



## **SERVING FUTURE TRANSPORTATION NEEDS:**

# **Succession Planning for a State Department of Transportation Organization, Its People & Mission**

**Final Report**

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# SI\* (MODERN METRIC) CONVERSION FACTORS

## APPROXIMATE CONVERSIONS TO SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
<b>LENGTH</b>				
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
<b>AREA</b>				
in <sup>2</sup>	square inches	645.2	square millimeters	mm <sup>2</sup>
ft <sup>2</sup>	square feet	0.093	square meters	m <sup>2</sup>
yd <sup>2</sup>	square yard	0.836	square meters	m <sup>2</sup>
ac	acres	0.405	hectares	ha
mi <sup>2</sup>	square miles	2.59	square kilometers	km <sup>2</sup>
<b>VOLUME</b>				
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft <sup>3</sup>	cubic feet	0.028	cubic meters	m <sup>3</sup>
yd <sup>3</sup>	cubic yards	0.765	cubic meters	m <sup>3</sup>
NOTE: volumes greater than 1000 L shall be shown in m <sup>3</sup>				
<b>MASS</b>				
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")
<b>TEMPERATURE (exact degrees)</b>				
°F	Fahrenheit	5 (F-32)/9 or (F-32)/1.8	Celsius	°C
<b>ILLUMINATION</b>				
fc	foot-candles	10.76	lux	lx
fl	foot-Lamberts	3.426	candela/m <sup>2</sup>	cd/m <sup>2</sup>
<b>FORCE and PRESSURE or STRESS</b>				
lbf	poundforce	4.45	newtons	N
lbf/in <sup>2</sup>	poundforce per square inch	6.89	kilopascals	kPa
<b>APPROXIMATE CONVERSIONS FROM SI UNITS</b>				
Symbol	When You Know	Multiply By	To Find	Symbol
<b>LENGTH</b>				
mm	millimeters	0.039	inches	in
m	meters	3.28	feet	ft
m	meters	1.09	yards	yd
km	kilometers	0.621	miles	mi
<b>AREA</b>				
mm <sup>2</sup>	square millimeters	0.0016	square inches	in <sup>2</sup>
m <sup>2</sup>	square meters	10.764	square feet	ft <sup>2</sup>
m <sup>2</sup>	square meters	1.195	square yards	yd <sup>2</sup>
ha	hectares	2.47	acres	ac
km <sup>2</sup>	square kilometers	0.386	square miles	mi <sup>2</sup>
<b>VOLUME</b>				
mL	milliliters	0.034	fluid ounces	fl oz
L	liters	0.264	gallons	gal
m <sup>3</sup>	cubic meters	35.314	cubic feet	ft <sup>3</sup>
m <sup>3</sup>	cubic meters	1.307	cubic yards	yd <sup>3</sup>
<b>MASS</b>				
g	grams	0.035	ounces	oz
kg	kilograms	2.202	pounds	lb
Mg (or "t")	megagrams (or "metric ton")	1.103	short tons (2000 lb)	T
<b>TEMPERATURE (exact degrees)</b>				
°C	Celsius	1.8C+32	Fahrenheit	°F
<b>ILLUMINATION</b>				
lx	lux	0.0929	foot-candles	fc
cd/m <sup>2</sup>	candela/m <sup>2</sup>	0.2919	foot-Lamberts	fl
<b>FORCE and PRESSURE or STRESS</b>				
N	newtons	0.225	poundforce	lbf
kPa	kilopascals	0.145	poundforce per square inch	lbf/in <sup>2</sup>

\*SI is the symbol for the International System of Units. Appropriate rounding should be made to comply with Section 4 of ASTM E380.  
(Revised March 2003)

## EXECUTIVE SUMMARY

Alaska has a shortage of engineering and technical professionals. For example, at the Alaska Department of Transportation and Public Facilities (ADOT&PF), the vacancy rate for engineers is about 20%. Compounding this situation is the indication from our research that 43% of engineers and other technical professionals at ADOT&PF are very likely or somewhat likely to leave within the next three years. A literature search confirmed this tendency as a nationwide problem, but yielded few suggestions for improving retention that would be applicable to Alaska.

Our survey of ADOT&PF Engineers I and II indicated that about 52% of them are likely or somewhat likely to leave the department if a major development project, such as a natural gas pipeline, were to begin. Though all potential major projects in Alaska are tentative, ADOT&PF would need additional personnel to deal with this loss if such a project came to fruition.

In order to identify specific retention issues, we surveyed ADOT&PF managers, engineers, and other technical professionals. We then reviewed the results of those methods, formed conclusions, and suggested recommendations, including some implementation tools. Succession planning must address these retention issues and it must address recruiting, since the same issues affect both retention and recruiting.

A primary finding of our survey is that most engineers and other technical professionals at ADOT&PF are satisfied with their employment and likely to stay. However, some trends of dissatisfaction are evident. Among the findings are the following (not necessarily in order of importance):

1. A shortage of engineers and technical professionals exists and is becoming critical. Actions are needed to assure that ADOT&PF has sufficient technical personnel to carry on its mission. This requires attention beginning at the policy-making level and extending to line management.
2. Relevant job-skills training is lacking, especially training in soft skills such as communication and human relations. Many employees feel a lack of mentoring, the personal one-on-one transfer of knowledge from more-experienced personnel to less-experienced personnel. The responsibilities of a supervisor must include the training and professional growth of subordinate employees.
3. With respect to technical training, the training needs of such “line” positions as design and construction are different from the training needs of non-line professional support such as geotech, materials, environmental, and right of way. An analysis of these needs is recommended.
4. Nearly one-third of surveyed employees feel a lack of appreciation, acknowledgment, and sense of personal accomplishment at ADOT&PF, and report a deficiency in feedback and clear expectations. Some employees feel criticized by their supervisors, the public, and the legislature. This situation relates to human-relations training of supervisors and the need for department-wide appreciation initiatives.
5. Pay continues to be a large issue among the surveyed employees. Engineer I and II positions are not eligible for overtime pay, a matter that should be explored.

6. Concerns about Tier IV retirement were mentioned often in survey responses. Some Tier IV employees would prefer a return to a defined-benefit program. Additionally, some supervisory personnel believe that the Tier IV program provides no incentive for newer employees to stay. The effects of a defined-contribution type of retirement system must be considered as part of the entire recruiting and retention issue.
7. There is widespread agreement that many aspects of the ADOT&PF workplace are satisfactory. These positive aspects ought to be emphasized with both current and prospective employees. Although most employees are comfortable with their situations, some employees noted deficiencies with their physical work locations. Funds should be made available to improve these situations.
8. Though the prospect of a major development project in Alaska in the near future is uncertain, we recommend monitoring the situation, with the idea that planning and funds for the planning are made available to ADOT&PF before major private projects are actually approved—that is, during the pre-approval process, once the approval is expected.

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## OVERVIEW, INTRODUCTION, AND PROBLEM STATEMENT

### Overview

Nationwide, there is a shortage of engineers and other technical professionals who design and build transportation systems. This shortage is especially acute among professionals in lower and mid-level management positions—those individuals best prepared to move into the upper management positions of retiring Baby Boomers. In Alaska, the shortage is particularly severe. The Alaska Department of Transportation and Public Facilities (ADOT&PF) is experiencing the difficulties of this shortage; in addition, it is having trouble recruiting sufficient numbers of entry-level engineers and technical professionals. Here are some facts to illustrate the problem:

- Presently, 14% of the entire ADOT&PF workforce is eligible to retire; an additional 15% will be eligible in 5 years.
- The vacancy rate for ADOT&PF engineers is about 20%.
- Our research indicates that 43% of ADOT&PF engineers and technical professionals are very likely or somewhat likely to leave the department in the next three years, if the Alaska economy remains stable.
- Our research also indicates that Engineers I and II (individuals who made up our core research focus group) are slightly less likely to leave if the economy remains stable. However, 52.5% of employees from this group are likely or somewhat likely to leave if a major project like the gas line begins,

Early in our research, we realized that the same issues affecting the retention of key employees were likely also affecting recruitment. We realized, too, that unless the retention issues were addressed, succession planning would be limited. Therefore, we used three research methods to evaluate retention:

1. A literature search of relevant workforce retention and succession planning literature was conducted. The major transportation research units—the National Cooperative Highway Research Program (NCHRP) of the Transportation Research Board (TRB) and the American Association of State Highway and Transportation Officials (AASHTO)—have published several comprehensive and useful reports. We surveyed other government literature that was not DOT-related, recent literature from general business, as well as ADOT&PF materials. Most of this literature reinforced our starting assumption that loss of upper-division technical professionals and shortages of middle-division and entry level professionals, are nationwide problems. (Most of this literature was based on data published before the recent economic downturn.) No “magic formulas” for fixing those shortages were found in the literature.
2. A review of major proposed projects in Alaska was made by calling the main resource agencies and consulting available literature. Various proposals for the gas line from North Slope have been documented and, since this is the largest of the projects, some estimates could be made. All of these projects are tentative. However, it is clear that ADOT&PF would need additional human resources to deal with the transportation and facilities impacts of any such project.

3. A survey was completed of ADOT&PF managers, engineers, and technical professionals. We used a novel technique: one of our researchers met with the selected employees and personally handed them the envelopes with the survey material. This technique resulted in an excellent response rate of 72.5%. Responses were coded so that job class and location of each respondent could be identified. The responses were entered into a database for analysis by factors such as age, gender, region, job class, and supervisor/non-supervisor.

The findings and information from these methods were reviewed by three principal researchers, who together have over eighty years of professional engineering and management experience in Alaska, including thirty years with ADOT&PF. The results of these methods were reviewed, and conclusions and recommendations, including some implementation tools, followed.

