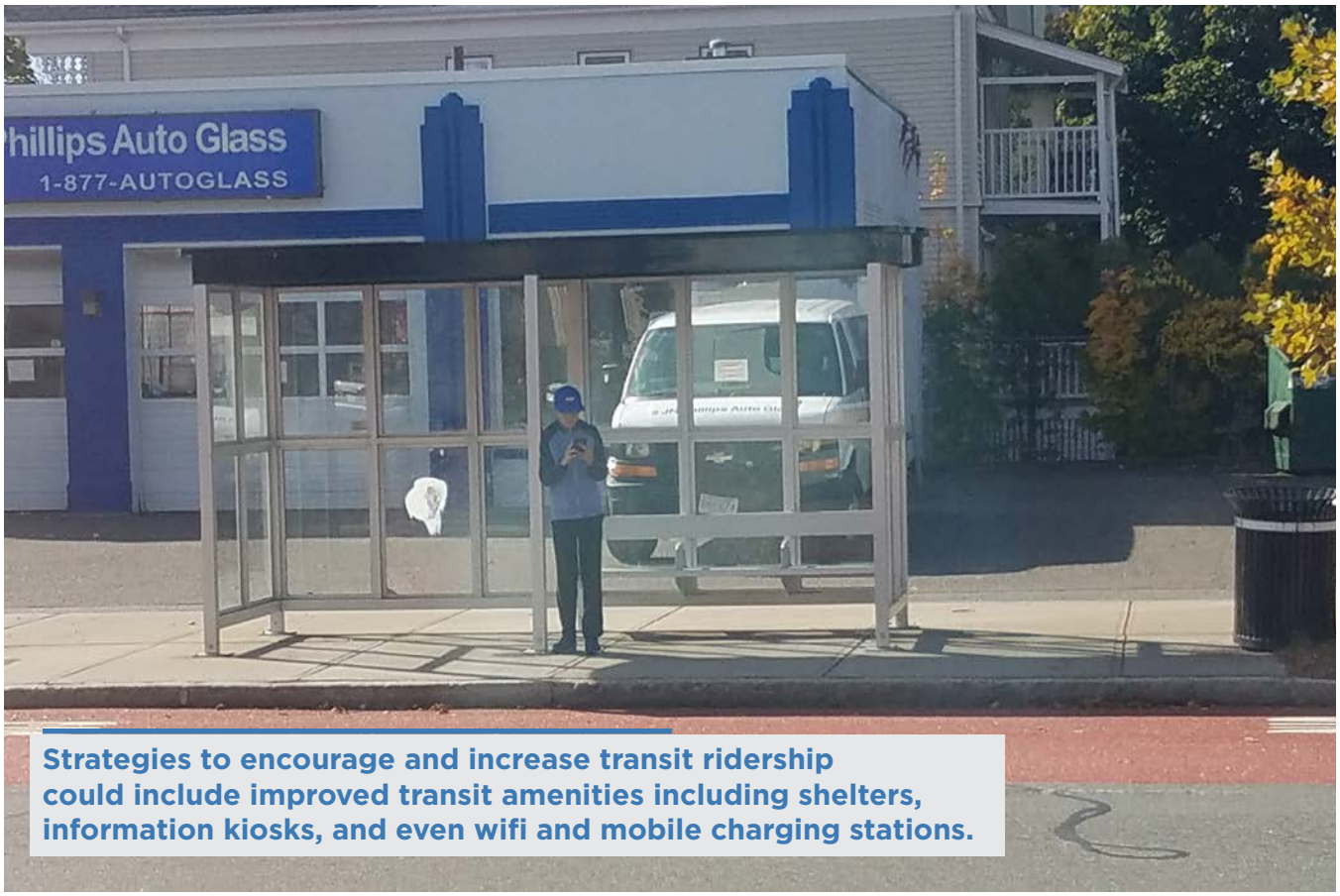
We propose hosting at least one (or both) of the mobile workshops after the draft plan is delivered. The opportunity to present key concepts, policy initiatives and project priorities to the public for their input is critical not only to developing the final plan priorities, but to future implementation efforts. Providing the opportunity for stakeholders to engage and critique plan elements can help to build support for the plan and its initiatives.

D.3 Final Sustainable Transportation Plan

Based on public input, and one set of consolidated and non-conflicting comments from Town staff and the Advisory Committee, the Nelson\Nygaard team will revise the Sustainable Transportation Plan document as needed. The result will be a plan and implementation strategy that is fully based on community priorities and implementable strategies to improve how Arlington's residents, workers and visitors move to, from and through the community.

DELIVERABLES

- ☐ **Draft Sustainable Transportation Strategy**
- ☐ **Final Sustainable Transportation Strategy**



Strategies to encourage and increase transit ridership could include improved transit amenities including shelters, information kiosks, and even wifi and mobile charging stations.

Recommendations to enhance safety may include higher cost intersection redesigns as well as lower cost tactical strategies similar in spirit to Arlington's successful introduction of safety flags that enhance pedestrian safety though enhanced visibility in crosswalks.
[Credit: Boston Globe]

IMPLEMENTING THE SUSTAINABLE TRANSPORTATION PLAN

Successful implementation of any comprehensive planning strategy is the greatest challenge for any municipality. As such, the Sustainable Transportation Plan cannot run the risk of being an end point, regardless of how well-developed, documented, and implementable it might appear.

The Nelson\Nygaard team regularly sees its plans implemented because we do not allow ourselves to work impractically. Far too many plans become visionary without enough ability to hit the streets running.

While the Sustainable Transportation Plan must have a forward-thinking vision that ensures it is only the beginning of a process, we are well-grounded in the realities that Town staff, elected officials, business owners, and landowners face every day.

