CONSTRUCTION PROGRAM BUSINESS PLAN

October 2017

Washington State
Department of Transportation

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Washington State
Department of Transportation

Message from the Secretary of Transportation

As our state invests billions of dollars into critical transportation improvements over the next 16 years, the Construction Program Business Plan is designed to guide effective project delivery in a changing construction landscape.

Central to these changes is the Washington State Department of Transportation's desire to improve our delivery of construction projects by finding opportunities to take full advantage of the design-build method and use of consultants. This delivery effort is designed to maximize efficiencies, and will allow WSDOT to be a better steward of state dollars and deliver projects faster. The focus on design-build also has important implications not only for how we carry out projects, but also how we forecast staffing levels and anticipate workforce development needs.

The Legislature directed WSDOT to develop this plan through the Connecting Washington revenue package via Second Engrossed Substitute Senate Bill 5997 in 2015. Throughout the plan development, we relied heavily on ideas from a Stakeholder Advisory Committee led by representatives from the Professional and Technical Employees Local 17, American Council of Engineering Companies of Washington, Associated General Contractors of Washington, and WSDOT's engineering staff.

The Plan outlines goals and associated strategies for delivering a successful multi-year construction program. The goals include:

- Retaining a **strong owner role**, which involves partnerships with industry and addressing employee recruitment, training, career development, retention, and competitive compensation.
- Ensuring **sustainable staffing levels** for state-employed engineering staff, including projections updated each biennium to support our capital improvement and preservation program.
- Incorporating recommendations from the Joint Transportation Committee's 2016 design-build study into future **project delivery.**

We are entering a challenging and exciting new era of transportation investments that are sure to transform the way that residents, businesses, and visitors move around our state. I invite you to review the Construction Program Business Plan and learn more about our framework for building the future of our state.

Best,

Roger M. Millar, PE, AICP

Secretary of Transportation

Washington State
Department of Transportation

Message from the Stakeholder Advisory Committee

Washington state residents and businesses depend on a safe, reliable, and efficient public transportation system. WSDOT is the steward of that system, repairing roads and highway facilities, building capacity, and designing systems to improve the way we travel.

As partners with WSDOT, we believe it is in all our interests that WSDOT remain a strong, capable steward of the transportation system. Through our participation in the Plan development, we found WSDOT faces multiple challenges:

- **Establishing a sustainable staffing level to avoid attrition of experienced engineering staff.** The rapid upsizing and downsizing of staff to support delivery of the last two transportation funding packages—the 2003 Nickel and 2005 Transportation Partnership Programs—resulted in WSDOT losing well-trained senior engineering staff. It also resulted in an exodus of mid-level engineers, who left the agency for jobs that promised more stability.
- **Retaining and recruiting a strong talent pool in a strong job market.** Investing in recruiting and retaining a strong talent pool benefits WSDOT, taxpayers, and industry partners. High-quality staff provide competent, decisive leadership that leads to better productivity and more successful contracting relationships. However, WSDOT faces a competitive job market for engineers, especially within the Puget Sound corridor.
- **Addressing the gap in salary levels for WSDOT engineers compared to both public and private sector positions in Washington state.** Salary levels for WSDOT engineers are ranked at or near the bottom of the comparison group at every pay juncture, jeopardizing WSDOT's ability to recruit and retain skilled staff. The pay increase passed in the 2017 Legislative Session will help minimize the gap for some engineering positions, but does not address salaries at the management level. Compounding the problem, the State of Washington does not have a mechanism to address pay increases until WSDOT can demonstrate there is an issue with recruitment and retention after experienced staff have already left the agency. This is too late in the dynamic process of delivering transportation projects.
- **Providing effective training for WSDOT staff to effectively deliver the construction program.** A greater number of future WSDOT contracts will use the design-build contracting method, adding complexity. WSDOT staff will need additional skills and training to provide effective oversight of these projects.

Given these challenges, these are our top four priorities for this Plan:

1. WSDOT must continue to take action to prevent significant staffing fluctuations and provide more predictability to staff and industry.
2. It is essential for WSDOT to invest in recruiting and retaining a strong talent pool to provide predictability for industry and stability for staff.
3. The state of Washington should create and implement a proactive strategy for providing competitive salaries for WSDOT's engineering and technical workforce.
4. WSDOT must invest in expanding its training and professional development program.

The Plan that follows this letter fully addresses these priorities. This partnership approach to developing this Plan represents a sea change in how WSDOT and partners work together—by finding common solutions, rather than asserting our priorities as individual organizations. It is our intent that this collaboration continues as WSDOT implements the plan and we measure our progress.

We believe it is in the best interest of the public and industry that WSDOT moves forward quickly to implement the Construction Program Business Plan. We lend our full support to the Plan and look forward to continuing to advise WSDOT as it is enacted over the coming years.

Sincerely,

Van Collins
American Council of Engineering Companies of Washington (ACEC)

Tyler Kimberley
Associated General Contractors (AGC) of Washington

Vince Oliveri
Professional and Technical Employees Local 17

EXECUTIVE SUMMARY

The Washington State Department of Transportation developed the Construction Program Business Plan (the Plan) to guide how the agency will continue to improve delivery of transportation projects. In response to direction from the Legislature, the Plan outlines how WSDOT will strike a balance between sustainable staffing levels of engineering, technical employees, and consultants. The Plan also addresses how WSDOT will continue to provide a high-quality workforce to deliver billions of dollars of transportation programs and projects funded by Connecting Washington, while fully developing design-build.

In 2015, the Legislature passed Second Engrossed Substitute Senate Bill 5997, directing the Joint Transportation Committee (JTC) to review WSDOT's implementation of design-build. The bill further directed WSDOT to develop the Plan in coordination with a Stakeholder Advisory Committee, made up of representatives from the Professional and Technical Employees Local 17, American Council of Engineering Companies of Washington (ACEC), Associated General Contractors (AGC) of Washington, and WSDOT.

After the JTC completed its design-build recommendations in December 2016, WSDOT convened the Stakeholder Advisory Committee in January 2017 and collaborated over six months to develop this Construction Program Business Plan. The Stakeholder Advisory Committee was charged with defining key elements of WSDOT's strong owner strategy related to recruitment, training, retention, and competitive compensation while also outlining sustainable staffing levels and reporting on how WSDOT is addressing the results of JTC's study.

The committee's recommendations were informed by and help respond to the findings in the following studies:

- **JTC's Review of Washington State Department of Transportation's Implementation of Design-Build Project Delivery:** JTC identified recommendations for WSDOT to maximize efficiencies in cost and schedule by effectively employing design-build.
- **WSDOT's Recruitment and Retention Study:** this study outlined challenges and recommended how to strengthen the agency's recruitment and retention of the engineering and technical workforce.

As a first step, the committee reviewed and discussed data to understand WSDOT's past and future needs related to managing staffing levels, supporting the capital improvement and preservation program workforce, and future project delivery. Informed by these findings, the Stakeholder Advisory Committee is proposing the following goals for WSDOT's future construction program and strategies to adopt them.

- **Goal 1: Strong owner and stewardship**
  WSDOT continues to be a good steward of the state transportation infrastructure by strengthening the agency's role as a strong owner.
- **Goal 2: Sustainable staffing**
  WSDOT will ensure the agency has the right balance of staff and consultants it needs to deliver a successful and efficient capital improvement and preservation program by addressing staffing needs In a productive, sustainable, and predictable way.
- **Goal 3: Project delivery**
  Enact and accomplish the majority of recommendations of the Joint Transportation Committee's design-build study.

(Executive Summary continued)

What does WSDOT mean by "strong owner?"

The State of Washington represents taxpayers by taking care of public lands and infrastructure. In this role, the State of Washington assigns responsibility to WSDOT to facilitate safe and efficient movement of people and goods. WSDOT maintains the state's role as a strong owner by:

- Serving as a steward of Washington's state-owned multimodal transportation system.
- Providing quality staff who are capable and knowledgeable about building, maintaining, and operating the state's transportation system.
- Taking thoughtful, nimble, and decisive actions, guided by state and taxpayer interests.
- Providing solutions and performance through effective budget and schedule control on capital improvement and preservation projects.
- Recognizing and embracing flexibility and alternative ideas within industry.

Goal 1: Strong owner and stewardship

Goal	• WSDOT continues to be a good steward of the state transportation infrastructure by maintaining and strengthening the agency's role as a strong owner.
Strategies *Within the framework of the capital improvement and preservation program, WSDOT will advance the strong owner role through these strategies focused on workforce development and partnerships.*	• Achieve buy-in into the strong owner approach from staff, industry, and the Legislature by developing and implementing a communication and outreach plan for WSDOT's Executive Leadership. • Provide a strong, capable, and high-quality engineering workforce by developing and managing a workforce development plan. • Maintain the trust of the taxpayers, traveling public, and Legislature by forming and sustaining partnerships with industry to plan and deliver the capital improvement and preservation program and communicate with the Legislature and public.
Key considerations	• Recruitment is challenging due to the competitive local job market, an extended timeline to hire qualified engineers, and a lack of information about future staffing needs. WSDOT is already taking steps to improve recruitment. • Many diverse training options are available, including new trainings to help staff adapt to design-build. • Gaps include a lack of trained entry-level staff and staff with PE licensures to fill the openings created by future retirement. • Resignations are higher in specific regions and among employees with six to ten years experience. • The Recruitment and Retention Study considered issues affecting program oversight and delivery, including issues that may hinder the recruitment and retention of a quality workforce for engineering and technical employees. • Compensation for engineering positions is below the Washington state average and ranks at or near the bottom compared to other local governments. • Salary increases will help some positions (Transportation Engineers 1, 2, and 3), but without the eligibility for overtime pay at higher positions (Assistant Project Engineer and Project Engineer), it results in reduced incentive for people to advance. • WSDOT has created multiple distinct groups or committees to engage industry partners that work on agency projects in the development of applicable policies and specifications.

(Executive Summary continued)

Goal 2: Sustainable staffing levels

Goal	• WSDOT will ensure the agency has the right balance of staff and consultants it needs to deliver a successful and efficient capital improvement and preservation program by addressing staffing needs in a productive, sustainable, and predictable way.
Strategies	• Develop a staffing forecast through 2023 that avoids significant increases or reductions in staffing levels, communicate projections with staff, and update every biennium. The staffing forecast will include a target range of WSDOT full-time employees and staffing levels per biennium to support the capital improvement and preservation program. • Provide information to the Legislature about what WSDOT needs to respond to a competitive job market and sustain required staffing levels for program and project delivery. • Identify and proactively communicate opportunities for the consultant workforce to support program delivery by offering WSDOT flexible staffing and expertise.
Key considerations	• Staffing levels at WSDOT have widely fluctuated, resulting in losing experienced staff. • WSDOT is using resources across regions to assist with project delivery and mentoring staff in regions with limited experience with design-build. • The future construction program is more complex, with new methods of project delivery and providing coordination with Sound Transit 3. • Nearly half the WSDOT engineering and technical workforce will be eligible to retire by 2022.

Goal 3: Project delivery

Goal	• Enact and accomplish the majority of recommendations of the Joint Transportation Committee's Design-Build Study.
Strategies	• Prioritize and implement recommendations from the JTC Design-Build Study in coordination with industry teams and report back on outcomes.
Key considerations	• JTC developed 27 recommendations to improve WSDOT's implementation of design-build. • Design-build contract value will account for approximately 70 percent of the overall budget.

Next steps

In November, WSDOT will reconvene the Stakeholder Advisory Committee to identify how they will guide the progress of the Construction Business Plan, including providing biennial reports to the Legislature. Throughout 2017 and 2018, WSDOT task leads will move forward with implementing their strategies and tracking their objectives. WSDOT will provide the first biennial progress report to the Legislature on September 30, 2018.

CHAPTER 1

About the Construction Program Business Plan

Washington residents and businesses rely on safe, reliable, and cost-effective transportation options to improve livable communities and economic vitality for people and businesses. Our multimodal transportation network includes nearly 19,000 miles of state highways and the nation's largest ferry system, all designed, built, operated, and maintained by the Washington State Department of Transportation.

The 2015 Connecting Washington transportation revenue package invests billions of dollars in statewide transportation programs and projects over 16 years. WSDOT's role is to implement a six-year plan for highway preservation and improvement projects, updated with Connecting Washington revenue. The six-year plan is updated following each legislative session.

To effectively design and construct projects to preserve and improve our state's transportation network, WSDOT needs a strong, stable workforce prepared to adapt to changing conditions as the agency transitions from a more traditional contracting mechanism (design-bid build) to increased use of design-build. In July 2015, Governor Inslee signed into law Second Engrossed Substitute Senate Bill 5997, directing the Joint Transportation Committee (JTC) to review WSDOT's implementation of design-build and WSDOT to develop the Construction Program Business Plan.

In accordance with the legislation, the Construction Program Business Plan describes mechanisms to:

- Provide appropriate oversight of contracted services through a strong owner strategy that addresses employee recruitment, state employee training, career development, retention, competitive compensation, and partnership with industry.
- Outline a sustainable staffing level of state-employed engineering staff.
- Report how WSDOT is incorporating recommendations from the design-build study, which were informed by comparisons of Washington state to national trends and methods.

Every two years, WSDOT will also prepare Plan implementation progress reports, beginning September 30, 2018 through September 30, 2030.