The literature search brought many good ideas to our attention. However, our conversations and data indicated that most of these ideas had been considered previously by ADOT&PF. Likewise, the investigation into the possible impacts of large projects indicated that little can be done now, since the projects are not close to approval. If the projects are approved, however, they would impact ADOT&PF, and special staffing would be needed. Preparation for such events would probably be outside of the State Transportation Improvement Plan (STIP).

Survey results indicated that most ADOT&PF professional and technical employees are satisfied with their employment and likely to stay. Some trends of dissatisfaction, however, need to be addressed, and some trends of satisfaction could be emphasized in recruiting and retention literature. The ten primary concerns and recommendations are provided below, in no particular order. A summary of conclusions and recommendations is discussed in further detail later in the report. Please note that the recommendations made in this report are not hard-set, but rather are intended as suggestions.

1. **Critical Shortage of Skilled Engineers and Technical Professionals:** There is a critical shortage of skilled engineers and technical professionals, which is probably going to worsen with retirement eligibility. Steps must be taken to reduce loss of Engineer I and II employees. Improvement in retention may follow some relatively inexpensive steps, but these steps will require changes in the corporate culture of the agency and the support of ADOT&PF upper management. **Recommendation:** Consider this report as important factual input to the department's succession planning efforts, and schedule a half-day discussion and feedback work session with upper management, where these findings and recommendations are discussed.
2. **Lack of Relevant Job-Skills Training:** Many surveyed employees report a lack of **relevant** job-skills training. We are aware that ADOT&PF has a robust training program for technical skills. Here, we note that it is soft skills—communication, human relations, teamwork, public involvement, supervision—where a perceived lack of training exists. **Recommendation:** Inventory the skills of managers and incipient managers, and develop programs to improve those skills. Further, supervisors and managers need to accept that training the next generation of workers is an important part of their job. We recognize this is difficult when the emphasis is to “get the project on the streets” or “get the project built,” but it can happen if the supervisors accept this as an important part of their job.

3. **Line versus Non-Line Jobs:** In analyzing responses by job classification, we found differences between engineers in the line jobs (design and construction), and engineers and non-engineer professional support staff in the non-line jobs (geotech, materials, right of way, environmental, and planning). **Recommendation:** Recognizing that some non-line jobs require definite certification-related training, conduct an analysis to determine if the training and development needs of employees in those jobs are different from the needs of employees in line jobs.
4. **Human Relations:** Approximately 30% of the surveyed employees feel a lack of appreciation, acknowledgment, a sense of personal accomplishment, feedback, and clear expectations in the ADOT&PF workplace. Some employees feel criticized not only by their supervisors, but also by the public and the legislature. We feel this relates to human-relations training of supervisors and the need for department-wide appreciation initiatives. **Recommendation:** Expand human relations and teamwork training for supervisors.
5. **Mentoring:** Many employees note a lack of mentoring, which is the personal one-on-one transfer of knowledge from more-experienced personnel to less-experienced personnel. This problem is similar to Concern #2, regarding job skills, but mentoring is needed to transfer the skills that cannot be transferred by regular training. **Recommendation:** Initiate a mentoring program.
6. **Pay:** Pay continues to cause dissatisfaction. Fifty-three percent of Engineers I and II in this survey do not believe they receive a fair and adequate salary. **Recommendation:** Explore ways that non-salary amenities, especially work/life balance, might be emphasized. Since the critical Engineer I and II classifications do not receive overtime pay, explore their compensation method.
7. **Tier IV Retirement:** Approximately 40% of the survey respondents cite the Tier IV retirement plan as a problem in terms of compensation and retention. Many of the newer employees in Tier IV are younger and belong to the Millennial Generation. Employees of this generation tend to value work/life balance more than the older generation, and may be more amenable to acceptance of non-monetary compensation. Some Tier IV employees would prefer a return to a defined-benefit program. Some supervisory personnel believe the Tier IV program provides no incentive for newer employees to stay. **Recommendation:** The effects of a defined-contribution type of retirement system must be considered as part of the entire recruiting and retention issue.
8. **Satisfactory Workplace:** There is widespread agreement that many aspects of the ADOT&PF workplace are satisfactory, including benefits (except for retirement Tier IV), job security, family-friendly work environment including schedule flexibility that allows work/life balance, a feeling of acceptance, knowledgeable supervisors, emphasis on professionalism, and positive workplace environment. **Recommendation:** Emphasis of these workplace qualities might be used to bolster morale and enhance recruitment efforts.

9. **Workplace Amenities:** Employees are comfortable with their situations and are neither satisfied nor dissatisfied with amenities. However, survey text comments indicate that some employees have strong concerns. We conclude that these concerns are highly specific to certain locations—buildings—and note that ADOT&PF managers are likely well aware of deficient buildings and locations.  
**Recommendation:** Budget for improvements to these substandard locations and situations, and invite employees who are affected to suggest improvements.
10. **Major Development Projects in Alaska:** The prospect of a major development project in Alaska in the near future is uncertain. If such becomes a reality, the impact on ADOT&PF will be significant. **Recommendation:** Monitor the situation, with the idea that the department’s planning, and funds for that planning, must be available before the projects are actually approved—that is, during the pre-approval process, once approval is probable.

## Introduction and Problem Statement

On July 24, 2009, the Alaska University Transportation Center (AUTC) authorized the project, “Serving Future Transportation Needs: Succession Planning for a State Department of Transportation Organization, Its People and Mission.” The need for such a study arose from widespread concerns, both within ADOT&PF and throughout other technology-based public agencies and private firms, that sufficient technical personnel will not be available to fulfill future needs. The problem statement, as given in the project proposal, is as follows:

*ADOT&PF recognizes increasing problems regarding hiring and long term retention of good people in certain job classifications. A part of the problem considered in this research involves successfully recruiting sufficient numbers of people with adequate education, skills, and temperament needed to handle the ADOT&PF workload now and in the foreseeable future. This must be done regardless of salary/benefits offerings that may appear (with some job classifications) lower than equivalent private sector jobs. Successful recruitment is only part of the long term work force picture that will be considered within the scope of this project. An even larger problem appears on the other side of the coin, employee retention. Successful retention requires that the organization be designed to nurture these people from entry level to senior managers. Success requires at least three things: 1) An organization that values people, 2) sufficient investment to provide job satisfaction and job opportunities, and 3) an organizational structure to accomplish these things. The research objective is to provide ADOT&PF with specific management and organizational tools to overcome challenges related to both recruiting and retention.*

Thus, we report here a study of succession planning, and we adopt the following working definition of that term:

*Succession planning is a strategy and process of workforce planning designed to ensure the sustained effective performance of an organization by continually developing, supporting, and replacing vital personnel as needed to fulfill the organization’s mission. For the Alaska Department of Transportation and Public Facilities, successful succession planning results*

*in a sufficient professional workforce that is well-trained and properly placed to serve Alaska's current and future needs. The process includes*

- 1) maintaining a workplace where current employees are likely to remain,*
- 2) adding well-qualified employees to the workforce as needed,*
- 3) providing comprehensive training and mentoring that transfers knowledge, skills and organizational culture, and*
- 4) preparing the organization for likely future workforce requirements.*

At the outset, we emphasize that succession *planning* fits within a larger context of succession *management*. Charan (2000) defines succession management as “perpetuating the enterprise by filling the pipeline with high-performing people to assure that every leadership level has an abundance of these performers to draw from, both now and in the future.” Thus, the work and recommendations described in this report seek to assist the department in establishing a *plan*, which can then be *managed* to provide adequate human resources to carry out its mission.

### **ADOT&PF in Perspective**

The Alaska Department of Transportation and Public Facilities is the largest of the state's fifteen executive branch agencies, measured by number of employees. According to the State of Alaska Workforce Profile for FY 2009 (Department of Administration, 2009), the department's 3,325 employees were 21.4% of the total 15,533 executive branch employees. The average monthly salary of \$4,803.80 ranked ninth among the fifteen branches. For all branches, the average was \$4,727.97, ranging from an average of \$4,254.71 for Military and Veterans Affairs to \$5,961.86 for Law.

The same report shows that the average age of ADOT&PF employees in 2009 was 46.5, compared with an average age of 45.2 for all executive branch employees, tying it for third oldest among the fifteen operating agencies. The average age per agency ranged from 41.3 for Public Safety to 47.8 for Labor and Workforce Development. The average age of ADOT&PF new hires was 40.6 (fourth highest), compared with an overall average of 38.3 and a range of 33.1 for the Governor's Office to 42.2 for Military and Veterans Affairs. Finally, ADOT&PF employees had an average of 9.52 years of State of Alaska service, compared with an overall average of 8.91 years of service, placing it fifth in this longevity measure. Range of service was 7.52 years for Military and Veterans Affairs to 11.14 for the Governor's Office.

### **Current Workforce Status**

The importance of effective workforce planning at ADOT&PF cannot be overemphasized. Depending on one's point of view, the current and predicted future status of staff levels ranges from dire to mildly inadequate. The department is not alone in this case. Most state and federal transportation agencies and, indeed, others in the public works sector, are facing similar challenges. Among the causes of the present workforce situation in Alaska and elsewhere are the following:

- Large numbers of employees are eligible to retire now or soon. As of July 31, 2010, 14% of ADOT&PF's total workforce could retire immediately, and another 15% could retire within five years. Aging of the Baby-Boom population (those born between 1946 and 1964) and the so-called Interstate Era workforce (a group that overlaps the baby boomers

and provided large numbers of personnel for the development of the Interstate Highway System) is impacting retirements throughout the nation's employment sector, both public and private.