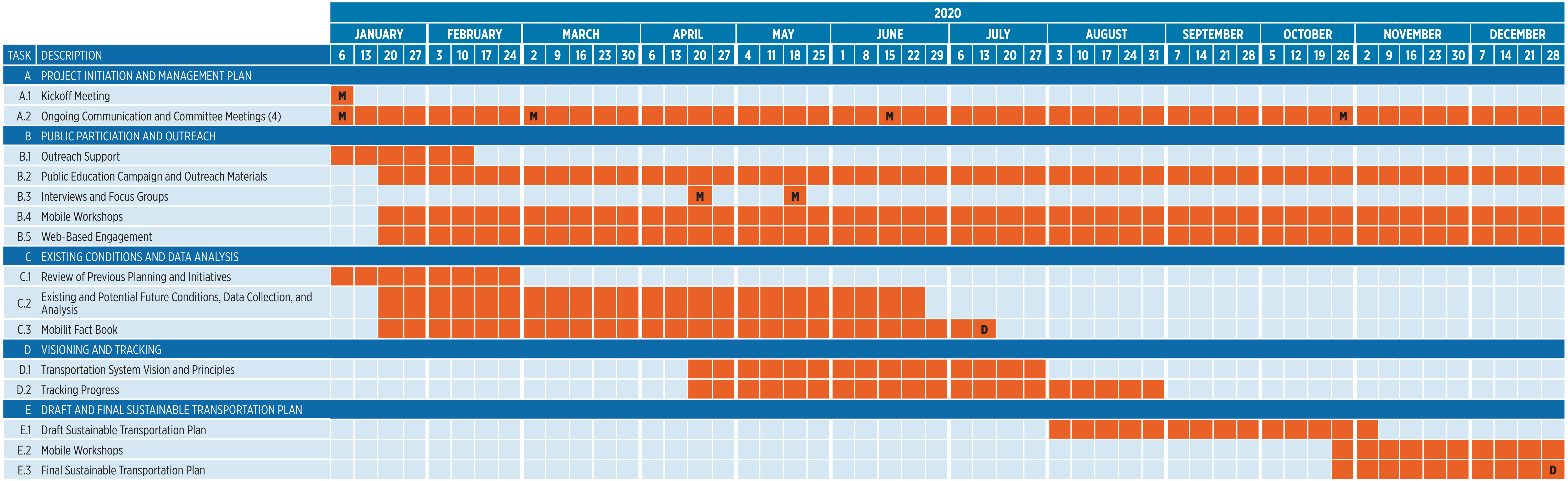
The implementation strategy, steps, and timelines will be grounded in a sequence that is realistic, given time, budgets, and regulatory constraints. Nonetheless, we expect that strategy development will create the kind of motivation and support from all internal and external stakeholders necessary to keep implementation on track. As such, all strategies within the Sustainable Transportation Plan will include the following components:

- Timeframe and phasing for quick wins, medium-term, and long-term implementation
- Responsible parties (primary and secondary), including both Town departments and committees, and non-government organizations
- Order-of-magnitude costs for capital and ongoing maintenance

Finally, given the many competing funding needs within a community, ensuring that key transportation initiatives are included within the Town's Capital Improvement Program (CIP) budget process is critical to implementing projects in a timely manner. Team members from both Nelson\Nygaard and Beta Group have experience developing CIPs, both for municipal transportation departments and as part of the municipal budgeting process.

PROJECT SCHEDULE

Our proposed project schedule outlines the anticipataed timeline for completion of tasks as presented in our approach to the scope of services provided.



M =	Meeting
D =	Deliverable


BROOKS AVE

STAFF EXPERIENCE

Meet your team of experts.

To ensure our management approach is executed properly and meets the needs of this Sustainable Transportation Plan, we have assembled a team of experts with relevant experience in developing a wide-range of transportation planning projects in cities across the United States. Our proposed key staff is presented here with short bios followed by complete resumes.

Staff Capacity To Complete the Plan.

Our staff is fully available and capable of performing the work as mentioned in the RFP. Our staff, although working on a few projects at once, are trained to balance the needs of clients. We pride ourselves on getting our work done, and a good portion of our work is from repeat clients because they are happy with the quality of our work and our ability to meet deadlines.

Our firm's QA/QC control protocols specify work procedures that assist in establishing realistic scope of services, work tasks, schedule, fees, and allows us to ensure staff are available and projects are staffed appropriately.

MATT SMITH, PRINCIPAL
PROJECT MANAGER & CURBSIDE MANAGEMENT LEAD

Matt helps build vibrant communities by aligning transportation and land use practices that enhance connectivity, mobility, economic opportunity, and sustainability.

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. His work in multimodal and parking management planning has helped communities to 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.

BILL SCHWARTZ, PRINCIPAL
PRINCIPAL-IN-CHARGE

Bill understands that true mobility is rooted in equity and independence.

Bill is a multimodal transportation specialist with more than 35 years of professional consulting experience. His work has covered a broad range of transportation topics for clients throughout the U.S. He's passionate about helping people travel independently and seamlessly, particularly people whose travel options don't include driving.

Bill is an expert in Americans with Disabilities Act (ADA) compliance and in active transportation. He is a strong advocate for helping people plan for their driving retirement. Bill led the 2008 Massachusetts Statewide Bicycle Plan, helping to implement the Bay State Greenway bicycle network in the Pioneer Valley, and was planning lead for MassDOT's Safe Routes to School infrastructure program, including Dallin Elementary in Arlington.

ALYSON FLETCHER, SENIOR ASSOCIATE
TRANSPORTATION, MULTIMODAL, AND OUTREACH LEAD

Alyson is an expert in bridging planning and design for walkable, bikeable communities.

Alyson specializes in street design and active transportation, including walkability studies, multimodal corridor plans, trail safety plans, and campus master plans. She has an inter-disciplinary background in architecture, planning and landscape architecture which allows her to blend an attention to detail with seeing the bigger picture in a project's context.

Alyson was the Deputy Project Manager for the Newton Transportation Strategy project, where she lead all data analytics and outreach processes. Alyson was also the lead planner for the Arlington Center Parking Plan, running field work, mapping, public engagement, and report development. Alyson is a regular presenter on sustainable transportation best practices, including presentations at Vision Zero, ITE's Urban Streets Symposium, Velo-City, Rail-volution, and the ASLA National Conference.

SUZIE BIRDSELL, ASSOCIATE
GIS LEAD AND TRANSIT ANALYST

Suzie's skillset includes spatial and data analysis, cartography, and designs.

Suzanne Birdsell specializes in geospatial analysis, transit planning and commute pattern analysis. She has over four years of experience applying spatial and data analysis to transit systems and travel behavior and creating new ways to measure feasibility and demand particularly for high capacity transit, commuter markets, and emerging markets. She has extensive experience using survey results and integrating local, regional, and national datasets as well as local feedback to gain comprehensive insight into transit feasibility. Her skillset includes spatial and data analysis, cartography, and design. Her background in urban geography and spatial sociology provides key insights into the way space and mobility can be designed to improve the lives of marginalized groups.

DAN BEREZ, ASSOCIATE
TRANSIT AND EMERGING MOBILITY

Dan helps make public and private mobility options work for everyone.

Dan helps make public and private mobility options work for everyone. He specializes in the intersection of transit and emerging mobility, facilitating collaboration between cities, transit agencies, and mobility service providers to reduce reliance on private vehicles. His projects have supported clients in reversing ridership declines, implementing nationally-recognized tactical urbanism projects, and engaging with customers that are often left out of the transportation decision-making process. Locally, Dan has worked extensively with MassDOT, the MBTA, and the City of Everett to enhance local bus service – including planning support for the Broadway bus lane pilot and leading the service analysis for phase one of the Better Bus Project.