JTC Design-Build Implementation Study

In 2016, the JTC issued a Review of Washington State Department of Transportation's Implementation of Design-Build Project Delivery, which informed the Construction Business Plan. The study was completed in December 2016 and provides an overview of design-build, identifies best practices for design-build, examines WSDOT's implementation of design-build, recommends opportunities for improvement, suggests strategies for WSDOT and industry to adopt recommendations, and provides updates to legislators and stakeholders. The study is provided in Appendix A and the work plan for the implementation of the study recommendations is included in Appendix F.

Why design-build?

Design-build is a method of project delivery in which WSDOT executes a single contract with one entity (the Design-Builder) for design and construction services to provide a finished product. Since the design-build process creates efficiencies by providing both engineering and construction services under one contract, the design/build method can be more cost-effective and time-efficient than other methods.

This Plan summarizes the planning process, past and current conditions for WSDOT capital program delivery, presents goals and strategies for the future program, reviews specific actions and a work plan to implement each strategy, and describes next steps. The Plan includes the following sections with related reports and detailed data provided in the appendix:

- The landscape for capital program delivery
- Goals and strategies
- Work plan
- Next steps
- Appendix

1.1 Planning process

As directed by the Legislature, WSDOT developed this Plan in coordination with a Stakeholder Advisory Committee, made up of representatives from American Council of Engineering Companies of Washington (ACEC), Associated General Contractors (AGC) of Washington, Professional and Technical Employees Local 17, and WSDOT's engineering staff.

During a six-month period in 2017, stakeholders participated in five meetings to discuss existing conditions, develop goals and strategies informed by existing conditions, and provide input on the draft Plan (Figure 1.1). The Stakeholder Advisory Committee will continue to guide implementation of the Plan and biennial progress reports.

Construction Business Plan Work Group

Stakeholder Advisory Committee

- Van Collins, ACEC
- Tyler Kimberley, AGC
- Vince Oliveri, PTE Local 17

WSDOT Staff

- Jay Alexander, Capital Program Development & Management Director
- Chris Christopher, State Construction Engineer
- Kevin J. Dayton, Assistant Secretary, Regional and Mega Programs
- Todd Dowler, Acting Human Resources Director

Figure 1.1 Construction Program Business Plan process and timeline

CHAPTER 2

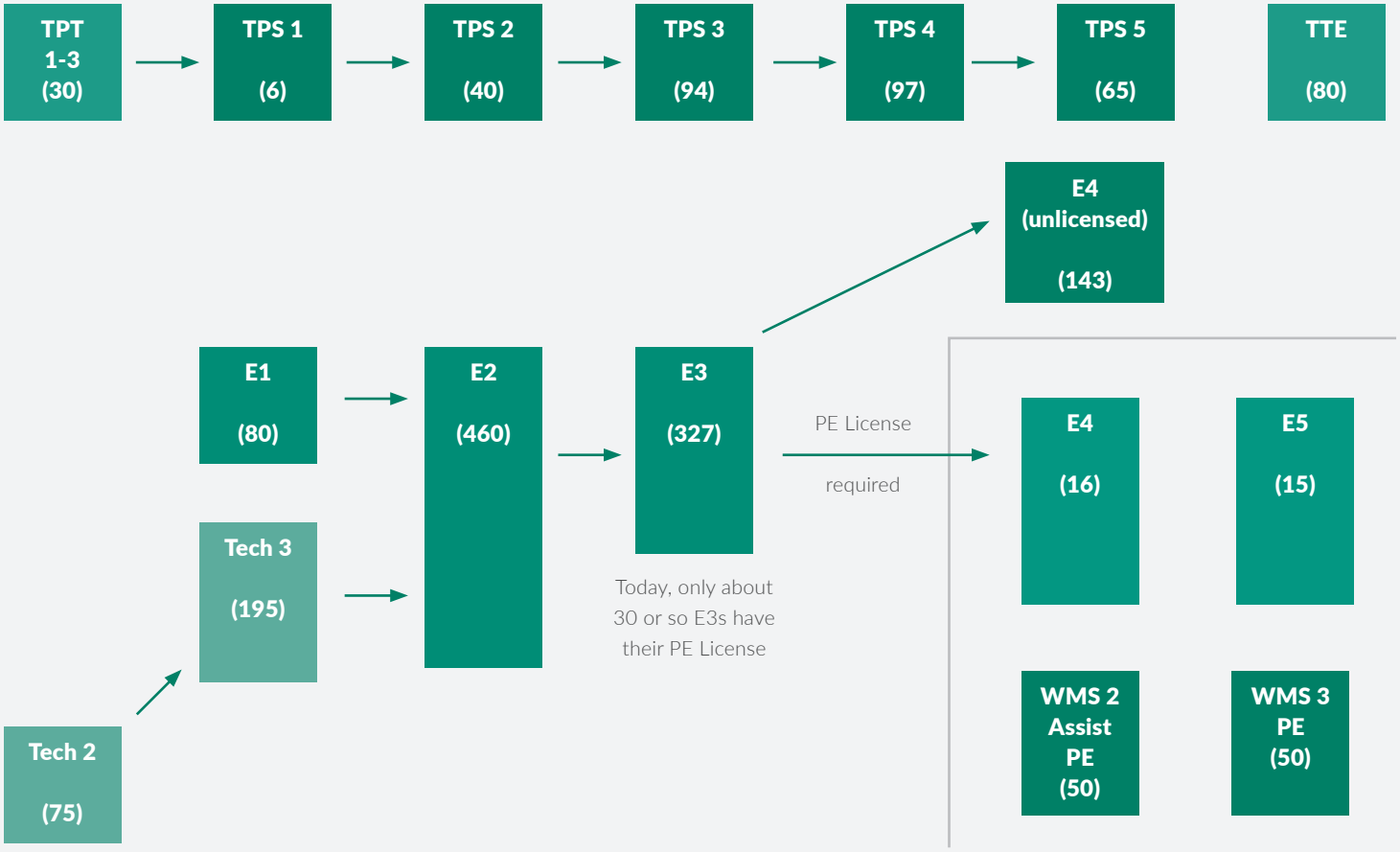
The landscape for capital program delivery

As a first step to inform goals and strategies for WSDOT's construction program, WSDOT evaluated past and current conditions for each of these key topics: staffing levels, workforce needs, and project delivery.

WSDOT relies on approximately 2,000 full-time equivalents (FTEs) to carry out the projects and programs in the Improvement and Preservation Program, including Connecting Washington. This Plan focuses on this segment of the workforce, which includes the following positions:

- Transportation Planning Technicians (TPT 1-3)
- Transportation Planning Specialists (TPS 1-5)
- Transportation Technicians (2-3)
- Transportation Engineers (E 1-5)
- Transportation Technical Engineer (TTE)
- Washington Management Service (WMS) 2/Assistant Project Engineer
- WMS 3/Project Engineer

WSDOT planning, technician, and engineer series



All numbers are approximate and do not include some WMS positions.

2.1 Managing staffing levels

During delivery of the last two transportation funding packages, the 2003 Nickel and 2005 Transportation Partnership Program (TPA), WSDOT experienced staffing fluctuations and challenges. Through this Plan, the Legislature directed WSDOT to outline a sustainable level of state-employed engineering staff and technical workforce that will allow WSDOT to address long-term needs of the construction program, while identifying ways to address shifting needs through contract engineering resources. This section describes how WSDOT managed staffing levels during delivery of past capital programs, what WSDOT is doing now to manage staffing levels, and future considerations.

To inform future staffing projections and a sustainable staffing level (see pages 28-30), this section reviews historical staffing levels, current innovative strategies to manage staffing, and how WSDOT's staffing needs will change to meet future project delivery.

WSDOT's philosophy on use of consultants

WSDOT hires consultants when they possess the expertise WSDOT does not have in house, or does not plan to develop. Consultants also supplement WSDOT's ability to deliver by providing additional workforce capacity during peak periods.

Key considerations for staffing levels

Historic staffing

- Staffing levels fluctuated widely.
- FTE levels correlated with project costs.
- Generally, projects were delivered through design-bid-build.

Current WSDOT strategies

- Current strategies strive to achieve balance between workloads and staffing.
- WSDOT is using resources across regions to assist with project delivery and mentoring staff in regions with limited experience in design-build.

Future staffing influences

- Construction program adds more complexity with emphasis on design-build.
- Nearly half of WSDOT staff will be eligible for retirement by 2022.

What happened in the past?

Staffing levels fluctuated widely

The 2003 Nickel and 2005 TPA revenue packages provided $12.7 billion in new funding for transportation. The state-employed engineering and technical workforce grew to about 3,000 FTEs in WSDOT's capital improvement and preservation program during the peak level of delivery. From 2011 to 2013, the Legislature directed WSDOT to downsize to 2,000 FTEs. Figures 2.1 to 2.4 shows the history of expenditures per biennium for WSDOT's capital improvement and preservation program and levels of FTEs from 1999 to 2015.

After delivering these programs, WSDOT identified several lessons learned associated with upsizing and downsizing the engineering and technical workforce:

- Preparing and equipping human resources staff to manage recruitment during the years when WSDOT increased the engineering and technical workforce.
- Training costs to onboard new employees.
- Retention of skilled staff as a program comes to a close.
- Office space availability during the years when WSDOT had a larger engineering and technical workforce.
- Morale issues when WSDOT had to downsize the engineering and technical workforce.
- Using staff across regions to support regions with multiple construction projects with planning and design, rather than hiring more staff.
- Need to balance utilization of consultants with WSDOT's engineering and technical workforce to help minimize staffing peaks and valleys.

Figure 2.1 WSDOT historical program expenditures and workforce

Includes the Improvement and Preservation programs with the exception of expenditures reimbursed by Sound Transit.