- Lack of successful recruiting, and the time required to make these hires, has resulted in many unfilled positions. As of May 26, 2009, ADOT&PF's vacancy rate among engineer positions was 21%. (DOT/PF Engineer Employees Eligible for Retirement, 2009)
- Although Alaska is an attractive place to live and work for many people, most employers in Alaska, including ADOT&PF, face special recruiting challenges related to climate, cost of living, distance from family, and the like. Anecdotal evidence suggests that some engineering employers experience about a 25% success rate in retaining new hires from outside of Alaska for more than a year; the other 75% "go back home."
- Job requirements are changing, with the result that available skill sets often do not match needs. Changes in technology require updated technical skills. Outsourcing of design work requires agency employees with the expertise to administer such contracts. High customer expectations require employees who can respond appropriately. Such soft skills as creativity, teamwork, and public involvement, in addition to oft-mentioned proficiency in communication, project management, and supervision, are increasingly important.
- Increases in available funding for transportation projects have placed a growing demand on state agencies. While the future of national infrastructure funding is now uncertain (as it always is!), and while future demands for Alaska transportation projects are difficult to predict (more on this later), Alaska's recent history shows increasing funding for such work and thus a need for its transportation agency to provide expanded staff to respond. Similar to other states, possible future demands could include mandates to develop and operate public transit systems.
- Differences among the generations mean differing expectations in the workplace. Younger employees tend to place emphasis on "work/life balance." To recruit and retain such persons, employers are challenged to provide a work environment different from that in the past.
- External conditions, over which the agency has no direct control, also influence the attractiveness of the job to potential employees and the satisfaction and productivity of current employees. These conditions include employment competition with the private sector, with its often higher salaries, and various system-mandated benefits such the state's retirement system.

Where will new employees come from? What are their needed skill sets? What conditions will make all ADOT&PF employees likely to remain with the department? What can ADOT&PF do to make itself an employer of choice? What specific factors rank highest (and lowest) in determining employee satisfaction? Do some employee groups view job satisfaction in a different way than other groups? This report attempts to address these kinds of questions.

## **Organization of the Report**

The next section of this report reviews other related efforts by ADOT&PF to address succession planning. The brief literature review that follows suggests that a great deal of relevant material



has been published on the subject. We identify potential projects in Alaska that could influence future transportation planning, design, and construction. Some demographic trends are then presented, followed by this project's primary effort, an employee survey that determined attitudes, reasons for staying and leaving, and suggestions for improving the ADOT&PF work environment. We conclude with recommendations and a suggested implementation plan.

## OTHER CURRENT ADOT&PF SUCCESSION PLANNING ACTIVITIES

For several years, ADOT&PF has been concerned about the prospect of insufficient numbers of qualified employees. Recent succession planning activities include the following:

- The department's 2008 Strategic Plan includes five goals. Goal #5 is "Promote career growth and safety for all staff." Within that goal, three of five measures address succession planning issues:

Measure 3: Percent change in annual turnover rate for employees.

Target 3: Achieve 3% decrease in turnover rate.

Measure 4: Establish a mentoring program by January 2009.

Target 4: Achieve a 5% increase in the number of employees participating in a mentoring program annually.

Measure 5: Percent change in employees promoted from within.

Target 5: Achieve a 3% increase in the number of employees promoted from within the department.

- The department established a Succession Planning Committee in 2008. Membership includes the commissioner and six other high-level ADOT&PF managers. To date, the committee has produced a policy statement, a succession planning flow chart, guidelines for supervisors and mentors, and planning worksheets. The committee continues to assist the department with critical career path planning for both participants and their supervisors, to advise the commissioner and the commissioner's management group on workforce issues, and to provide advice and feedback on the workforce plan currently under development.
- Prior to the formation of the Succession Planning Committee, the department developed a Career Opportunities brochure as a means of promoting focus on workforce planning.
- The department engaged the McDowell Group to conduct an employee satisfaction survey (McDowell Group, 2008) among all department employees. The report, dated April 2008, provides a wealth of data about workforce development and succession planning matters. It includes a comparison of ADOT&PF and Alaska Department of Environmental Conservation employee attitudes. Commissioner von Scheben distributed a memorandum to his management team on April 11, 2008, outlining several key points from the report, related to retention, training, recognition, performance, salary/benefits, growth and advancement, communication, and teamwork. At the end of this report, a comparison of some of this project's findings with those from the McDowell report is given.
- As part of her work in the role of Division Operations Manager for Administrative Services within ADOT&PF, Amanda Holland is the department's lead for workforce planning. Holland has prepared and distributed a number of workforce profile reports, including data on engineer employees eligible for retirement, average years of state service, average age of current employees and of new hires, successful recruitment percentages, and female/male gender percentages. Under Holland's direction, a departmental strategic workforce development plan is being developed. The plan is

intended to assist in the recruitment, retention, and professional growth of the workforce based on four strategies related to training and development, recruitment, retention, and outreach. The workforce planning program template has been developed and will be fleshed out over the next year.

- The ADOT&PF and UAF's Civil and Environmental Engineering Department held a workshop on workforce development issues on May 27, 2009, in Anchorage. Among topics discussed were implementation of the new UAF graduate certificate program in construction management and the succession planning project, reported herein, that had just been launched.
- Although not directly related to succession planning, three other activities are typical of the department's interest in the matter: (1) knowledge management, with succession planning as one of three key areas; (2) a presentation by Keli Hite McGee on May 28, 2009, to the ADOT&PF Commissioner's Executive Group on Nurturing Human Capital that included employee performance and turnover; and (3) a one-hour November 2009 American Society of Civil Engineers webinar on mentoring at the annual ADOT&PF meeting of construction engineers.
- In addition, the department, through its Statewide Research and Technology Transfer Program, maintains contact with agencies in other states and with the federal government that try to keep up to date on succession planning issues. Examples are:
  - NCHRP 20-72 Tools to Aid State DOTs in Responding to Workforce Challenges, Final Report Prepared for National Cooperative Highway Research Program Transportation Research Board of The National Academies February 24, 2009
  - The Workforce Challenge: Recruiting, Training, and Retaining Qualified Workers for Transportation and Transit Agencies – Special Report 275, Committee on Future Surface Transportation Agency Human Resource Needs: Strategies for Recruiting, Training, and Retaining Personnel, The National Academies
  - Entry-Level Transportation Construction Workforce Shortages, FDOT Contract # BDF05 September 2007, Submitted to State of Florida, Department of Transportation
  - 21<sup>st</sup> Century Workforce Development Summit, Wisconsin DOT, September 2009
  - Preparing Tomorrow's Transportation Workforce: A Midwest Summit April 27–28, 2010, Midwest Transportation Consortium and Iowa State University

The intent of the present study is to complement and enhance the many efforts that ADOT&PF has already made or is undertaking with regard to succession planning.

## **RESULTS OF LITERATURE SEARCH AND ANNOTATED BIBLIOGRAPHY**

Succession and succession planning have been hot topics in management and management research for over ten years. Many books on these two topics have been written, as well as hundreds of papers, magazine articles, research documents, and compendiums. Numerous seminars and consultants offer help with succession issues. In this literature search and review, we endeavored to find literature that was pertinent to ADOT&PF and this research. Formal citations are contained in the reference list at the end of the report. Here, we present a brief description and, in some cases, the major findings of documents that are especially helpful; they are divided into four main categories:

Material special to ADOT&PF – Most of this literature, which was supplied by ADOT&PF, includes information on the gas pipeline and other major projects.

Material regarding transportation workforce issues – Most of this literature is from TRB and NCHRP publications.

Material regarding government workforce issues – From the thousands of documents online, we selected some recent ones that seem pertinent.

Material regarding general workforce issues – This material includes pertinent current literature, as well as some classic literature that may be valuable.

### **Material Special to ADOT&PF**

- 10-30-08-EA I-II Recruitments from 2006–2008.xls: Excel sheet with data on the age at hire of new Engineering Assistants I/II. Interesting data, but may have confidential data, so only the charts are in Appendix A.
- ADF&G Workforce Planning and Development Program Coordinator PD.doc: Example of Alaska agencies hiring a coordinator for workforce planning. This position focuses primarily on recruitment and does not perform the full range of workforce planning.
- Alaska DOT Workforce 2007.pdf: Graph and table on DOT people eligible for retirement by job category.
- DOT-Report-to-Staff.pdf: This is a 17-page summary of the McDowell Report, April 2008.
- Engineering career path brochure draft 1.pdf: Example of brochure.
- Succession Planning Forms.pdf: Has all forms for package including above.
- Succession Planning flowchart 7-08.doc.
- Palin transition report.pdf.
- DOT & PF Engineer Employees Eligible for Retirement. pdf
- Handout for Nurturing Human Capital.docx, Keli McGee's notes for Workforce Talk.
- Workforce Profile 5-09.doc: Has demographics of ADOT&PF staff.

- Selectedlistofseparatedakdotpfemployees.zip: Has Excel files of ADOT&PF employees separated from service between 2007 and 2010.
- FW Research Project Question.txt. Copy of email from Ed Folgels of the Alaska Department of Natural Resources (DNR) discussing major projects.
- Impacts of Alaska Natural Gas Projects by Info Insights-05010.pdf: A major paper by Information Insights about impacts of an Alaska gas pipeline.
- Links to Gas Pipeline Infrastructure Improvements.htm: Email from Jim Sweeney with links to two Alaska DOT documents on the effects of the gas pipeline on infrastructure.