JACOB DEGEAL, ASSOCIATE
VISUAL COMMUNICATIONS

Jacob understands that ideas are made better though collaboration and teamwork.

Jacob has over a decade of experience in design. Working as an interactive web designer and later as a design manager, he understands that ideas are made better through collaboration and teamwork. A bicycle commuter since childhood, Jacob co-founded a bike advocacy organization in Bloomington-Normal Illinois, promoting the bicycle for everyday transportation. It was through this work that Jacob became passionate about transportation planning, public participation, and the power of design to create human-centered transportation solutions that work.

KIEN HO, PE, PTOE, BETA
TRAFFIC ENGINEER

Kien is an IMSA Certified Signal Inspector and has extensive experience in optimizing and updating traffic signal systems.

Kien has over 35 years of experience specializing in all aspects of traffic engineering and signal/system design, peer review, and roadway/highway transportation planning and design. He has successfully managed numerous oncall type consulting services to communities and state agencies. Kien has prepared designs for municipal intersection and roadway projects including traffic signals, traffic calming applications, traffic management plans, and the application of Intelligent Transportation Systems.

Kien has authored and published technical papers related to traffic analysis techniques. His recent relevant traffic signal experience includes an Adaptive Traffic Signal System for Wellesley and the optimization of signal locations in Westwood, Worchester, Taunton, Brookline, and Natick.

JAKLYN CENTRACCHIO, PE, BETA
TRAFFIC ENGINEER

Jaklyn has 17 years of experience in traffic engineering and has developed a diverse background in many phases of transportation engineering.

Jaklyn's background includes substantial experience with traffic capacity analysis, Road Safety Audits, traffic impact studies, signal warrant studies, parking and traffic circulation studies, pedestrian safety studies, conducting peer reviews for various municipalities, traffic signal design, and preparation of traffic calming studies, signing, and pavement marking plans.

Some of Jaklyn's most recent and notable work includes assisting with a Road Safety Audit in Mansfield, MA; the technical memorandum and design plans for five intersection Adaptive Signal Project; preparation of a crosswalk evaluation for the entire Town of Westwood; final design plans for a three neighborhood traffic calming project in Westwood, MA; and the preparation of a pedestrian safety study along Memorial Drive in Cambridge, MA.

BETA
IMPROVING COMMUNITIES TOGETHER

TYLER DE RUITER, PE, PTOE, BETA
PROJECT ENGINEER

Tyler has nine years of experience in transportation engineering with a focus in traffic engineering and design.

Tyler's background includes the peer review of traffic impact and access reports; development and design of traffic calming studies; development of functional design reports and other transportation studies; preparation of technical design plans; preparation of transportation access and safety evaluations for schools; and assistance with MassDOT Complete Streets Tier I, II, and III.

Recently, Tyler has assisted the Town of Nantucket in the evaluation and planning of a newly acquired Amelia Drive, a narrow commerical street. The planning of this street, and the surrounding neighborhood, involved evaluating curb use and vehicle operations and pedestrian/bicycle accessibility and safety with on- and off-street parking.

SCOTT RIDDER, RLA, ASLA, LEED AP, BETA
TRANSPORTATION PLANNER

Scott has more than 30 years of professional experience and has worked on numerous transportation and site development projects throughout New England.

Scott's design and technical expertise includes a broad-variety of project types including streetscapes and urban design, historical roadways, pedestrian pathways, and bike paths.

Scott is currently involved in the redevelopment of Lexington's downtown streetscape along Mass Avenue known as Battle Road. This historic project site connects the Battle Green to the Commerical and Civic cores. Wide sidewalks with various seating types and gathering areas are planned. Site elements including bump-outs, stone walls, site furniture, trees, and lighting will help unify the project corridor.

STAFF WORKLOAD

We understand the importance of this plan to the Town of Arlington and will prioritize this project in order to complete the work within the schedule outlined in the RFP. We have thoughtfully reviewed the scope of work, schedule, and budget and have outlined here our proposed staff's current and projected workload to clearly present that we have the volume and capacity to follow through the project in a timely and professional manner. All of the staff proposed for this effort are based in Boston.

STAFF AND PROJECT ROLE	AVAILABIILITY
NELSON\NYGAARD	
Bill Schwartz, Principal-in-Charge	50%
Matt Smith, Project Manager	65%
Alyson Fletcher, Transportation, Multimodal, and Outreach Lead	60%
Suzie Birdsell, GIS Lead and Transit Analyst	70%
Dan Berez, Transit and Emerging Mobility	50%
Jacob DeGeal, Visual Communications	85%
BETA GROUP	
Kien Ho, Traffic Engineer	50%
Jaklyn Centracchio, Traffic Engineer	60%
Tyler de Ruiter, Project Engineer	60%
Scott Ridder, Transportation Planner	70%

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. We have provided a list of references who can speak to our high-quality work, realistic approaches to scope, and projects completed on time and on budget on similar projects. For each project, we have included a project contact and contact information.

City of Newton

Nicole Freedman, Director of Transportation Planning
t: 617-879-8148
e: nfreedman@newtonma.gov

Can speak about: Our work in comprehensive visioning, analysis, outreach, and implementation plan development for a suburban-Boston municipality.

City of Salem

David Kucharsky, Director of Traffic and Parking
t: 978-619-5697
e: dkucharsky@salem.com

Can speak about: Our work in downtown and residential parking analysis and strategy, tactical infrastructure project process and data collection; and local shuttle analysis (including micro transit).

City of Beverly

Aaron Clausen, Director of Planning and Community Development
t: 978-605-2341
e: aclausen@beverlyma.gov

Can speak about: Our work in downtown parking strategy, mobility hub design and community engagement.

City of Mansfield

Kevin Dumas, Town Manager
t: 508-261-7370
e: kdumas@mansfieldma.com

Can speak about: Parking strategy, wayfinding and active transportation connectivity to enhance downtown economic vitality.

A

APPENDIX: FULL RESUMES

MATT SMITH PRINCIPAL

EDUCATION

Master of Urban Planning, Hunter College of the City University of New York

B.S., Communications, Syracuse University

EXPERIENCE

Nelson\Nygaard Consulting Associates
Principal, 2018–Present

Plan South Boston, Dorchester Avenue Transportation Study, Boston Planning and Development Agency (Boston, MA), 2019-Ongoing. As Deputy Project Manager, Matt is responsible for all land use analysis, active transportation and curbside management analysis and strategy, and public engagement activities as part of a comprehensive transportation plan process and strategy to serve existing and future residents, workers and visitors in an area that will encompass up to 16 million square feet of new development as proposed in the 2016 Plan South Boston: Dorchester Avenue plan.