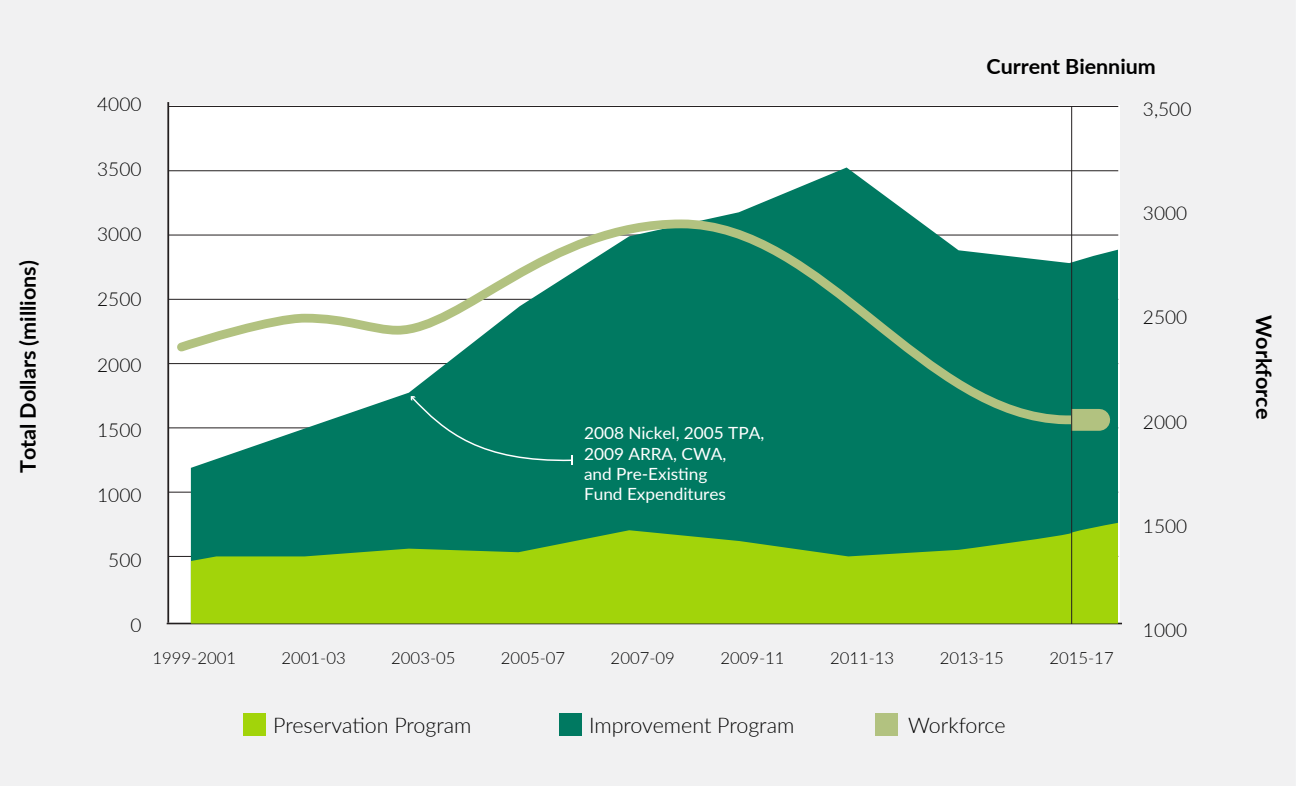


Figure 2.2 Historic expenditures

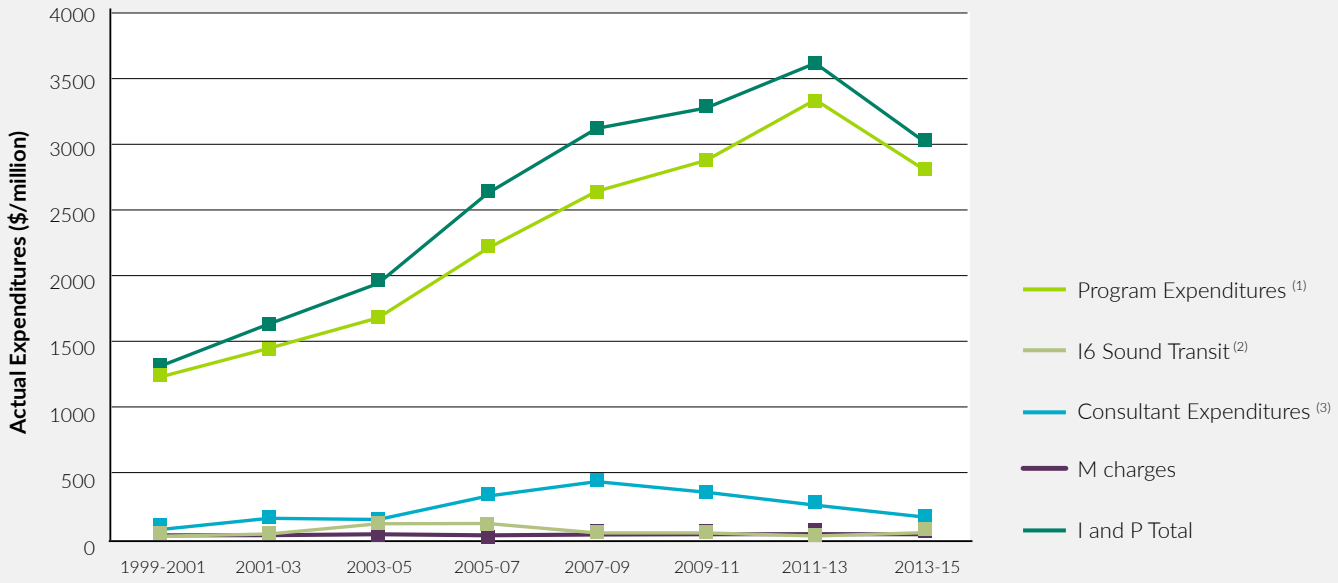
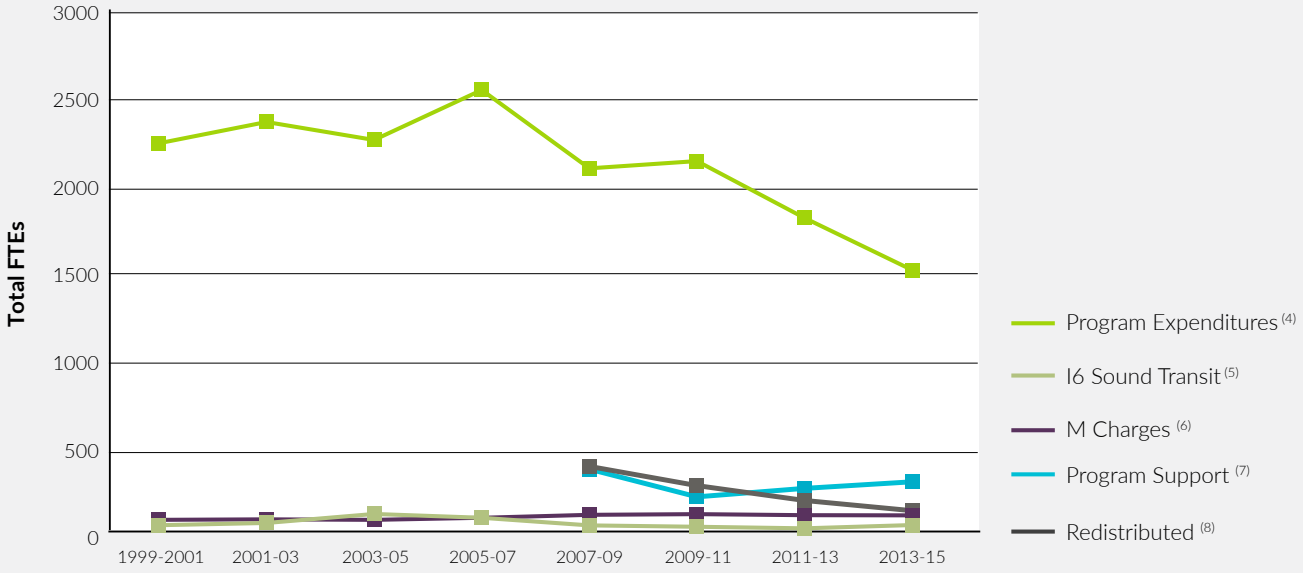


Figure 2.3 Historic FTEs



Notes:

(1) Expenditures by biennium for the Improvement and Preservation programs, excluding I6 Sound Transit and consultant expenditures.
(2) Non-appropriated expenditures reimbursed by Sound Transit, excluding consultant expenditures.
(3) Architectural and Engineering Services, Sub object code JK, expenditures by biennium for the Improvement and Preservation programs, including I6 Sound Transit. Projection based on 5% of total expenditures.
(4) FTE expenditures by biennium for the Highway Improvement and Preservation programs, excluding I6 Sound Transit and I7 Tacoma Narrows Bridge, minus I5 and P4 Program Support, P8 Redistributed, and Maintenance program charges.
(5) FTE expenditures by biennium for work reimbursed by Sound Transit.
(6) Maintenance staff charges to the I and P programs.
(7) FTE expenditures to the I5 and P4 sub-programs. Projected to maintain consistant budget level.
(8) Redistributed HQ and Region support charges to sub-program P8. Estimated at 6% of total projected FTEs.

How is WSDOT balancing workloads and staffing today?

WSDOT is employing strategies for cross-region delivery and training

Over the course of the past few years, WSDOT has implemented several strategies to help to balance the workload to the available engineering and technical workforce, by adding staff support in regions that are busy, and provide training to further staff development. For example, during project development, there are some tasks—such as project scoping and design—that can be handled by staff who are not physically present in the office. In these cases, WSDOT sends these tasks to region offices that are experiencing a lower workload.

Additionally, to increase design-build knowledge and experience, regions are encouraging their staff to learn new skills by taking part in aspects of design-build procurement.

Examples of cross-region delivery

- North Central Region is developing several fish barrier projects in the Northwest and Olympic regions: Eastern Region delivered several fish barrier projects in the Olympic Region.
- Eastern Region delivered a statewide guardrail project.
- With the influx of work associated with the federally-funded passenger rail improvements, several regions signed on to deliver select projects funded out of WSDOT's Rail, Freight, and Ports Division.

What influences WSDOT staffing in the future?

The future construction program adds more complexity to staffing projections

WSDOT has a long history of delivering projects through traditional design-bid-build project delivery. With design-bid-build project delivery, FTE levels more directly correlate to project cost. Forecasts are better known with design-bid-build projects, but WSDOT is applying historical data to plan for design-build. As such, future staffing projections will need to consider:

- Emphasis on projects using design-build.
- Ongoing use of consultants for design-bid-build projects.
- Increase in number of projects as a result of Connecting Washington investment (see Figure 2.5).
- With more than 400 projects contracted for delivery over the next 10 years, WSDOT is now issuing contracts with General Engineering Consultants (GECs) for design-bid-build projects. GEC duties can include planning, design, and program management responsibilities for a major project or clusters of projects, in some cases assisting in the award and management of construction contractors ultimately selected to build the projects.
- Supporting Sound Transit to deliver the ST3 program by providing technical resources to assist in the use of WSDOT's right-of-way and its policy implications.

Legislative direction

Over the course of the last 16 years, the Legislature has provided direction to WSDOT regarding workforce policy. See Appendix B for a complete summary. Key highlights are as follows:

2003 - SSB 5248

- Authorized using consultants for transportation construction and engineering services.

2005 – ESSB 6091 Section 605

- Directed WSDOT to eliminate 131 middle management positions.

2011 – ESHB 1175 Section 608

- Directed WSDOT to reduce highway construction workforce levels from 2,800 FTEs by 400 FTEs in 2011-2013 and another 400 FTEs in 2013-2015 to reach a target of 2,000 FTEs by June 30, 2015.

2012 – ESHB 2190 Section 602

- Directed WSDOT to reduce the size of the workforce in the identified administrative operating programs in the 2013-2015 biennium by 3 percent.

2013 – ESSB 5024 Section 601

- Stated that workforce levels are sustainable with current law program projections and continued the reduction of highway construction FTEs to 2,000 by June 30, 2015.

2015 – 2ESSB 5988 Section 501

- Directed WSDOT to develop and implement a construction program business plan so that future staffing levels are sustainable and meet necessary skill sets.

Figure 2.4 Key Considerations for WSDOT Staffing Forecast

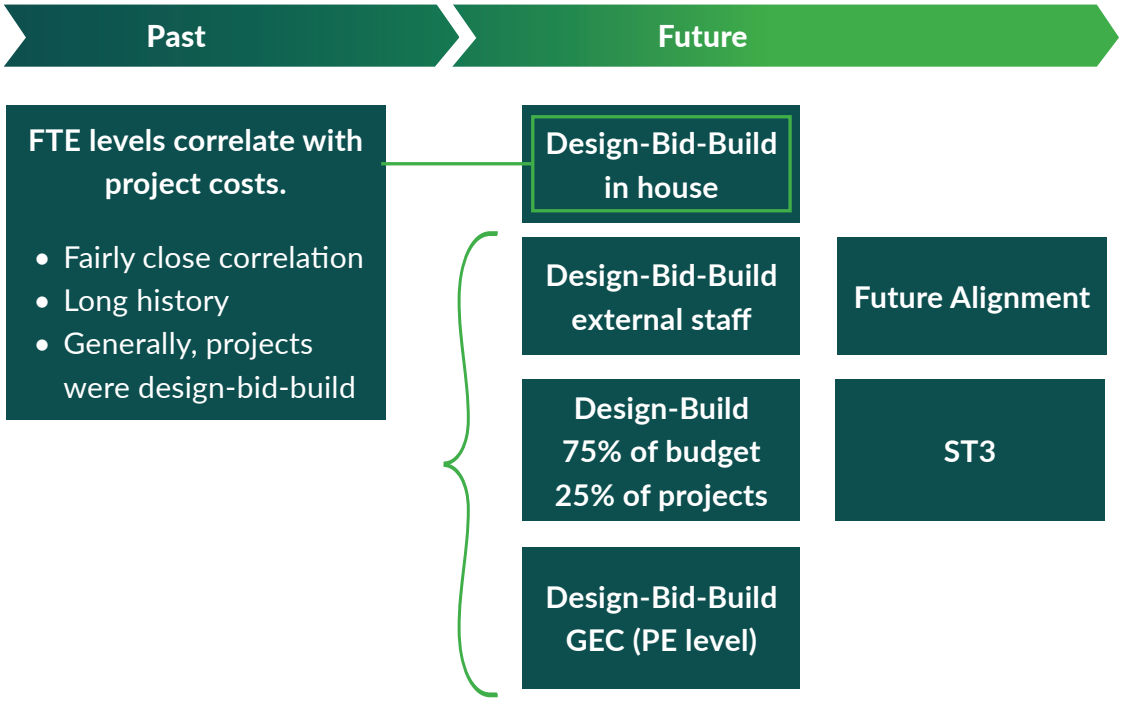
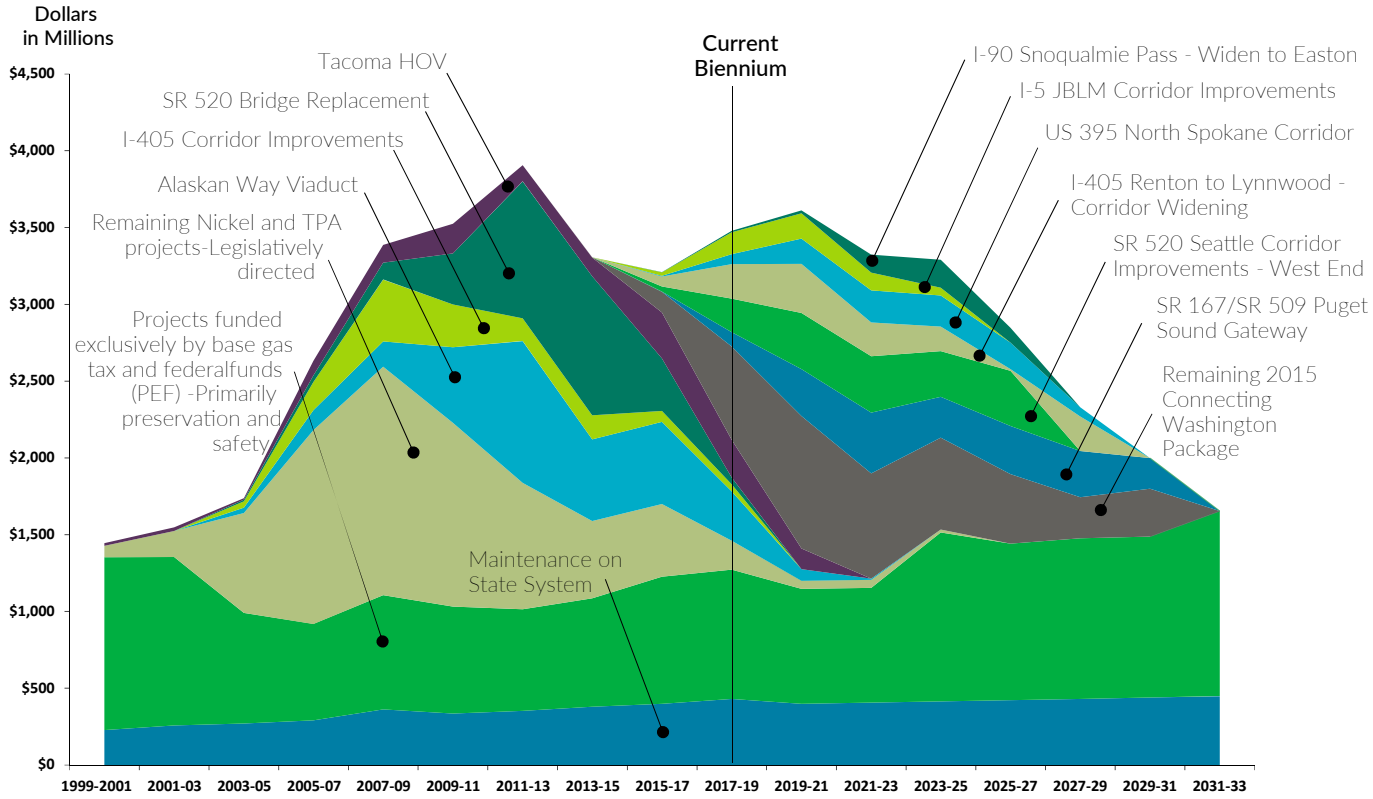