## **Transportation Workforce Literature**

- The Workforce Challenge: Recruiting, Training, and Retaining Qualified Workers for Transportation and Transit Agencies. [Special Report 275] 2003. Transportation Research Board of The National Academies Committee on Future Surface Transportation Agency Human Resource Needs: Strategies for Recruiting, Training, and Retaining Personnel. Booklet thoroughly examines workforce shortages in state DOTs and transit agencies and develops recommendations, including more training, using federal highway funds for education and training, innovation in human resource (HR) practices, partnering with universities, community colleges, training institutes, and LTAP centers, and having transportation agency leaders make human resource management a strategic function in their agencies.
- Aviation Workforce Development Practices a Synthesis of Airport Practice [ACRP Synthesis 18] 2010. Consultant Seth B. Young. Columbus, Ohio. Transportation Research Board, Washington, D.C.: Good overview of airport needs, most of which are related to airport operations, not design or construction.
- The Impacts of Design-Build on the Public Workforce. [Research Paper 07-01] 2007. Douglas D. Gransberg, Keith R. Molenaar. USC Keston Institute for Public Finance and Infrastructure Policy: Reviews use of design-build by DOTs and if this reduces need for DOT engineers. Concludes that, in general, it does not.
- Developing Transportation Agency Leaders. A Synthesis of Highway Practice. [NCHRP Synthesis 349] 2005. Consultant Thomas R. Warne. Transportation Research Board, Washington, D.C.: Reviews how state DOTs train leaders. Other NCHRP documents address training of the entire workforce, from equipment operators to IT managers. This document builds on private sector practices of developing future leaders or executives. It has many good ideas and notes the great variability in DOTs.
- Recruiting and Retaining Individuals in State Transportation Agencies: A Synthesis of Highway Practice. [NCHRP Synthesis 323] 2003. Consultant Thomas R. Warne. Transportation Research Board, Washington, D.C.: Reviews what DOTs are currently doing with recruitment and retention. Contains results of several employee surveys.
- In-Service Training Needs for State DOTs. [NCHRP Project 20-24(50)] 2005. Tom Warne and Associates, LLC Draft Report October 17, 2005: Has excellent breakdown of skills needed for DOT managers.

- Tools to Aid State DOTs in Responding to Workforce Challenges. [NCHRP Report 636] 2009. Spy Pond Partners, Barbara Martin, ERS Associates, Randolph Morgan Consulting. Transportation Research Board Washington, D.C.: Has some software and material that may be useful to HR work into DOT workforce issues, but probably not helpful to this report.
- Entry-Level Transportation Construction Workforce Shortages. 2007. Dr. Lance Anderson, Dr. Candace Cronin, Mr. Cody Martin, Ms. Sukanya Swetharanyan, Mr. Eric Weingart. Florida Department of Transportation Tallahassee, FL: This report centers on youth entering construction and such DOT-useful employments. Not very useful, except to review the overall problem.
- Staffing Plan Survey of State Transportation Agencies. 2000. Jacqueline N. Hood, Tony Alarid and David Albright, Transportation Research Record, Vol. 1729, pp. 12–20: Has responses from HR departments of all 50 states about staffing issues, circa 2000, from the HR department perspective – priorities and budget. Compared with today, yields many good insights about chronic issues.
- Succession Planning at the State DOT Level. Lester A. Hoel and Michael A. Perfater, Transportation Research Record 1498 pp. 51–58: Combined with our current findings, this study of the Virginia DOT indicates that nothing is new, just worse. For example between 1984 and 1990, 75 professionals left the agency and 68% gave their reasons as a better job. Recommends recruitment, mentoring, and training programs.
- Preparing Tomorrow’s Transportation Workforce: A Midwest Summit. <http://www.intrans.iastate.edu/mtc/documents/2010MidwestSummitReport.pdf> April 27–28, 2010, Iowa State University, Ames, Iowa: Has a good overview of initiatives to increase the available transportation workforce, and has ideas on K–12, college and post-college education initiatives as well as marketing a transportation career to young people.

## Succession in Government

- Succession Planning Guide. 2001. GSA Office of Governmentwide Policy. [http://www.gsa.gov/graphics/ogp/UpdatedSPGuide\\_R25-uI-a\\_0Z5RDZ-i34K-pR.pdf](http://www.gsa.gov/graphics/ogp/UpdatedSPGuide_R25-uI-a_0Z5RDZ-i34K-pR.pdf): Has an overview of organizing succession planning in a government agency. Discusses how data, demographics, and agency needs are translated into skill sets and HR goals built around that information. Provides good insights into the generic nature of the succession issue.
- Optimizing Organizational Performance Workforce and Succession Planning, U.S. Office of Personnel Management. <http://www.opm.gov/hr/employ/products/workforce/workforce.asp>: Has links and tools including the next three documents: Strategic Alignment System.
- OPM’s Workforce Planning Model, Office of Personnel Management [U.S.]. [http://www.opm.gov/hcaaf\\_resource\\_center/assets/Sa\\_tool4.pdf](http://www.opm.gov/hcaaf_resource_center/assets/Sa_tool4.pdf): Good, simple broad-brush overview of workforce planning.

- OPM’s Workforce Planning Model, Workforce Planning. [http://www.opm.gov/hcaaf\\_resource\\_center/assets/Sa\\_wp\\_kepi.pdf](http://www.opm.gov/hcaaf_resource_center/assets/Sa_wp_kepi.pdf): Details about workforce planning.
- OPM’s Workforce Planning Model, Human Capital Planning. [http://www.opm.gov/hcaaf\\_resource\\_center/assets/Sa\\_hcp\\_kepi.pdf](http://www.opm.gov/hcaaf_resource_center/assets/Sa_hcp_kepi.pdf): Integration of workforce planning with the mission of the agency.

## **Succession in General**

- Leadership in Crisis: How to Maximize Leadership Development and Succession Planning. <http://www.mindleaders.com/resources/leadership-in-crisis-whitepaper.aspx>. MindLeaders, Kristina Stiffler: This white paper is essentially a marketing tool, but is an excellent overview of the process of developing leaders, and has many good nuggets of information. For example, “So while 92% of business leaders recognize that superior talent and leadership provides a vital competitive advantage, less than 10% hold their managers accountable for developing the company’s talent pool.” Many other interesting and practical insights are included in this brief paper.
- Developing Your Leadership Pipeline. Jay Conger and Robert Fulmer, Harvard Business Review, December 2003: Typical HBR story, the authors’ opinions flavored with capsule case studies about successful programs at large businesses. While handicapped by lack of proof—most of the stories that the case studies use are written by the businesses, especially the proponents of the systems within those businesses—this publication has some good ideas, especially the discussion of “transparency” of the leadership-selection process.

## RECENT ADOT&PF DEMOGRAPHIC TRENDS

A comparison of data from 2006 and 2009 for ADOT&PF employees eligible to retire provides an illuminating picture of the workforce status. Table 1 was developed from two State of Alaska Workforce Profile reports (Department of Administration, 2006 and 2009).

**Table 1. ADOT&PF Engineer Employees Eligible to Retire**

Class Title	2006	2006	2006	2006	2006	2009	2009	2009	2009	2009
	Employee Count*	Within 1 yr	% within 1 yr	Within 5 yrs	% within 5 yrs	Employee Count*	Within 1 yr	% within 1 yr	Within 5 yrs	% within 5 yrs
Engineer/Architect I	36	3	8.3%	8	22.2%	24	4	16.7%	6	25.0%
Engineer/Architect II	27	9	33.3%	17	63.0%	22	3	13.6%	7	31.8%
Engineer/Architect III	33	5	15.2%	14	42.4%	39	6	15.4%	10	25.6%
Engineer/Architect IV	21	3	14.3%	10	47.6%	20	5	25.0%	9	45.0%
Engineer/Architect V	6	2	33.3%	4	66.7%	6	3	50.0%	5	83.3%
Engineering Assistant I						3	0	0.0%	0	0.0%
Engineering Assistant II	98	8	8.2%	21	21.4%	72	13	18.1%	26	36.1%
Engineering Assistant III	106	11	10.4%	32	30.2%	102	21	20.6%	40	39.2%
Engineering Associate	36	9	25.0%	21	58.3%	38	13	34.2%	26	68.4%
Technical Engineer I/ Architect I	21	4	19.0%	5	23.8%	19	3	15.8%	6	31.6%
Technical Engineer II/ Architect II	10	5	50.0%	7	70.0%	12	5	41.7%	5	41.7%
Drafting Technician III	28	4	14.3%	12	42.9%	16	6	37.5%	10	62.5%
Totals AKDOT&PF Engineer Employees	422	63	14.9%	151	35.8%	373	82	22.0%	150	40.2%
Totals AKDOT&PF	2965	369	12.4%	879	29.6%	3167	445	14.1%	939	29.6%
Totals Alaska State Executive Branch Departments						15359	2018	13.1%	4060	26.4%
* Employee count includes employees in retirement & benefit system for whom retirement date was available.										

Table 1 includes data for ADOT&PF employees who are part of the retirement and benefit system (most employees are), whose retirement date were available. (A small percentage of those dates could not be ascertained.) In comparing the 2006 and 2009 data for engineer employees, we found that the percentage of those who are eligible to retire within five years increased from 35.8% to 40.2%. Those who could retire within one year, a subset of the above group, increased from 14.9% to 22.0%.

A comparison of engineer employees with all ADOT&PF employees shows that the retirement eligibility percentages are greater for the engineer group for both years (2006 and 2009) and for the within-five-years and within-one-year categories. Overall, the percentage of retirement-eligible ADOT&PF employees is greater than that for the executive branch in total for the year 2009, for which data were available.

Within the engineer job classifications, significant trends in 2009 are apparent. Forty-five percent of Engineer/Architects IV can retire within 5 years, somewhat lower than the 47.6% for 2006. Five of the six (83.3%) Engineer/Architects V are also eligible for retirement, a status not surprising given their heavy experience and long years of service; three of those five can retire within one year. Among the Engineering Associates, 68.4% can retire within five years, compared with 58.3% in 2006. The percentage of Drafting Technicians III eligible to retire within five years rose from 42.9% in 2006 to 62.5% in 2009.