Manchester TOD Planning Strategy, SNHPC (Manchester, NH), 2019-Ongoing. Matt is leading the transportation components of this comprehensive neighborhood redevelopment plan around a potential commuter rail station in Manchester's downtown. The area presents numerous connectivity challenges including steep grades, limited internal roadway capacity, and poor pedestrian and bicycle amenities and connections. Given the uncertainty around future rail service, the plan aims to create a transit-oriented development served by local and regional bus, and trail connectivity to support increased density, reduce auto dependency and support local economic development initiatives, while making the area "rail ready."

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.

Salem On-Call Services and Shuttle Analysis, City of Salem Traffic and Parking Department, (Salem, MA) 2018-Ongoing. Matt is advising the City of Salem on strategic transportation and parking initiatives including tactical transportation project planning, data collection and outreach activities to ensure projects are carried out successfully; parking data collection and analysis support, and resident parking strategy development. In addition, Matt oversaw Nelson\Nygaard's analysis of potential local intracity shuttle options, with a recommendation to pilot a micro-transit, on-demand node-based shuttle.

Amherst Downtown Parking Study, Town of Amherst (Amherst, MA), 2018-2019. Matt served as the Project Manager on this 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.

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.

BILL SCHWARTZ PRINCIPAL

EDUCATION

M.S., Transportation, Massachusetts Institute of Technology

B.A., Government and Geography, Clark University

EXPERIENCE

Nelson\Nygaard Consulting Associates
Principal, 2018–Present

Belmont Traffic Calming Technical Associates, Town of Belmont (Belmont, MA) 2019-Ongoing. Bill is Project Manager assisting the Town of Belmont with several tasks associated with the new high school construction project. Tasks include recommending improvements to improve bicycle and pedestrian access during and after construction of the new school campus, consolidation of bus stops on Concord Avenue, design of a parking-protected bike lane on Concord Avenue, and traffic calming improvements on Trowbridge, Baker, and Hittinger Streets.

Winchester Master Plan Transportation Assistance, Town of Winchester (Winchester, MA) 2019. Bill is supporting the town's master planning team by developing transportation scenarios and recommending measures to measures to increase use of alternatives to driving, particularly for school pickup and drop-off. The recommendations also focused on improving accessibility and coordinating planning with adjacent communities.

MBTA Systemwide Station Access Study, MassDOT (Boston, MA) 2019-Ongoing. Bill is Deputy Project Manager for access planning study of the MBTA's rail stations. The study includes compilation of bicycle and vehicle parking data, development of a

Boston Transportation Department Shared Mile Initiative, National Resources Defense Council (Boston, MA) 2019-Ongoing. Bill is leading the development of curbside use guidelines as part of the City of Boston's Shared Mile Playbook. He is also supporting the development of guidance on implementing mobility hubs throughout the city. This includes promotional materials and specifications documents for mobility hub elements and location typologies for different use cases. Bill organized a one-day mobility workshop to build partnerships among public, private, community, and institutional stakeholders.

Providence Great Streets Master Plan, City of Providence (Providence, RI) 2019. Bill served as Implementation Task Lead for Providence's complete streets master plan, which aims to transform the city's street network to accommodate all users and improve safety. Bill's team evaluated the regulatory framework, interviewed department leaders, identified effective practices in project delivery, and recommended changes to improve coordination.

The RIDE Technical Assistance, Massachusetts Bay Transportation Authority (Boston, MA) 2018–2019. Bill served as the firm's Project Manager for technical assistance to the MBTA's Office of Transportation Assistance, which oversees The RIDE. Tasks completed during this period included rider survey, training activities for the eligibility appeal panel, and procurement assistance for selecting service providers.

Plan for Accessible Transportation Infrastructure (PATI), Massachusetts Bay Transportation Authority (Boston, MA) 2018. Bill served as Subject Matter Expert for the MBTA PATI project. He helped train and oversee quality for data collection covering accessibility features at more than 7,500 bus stops and more than 175 rail stations system wide. He tabulated results and supported the agencies prioritization efforts for implementing accessibility improvements.

MassDOT State Pedestrian Plan, Massachusetts Department of Transportation (Pioneer Valley, MA) 2016-2017. As part of a team, Bill examined demographic changes, regional pedestrian planning efforts, and other resources to establish a framework for better integrating MassDOT's pedestrian guidelines with local infrastructure. The comprehensive demographic analysis was used to support the development of policy-level improvement strategies. Bill also provided ADA subject matter expertise to support the plan's Municipal Resource Guide.

ALYSON FLETCHER SENIOR ASSOCIATE

EDUCATION

M.C.R.P., Cornell University, NY

M. Landscape Architecture, Cornell University, NY

M.A., Art & Art History, Literary & Cultural Studies, College of William & Mary, VA

EXPERIENCE

Nelson\Nygaard Consulting Associates
Senior Associate, 2019–Present;
Associate, 2014–2019;
Intern, 2013–2014

Newton Multimodal Transportation Strategy, City of Newton (Newton, MA) 2016–2017. Alyson was the Deputy Project Manager for this citywide strategy for active transportation, transit, vehicular circulation and parking. She led and organized the community outreach process, the project branding and outreach graphic development, and all mapping and writing efforts. Alyson served as the project manager for Newton's complementary Economic Development Strategy and for multiple corridor and development plan projects.

Arlington Parking Management Plan, Town of Arlington (Arlington, MA) 2013–2014. Alyson was the lead planner and graphic designer for the development of a multimodal parking management plan with specific strategies to alleviate real and perceived parking problems in the core of the central business district.

Boston Esplanade Pathway Improvement and Safety Plan, Esplanade Association (Boston, MA) 2018–2019. As Deputy Project Manager, Alyson worked 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 establishes 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 improves the current system, enhances safety, but also respects the Esplanade's landscape character and history.

Downtown Rogers Street Design Study, City of Rogers (Rogers, AR) 2018–2019. Alyson was the project manager to assess how the street network in downtown Rogers can balance mobility for all users including how well its parking supply supports adjacent uses and reduces speeding and how Rogers can improve walking and biking connectivity to and within the downtown area. Alyson also led the subsequent cycletrack design that was recommended as part of the project.

Belmont High School Master Plan, Town of Belmont (Belmont, MA) 2017–2019. Supporting an interdisciplinary master planning team to improve multimodal access design and policy parameters for a renovated high school redesigned to also accommodate the middle school. Project included extensive stakeholder outreach with students, teachers, parents, and neighboring residential areas.