Figure 2.5 WSDOT Highway Maintenance and Construction Programs with Revenue Packages 2017 Legislative Final Budget

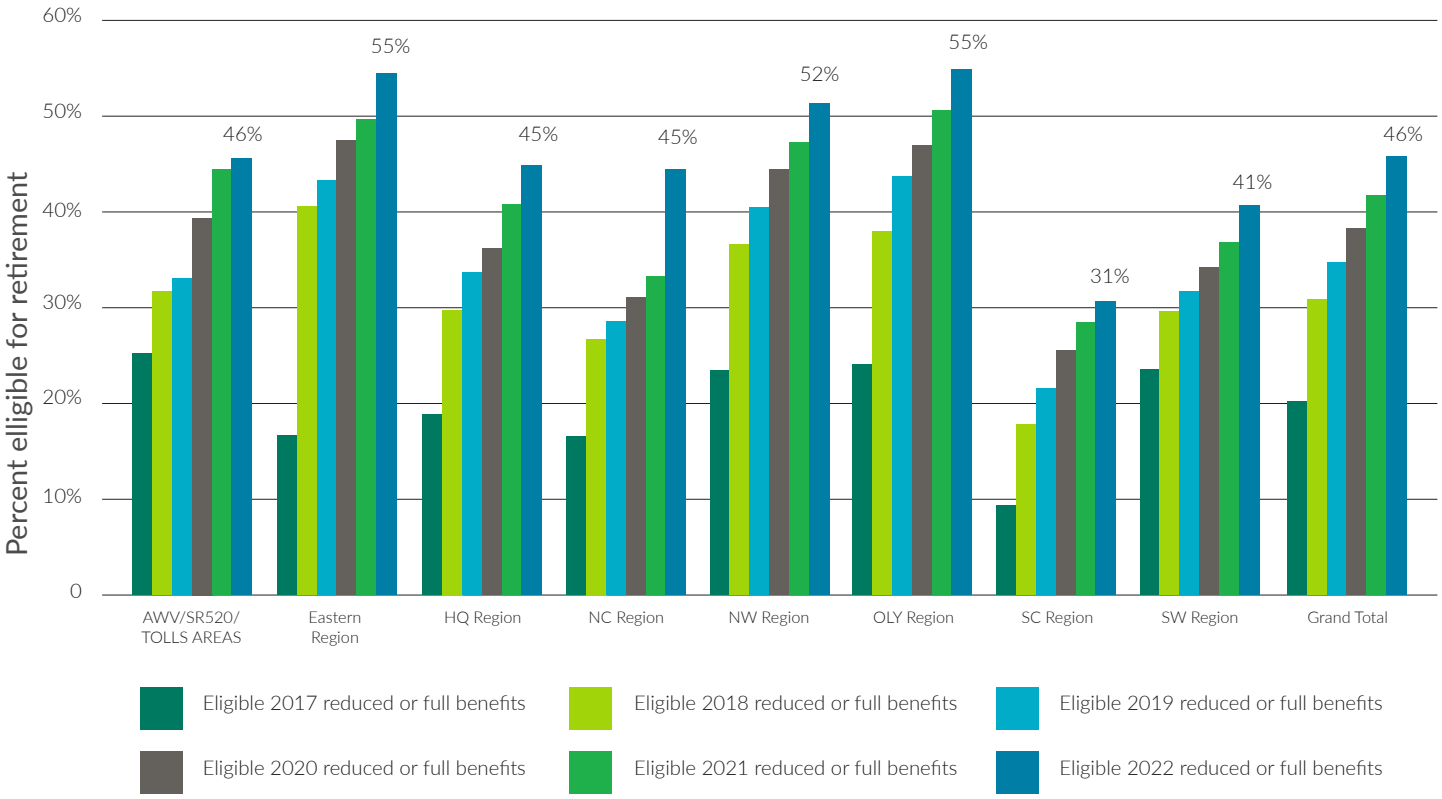
17LEGFIN (Excludes sub-programs 16 and 17)



The percentage of engineering staff eligible for retirement signals a future staffing gap to meet the needs of Connecting Washington

WSDOT anticipates that, on average, approximately 46 percent of staff will be eligible for retirement by 2022, with the highest percentage of eligible staff (55 percent) in the Eastern and Olympic regions. Figure 2.6 highlights the percentage of staff by region eligible for full or partial retirement based on age, years of service, and retirement plan criteria. WSDOT needs to proactively plan to hire and train new staff to maintain a sustainable workforce.

Figure 2.6 Percent of engineering staff by region eligible to retire with full or reduced benefits by 2022



2.2 Supporting workforce needs

WSDOT contractors, consultants, and taxpayers expect the agency to serve as a strong owner, with decisive, knowledgeable, and capable staff leading projects in cooperation with industry. To meet this expectation, WSDOT needs to attract and cultivate highly-performing staff. The focus of this plan includes developing a strong owner strategy as it relates to recruiting, training and staff development, retention, and compensation for these positions. WSDOT surfaced some of these challenges through a 2016 study that examined recruitment and retention at the agency and is already acting to address several of the study's recommendations. This section provides more information about WSDOT's Recruitment and Retention Study, in addition to supplemental data about WSDOT's recruitment, training, and attrition trends.

Key considerations for WSDOT workforce

Recruitment

- Facing competitive job market and a lengthy timeline to hire engineers.
- Lack of information about future staffing needs.
- Beginning proactive steps to improve recruitment.

Training and staff development

- Offer diverse array of training.
- Planning to train staff on new methods of project delivery.
- Lacking licensed engineering staff.
- Need to invest in training for entry- and mid-level staff.

Retention

- Resignation is outpacing retirement.
- Resignations are a challenge in specific regions and among mid-level employees.
- Combined rate of retirement and resignations is a challenge.
- Recruitment and Retention Study identified additional concerns.

Compensation

- Key engineering positions are below the Washington state average and rank at or near the bottom compared to local governments.
- Salary increases will help some positions, but with the eligibility for overtime pay some will be paid higher than upper-level positions, resulting in reduced incentive for people to advance to higher level positions.

What was the focus of WSDOT's Recruitment and Retention Study?

In June 2016, WSDOT published the Recruitment and Retention Study (see Appendix C). The study considered issues affecting program oversight and delivery, including issues that may hinder the recruitment and retention of a quality workforce for engineering and technical employees. The study evaluated the following positions in the preliminary engineering segment of the workforce:

- Transportation Engineer 1-5
- Transportation Technical Engineer
- Transportation Technician 1-3
- Property and Acquisition Specialist 1-6

The study recommended three key changes:

1. Compensation for engineering and technical workers is significantly under market and the disparity must be addressed.
2. Management needs to develop a service-delivery plan for the recently approved construction program to determine how much work will be done in-house or contracted out.
3. Recruitment processes need to use more proactive methods to find and attract qualified candidates for essential engineering and technical positions.

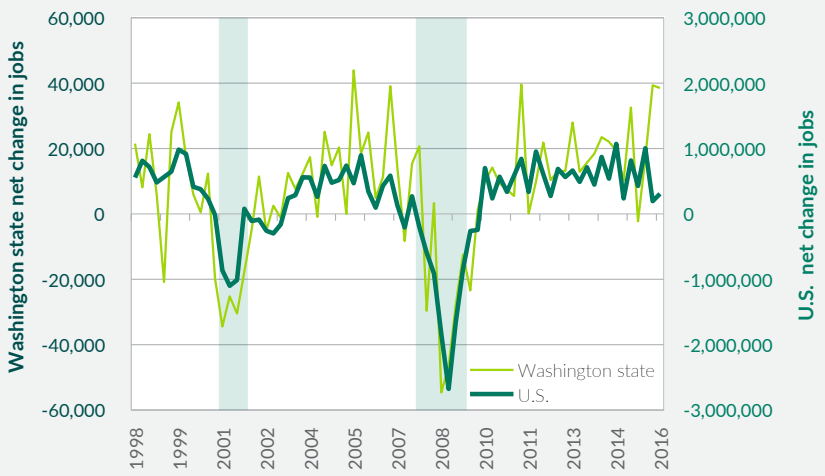
This Plan includes high-level findings and recommendations from the Recruitment and Retention Study to better illustrate the current landscape.

What challenges are WSDOT facing with recruiting engineering staff?

Washington state is a very competitive job market

Improved economic conditions in Washington state mean employers face challenges in recruiting for positions, since candidates have more job opportunities and may receive competing job offers. Job growth in Washington stayed strong and picked up in the U.S. in the second quarter of 2016, with a net gain of 38,455 jobs[1]. In the engineering industry, the American Council of Engineering Companies (ACEC) of Washington and Oregon found that economic conditions for engineering firms are continuing to improve, with 68 percent of companies reporting revenue growth in 2016, compared to 54 percent in 2011[2]. Statewide and regional transportation investments are contributing to favorable market conditions. In addition to transportation projects included in the Connecting Washington funding package, the Sound Transit 3 ballot measure passed in fall 2016 with $54 billion in new transit investments for the Puget Sound region.

Figure 2.7 Washington state net change in jobs



Job growth in Washington stayed strong and picked up in the U.S. in second quarter 2016.

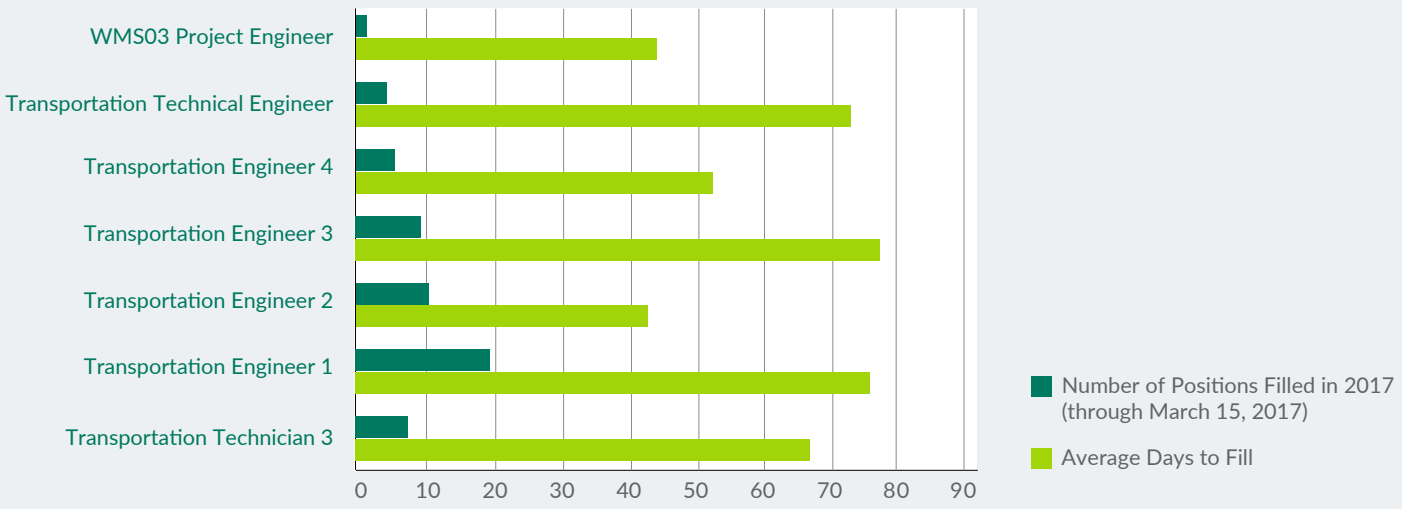
[1] *Washington State Employment Security Department. "Washington State Business Employment Dynamics Second Quarter 2016." Washington State Business Employment Dynamics, Second Quarter 2016 (2017): n. pag. Fortress.wa.gov/esd. Washington State Employment Security Department, Mar. 2017. Web. Apr. 2017.*

[2] *American Council of Engineering Companies of Washington and Oregon. Salary and Benefits Survey 2016. Rep. N.p.: n.p., 2016. Print.*

WSDOT typically faces a timeline of two months or more to fill engineering positions

From January to March 2017, WSDOT's recruiting timeframe for engineering positions was 61.9 days on average to fill 62 open positions. The Transportation Engineer 3 positions took the longest time to fill, with an average of 75.9 days (see Figure 2.8).