Another measure of the aging of the ADOT&PF workforce is simply the average employee age. While these figures are not available for engineer employees alone, the department's average age increased from 45.6 in 2006 to 46.5 in 2009 (Department of Administration, 2006 and 2009).

An important trend in State of Alaska employment since 1986 is the several revisions in the retirement system. Tier 1 was available for employees hired between January 1, 1961 and June 30, 1986, Tier II from then until June 30, 1996, Tier III from then until June 30, 2006, and Tier IV for those who entered the system after June 30, 2006 (Alaska Division of Retirement and Benefits, 2010) There are significant differences among the tiers in terms of employee contributions, bases for benefits, cost-of-living allowances, medical coverage, and disability benefits.

## POTENTIAL FUTURE INFLUENCES EXTERNAL TO THE NORMAL ADOT&PF PLANNING PROCESS

How might future events of large Alaska construction projects or various aspects of ADOT&PF's existing organizational strategy influence the department's future employment situation? This question is briefly explored through two sources of information. The first source is a viewpoint offered by Alaska government managers and planners. The second source is recent Alaska-published literature that predicts economic consequences of an Alaska gas pipeline. Except for scale, predictions about employment and infrastructure changes due to gas pipeline construction and operation pertain to any very large in-state project, because similar types of problems will have to be addressed. No literature was found that specifically discussed acute engineering staff needs (or any other staffing needs for that matter) of Alaska government agencies in response to very large projects, outside of metro planning or the STIP process.

### Responses from State Agency Managers

An email was sent to ADOT&PF and DNR managers that we felt were cognizant of long-range planning issues, to explore management-level opinions concerning employment ramifications of future large projects in Alaska.

### Response from ADOT&PF

Concern was expressed that sufficient funding may not be available to support large increases in ADOT&PF employment, regardless of the appearance of large new projects. Opinion suggests that future hiring trends might be toward fewer government employees, large projects notwithstanding. It was speculated that there could be less federal funding and/or redirected funds to non-ADOT&PF work (rail, transit, ferries) and thus less need for traditional engineering and construction staff. Specific concerns expressed were (1) that future high levels of U.S. funding for ADOT&PF activities is not assured; (2) that state income from oil production will fall; (3) that production of natural gas will not cover the revenue gap caused by falling oil-based income; and (4) that future environmental legislation may, directly or indirectly, change ADOT&PF's operative role to the point that the existing mix of ADOT&PF employment professional skills/requirements (including level of need for engineers) would no longer be relevant.

Managers speculated that most new resource-type projects (mine, coal, etc.) will not result in new *public* road mileage. Such an outcome could stem from several factors including environmental regulations, financing source restrictions, state laws concerning vehicle size/weight, and commercial driver licensing requirements. Concern was expressed that these factors and more might make ADOT&PF "the partner of last resort" on such projects, which may explain why operations such as Red Dog, Pebble, and other mines do not use ADOT&PF as a road builder.

On the other hand, recruitment and retention are viewed as critical, regardless of whether ADOT&PF is a major player in future large projects. Concern was expressed that, until recently, it was difficult to find younger employees who could be trained and advanced into senior staff positions within the two- to five-year timeframe that will see many senior staff retirements. It was observed (not surprisingly) that the recent downturn in U.S. economics has greatly improved recruitment of high-quality applicants.

Retirement system tier changes were recognized as important factors in employee job retention. The fact alone that the so-called Tier 1 “golden handcuff” system is no longer available to incoming employees requires rethinking more than all other aspects of the ADOT&PF work environment that might tend to retain workers. The managers speculated that the full employment impact of this particular change has not yet been felt.

Finally, fear that ADOT&PF may react too slowly to evolving transportation modes was expressed. An example cited concerned legislative discussion about a new transportation agency to oversee metro transit in the Anchorage/Matanuska-Susitna area. The observation (and worry) was that this type of system may not be readily acquired and integrated into the ADOT&PF structure as part of an expanding transportation mission, and that such systems could eventually absorb large portions of the state’s total transportation funding.

### **Response from the Department of Natural Resources (DNR)**

The DNR did not speculate about the effect of large projects or other issues on government hiring, but did offer a list of large projects that may have significant impact on ADOT&PF staffing. The list of projects that follows, valid as of January 15, 2010, was provided by Edmund Fogels, Director, Office of Project Management and Permitting.

One or more of the projects could influence ADOT&PF staffing requirements within the foreseeable future. Each is a large project that could require significant department involvement outside the scope of the existing metro planning or STIP. Such work would probably rely heavily on the services of engineers and non-engineering professionals who assist the engineering process.

### **MINING**

- Donlin Creek Gold Project – Permit applications in the next year, then maybe four years of NEPA (National Environmental Protection Act) and other permitting before construction. This project is located about three hundred miles northwest of Anchorage on the middle Kuskokwim River.
- Pebble Project – Same as above. This project, a mine for gold and other minerals, is located in the Bristol Bay area of Southwest Alaska near Lake Iliamna and Lake Clark.
- Livengood Gold Project – Owners are several years from submitting applications. This potentially very large gold mine is about eighty miles north of Fairbanks.

### **PIPELINE**

- AGIA Gasline (the Alaska Gasline Inducement Act gasline) – Intended to result in construction of a natural gas pipeline from the Alaska North Slope to market, where the gas will be sold. Exact route and cost factors remain tentative.
- In-state Gasline – Involves a bullet line from the North Slope, Spur line from AGIA, or perhaps something else.

### **TRANSPORTATION**

- Foothills Road to Umiat – Approximately one hundred miles of roadway extending west from the Dalton Highway to Umiat. The road will provide access to resources along the

northwestern foothills of the Brooks Range and within the National Petroleum Reserve, Alaska

- Northern Rail Spur to Fort Greely – An extension of the Alaska Railroad track system from Fairbanks to missile facilities at Fort Greely (through Delta), including a major bridge project across the Tanana River. A significant portion of the funding will be supplied by the U.S. Department of Defense.
- Point MacKenzie Rail Spur – This rail spur will extend between the Port of Anchorage and the Alaska Railroad, tentatively at some point between Meadow Lakes and north of Willow. It will provide a general shipping link between the Port and Interior Alaska.
- KABATA (the Knik Arm Bridge and Toll Authority) – Created to construct a bridge across Knik Arm, connecting the Municipality of Anchorage and the Matanuska-Susitna Borough.

#### ENERGY

- Mt. Spurr Geothermal – A project intended to promote tapping of geothermal energy from the area around the Mt. Spurr Volcano (east side of Cook Inlet, about eighty miles west of Anchorage).
- Chakachamna Hydro – Proposed Chakachamna Hydroelectric Project would be located at Chakachamna Lake on the Chakachamna River, Kenai Peninsula Borough. The plan calls for a production capacity of 330 megawatts.

#### OIL AND GAS

- Point Thomson – A remote natural gas and condensate field, about sixty miles east of Prudhoe Bay (about forty miles further east than any previous development). Said to hold about 25% of discovered gas resources on the North Slope.
- Chukchi and Beaufort Seas outer continental shelf (OCS) – Offshore exploration and development in Alaska's northern OCS area; predicted to provide jobs and state income over the next fifty years.

#### Information from Alaska's Economic Literature

The following sources do not provide information that is directly applicable to estimating the future human resource needs of ADOT&PF for large projects; however, they do paint a good picture of types and locations of infrastructure work that may be necessary. The information also provides an idea of the overall magnitude of funds, and something of the human resource effort estimated for the work.

- A 2006 report titled *Economic, Fiscal and Workforce Impacts of Alaska Natural Gas Projects* (Rogers et al., 2006) compares economic impacts of three scenarios for bringing Alaska North Slope natural gas to markets in Alaska and elsewhere. In addition to other aspects of economic prediction, models used in the study estimated the number of private and public sector jobs that would be created because of the projects. The report estimated the net present value of the project to state and local governments at about \$27 billion (in 2005 dollars) over the life of the project. As part of the big picture through 2050, the report estimated that state and local spending of project-related income would create as many as 900,000 jobs (in terms of job-years) over the life of the project. Depending on which of the

three routing plans is selected, the state's total gas pipeline-related increased labor force needs are estimated at

- 18,000 (or 19,000 or 22,000 for options 2 or 3) workers during construction
- 26,000 (or 27,000 or 23,000 for options 2 or 3) jobs/per year, sustained, after construction

Pipeline construction is estimated to require about four years, regardless of the routing. Note that none of the estimated figures directly addresses future requirements for ADOT&PF engineering professionals. However, a significant correlation between an increasing total Alaska workforce and ADOT&PF professional staffing needs is likely.

A section of the report by Rogers et al. (2006) titled *Known Challenges and Assumptions* identifies potential problems associated with ADOT&PF infrastructure. Among these potential problems is the risk of delays of unfinished road and bridge projects. Other challenges could affect construction to a greater extent including

- Upgrading certain highways and bridges to support heavy loads of pipe
- Expansion of some ports to handle increased volumes of materials/equipment/supplies

The report states

*Upgrades may be eligible for federal funding with a state match through the federal transportation programs. However there is already a large backlog of projects in the State Transportation Improvement Plan (STIP) that are designed or ready to start and await funding. Without earmarks for the projects outside the STIP process or increased levels of federal funding, it will be challenging to fund the needed upgrades without displacing existing road projects of high importance to municipalities and other entities across the state.*

From this description, it follows that without earmarks for funding outside the STIP, there would be little concern about professional-level staffing except for that required by STIP projects.

The report writers assume that all necessary upgrades will be finished in time to support movement of heavy pipe. This assumption along with other statements in the report suggests that a significant increase in ADOT&PF engineering staff may become necessary (at some point) over a short period.