Bentley University TDM Plan, Bentley University (Waltham, MA) 2018–2019. Alyson served as the project manager for this project that addressed parking and demand management, bicycle and pedestrian access, emerging mobility, and campus transit on Bentley's picturesque campus 10 miles outside of Boston. The Plan responds to present challenges with sustainable, cost-saving measures to improve campus mobility for current students, faculty, and staff, while providing forward-thinking strategies that incorporate best practices in emerging mobility.

Tulsa Downtown Walkability Study, Tulsa Downtown Coordinating Council (Tulsa, OK) 2016–2017. Alyson served as the project manager for this walkability study in downtown Tulsa that addressed the principal factors determining driver speed and pedestrian exposure, both of which discourage walking. The project included a corridor analysis that included a review and compilation of existing conditions and the development of preliminary, planning-level recommendations for an improved street network, identifying the number and direction of all driving lanes within the study area.

Tufts University TDM Plan, Tufts University (Medford, MA) 2014. Alyson assisted in the preparation of this transportation demand management plan that included multimodal improvements, best practices for bike and pedestrian access, and conceptual intersection redesign.

SUZIE BIRDSELL ASSOCIATE

EDUCATION

M.S., Geographic Information Science, Clark University, MA

B.A., Geography, Women's & Gender Studies, Clark University, MA

EXPERIENCE

Nelson\Nygaard Consulting Associates
Associate, 2016–Present

Cambridge Citywide Plan, City of Cambridge, (Cambridge, MA) 2016–2018. Main analyst for research and data collection to inform the mobility component of the Citywide Plan with an emphasis on existing sustainable policies, including community outreach.

City of Belle Isle Transportation Master Plan (Belle Isle, FL) 2018–2019. GIS and data analyst for existing conditions including modal, traffic, and safety analyses.

MBTA Systemwide Service Redesign, (Boston, MA) 2017–2019. GIS and data analyst for existing transit market conditions and travel patterns for all of the greater Boston area.

Rhode Island Transit Master Plan, Rhode Island Public Transit Authority (Providence, RI) 2018–Ongoing. Market Analysis task lead and main analyst for Rhode Island's statewide transit plan through 2040, including high-capacity transit, commuter rail, flex and on-demand service, and ferry service.

Las Vegas Mobility Plan, Regional Transportation Commission (Las Vegas, NV) 2019–Ongoing. GIS analyst for the development of a long-range transportation plan for Southern Nevada's future regional system. Lead analyst on multi-variable scenario analysis, to compare strengths, weaknesses, and trade-offs of different scenarios.

Fort Worth Transit Master Plan, City of Fort Worth (Fort Worth, TX) 2018–Ongoing. Lead analyst on scenario evaluation to compare strengths, weaknesses, and trade-offs of different scenarios.

Regional Transit Framework Study, Maricopa Association of Governments, (Phoenix, AZ) 2016–Ongoing. GIS analyst and deputy project manager for the development of an update to the Regional Transit Framework, focusing on feasibility and development of high capacity transit services.

RTA Strategic Transit Plan (New Orleans, LA) 2016–2018. GIS and data analyst for existing and future transit market conditions and effectiveness of scenario development.

Commuter Bus Feasibility Study, Maricopa Association of Governments (Phoenix, AZ) 2019—Ongoing. Project Manager for assessment of existing and future commuter bus demand in the Phoenix metro area and alternatives development to improve long-distance commuter mobility in the region.

Joliet Express Bus Study, Pace (Chicago, IL) 2019—Ongoing. Deputy Project Manager for feasibility of existing express bus service between the City of Joliet and other suburban Chicago communities.

SCTA Transit Development Plan Update, (Lancaster & Berks Counties, PA) 2017–2018. GIS and data analyst for existing transit market conditions and Title VI programs.

SORTA Bus Stop Optimization Project, Southwest Ohio Regional Transit Authority, (Cincinnati, OH) 2018–Ongoing. Deputy Project Manager and Data Analyst for the inventory of over 4,500 stops system-wide and bus stop optimization resulting in removal of underutilized stops and optimizing stop spacing based on land use.

Lawrence Transit Comprehensive Operations Analysis, Lawrence-Douglas County MPO, (Lawrence, KS) 2016–2017. GIS and peer analyst for the assessment of service performance for Lawrence Transit and KU on Wheels, with an emphasis on improving service productivity and potential service consolidation, including a comprehensive fare analysis.

DAN BEREZ ASSOCIATE

EDUCATION

M.A., Urban Planning, Transportation Policy and Planning, University of California Los Angeles

B.A., Sociology, Pitzer College

EXPERIENCE

Nelson\Nygaard Consulting Associates
Associate, 2015–Present

Plan South Boston: Dorchester Avenue Transportation Plan, Boston Planning and Development Agency (Boston, MA) 2019-Ongoing. Dan is serving as a project advisor on a transportation master planning effort for one of the City of Boston's largest redevelopment areas. In this role, Dan will support the project team in identifying short term tactical transit investments as well as transformative long-term investments to support mobility for current and future residents and workers.

Everett Transportation Improvement and Management Plan, City of Everett, MA 2018-2019 Dan was the deputy project manager of a city-led transportation master plan for a suburb of Boston, MA. Study included the identification, selection, and initial planning for a series of transit priority corridors, as well as the development of growth-supportive multimodal transportation strategies. Project concluded with a detailed short-term and long-term implementation strategy.

Hazelwood Green Long Range Transportation Plan, Almono LP (Pittsburgh, PA) 2019. Dan developed and evaluated potential transit projects for a large-scale urban redevelopment site in Pittsburgh. Tasks included the development of planning-level alignments and stop locations, cost estimates, and ridership forecasts.

Everett Transit Action Plan, MassDOT (Boston, MA) 2016. Dan was the deputy project manager for a study that identified and evaluated short, medium, and long-term transportation improvement projects in a quickly growing suburb of Boston. He developed the market analysis, service analysis, and community outreach plan. Project led to a successful implementation of a bus only lane pilot, which has served a pioneering example using tactical urbanism for transit service improvements.

Improving Ridership on the Fairmount Line, The Boston Foundation (Boston, MA) 2016–2017. Dan was the deputy project manager for a study that focused on identifying short term, low cost interventions designed to increase ridership on an underutilized rail corridor serving many of Boston's most transit reliant neighborhoods. Dan led the development of study recommendations, conducted outreach to both community stakeholders and local planning officials, and assisted in a comprehensive ridership count.