Figure 2.8 Average number of days to fill engineering positions from January to March 2017



The Recruitment and Retention Study identified additional recruitment issues

WSDOT is also considering the results of the Recruitment and Retention Study, which highlighted the following challenges:

- The staffing plan is not yet determined.
- The recruitment office does not know future recruitment needs.
- The current recruitment process is reactive to immediate needs identified by managers.
- WSDOT has had difficulty identifying and hiring specialized technical positions that are critical to the agency's mission, such as geotechnical engineers.

What is WSDOT already doing to improve recruitment?

WSDOT is beginning proactive steps to improve recruitment

WSDOT Human Resources aims to decrease the time to fill open positions, with a target of 45 days, and staff are taking the following steps to proactively improve advertising methods for open positions and the recruitment process:

- Post positions on multiple social networking and professional sites.
- Partner with multiple military organizations.
- Upgrade career fair materials.
- Refer candidates more quickly to the interview stage.
- Start interviewing qualified candidates early.
- Use Human Resources software, NEOGOV, to track recruiting statistics.

Human Resource's current efforts have already led to an increase in applicants per position by 50 percent from the first half to the second half of 2016. Staff are also taking steps to address the recommendations outlined in the Recruitment and Retention Study (see Table 2.1).

Table 2.1 Status of Recruitment and Retention Study recommendations

Recommendation #	Status
15.1 – Identify staffing needs	• Developed a workload model for the number of positions each recruiter should complete per year. • Led to the funding of an additional recruiter position (funded for seven recruiters) with funding for an eighth position should the number of recruitments continue to increase.
15.2 Evaluate NEOGOV	• Continue to work with the Department on Enterprise Systems (DES) to take advantage of NEOGOV as enhancements are released. • DES had a specialized training for WSDOT recruiters in January 2017.
15.3 Sourcing candidates	• Prefer to use NEOGOV to source candidates that have previously applied, however DES has disabled that functionality. • Intend to follow-up with DES to discuss.
17.1 Establishing ties with college engineering programs	This effort is underway as part of the Workforce Development Plan.
17.2 Rebuild a robust internship program	This effort is underway as part of the Workforce Development Plan.
Employee Referral Program	• State HR recently approved an employee referral program that would allow WSDOT to pay employees up to $200 per referral. • Beginning stages of developing a program. • Plan to provide notice to the unions prior to implementation.

What training and staff development opportunities are available at WSDOT?

All levels of employees can participate in diverse array of training opportunities

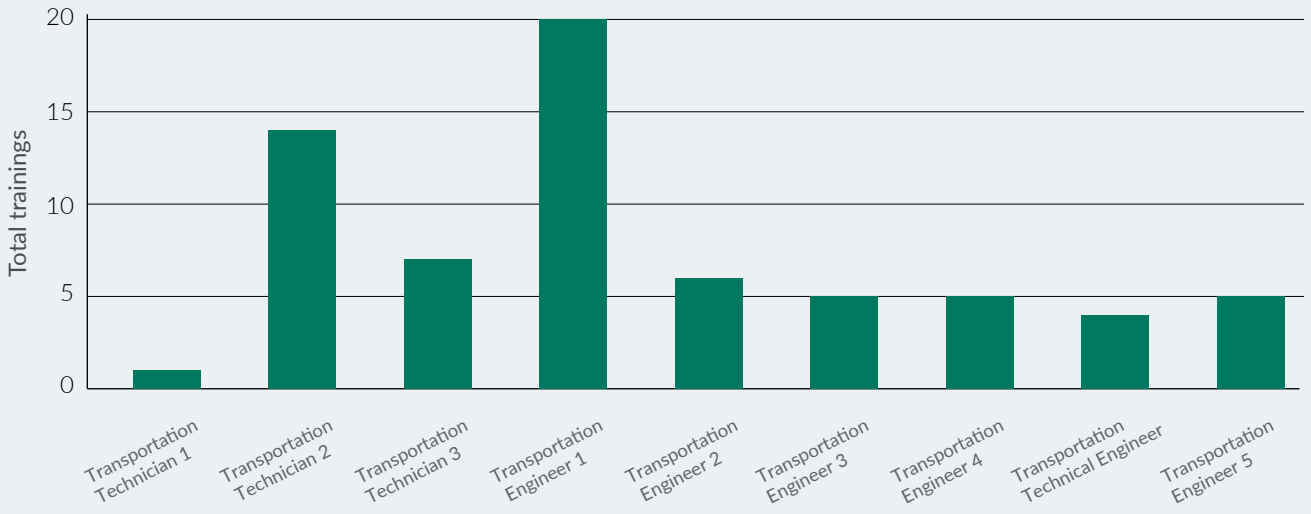
WSDOT provides a wide range of training opportunities for employees, starting from the time they begin working at WSDOT and continuing throughout their careers. As part of WSDOT's major emphasis area, the agency has prioritized training and it is now more available. The emphasis on training is supported by the Legislature. Initial training focuses on the mandatory subjects covering agency policies, then shifts to technical training based on the requirements of a particular position and within different disciplines such as environmental, traffic, and inspection. WSDOT also provides entry level management and leadership training opportunities to employees as they progress within the agency in addition to specialized trainings such as Practical Solutions. Most training courses are offered through the Learning Management System (LMS) in concert with individual development plans.

Types and examples of training opportunities are provided below as well as the average number of classes per employee (see Figure 2.9), with a comprehensive summary of trainings included in Appendix C.

Table 2.2. Types and examples of current training opportunities

Type	Description	Examples
Mandatory	Numerous training courses are required, and serve to educate new employees on agency policies and methods for maintaining a respectful workplace.	• Valuing Diversity • Violence in the Workplace • System Security Awareness • Sexual Harassment and Discrimination • Information Security • Disability Awareness
Technical	A wide array of courses are offered across numerous disciplines including project development, risk management, safety, traffic operations, bridges and structures, construction, consultant services, and highway design.	• Highway design courses and curriculum • Environmental Services • Construction Inspector training program • Materials testing program
Entry-Level Management (ELM) Course	Promotes supervisory and management skills that benefit both employees and supervisors. Training outcomes include facilitating better employee work performance, fostering improved communication, and encouraging a healthier work environment.	• ELM Course
New Initiative Training	Help employees adapt and meet expectations related to new business needs, such as design-build.	• Partnering training • Design-Build training • Practical Solutions
Leadership training conferences	WSDOT nominates managers to attend the annual trainings conducted by American Association of State and Highway Transportation Officials (AASHTO).	• National Transportation Management Conference • National Transportation Leadership Institute • National Transportation Advanced Leadership Training

Figure 2.9 Average number of trainings attended by job class in 2016



New trainings are planned to help staff adapt to new needs and methods of project delivery

WSDOT is prioritizing and developing new initiative trainings to help employees adapt and meet expectations related to new business needs, such as design-build and Practical Solutions. The emphasis on this type of training is also supported by the Legislature. WSDOT is planning to offer 12 one-day partnering workshops to WSDOT project offices in 2017 and will plan future trainings based on feedback from participants. Additionally, WSDOT hired a consultant to lead a series of ten statewide design-build training modules in October 2017. The trainings will be open to WSDOT staff, consultants, and contractors.

What is Practical Solutions?

Practical Solutions is a performance-based approach to transportation decision-making. This data-driven approach uses the latest tools and performance measures to support to seek lower cost efficiencies in operating highways, ferries, transit, and rail, reducing travel demand to save money and reducing the need for building costly new infrastructure expansion.

Recent WSDOT design policy and technical guidance has created tools and procedures that support the type of performance-based decisions that are consistent with the Practical Solutions approach. WSDOT has implemented supporting policies and training for our workforce and is using new tools to help keep our existing assets in good condition.

What are WSDOT's needs regarding training and staff development?

With many experienced staff on the verge of retirement, WSDOT has a lack of licensed professional engineers ready to move up and fill these positions.

Today, fewer engineers have the licensing required to fill the gap when upper-level engineers retire. According to the Recruitment and Retention Study, lower-tenure employees with licensure ability were the most impacted by the reduction in positions at WSDOT over the past several years. The study finds, "WSDOT has fewer trained lower-level employees and a looming retirement bubble that will further drain experienced engineers out of the workforce."

Prior to the 2008 to 2009 biennium, WSDOT typically had approximately 100 staff in the Transportation Engineer 2 and 3 positions with a Professional Engineer (PE) license. A PE license is generally required for WSDOT staff to qualify for positions above the Engineering 3 level. When the agency started reducing staff in the 2008 to 2009 biennium, many of the employees that left the agency were mid-level engineers who had, or would have likely obtained their PE license and then be qualified to move into upper level positions today.

Currently, the agency has only about 30 licensed engineers at the Engineer 2 and 3 levels ready to fill a potential gap of approximately 125 upper-level engineering positions in the next few years. WSDOT has approximately 250 positions above the Engineer 4 level, with a potential retirement percentage for those positions approaching 50 percent in the next few years (see Figure 2.6). However, WSDOT is reassessing staffing needs to see if the number of licensed engineers will remain the same in future years.

Many entry-level employees need training

According to the Recruitment and Retention Study, it will be difficult for WSDOT to meet the need of training new employees. The reduction in FTEs affected lower-tenured employees the most, resulting in fewer trained entry-level employees.

Human Resources no longer manages and facilitates all trainings

WSDOT used to provide a centralized structure for training and talent development through Human Resources. A team of approximately ten Human Resources staff would manage and facilitate instructor-led trainings. In addition, various WSDOT committees would inform learning plans to guide staff development, with matrices outlining mandatory and suggested trainings by position. Employees could also benefit from a tuition reimbursement program for trainings, which has been available on a case-by-case basis.

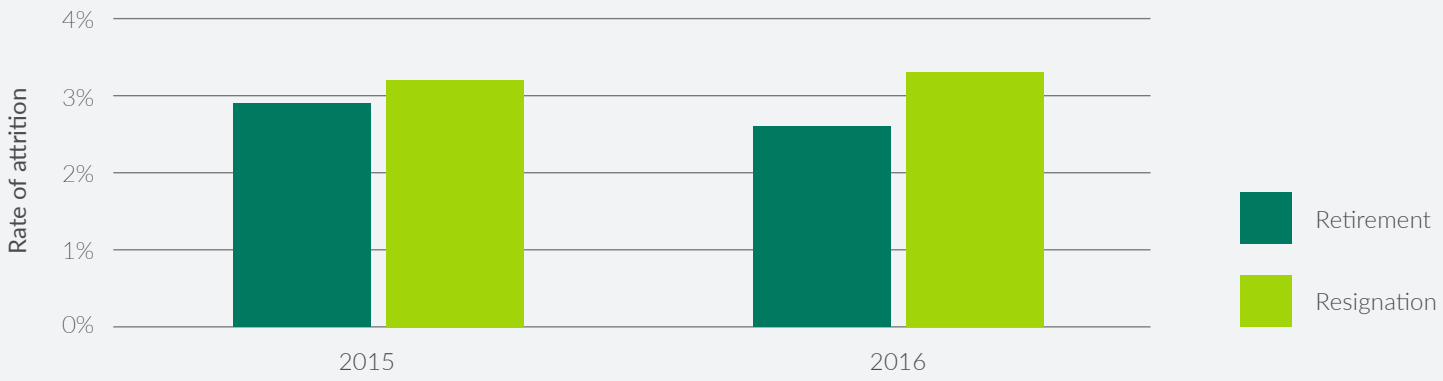
Following a reduction in FTEs and funding, WSDOT training is no longer centralized through Human Resources. Instead, various divisions, like the Construction Office, develop their own discipline-specific training programs. Other trainings are provided through online modules. Although WSDOT had temporarily moved away from the learning plans, the Construction Office is resurrecting a committee to update this tool.

What challenges is WSDOT facing with retention?

Resignation is now outpacing retirement

Over the past two years, WSDOT is seeing an increase in the rate of resignations among the engineering group. From 2015 to 2016, the percentage of staff resigning grew to nearly one percent higher than the rate of retirement.