Finally, the report estimates that approximately 1,545 state and local government jobs (non-education) will be created for each \$100 million of gas pipeline spending. It may be possible to roughly calculate future pipeline-related ADOT&PF staffing needs based on this estimate.

Another study (Rogers et al., 2005) was intended to provide the Fairbanks North Star Borough with initial estimates of gas pipeline construction and operation. Infrastructure and transportation impacts were discussed in a report section titled *Socio-economic Impacts*. Impacts that would concern ADOT&PF include

- Increases in size and weight of truck loads

- Increases in traffic volume
- Increased need for much improved dust control with vastly increased traffic
- Dredging to allow Prudhoe Bay barge access

Material haul during construction is estimated to include 732 miles of pipe plus many loads of equipment and supplies. Gravel roads, paved highways, bridges, and ports will have to be upgraded. As of the report publishing date, ADOT&PF and the producer companies had estimated \$284 million for the upgrading work, including \$98 million just for work on the Dalton Highway between Livengood and Prudhoe Bay. The following types of impact are discussed:

**Major Routes** – Difficult to define all specific routes because the pipeline route has not yet been settled. However, because of Alaska’s limited transportation network, a large portion of any route will see heavy use. Attention to infrastructure will be inescapably critical for the main route (Steese/Elliott/Dalton) running north from Fairbanks to Prudhoe Bay (and within the Prudhoe Bay area itself).

**Prudhoe Bay** – New and/or cleanup dredging needed.

**North Slope** – Work will require both new and improved gravel roads. Both of these actions will require gravel (a scarce commodity); therefore, gravel sources and hauls are a concern.

## **Discussion**

For very large projects, engineering staff may need to expand rapidly in the areas of road, airport, bridge, and harbor design as well as to handle all associated areas of construction. As indicated above, the gas pipeline will require all of these. Technical engineering positions, that is, hydrology, harbor, and geotechnical, will be stressed but likely will be boosted by consultant services, as is done now. Additional maintenance and operations engineering staff will be necessary to respond to the wear and tear of increased vehicle operations and to handle the new infrastructure after construction.

Locating aggregate materials sufficient for ADOT&PF involvement in very large projects can be extremely time consuming and should be done well ahead of time if possible. The need for assured sources of aggregate will be common to every project. Additional geologists may be necessary or consultant services will be required to perform this vital function to assist the engineering process.

Land acquisition and permitting for ADOT&PF work associated with very large projects will require an increase in professional staffing to assist the engineering processes in areas of right-of-way and environmental assessment.

Planning is critical to all the needs just described. The department should avoid being caught in emergency-response mode, which could be prevented by having a practical framework for ADOT&PF response to specific large projects. Perhaps through consultant services, it would be possible to generate an ADOT&PF contingency staffing plan for each large project that is firmly on the horizon.

## **EMPLOYEE SURVEY**

A major part of this project was a questionnaire survey of current and former ADOT&PF employees, to ascertain their attitudes about their jobs, to solicit their ideas as to why employees stay with or leave the department, and to invite suggestions about what ADOT&PF might do to become a more attractive place to work. This section describes the questionnaire process and its analysis and results.

### **Questionnaire Process**

#### **Questionnaire Development and Review**

The project team spent considerable time and effort in designing questionnaires that would be easy to complete, yet yield valuable data for analysis. Staff members of ADOT&PF were helpful in providing advice as the questionnaires were developed. Appendix B contains questionnaires for current employees, and Appendix C contains questionnaires for former employees. The two questionnaires are nearly identical, the main difference being that the questionnaire for former employees does not include two questions that ask how likely the employee is to leave the department under certain conditions. The questionnaire for former employees asks their reason for having left ADOT&PF and the reasons why they think others choose to stay or leave.

#### **Selection Criteria**

Since the study focused on technical professionals and associated personnel within ADOT&PF, the questionnaire distribution was confined to these job categories. Of 4,451 department employees on December 1, 2009, the list was reduced, first, by confining potential respondents to those located in Anchorage, Fairbanks, and Juneau. Then, (1) professional and subprofessional engineering job categories (later in this report identified as engineer professionals) and (2) certain professional and subprofessional non-engineering categories that directly assisted the engineering process (later in this report identified as non-engineer professionals) were selected. Finally, we assured that the positions were presently occupied, and that they appeared on the many ADOT&PF organizational charts available at the time of the selection. Of course, some judgment was necessary in deciding which “engineering-associated” job categories to include. Decisions regarding including/excluding various employee classifications from the study followed agreement between researchers and ADOT&PF research advisors. In general, those surveyed included all professional engineers, all engineering assistants/ associates, and certain professional and subprofessional (but non-engineering) members of Right of Way, Environmental, and Planning work groups.

Four hundred and sixty-five current employees were thus selected to receive questionnaires.

Responses were solicited from former employees with relatively recent experience with the department. Thus, the list of all employees who had left ADOT&PF between July 1, 2007, and September 24, 2009, was examined; those whose job classifications matched those to be surveyed among current employees were selected. Of the list of 123 former employees, contact information was available for about 75.

## Distribution Method

The distribution process for this employee survey began with an email from ADOT&PF Commissioner Leo von Scheben to all employees, notifying them that some had been selected to participate and would be receiving a questionnaire within two weeks. von Scheben indicated his support for the project, assured employees that individual responses would not be identified in the analysis, and encouraged them to complete and return the forms. Distribution was then accomplished by personal visits from research personnel. Both McHattie and Bennett visited departmental offices in Fairbanks, McHattie traveled to Anchorage, and Bennett traveled to Juneau. After courtesy visits with the respective regional directors, McHattie and Bennett visited individuals at their workplaces, handed each a packet consisting of a questionnaire and a cover letter from the commissioner, and sought assurances that the forms would be completed and returned. Apparently, this method was effective, because the responses, as reported in the next section, were gratifyingly high. In a small number of cases in which individuals were not available, questionnaire packets were delivered to their departmental mailboxes. As shown in Table 2, 458 questionnaires were distributed in this manner (some of the 465 total employees had already left the department): 208 in Anchorage, 136 in Fairbanks, and 114 in Juneau.

**Table 2. Questionnaire Return Statistics**

	<b>Total Distribution</b>	<b>Returned</b>	<b>% Returned</b>
<b>Current Employees</b> , incl. Statewide at given location			
Anchorage, Central Region, incl. ANC Airport	208	148	71.2%
Fairbanks, Northern Region, incl. FAI Airport	136	106	77.9%
Juneau, Southeast Region	114	78	68.4%
Total	458	332	72.5%
<b>Former Employees</b>			
Total	70	17	24.3%
<b>Current and Former Employees</b>			
Total	528	349	66.1%

For the survey of former employees, an attempt was made to contact the 75 individuals by telephone to explain the survey and gain assurances that they would respond. This method was only partially successful, with about one-half actually contacted. In any case, a few individuals indicated they did not wish to participate, and ultimately 70 questionnaires and cover letters were sent by U.S. Postal Service.

## Number Surveyed and Returned

Questionnaires were distributed to current employees in February 2010, and mailed to former employees shortly thereafter. By early May 2010, when the last of the returned questionnaires was received, it was clear that the project team had been successful in soliciting an excellent response from current employees. Table 2 shows the response rates for the department overall and for the regions. Note that “region” includes statewide work group employees working in

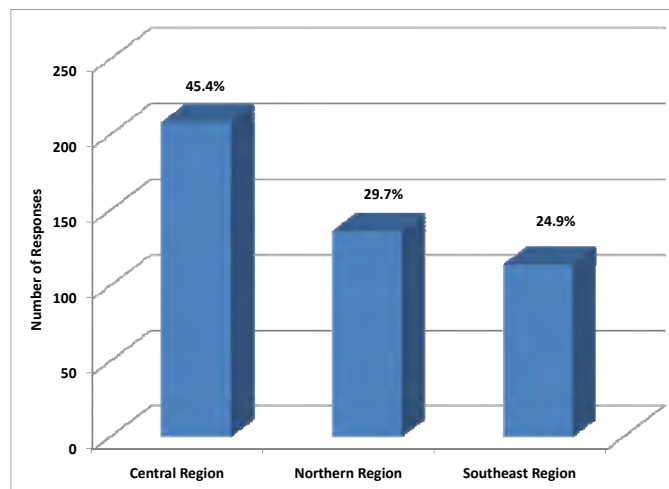


offices in the respective geographic regional areas. Overall, 72.5% of current employees polled returned survey questionnaires.

Table 2 shows that, of the 70 questionnaires sent to former employees, 17 were completed and returned. Although this 24.3% response rate is better than respectable for this kind of survey, the small number allowed only limited analysis. As will be seen in the description of the survey analysis, those responses were similar in many respects to the ones by current employees. The overall response rate, including both current and former employees, was 66.1%.

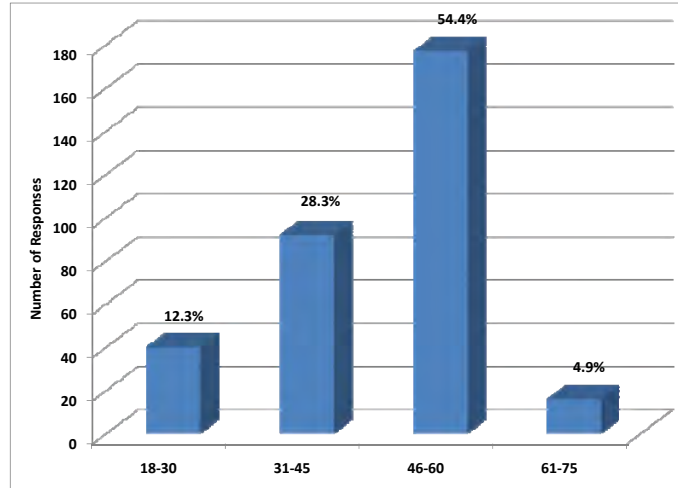
### Profile of Respondents

Unlike the previous section, which reported the percentage response of all questionnaires distributed, this section is confined to a profiling of the group who responded to the survey. Five graphs, labeled Figures 1, 2, 3, 4, and 5, give some information about the composition of the group of current employees who responded to the survey. Figure 1 indicates the regional distribution of the 332 employees, with nearly half representing the Central Region.