MBTA Systemwide Station Access Strategy, MassDOT (Boston, MA) 2019-Ongoing. Dan is the technical lead for the development of a comprehensive strategy for enhancing access to MBTA commuter rail and subway stations – including car parking, multimodal access, and transit oriented development. The project includes the development of a systemwide car and bike parking demand model, a mobility hub toolkit, and a station access policy to guide capital allocation decision making.

Park and Ride Strategy, TransLink (Vancouver, BC) 2019-Ongoing. Dan is the deputy project manager for the development of a strategy to site and manage park and ride facilities throughout the TransLink transit network. Study includes the development of a evaluation toolkit to inform the siting of new park and ride facilities, the expansion of existing facilities, and the conversion of facilities to new uses, such as transit oriented developments and mobility hubs.

Improving Parking as Part of MBTA System, MBTA (Boston, MA) 2017. Dan was the deputy project manager for a comprehensive study of pricing and policy for MBTA-owned commuter rail and rapid transit parking facilities. Dan developed facility typologies and pricing, product, and investment recommendations, which the MBTA began implementing in 2018.

JACOB DEGEAL ASSOCIATE

EDUCATION

M.F.A., Design, University of Texas at Austin

B.S., Graphic Design and Photography, Illinois State University

EXPERIENCE

Nelson\Nygaard Consulting Associates
Associate, 2019–Present

Downtown Rogers Street Design Study, City of Rogers (Rogers, AR) 2019. Designer. Jacob designed an identity system for a proposed complete street concept in Rogers, Arkansas. Part of a downtown walkability study, Poplar Street was identified as a unique opportunity to implement protected tree-lined bike lanes, increased pedestrian amenities, and traffic-calming devices. The final identity complemented and modernized the character of downtown Rogers, paying homage to their retro Coca-Cola advertisements, Southern typographic flair, and almost century-old brick streets.

Pinal County Transit Governance Study, Central Arizona Governments (Apache Junction, AZ) 2019–Ongoing. Designer. Working closely with project managers and associate planners, Jacob designed an identity for a transit governance study in south-central Arizona. A county rich in history, the plan identity organizes the area's ghost towns, awe-inspiring desert plateaus, and natural wildlife into recognizable regional focus.

***OnHand* Coordinated Human Service Plan, RTA of Southeast Michigan (Detroit, MI) 2019–Ongoing.** Designer. Nelson\Nygaard was contracted for the Coordinated Human Services Public Transit Plan of Southeast Michigan. The plan seeks to organize paratransit services for vulnerable residents living in the state's most populous region. In addition to designing the identity for the project, Jacob also proposed a new shorter name that would still capture its scope. OnHand is a visual and idiomatic brand that builds upon the vernacular wayfinding commonly used by Michiganites. In addition, accessibility was used as a basis for design, testing fonts and colors for vision sensitivity.

Esplanade Pathway Safety and Improvement Plan, Esplanade Association (Boston, MA) 2019. Designer. Jacob designed the final report, organizing raw text, data, research photography, and maps into a comprehensible and visually engaging report, fit for Boston's iconic greenway. Jacob developed clear and cost-effective wayfinding for bike and pedestrian prioritization, through a mix of surface stenciling, signage, and graphic imagery.

PREVIOUS EXPERIENCE

University of Texas at Austin, Austin, TX
Instructional Assistant Professor, 2019

- Used established principles from the science of learning to design and deliver design curriculum and instructional activities for graduate students learning human-centered design, including leading lectures on experience prototyping, design critiques, and peer feedback. Co-conducted a design research project to radically reimagine the standard undergraduate design critique. Designed and led two juried critiques.

My Health Resources (MHMR) of Tarrant County, Fort Worth, TX
Design Consultant, 2018

- Consultant for federal grant program using design thinking to improve transportation access to clients in the criminal justice system in order to reduce recidivism. Assisted in facilitation of design thinking workshops, created product visualizations, and co-developed business plan and final pitch.

Kien Y. Ho, PE, PTOE
Vice President

Professional Overview

Mr. Ho has 35 years of experience specializing in all aspects of highway and transportation design and engineering including performing highway conceptual for urban and residential areas close to major metropolitan roadway systems. Kien performs and managed preliminary and final designs for highway projects, constructability review, construction staging/ sequencing, traffic management plans, final construction inspection, specifications and analyses, and installation of Intelligent Transportation Systems. He also has experience in designing and managing complex highway design-build type of project. He has extensive experience in complex urban arterial / highway interchange projects and has authored and published technical papers.

As a Vice President at BETA, Mr. Ho provides management, project supervision and technical guidance on a variety of transportation facility improvement projects and large-scale civil engineering projects.

Lexington Projects – Lexington, MA

- Managed numerous transportation projects from design to construction. Projects consist of concept development to design and construction. Lexington Center, Battle Green, Clark Middle School, Robinson Road and various intersection signal improvements assignments.
- Responsible for providing technical support to the project team performing all the assignments such as roadway improvements, parking studies, safety improvements, pedestrian signal design, traffic signal design, traffic calming design and studies, signing and pavement marking design and peer review.
- Represent the Town at meetings by providing technical support and presentations.
- Assist the Town in evaluating the existing transportation system infrastructure and applying Transportation System Management strategies as a means of improving congestion and/or safety problems on the roadway system without resorting to major reconstruction of the existing roadway infrastructure. Apply the latest Intelligent Transportation System to traffic signal improvements.

On-Call Engineering Services – Wellesley, MA

- Managed numerous transportation roadway and multi-use trail projects (Fuller Brook Park) from design to construction. Over saw construction inspectional services and performed final punch list on roadway infrastructure projects.
- Responsible for providing technical support to the engineers performing all the roadway and transportation assignments such as roadway improvements, parking studies, safety improvements, pedestrian signal design, traffic signal design, traffic calming design and studies, signing and pavement marking design and peer review.
- Assist and represent the Town of Wellesley at meetings by providing technical support.
- Assist the Town in evaluating the existing transportation system infrastructure along the Washington Street corridor and applying Transportation System Management (TSM) strategies as a means of improving congestion and/or safety problems on the roadway system without resorting to major reconstruction of the existing roadway infrastructure. TSM techniques and the latest ITS application of advanced and emerging technologies such as traffic responsive type of software coupled with Ethernet communication.

Massachusetts Statewide Traffic Engineering Advisory On-Call Services – MassDOT

- As Project Manager, responsible for managing work orders assigned by the MassDOT Department including those associated with highway signage and signalized intersection improvements.