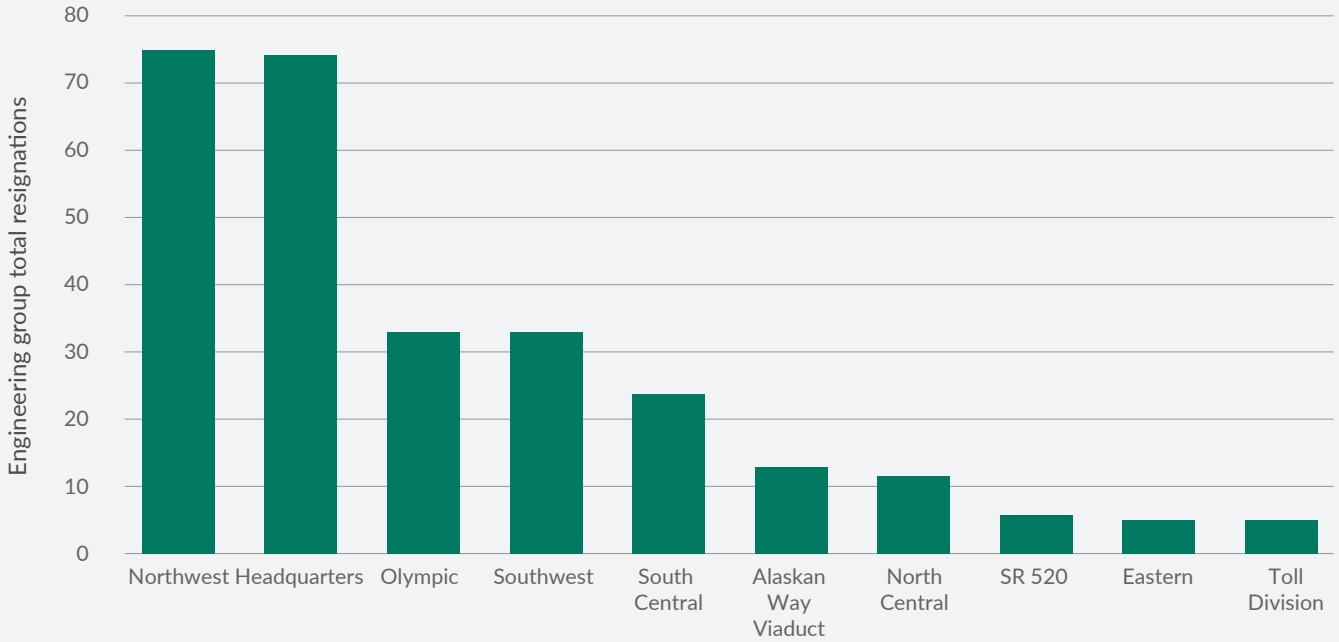
Figure 2.10 Percentage of engineering group attrition from 2015 to 2016



The Northwest Region and WSDOT Headquarters are experiencing the biggest challenge with resignations

Over the past three years, the Northwest Region and WSDOT headquarters are experiencing the highest resignations among engineering staff, which may be because of the competitive Puget Sound job market. Figure 2.11 identifies resignations by region.

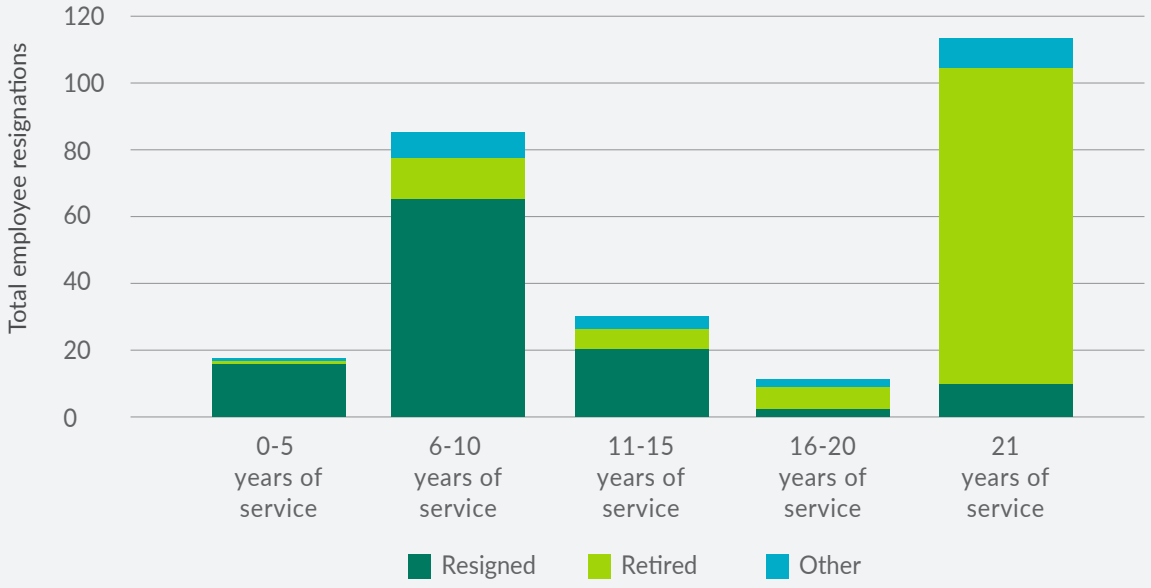
Figure 2.11 Amount of engineering group resignations by region from 2014 to 2016



The majority of resignations among engineering positions occurs within the first ten years of service

According to the Recruitment and Retention Study, WSDOT is experiencing increasing attrition of trained staff in mid-career, in part due to strong hiring among WSDOT's competitors. The resignation rate decreases after 15 years of service, with the majority leaving the agency due to retirement (see Figure 2.12).

Figure 2.12 WSDOT attrition tenure and reason (1/1/2013-12/31/2015)

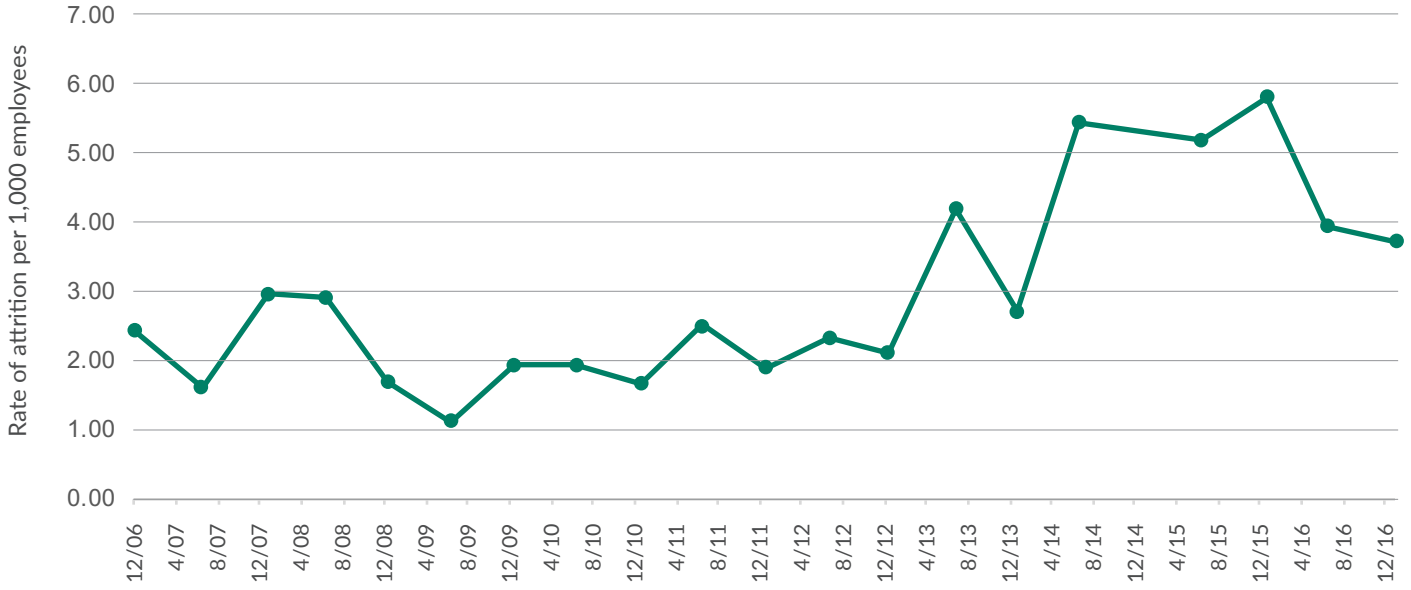


3 PFM Group. Washington State Department of Transportation Recruitment and Retention Study. Rep. N.p.: n.p., 2016. Print.

An increasing number of employees separated from WSDOT after six to ten years of service

In the engineering group, employees are experienced and well-trained at six to ten years of service and are positioned to advance into management positions. From 2006 to 2013, there was a historical average of about two staff separating per 1,000 WSDOT employees, but it jumped to a rate of over five staff per 1,000 employees from 2014 to 2015. The rate declined slightly in 2016 (see Figure 2.13).

Figure 2.13 Number of employees separating with six to ten years of service, per 1,000 WSDOT employees, from 2006 to 2016.



The Recruitment and Retention Study found several additional issues related to retention

WSDOT is also considering the results of the Recruitment and Retention Study, which highlighted the following challenges:

- Current and former engineering employees report the change from design-bid-build to design-build will result in WSDOT engineers becoming contract managers overseeing consultant engineering, rather than leading the engineering in-house.
- Current classifications for job classes are too broad, including a significant number of job titles and varieties of skill sets all limited to a specific pay grade.
- WSDOT compensation lags behind both public and private employers in various labor markets across the state.
- Geographic assignment pay is offered to a limited number of classifications. Expanding this to other classifications would help address low base pay in regions with a higher cost-of-living or in regions where it is difficult to recruit.
- Unlike some employers, WSDOT does not provide any additional pay for employees who possess a PE licensure or other licensures. So, when people earn their PE, they have an incentive to go elsewhere.
- The promotion process varies and creates an uncertain career path.
- Separated employees cited concerns about feeling valued by the agency and dissatisfaction with management.

How competitive is the compensation at WSDOT?

Compensation for WSDOT engineering positions is below the Washington state average

The Recruitment and Retention Study found WSDOT compensation for each classification ranks at or near the bottom of the comparison group at every pay juncture and geographic assignment pay for some positions. The State of Washington does not currently have a mechanism to address pay increases until WSDOT can demonstrate there is an issue with attrition.

A salary increase for some engineering positions will help reduce the compensation gap

The 2017-19 Washington State operating budget included a 7.5 percent salary increase for specific WSDOT positions in the engineering and technical workforce. These positions include:

- Transportation Technician 2 and 3
- Transportation Engineer 1, 2, 3, 4, and 5
- Transportation Technical Engineer

The salary increase became effective on July 1, 2017.

Salary increases will result in some disparities, reducing an incentive for career advancement

Although WSDOT engineering and technician levels will receive a 7.5 percent increase, staff at the transportation planning specialist level did not receive an increase. Additionally, the salary increases will help some positions (Transportation Engineers 1, 2, and 3), but without the eligibility for overtime pay at higher positions (Assistant Project Engineer and Project Engineer) it results in reduced incentive for people to advance to higher level positions.

2.3 Anticipating future project delivery

The Legislature directed WSDOT to report on how findings from the design-build study are being incorporated into project delivery methods for design and construction. WSDOT is already implementing many of the JTC's recommendations outlined in the Review of Washington State Department of Transportation's Implementation of Design-Build Project Delivery. Chapter 3 addresses how WSDOT is incorporating the results of the study into project delivery. In addition to the findings from the JTC report, WSDOT identified upcoming contracts by delivery method and reviewed how WSDOT is coordinating with industry.

What is expected for future contracts?

Design-build contracts are fewer, but the contract value is significantly higher than other methods

WSDOT has outlined a construction program for the next six years with projects funded by Connecting Washington. Although only 24 percent of upcoming advertisements are for design-build projects (see Figure 2.14), the design-build contract value is aproximately 70 percent of the overall budget for these projects (see Figure 2.15). This is because most of the design-build projects are higher value than the design-bid-build projects. WSDOT determines whether design-build or design-bid-build is the most appropriate delivery method and in some cases design-bid-build is best.

Figure 2.14 Number of upcoming advertisements by contracting method

Connecting Washington Highway Construction Projects

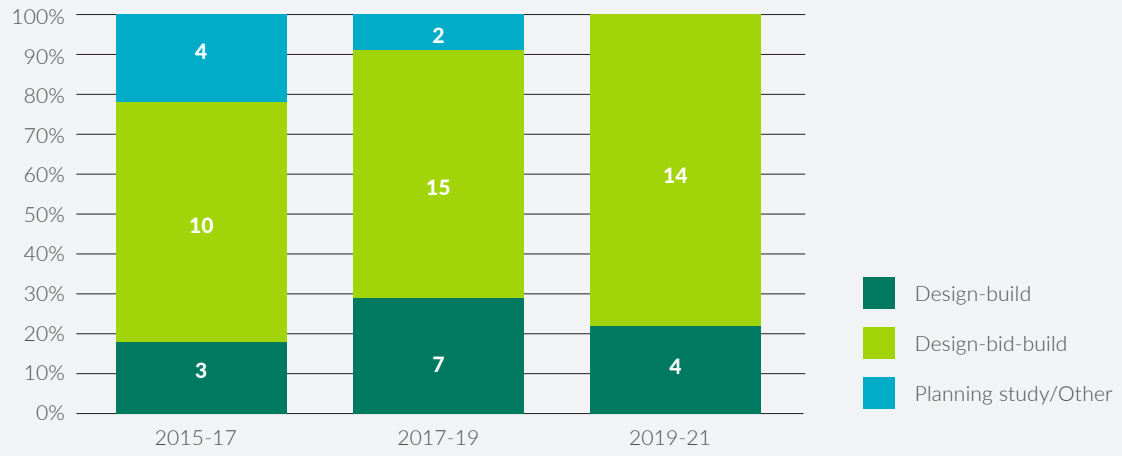


Figure 2.15 Value of upcoming advertisements by contracting method ($/million)

Connecting Washington Highway Construction Projects

How does WSDOT coordinate with industry?

Multiple industry teams and organizations inform WSDOT's design and construction work

Since the intent of this legislation and the Stakeholder Advisory Committee emphasized partnership with industry, WSDOT reviewed current methods for collaborating with industry. WSDOT has created multiple distinct groups or committees to engage industry partners that work on agency projects in the development of applicable policies and specifications.