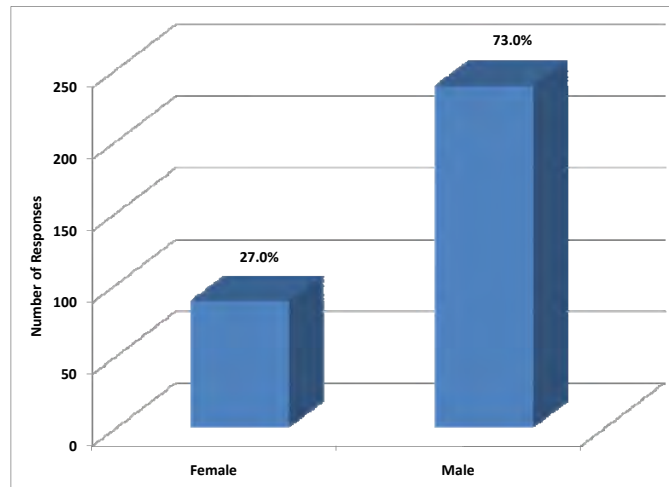
**Figure 1. Respondent Profile by Region. Current Employees. Total = 332.**

Figure 2 gives the respondent profile by age range for the 325 current employees who indicated their age. This profile, like the others, appears to mirror the totality of the ADOT&PF professional workforce. If one calculates the mean value of the ages of the respondents, by finding the weighted average of the midpoints of the four ranges, the result is very close to the 46.5 average age reported in the Workforce Profile (2009). Note that nearly 60% of the respondents are age 46 or older.



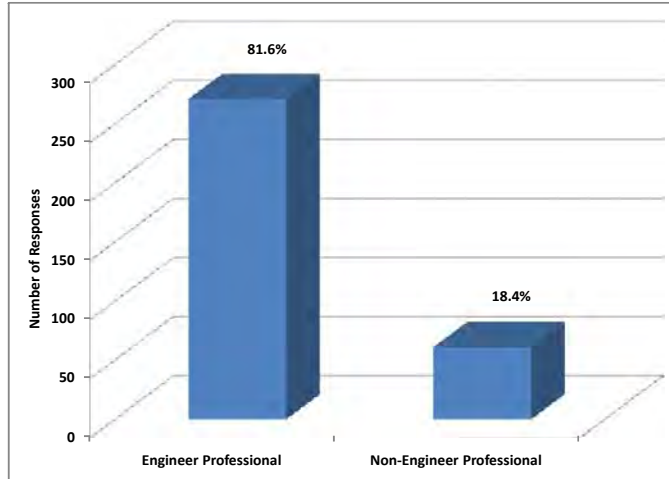
**Figure 2. Respondent Profile by Age. Current Employees. Total = 325.**

In Figure 3, we show a ratio of about 1:3 of female to male responses, very close to that reported for the entire ADOT&PF in the Workforce Profile (2009).



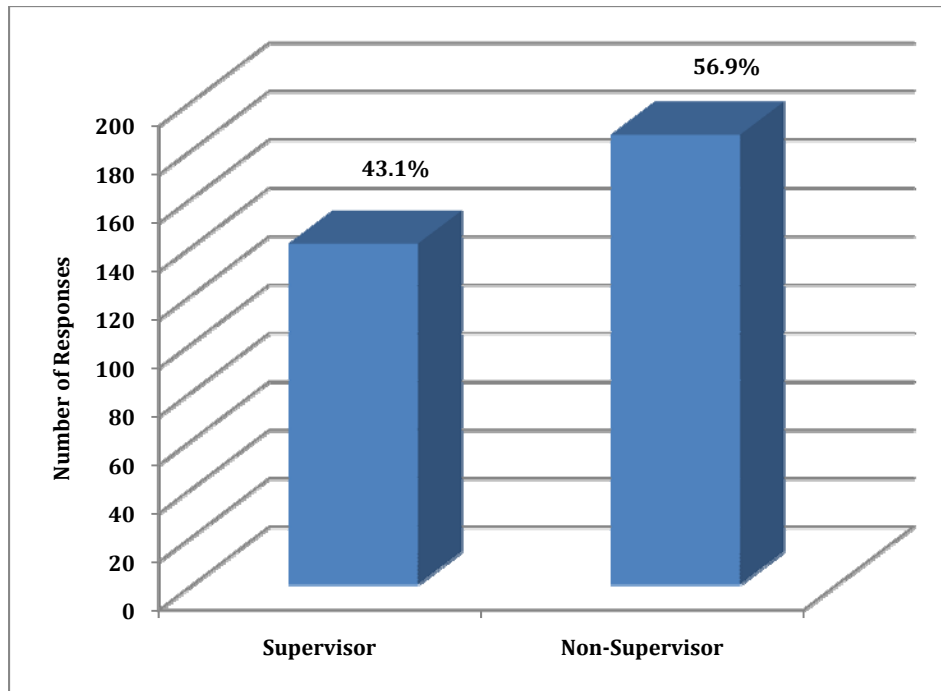
**Figure 3. Respondent Profile by Gender. Current Employees. Total = 326.**

Of the 332 respondents, 81.6% had engineer job classifications, while the balance were non-engineer professionals such as right-of-way agents and environmental analysts (see Figure 4).



**Figure 4. Respondent Profile by Job Type. Current Employees. Total = 332.**

Figure 5 shows that 43.1% of respondents, or about 3 in 7, said that they were supervisors.



**Figure 5. Respondent Profile by Supervisory Status. Current Employees. Total = 327.**

In the analysis that follows, distinctions in questionnaire responses among the various subgroups in this profile were studied. In many cases, there was little difference in response to the questions.

The table in Appendix D contains a summary profile of the seventeen former employees who responded to the survey.

## **Compilation of Responses**

All responses were inserted into a master spreadsheet, allowing for straightforward analysis in most any manner desired. The analysis and its results, described in the next section, are all based on the master spreadsheet and subsections thereof. The analysis described here is confined to sets of data that the research team considered most valuable to ADOT&PF. The master spreadsheet is available for use by interested personnel in performing any desired supplemental analysis of the data.

## **Analysis – Process and Results**

### **Interpretation of Numeric Questionnaire Responses**

The questionnaire provided to current ADOT&PF employees was divided into four sections (see Appendix B), as follows:

- I. Information on you and your position
- II. A list of questions about your job, subdivided into six categories, for which you will indicate whether you strongly agree, agree, etc.
- III. A ranking of the six categories by importance
- IV. A series of four more questions related to employee retention

This report section addresses analyses of Sections II, III, and IV of the questionnaire. The responses to each question in Sections II, III, and IV are broken down into two employee groups. One group includes all employees, and the second group combines only Engineer I and Engineer II employees. These employees, which are typically entry-level and secondary-level registered engineers, were selected for special analysis for two reasons: (1) They presently hold many key engineering and lower/middle management positions within ADOT&PF, and (2) we believe they are indicators for other technical professionals who are incipient managers. It is critically important to hire potential members of the Engineer I and II groups *and* to keep them once hired.

### **Analyzing Questionnaire Section II Questions**

The purpose of this analysis is to quantify the percentage of individuals responding, at various levels of agreement, to specific questions about present (or former) employee assessments of job satisfaction.

Section II of the questionnaire required individual responses to the thirty-eight questions comprising the six main question categories. Five numerical choices were available for each question: 1 (Strongly Agree); 2 (Agree); 3 (Neutral); 4 (Disagree); and 5 (Strongly Disagree). Responses are presented in six tables. One table addresses each main question category, and each table contains responses for each of the questions within that category.

In each table, responses are provided for each of the two defined employee groups; that is, (1) the All Employees group and (2) the Engineer I and II group. Each question is presented in the form of a statement. Each response listed in the table indicates the percentage of individuals within each employee group who responded at a defined level of agreement with the question. The levels of agreement shown in the tables are shown in five columns labeled Strongly Agree,

Strongly Agree *or* Agree, Neutral, Strongly Disagree, and Strongly Disagree *or* Disagree. The tables themselves are much easier to understand via examination than by explanation.