Primary Discipline

Transportation

Years of Experience

- BETA: Since 2002
- Total: Since 1984

Education

- MSCE, Transportation Engineering, Northeastern University (1994)
- BSCE, Cleveland State University (1984)

Training and Certifications

- Certified IMSA (International Municipal Signal Association) Traffic Signal Inspector
- Certified # SI-71973

Registrations

- Professional Engineer: RI #7177, CT #20486, MA #46431, NH # 15510
- Professional Traffic Operations Engineer
- Certified IMSA (International Municipal Signal Association) Traffic Signal Inspector

Affiliations

- ITS: MA Chapter
- ITE:
  - MA Chapter
  - New England Chapter
  - National
- Boston Society of Civil Engineers
- Women's Transportation Seminar Boston

Jaklyn C. Centracchio, PE, PTOE
Project Engineer

Professional Overview

Ms. Centracchio has 17 years of experience in traffic engineering and has developed a diverse background in many phases of transportation engineering. Her background includes traffic analysis, traffic calming, traffic design, and design for roadway. She is proficient in VISSIM, HCS, SYNCHRO, and AutoCAD applications. Her experience further includes:

- Traffic Signal Design
- Traffic Signal Inspections
- Conceptual Design Reports
- Traffic Impact Studies
- Functional Design Reports
- Traffic Calming Studies
- Traffic Calming Design
- Pedestrian Safety Studies
- Traffic Management & Detour Plans
- Parking and Traffic Circulation Studies
- Physical Alteration Permits
- Construction Inspection and Management

Northland Transit-Oriented Development Peer Review, Newton, MA

- Conducted a review of the Zoning By-Laws, Ordinances and Code for parking requirements of seven communities in the metro Boston area to determine the best practices for this large-scale TOD project on Needham Street in Newton. Project included over 800 multi-family units, several thousand square feet of mixed-use development and a 7-bus shuttle system to serve site users and the public.

Route 140 and Route 106 Traffic and Safety Improvements – Mansfield, MA

- Prepared Functional Design Report summarizing traffic data, analysis and findings.
- Effort included the traffic signal coordination and associated plan work for five additional intersections along Route 140.
- Prepared 25% Design Traffic Signal plans, Pavement Marking and Signing plans, and estimate for associated items at the intersection.

Adaptive Traffic Signal Project on Route 109 – Westwood, MA

- Coordinated the data collection effort which in part included the deployment of BlueTOAD technology to capture real time speed data.
- Managed the preparation of Traffic Signal plans for the 25% design submission for the upgrade of seven signalized intersection's traffic equipment to provide a full Adaptive Signal Control Technology (ASCT) system and the upgrade of existing communication equipment to provide real tie video to the police department.
- Prepared the technical memorandum which included the inventory of existing traffic signal equipment at each location, safety analysis, safety review, traffic volumes and travel time data.
- Met with the Town DPW, Police Department, and IT personnel.

Town-wide Marked Crosswalk Evaluation – Westwood, MA

- Evaluated 202 crosswalk locations and associated ramps town-wide for safety, ADA, and MUTCD compliance.
- Created a comprehensive program to enhance safety and accessibility at pedestrian crossing locations throughout the entire Town.

Primary Discipline
Transportation

Years of Experience
- BETA: Since 2007
- Total: Since 2002

Education
- BS, Civil/Environmental Engineering, University of Rhode Island, Kingston (2002)

Registrations
- Professional Engineer – NH #14608
- Professional Traffic Operations Engineer #3877 (2019)
- LEED Green Associate (2013)

Training and Certifications
- Certified International Municipal Signal Association (IMSA) Traffic Signal Inspector

Affiliations
- Women's Transportation Seminar
- Institute of Transportation Engineers

Technical Competencies
- VISSIM
- HCS
- SYNCHRO
- AutoCAD
- Petra
- Quest

Tyler de Ruiter, PE, PTOE
Project Engineer

Professional Overview

Mr. de Ruiter is a Project Engineer in the transportation department at BETA with nine years of professional experience. During his time with BETA, Tyler obtained his professional engineering license and continues to gain experience in civil design, traffic engineering, Complete Streets planning, and peer review of various transportation projects. Tyler's professional experience at BETA is attributed by the following skills and tasks:

- Traffic Signal and Intersection Design
- Roadway, Striping, and Signage Design
- Development and Preparation of Project Plans and Technical Reports
- Traffic Calming Studies and Measures
- Complete Streets Development and Data Collection/Integration
- Roundabout Design and Modeling
- Synchro Traffic Analysis
- Access and Safety Studies for Schools and Other Sites

Project Experience

Municipal On-Call Traffic – Multiple Communities

- Peer review of Site Plans and Traffic Impact and Access Studies
- Evaluate field conditions, perform traffic analysis, and design geometric and safety improvements
- Present at respective public hearings and meetings
- Attend and moderate Road Safety Audits for areas of safety concern

Amelia Drive Evaluation – Nantucket, MA

- Utilized traffic volume data to evaluate neighborhood impacts for various reconfiguration alternatives of a narrow commercial street
- Options included conversion to one-way, expansion for parking, and expansion for pedestrian/bicycle infrastructure

Town-Wide Traffic Evaluation – Randolph, MA

- Developed several short-term, mid-term, and long-term design concepts to promote traffic calming within two neighborhoods
- Concepts included median islands, mini-roundabouts, traffic circles, all-way stops, and traffic signals

Old South Road Corridor Study – Nantucket, MA

- Collected field data and performed Synchro and Sidra analysis for 11 intersections
- Developed several short-term, mid-term, and long-term design concepts to promote traffic calming as well as improved operations and safety for all users
- Concepts included improved bus accommodations (pull-offs) and five roundabouts at four intersections

Speed Studies – Multiple Locations – Lenox, MA

- Collected and analyzed speed data and regulatory speed limits to provide a comprehensive evaluation of travel speeds on rural roadways

Complete Streets Experience – Multiple Communities

- Responsible for collecting and compiling data to establish potential projects (Tier II)
- Assisted with data integration, costing estimating, prioritization and ranking or projects (Tier II and Tier III)

Primary Discipline

Transportation

Years of Experience

- BETA: Since 2012
- Total: Since 2010

Education

- MS, Civil Engineering (Transportation) – University of Massachusetts, Amherst (2012)
- BS, Civil and Environmental Engineering – University of Massachusetts, Amherst (2010)

Training and Certifications

- OSHA 10 – Construction Safety #002315733 (2009)
- OSHA – Confined Space Entry (2017)

Registrations

- PE – MA #52647 (2016)
- PTOE - #4635 (2019)

Affiliations

- American Society of Civil Engineers (ASCE)
- Boston Society of Civil Engineers Section (BSCES)
- BSCES Younger Member Group (YMG) – Former UMass Amherst Liaison
- BSCES Transportation & Development Institute (T&DI) – Berger Seminar Chair / Vice Chair
- Institute of Transportation Engineers (ITE)
- Young Professionals in Transportation (YPT)

Scott T. Ridder, RLA, ASLA, LEED AP, SITES AP

Project Manager/Senior Landscape Architect

Professional Overview

Mr. Ridder possesses a wide array of experience in designing landscape architecture and site development projects throughout New England. Expertise incorporates a broad variety of project types including transportation and streetscapes, historic roadways and sites, native restoration plantings, recreational fields and trails, and building/site permitting and development for municipal, institutional, commercial, and residential clients. Scott also provides proposed project site and landscape design peer reviews for numerous local municipalities.