The following highlights some of WSDOT's methods for engaging with industry:

WSDOT/ACEC Washington

WSDOT works with ACEC through several executive teams including:

- WSDOT/ACEC Bridge and Structures Team
- WSDOT/ACEC Project Delivery Team
- WSDOT/ACEC Business Administration Subcomittee

The Business Administration Subcommittee is a forum for representatives from ACEC member firms and WSDOT to share emerging information and changes in federal and state regulations and Department policy, and to discuss significant business process issues.

Local 17

WSDOT schedules meetings as needed with the Labor Management Committee through Local 17, in accordance with the collective bargaining agreement.

Association of General Contractors (AGC)

WSDOT works with the AGC through several teams that meet every month or two. The teams are organized to focus on several specific areas of WSDOT's construction program. The teams are composed primarily of WSDOT employees and AGC Members, but sometimes include representation from the American Council of Engineering Companies (ACEC), suppliers, the Federal Highway Administration, and local agency representatives. In general, the teams are co-chaired by one AGC Member and one WSDOT Engineer. Teams typically have around 20 members, with half from the AGC and half from WSDOT. Here is a list of the AGC/WSDOT teams:

- AGC/WSDOT Lead Team
- AGC/WSDOT Administration Team
- AGC/WSDOT Bridge and Structures Team
- AGC/ACEC/WSDOT Design-Build Team (also includes an ACEC co-chair)
- AGC/WSDOT Roadway Team

Association of Drilled Shaft Contractors (ADSC)/WSDOT Task Force

Provides support and advice on WSDOT's drilled shaft and geotechnical construction program. Composed of representatives from the ADSC and WSDOT.

DBE Advisory Group

WSDOT formed the DBE Advisory Group July 1, 2011. This group is comprised of community and trade based organizations, representing both prime contractors, consultants, subcontractors and subconsultants (DBE and non-DBE). This group provides WSDOT with direct market insight into how the DBE Program is affecting citizens and, more specifically, contractors and consultants of Washington State.

Apprenticeship Advisory Committee

Team is composed of representatives from WSDOT, Labor, and the AGC. Reviews WSDOT's Apprenticeship program and provides advice and recommendations on apprenticeship issues.

Washington Aggregate and Concrete Association (WACA)/WSDOT Team

Industry outreach team focused on concrete and aggregates. Membership includes representatives from WSDOT, WACA, and suppliers/technical experts who support concrete construction work.

American Concrete Pavement Association (ACPA)/WSDOT

Industry outreach team focused on concrete pavements. Membership includes representatives from WSDOT and the NW Chapter of APCA.

Washington Asphalt Paving Association (WAPA)/WSDOT

Industry outreach team focused on hot mix asphalt pavements. Membership includes representatives from WSDOT, WAPA with their member contractors, and technical experts who support hot mix asphalt paving work.

WAPA/WSDOT Paving Work Zone Risk

Industry outreach team to promote risk reduction and safety in the paving work zone. Membership includes representatives from WSDOT, WAPA with their member contractors, and organized labor and operator unions.

American Public Works Association/WSDOT

Industry outreach team focused on drainage items that include precast concrete, castings for grates, and all types of pipe. Membership includes representatives from WSDOT, local agencies, consultants, and fabrication plant representatives.

CHAPTER 3

Construction Program Business Plan goals and strategies

The Stakeholder Advisory Committee proposes the following priority goals to strengthen WSDOT's delivery of the capital improvement and preservation program and some strategies and actions WSDOT can use to adopt them.

The goals align with WSDOT's vision, while connecting the strategies with actions in progress to implement WSDOT's key initiatives and planning efforts (see Figure 3.1).

Figure 3.1 Construction Program Business Plan goals and strategies

Goal 1: Strong owner and stewardship

WSDOT CONTINUES TO BE A GOOD STEWARD OF THE STATE TRANSPORTATION INFRASTRUCTURE BY STRENGTHENING THE AGENCY'S ROLE AS A STRONG OWNER.

The State of Washington represents taxpayers by taking care of public lands and infrastructure. In this role, the State of Washington assigns responsibility to WSDOT to facilitate safe and efficient movement of people and goods. WSDOT maintains the state's role as a strong owner by:

- Serving as a steward of Washington's state-owned multimodal transportation system.
- Providing quality staff who are capable and knowledgeable about building, maintaining, and operating the state's transportation system.
- Taking thoughtful, nimble, and decisive actions, guided by state and taxpayer interests.
- Providing solutions and performance through effective budget and schedule control on capital improvement and preservation projects.
- Recognizing and embracing flexibility and alternative ideas within industry.

The ability to preserve and strengthen the strong owner role starts with WSDOT leadership. WSDOT leadership will share their vision for a strong owner strategy and how they plan to address challenges with recruiting, training, and retaining competent employees who can successfully plan and implement the capital improvement and preservation program.

Strategy 1: Achieve buy-in into the strong owner approach from staff, industry, and the Legislature by developing and implementing a communication and outreach plan for WSDOT Executive Leadership.

WSDOT's Executive Leadership team meets on a regular basis with a focus on three of WSDOT's emphasis areas: workforce development, inclusion, and implementing Connecting Washington using Practical Solutions. The communication and outreach plan will include key messages about WSDOT's strong owner strategy and how it relates to these three initiatives. The plan will outline key internal and external audiences and tactics to communicate the strategy and seek input.

Actions and evaluation

Type	Description
Actions	• Draft communication and outreach plan informed by Construction Business Plan and Strategy 2 by 4th Quarter 2017. • Implement communication and outreach plan by 4th Quarter 2018.
Lead	Kevin J. Dayton, Assistant Secretary, Regional and Mega Programs
Reporting tools	• Communication and outreach plan • Summary of actions to implement plan

Strategy 2: Provide a strong, capable, and high-quality engineering workforce by developing and managing a workforce development plan.

The workforce development planning is already in process, with the initial focus on reviving WSDOT's internship program. The plan will also cover:

- Providing a top-notch workforce development and leadership program, with trainings to give staff the tools and expertise to implement all types of project delivery.
- Potential staffing gaps, based on the workforce needs forecast.
- Barriers to recruiting and retaining staff in critical positions.
- Projected retirements and proactive ways to hire and onboard new staff to minimize staffing gaps.
- Succession planning for key leadership positions.
- Ways to promote WSDOT's reputation as a great employer.
- Attrition trends and the cost of turnover to help convey the importance of investing in WSDOT's workforce to the Legislature.
- Tools for retaining staff in the key geographic areas where resignations have increased and the job market is highly competitive.
- Recommendations from the Recruitment and Retention Study.

Actions and evaluation

Type	Description
Actions	• Update components of workforce development plan by 1st Quarter 2018 to include topics noted above. • Present updated workforce development plan to WSDOT leadership by 2nd Quarter 2018. • Begin implementation of workforce development plan in 3rd Quarter 2018.
Lead	Todd Dowler, Acting Human Resources Director Alvina Mao, Workforce Planning Manager Rafeaah Sok, Diversity and Inclusion Manager
Reporting tools	• Workforce development plan • Summary of actions to implement plan • Measuring time to fill engineering positions • Measuring quality of candidates for engineering positions by conducting hiring manager survey • Begin conducting pre- and post-training surveys for participants to evaluate trainings • Survey supervisors to assess staff performance following new initiative trainings (such as partnering workshops) • Measuring average trainings attended and training hours per engineering position • Engineering group attrition by tenure and reason for 2017-2018 • Updating retirement forecast chart • Evaluate results of exit interviews and establish them as an expectation for all staff

Strategy 3: Maintain the trust of the taxpayers, traveling public, and Legislature by forming and sustaining partnerships with industry partners to plan and deliver the capital improvement and preservation program and communicate with the Legislature and public.

WSDOT has a long history of collaboration and cooperation with the industry partners that work on agency projects. These partners include contractors, subcontractors, designers, suppliers, trade organizations, and other specialty organizations. Building relationships with industry partners is beneficial to both WSDOT and partners, since working together ensures the construction program is efficient and streamlined.

WSDOT is also implementing an Inclusion Work Plan (see Appendix E) to reflect an increased commitment to diversity and inclusion in planning, operations and services, internally and externally. The Inclusion Work Plan focuses on systemizing business practices that result in a more diverse workforce and increased outreach and inclusion strategies to historically underserved communities of Washington. Specific to industry partnerships, WSDOT is focused on increasing use of Disadvantaged Business Enterprises (DBEs), interacting with its DBE Advisory Group, and increasing diverse business owner access to state-funded work.

Through meeting with the organizations and teams outlined on page 23, WSDOT will:

- Provide opportunities for WSDOT and industry partners to collaborate and provide honest input.
- Seek input from industry and staff about ways to continue to provide an attractive environment for procurement that is fair and competitive.
- Identify and address barriers to successful project delivery so WSDOT becomes the owner of choice for industry partners.
- Convey WSDOT's goals for inclusion as outlined in the agency's Inclusion Work Plan.

In addition, WSDOT will communicate with the Legislature, taxpayers, and industry partners about how WSDOT values its industry partners and needs a strong partnership with private industry to successfully deliver projects.

Actions and evaluation

Type	Description
Actions	• Outline partnership outreach meetings, topics, and outcomes by 1st Quarter 2018. • Implement outreach and document events and outcomes beginning in 2nd Quarter 2018. • Develop a survey for industry partners to understand perceptions about WSDOT's strong owner strategy by 2nd Quarter 2018. • Conduct and analyze survey by 3rd Quarter 2018.
Lead	Chris Christopher, State Construction Engineer
Reporting tools	• Outreach plan and master calendar of events • Summary of outreach events and outcomes • Survey results

Goal 2: Sustainable staffing

WSDOT WILL ENSURE THE AGENCY HAS THE RIGHT BALANCE OF STAFF AND CONSULTANTS IT NEEDS TO DELIVER A SUCCESSFUL AND EFFICIENT CAPITAL IMPROVEMENT AND PRESERVATION PROGRAM BY ADDRESSING STAFFING NEEDS IN A PRODUCTIVE, SUSTAINABLE, AND PREDICTABLE WAY.

Washington state taxpayers, the traveling public, and the Legislature expect WSDOT will be able to maintain and improve critical transportation infrastructure by constructing projects funded by Connecting Washington. To fulfill this mission, WSDOT will rely on the engineering and technical workforce that performs or oversees these projects. WSDOT learned after the 2003 and 2005 funding packages that having an adequate and experienced workforce available to deliver the two programs was critical in successful delivery.

The Connecting Washington transportation package assumes a shift to additional delivery by consultants. WSDOT staff and industry need to rely on dependable projections of staffing levels and work that will be contracted out.

Strategy 1: Develop a staffing forecast through 2023 that avoids significant increases or reductions in staffing levels, communicates projections with staff, and update every biennium. The staffing forecast will include a target range of WSDOT full-time employees and staffing levels per biennium to support the capital improvement and preservation program.

WSDOT developed a Workforce Projection Model to aid with future planning. WSDOT used the following methodology to identify workforce needs:

- Model used a historical relationship between total dollar expenditures and WSDOT FTEs.
- The staffing forecast also includes assumptions for method of delivery (design-build and design-bid-build) as included in the 2017 Legislative final budget.
  - The relationship between total dollars and FTEs varies depending on project phase and project delivery method.
  - Example: Model assumes 4.8 FTEs per $1 million in expenditures during PE phase and .04 FTEs per $1 million in expenditures for construction in the 2017-19 biennium.

The Stakeholder Advisory Committee reviewed the results and identified 2,100 to 2,300 was the ideal target range of FTEs. The Stakeholder Advisory Committee and WSDOT will evaluate actual FTEs and consultant use and course correct as needed. The committee also noted it would take time for WSDOT to achieve this range. Therefore, in the next biennium, they anticipate WSDOT may need to fill any gaps with additional consultant resources.

Within the framework of WSDOT's future Improvement and Preservation budget, Figure 3.2 identifies the WSDOT and consultant workforce target, as well as additional expenditures such as contractor payments and property acquisitions. Figures 3.3 and 3.4 show only the consultant and WSDOT labor expenditures.

Figure 3.2 2,200 FTE Workforce Target - Expenditure Type Estimate

This graph shows estimated expenditures by category to support the WSDOT construction program through the 2021-2023 biennium.

Consultant usage ranges from $151 million in 2015-2017 to a high of $387 million in the 2017-2019 biennium.