Project Experience

Streetscape – Lexington, MA

- Landscape architect for the redevelopment of the downtown streetscape on Mass Ave., also known as Battle Road. This historic corridor is a pedestrian filled area that ties the Battle Green to the Civic and Commercial cores. Updated the 25% design plans based on the Center Streetscape Ad-hoc Committee's recommendations. Prepared an existing tree inventory and historic survey. Revised plans focus on maintaining the existing tree layout, wide brick sidewalks and seating configurations in the core area. Proposed work includes new brick sidewalks, seating areas, lighting installed, and trees planted.

East Main Street Streetscape – Fall River, MA

- Prepared conceptual design for two streets in Fall River. The first, East Main Street, a 2,750 linear foot connection from Dwelly Street to South Main Street. The intersection of East and South Main streets includes a granite monument to Thaddeus Kosciusko, a Polish and American Revolutionary War hero. The second project includes Purchase and Bank Streets just off Government Center in the heart of downtown. Bank Street is the pedestrian link to Battleship Cove. Developed new sidewalks and bump-outs at the intersections, various gathering areas, tree plantings, and lighting. Construction began in the fall of 2017.

Sidewalk Planting, Roosevelt Ave, Pawtucket, RI

- LID project where we developed a series of six, 4' x 35' planted areas that are flush with sidewalk. Runoff from the sidewalk will provide water for the plants. Planted alternating beds of perennials, ornamental grasses, and bulbs for a multi-season effect. Plants selected for their ability to withstand a dry urban environment as well as being salt tolerant.

Streetscape – Salem, MA

- Working on landscape improvements along an 800-foot section of Essex Street in downtown Salem which is part of Salem's Heritage Trail. The roadway corridor is narrow; one-way traffic with parking on both sides of the road and narrow sidewalks. Project includes removing parking on one side and widening the sidewalks, adding a bike lane, bump-outs, tree planting, granite seat planters and lighting.

Roadside Path, Putnam Ave – Barnstable, MA

- Recently prepared conceptual design plans for a roadside meandering path along Putnam Avenue in the village of Cotuit, MA. The project corridor, approximately 1.8 miles long, begins at Tupelo Road (near Rte 28) and extends south to Main Street. Project will provide pedestrian connection to various residential and open space areas. Various path locations were explored including potential curbing, grading, retailing walls, and crosswalks. Presented plans to community group.

Primary Discipline

Landscape Architecture

Years of Experience

- BETA: Since 2013
- Total: Since 1984

Education

- Bachelor of Landscape Architecture (BLA) - Louisiana State University, 1984

Registrations

- Registered Landscape Architect - MA #893, CT #898, ME #2727, NH #98, RI #483

Certifications

- ASLA
- BSLA
- CLARB
- SITES AP
- LEED AP

B

APPENDIX: REQUIRED FORMS

CERTIFICATE OF NON-COLLUSION FORM
TOWN OF ARLINGTON
SUSTAINABLE TRANSPORTATION PLAN

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Signature of Individual Submitting Bid or Proposal

Leah Riley

Name of Individual Submitting Bid or Proposal

Nelson\Nygaard Consulting Associates, Inc.

Name of Business

November 1, 2019

Date

BY STATE LAW THIS NON-COLLUSION FORM MUST BE SIGNED AND SUBMITTED WITH THE BID OR PROPOSAL.

CERTIFICATE OF TAX COMPLIANCE FORM
TOWN OF ARLINGTON
SUSTAINABLE TRANSPORTATION PLAN

Pursuant to MGL Chapter 62C, Section 49A, I certify under the penalties of perjury that I have complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

58-2592493	
Social Security Number or Federal Identification Number	Signature and Title of Individual or Responsible Corporate Officer

BY STATE LAW THIS CERTIFICATE OF TAX COMPLIANCE FORM MUST BE SIGNED AND SUBMITTED WITH THE BID OR PROPOSAL.

C

APPENDIX: INSURANCE COVERAGE

CERTIFICATE OF LIABILITY INSURANCE

7/1/2019

DATE (MM/DD/YYYY): 6/29/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	**CONTACT NAME:** **PHONE (A/C, No, Ext):** **FAX (A/C, No):** **E-MAIL ADDRESS:**
	INSURER(S) AFFORDING COVERAGE — **NAIC #**
	INSURER A : LM Insurance Corporation — 33600
INSURED 1437223 NELSON\NYGAARD CONSULTING ASSOCIATES, INC. 116 NEW MONTGOMERY STREET, STE., 500 SAN FRANCISCO CA 94105 NELSON\NYGAARD	**INSURER B :** Endurance Risk Solutions Assurance Co — 43630
	INSURER C : Lloyds & London Co
	INSURER D : Liberty Mutual Fire Insurance Company — 23035
	INSURER E :
	INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 14562277 **REVISION NUMBER:** XXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
D	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [ ] PRO-JECT [ ] LOC OTHER:	N	N	TB2661066787028	7/1/2018	7/1/2019	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 1,000,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
D	**AUTOMOBILE LIABILITY** [X] ANY AUTO [ ] OWNED AUTOS ONLY [X] HIRED AUTOS ONLY [ ] SCHEDULED AUTOS [X] NON-OWNED AUTOS ONLY	N	N	AS2661066787018	7/1/2018	7/1/2019	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ XXXXXXX $ XXXXXXX $ XXXXXXX
B	[ ] **UMBRELLA LIAB** [X] OCCUR [X] **EXCESS LIAB** [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $	N	N	EXC10007382703	7/1/2018	7/1/2019	EACH OCCURRENCE AGGREGATE	$ 6,000,000 $ 6,000,000 $ XXXXXXX
A	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [N] **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	N	WC5661066787038	7/1/2018	7/1/2019	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
C	PROFESSIONAL LIABILITY	N	N	LDUSA1801441	7/1/2018	7/1/2019	$1,000,000 PER CLAIM/$1,000,000 AGGREGATE	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

FOR INFORMATIONAL PURPOSES ONLY

CERTIFICATE HOLDER

14562277
EVIDENCE OF COVERAGE

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Joseph M Agnello

NELSON NYGAARD

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