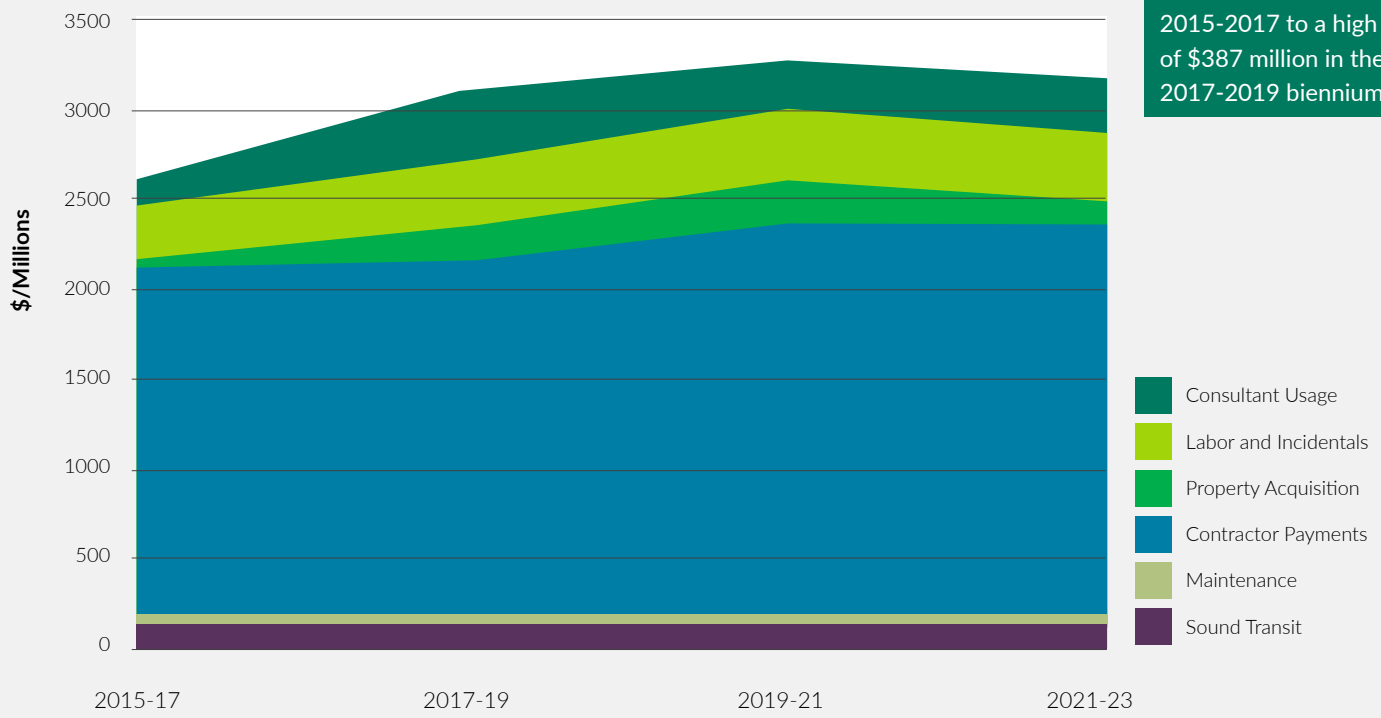


Figure 3.3 2,200 FTE Workforce Target - Expenditure Type Estimate

Consultant Usage and Labor Incidentals

This graph shows estimated consultant usage and WSDOT labor through the 2021-2023 biennium. WSDOT labor expenditures are separated by the preliminary engineering and construction phases.

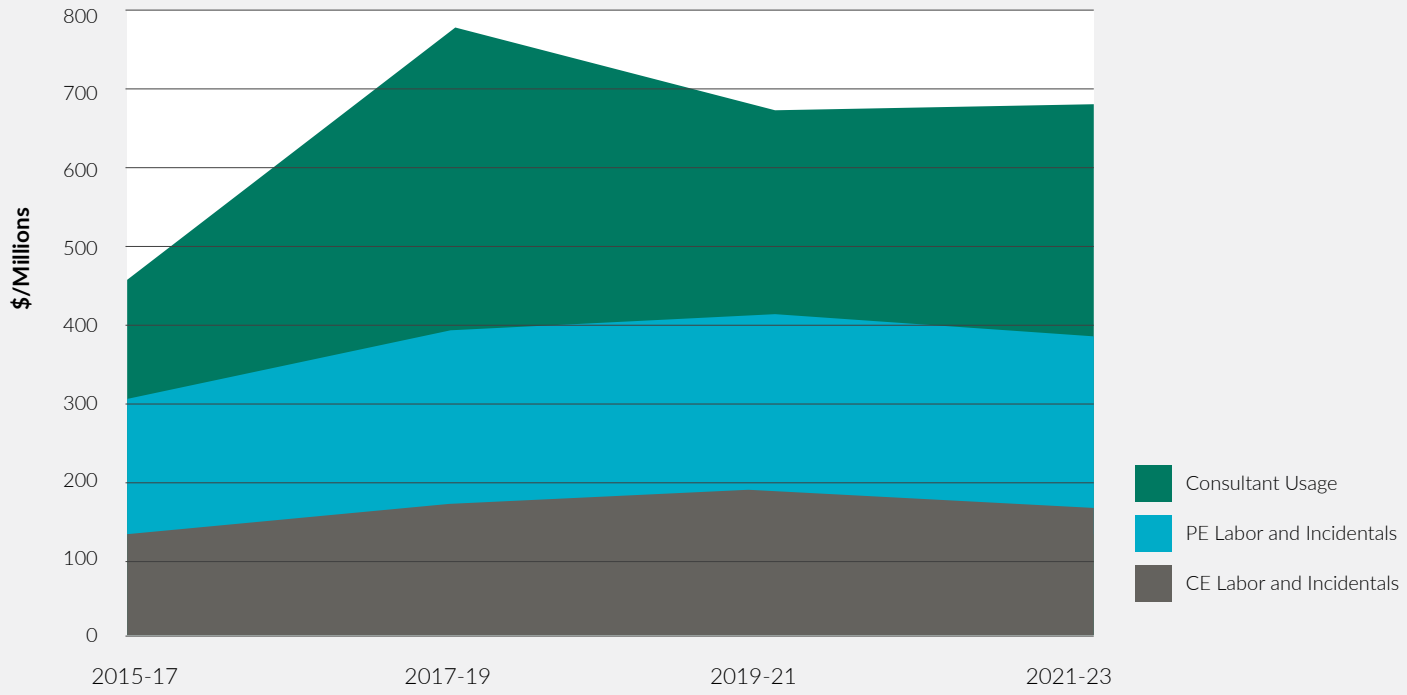
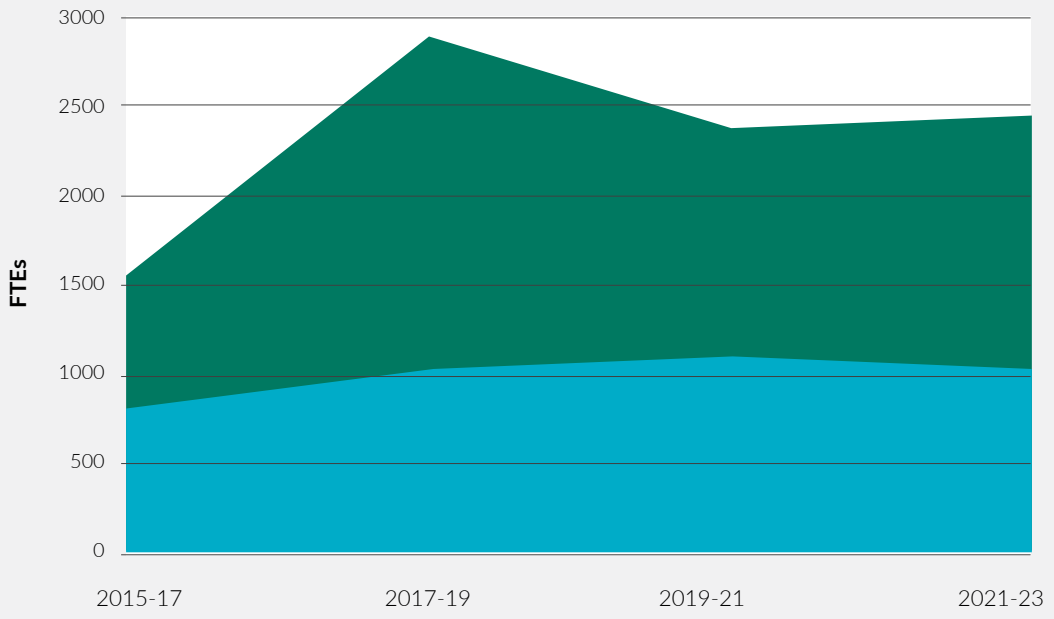


Figure 3.4 2,200 FTE Workforce Target - FTE by Expenditure Type Estimate

This graph estimates consultant FTEs based on projected expenditures. Estimated levels of WSDOT FTEs are shown for the preliminary engineering phase through the 2021-2023 biennium.



Estimated levels of consultant FTEs range from 724 FTEs in 2015-2017 to a high of 1,859 in the 2017-2019 biennium.

Consultant Usage - FTE

PE Labor and Incidentals - FTE

Actions and evaluation

Type	Description
Actions	• Distribute Workforce Project Model to key WSDOT staff and share with industry partners (through events outlined in Goal 1, Strategy 3). • Update workforce projection model in 4th Quarter 2018 and compare with actuals, present and discuss with Stakeholder Advisory Committee.
Lead	Jay Alexander, Capital Program Development & Management Director Kevin J. Dayton, Assistant Secretary, Regional and Mega Programs
Reporting tools	• Updated Workforce Projection Model

Strategy 2: Provide information about what WSDOT needs to respond to a competitive job market and sustain required staffing levels for program and project delivery.

As outlined in Chapter 2 and in the Recruitment and Retention Study, many factors influence WSDOT's ability to attract and retain a capable workforce. WSDOT's Office of Intergovernmental and Tribal Relations will brief the Legislature and legislative staff on these factors in an ongoing manner through 2018 and beyond. The Stakeholder Advisory Committee also intends to share these findings with legislators. WSDOT and PTE Local 17 will continue to collaborate on making sure our wages are competitive.

Actions and evaluation

Type	Description
Actions	• Conduct legislative briefings beginning 4th Quarter 2017 through 2018. Ongoing collaboration with PTE Local 17.
Leads	Allison Camden, Intergovernmental and Tribal Relations Director Todd Dowler, Acting Human Resources Director
Reporting tools	• Summary of legislative outreach • List of meetings with PTE Local 17

Strategy 3: Identify and proactively communicate opportunities for the consultant workforce to support program delivery by offering WSDOT flexible staffing and expertise.

The Workforce Projection Model identified WSDOT anticipates a value of approximately $387 million in consultant contracts from 2017 to 2019 and $265 million in the 2019-2021 biennium. WSDOT will share these projections with industry as well as the value and type of upcoming contracts. In addition, WSDOT will offer opportunities for industry to participate in future design-build and partnership trainings.

Actions and evaluation

Type	Description
Actions	• Distribute Workforce Projection Model and information about upcoming contracts with industry partners (through events outlined in Goal 1, Strategy 3). • Invite industry partners to future trainings.
Leads	Chris Christopher, State Construction Engineer Jeff Carpenter, Development Division Director and State Design Engineer
Reporting tools	• Summary of industry outreach and training opportunities

Goal 3: Project delivery

ENACT AND ACCOMPLISH THE MAJORITY OF RECOMMENDATIONS OF THE JOINT TRANSPORTATION COMMITTEE'S DESIGN-BUILD STUDY.

The Legislature recognizes the opportunity for WSDOT to employ design-build in project delivery to maximize efficiencies in cost and schedule. As the JTC study found, WSDOT is already doing many things well that align with design-build best practices, such as industry outreach and shortlisting. The study also outlined 27 recommendations for WSDOT to continue improving aspects of its design-build practices.

In recognition of these recommendations and the significant contract value of upcoming design-build contracts, WSDOT is already moving forward on advancing many of these recommendations, but will rely on industry teams to identify the most important tasks and advise WSDOT on enacting specific strategies.

Strategy 1: Prioritize and implement recommendations from the JTC Design-Build Study in coordination with industry teams and report back about outcomes.

In an effort to address the 27 recommendations from the JTC's Design-Build Study, WSDOT will meet with industry to prioritize and implement the recommendations. WSDOT has developed an initial work plan and will update the plan status as work progresses (see Appendix F).

Actions and evaluation

Type	Description
Actions	• Develop plan to engage with industry teams by 1st Quarter 2018. • Continue ongoing engagement with industry teams to implement design-build recommendations and provide quarterly updates to the progress report, which includes the status of JTC recommendations.
Lead	Chris Christopher, State Construction Engineer
Reporting tools	• Updates to JTC progress report

CHAPTER 4

Work plan

The timeline below identifies the actions described in Chapter 3 and the anticipated timeline for completion. WSDOT will provide an update on the status of these actions in a report to the Legislature on September 30, 2018.

	2017			2018											
	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December
GOAL 1: STRONG OWNER AND STEWARDSHIP															
Strategy 1															
Draft communication and outreach plan															
Implement plan															
Strategy 2															
Update components of workforce development plan															
Present plan to leadership															
Implement plan (ongoing)															
Strategy 3															
Outline partnership outreach															
Implement plan and document outcomes															
Develop survey															
Conduct and analyze survey															
GOAL 2: SUSTAINABLE STAFFING															
Strategy 1															
Update workforce projection model															
Strategy 2															
Conduct legislative briefings and meetings with PTE Local 17															
Strategy 3															
Distribute workforce projection model															
Invite industry partners to trainings (ongoing)															
GOAL 3: PROJECT DELIVERY															
Strategy 1															
Develop plan to engage with industry teams to prioritize JTC recommendations															
Ongoing engagement and implementation of recommendations (see Appendix F for detail)															
REPORTING															
Prepare biennial progress report (due Sept. 1, 2018)															

CHAPTER 5

Next steps

In November 2017, WSDOT will reconvene the Stakeholder Advisory Committee to review the final action plan and develop an approach for their engagement moving forward. WSDOT's intent is to continue to involve the Stakeholder Advisory Committee to guide the progress of the action plan and the biennial reports to the Legislature.

Throughout 2017 and 2018, WSDOT task leads will move forward with implementing their strategies and tracking their objectives. By early 2018, WSDOT will develop an approach and work plan for the first biennial progress report, due to the Legislature on September 30, 2018.

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