The thirty-eight questions address various aspects of six basic categories of employee satisfaction. The six categories are shown below, along with the thirty-eight questions that define each of the main categories to the extent that each category is explored in this study:

#### Category 1: Salary

- 1a. fair/adequate base salary
- 1b. fair/adequate total salary (including overtime)
- 1c. fair/adequate salary increases

#### Category 2: Employment Benefits

- 2a. fair/adequate leave policy
- 2b. fair/adequate retirement policy
- 2c. fair/adequate insurance programs
- 2d. adequate personal work space
- 2e. adequate amenities, e.g., break rooms, restrooms, housekeeping
- 2f. adequate support for care of personal property, e.g., parking, personal storage
- 2g. adequate support for employees with special needs

#### Category 3: Workplace Environment

- 3a. adequate sense of work enjoyment
- 3b. adequate sense of personal accomplishment
- 3c. adequate opportunities for training/personal growth
- 3d. adequate sense of personal appreciation and acknowledgment by ADOT&PF
- 3e. adequate accommodation with respect to work location and scheduling
- 3f. adequate feeling of acceptance as a true member of the ADOT&PF organization
- 3g. adequate promotion possibilities within ADOT&PF
- 3h. adequate feeling of job security and predictable work flow
- 3i. level of opinion about recommending ADOT&PF as a good place to work

#### Category 4: Work Activity

- 4a. appropriate/interesting work assignments
- 4b. appropriate/achievable schedules and deadlines
- 4c. adequate availability of equipment needed for work
- 4d. adequate provision of authority to make job-related decisions
- 4e. adequate encouragement with respect to innovation and initiative
- 4f. adequate sense that ADOT&PF policies and procedures are fair/reasonable

Category 5: Management & Supervisors

- 5a. adequate knowledge/ability
- 5b. demonstrate genuine concern for employee
- 5c. make job expectations/goals clear
- 5d. provide adequate feedback, e.g., support/praise/constructive criticism
- 5e. demonstrate appropriate/proper temperament toward colleagues
- 5f. engage in appropriate fellowship with employees
- 5g. provide sufficient/effective mentoring for employees
- 5h. promote teamwork and cooperation

Category 6: Fellow Employees

- 6a. appropriate/proper temperament toward colleagues
- 6b. appropriate/adequate fellowship with colleagues
- 6c. provide adequate, effective mentoring as needed by colleagues
- 6d. willingness to adequately/fairly share workload with colleagues
- 6e. willingness/efforts to resolve issues that interfere with workgroup effectiveness

Tables 3 through 8 report the percentage of responses to individual questions within the six categories.

**Table 3. Summary of Salary Category Responses**

Subcategories	% Strongly Agree		% Agree or Strongly Agree		% Neutral		% Strongly Disagree		% Disagree or Strongly Disagree	
	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II
1a. I receive a fair/adequate base salary	4.6	2.9	39.5	35.3	21.8	20.6	11.5	11.8	38.7	44.1
1b. I receive a fair/adequate total salary (including overtime)	4.3	2.9	37.0	26.5	24.6	20.6	9.2	17.6	38.4	52.9
1c. I expect fair/adequate salary increases	2.9	0	18.1	11.8	30.1	32.4	16.9	20.6	51.9	55.9

***Interpretation/Discussion of Salary Category Responses (Table 3)***

- The Engineer I & II group responded more negatively than the All Employees group to the three salary questions.
- Question 1c (fair/adequate salary increases) received the most negative response by both groups. The Engineer I & II and All Employees groups appear to have a somewhat pessimistic outlook for future pay increases. *This particular question received the highest disagreement response of the entire questionnaire.*
- Considering Questions 1a and 1b, it appears that the Engineer I & II group considers higher salary very important.
- Responses to Question 1b indicate that the Engineer I & II group is dissatisfied with not receiving overtime pay for overtime work. While they are dissatisfied with their base pay, they are even more dissatisfied with their total salary.

**Table 4. Summary of Employment Benefits Category Responses**

Subcategories	% Strongly Agree		% Agree or Strongly Agree		% Neutral		% Strongly Disagree		% Disagree or Strongly Disagree	
	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II
2a. There is a fair/adequate leave policy	31.2	44.1	88.3	85.3	7.4	8.8	1.1	2.9	4.3	5.9
2b. There is a fair/adequate retirement policy	14.5	14.7	56.5	50.0	22.3	32.4	9.3	5.9	21.2	17.6
2c. There are fair/adequate insurance programs	9.5	8.8	53.4	47.1	28.7	29.4	3.7	5.9	17.8	23.5
2d. There is adequate personal work space	20.1	20.6	68.2	61.8	11.2	8.8	8.0	11.8	20.6	29.4
2e. There are adequate amenities, e.g., break rooms, restrooms, housekeeping, etc.	10.1	5.9	49.9	29.4	20.9	23.5	9.3	11.8	29.3	47.1
2f. There is adequate support for care of personal property, e.g., parking, personal storage, etc.	14.8	17.6	66.1	52.9	18.6	20.6	3.5	5.9	15.4	26.5
2g. There is adequate support for employees with special needs	13.1	17.6	49.7	44.1	37.8	47.1	5.2	0	12.5	8.8

***Interpretation/Discussion of Employment Benefits Category Responses (Table 4)***

- Both employee groups appear close to agreement on questions related to benefits, except as indicated below.
- Both employee groups are especially positive about existing leave policy.
- Both employee groups disagree most about Question 2e, that is, the adequacy of break rooms, restrooms, housekeeping, etc. Engineers are less concerned about this aspect.
- Around 40% of both groups express a neutral opinion concerning adequate support for employees with special needs. This might be because relatively few special needs employees presently work at ADOT&PF. The Engineer I & II group is less concerned about special needs than the All Employees group.



- The Engineer I & II group is somewhat less satisfied with all aspects of employee benefits than the All Employees group.

**Table 5. Summary of Workplace Environment Category Responses**

Subcategories	% Strongly Agree		% Agree or Strongly Agree		% Neutral		% Strongly Disagree		% Disagree or Strongly Disagree	
	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II
3a. I have an adequate sense of work enjoyment	14.1	14.7	81.6	64.7	10.9	20.6	2.6	5.9	7.5	14.7
3b. I have an adequate sense of personal accomplishment	18.1	11.8	68.4	58.8	18.1	14.7	2.9	5.9	13.5	26.5
3c. I have adequate opportunities for training/personal growth	13.0	11.8	56.2	55.9	19.0	17.6	6.9	5.9	24.8	26.5
3d. I have an adequate sense of personal appreciation and acknowledgment by ADOT&PF	9.8	5.9	46.6	35.3	27.0	32.4	9.2	17.6	26.4	32.4
3e. I have been adequately accommodated with respect to work location and scheduling	24.7	32.4	81.6	76.5	12.1	17.6	1.7	2.9	6.3	5.9
3f. I have an adequate feeling of acceptance as a true member of the ADOT&PF organization	24.7	20.6	79.3	76.5	14.7	11.8	2.3	5.9	6.0	11.8
3g. I have acceptable promotion possibilities within ADOT&PF	8.1	14.7	41.2	44.1	23.3	26.5	13.0	23.5	35.4	29.4
3h. I have an adequate feeling of job security and predictable work flow	15.5	23.5	76.4	73.5	14.7	14.7	2.9	5.9	8.9	11.8
3i. I would recommend ADOT&PF as a good place to work	11.3	11.8	56.6	47.1	31.2	41.2	4.6	5.9	12.1	11.8

**Interpretation/Discussion of Workplace Environment Category Responses (Table 5)**

- Both employee groups responded similarly and positively to all work environment questions.
- Engineers have a lower sense of personal accomplishment than the All Employees group.
- Both employee groups most disagree with Question 3d (adequate personal appreciation and acknowledgment) and Question 3g (adequate promotion possibilities).
- Engineers see somewhat better promotion possibilities than the All Employees group.
- Engineers indicate that they have a lesser sense of personal appreciation and ADOT&PF acknowledgment than the All Employees group.

**Table 6. Summary of Work Activity Category Responses**

Subcategories	% Strongly Agree		% Agree or Strongly Agree		% Neutral		% Strongly Disagree		% Disagree or Strongly Disagree	
	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II
4a. I have appropriate/interesting work assignments	12.4	5.9	67.6	61.8	21.7	20.6	3.8	8.8	10.7	17.6
4b. I have appropriate/achievable schedules and deadlines	9.8	5.9	65.6	64.7	19.7	29.4	4.0	0	14.7	5.9
4c. There is adequate availability of equipment needed for work	13.2	11.8	64.5	58.8	18.1	11.8	2.9	5.9	17.5	29.4
4d. I have satisfactory provision of authority to make job-related decisions	12.6	11.8	61.9	67.6	20.9	5.9	6.6	5.9	17.2	26.5
4e. I get adequate encouragement with respect to innovation and initiative	12.6	11.8	46.0	41.2	31.6	26.5	6.0	2.9	22.4	32.4
4f. I believe that ADOT&PF policies and procedures are fair/reasonable	4.9	2.9	43.1	35.3	29.5	23.5	6.4	5.9	27.5	41.2

**Interpretation/Discussion of Work Activity Category Responses (Table 6)**

- Engineers believe that schedules and deadlines are more achievable than the All Employees group.
- Engineers disagree somewhat more about all other aspects of workplace activity than the All Employees group.
- Engineers disagree significantly more than the All Employees group about Questions 4d, 4e, and 4f; that is, they feel more negatively about authority to make decisions, encouragement towards innovation/initiative, and fairness of policies/procedures.

**Table 7. Summary of Management & Supervisors Category Responses**

Subcategories	% Strongly Agree		% Agree or Strongly Agree		% Neutral		% Strongly Disagree		% Disagree or Strongly Disagree	
	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II
5a. They have adequate knowledge/ability	26.2	23.5	79.3	70.6	10.4	11.8	4.9	5.9	10.4	17.6
5b. They demonstrate genuine concern for employee	28.4	20.6	70.7	61.8	19.8	23.5	4.3	8.8	9.5	14.7
5c. They make job expectations/goals clear	12.9	8.8	57.5	52.9	26.1	17.6	5.5	5.9	16.4	29.4
5d. They provide adequate feedback, e.g., support/praise/constructive criticism	15.5	5.9	55.2	52.9	24.1	17.6	6.6	8.8	20.7	29.4
5e. They demonstrate appropriate/proper temperament toward colleagues	24.5	23.5	72.9	73.5	13.3	8.8	5.2	8.8	13.8	17.6
5f. They engage in appropriate fellowship with employees	18.7	14.7	64.1	58.8	23.9	23.5	5.2	5.9	12.1	17.6
5g. They provide sufficient/effective mentoring for employees	14.2	11.8	43.1	41.2	30.1	23.5	9.0	8.8	26.9	35.3
5h. They promote teamwork and cooperation	18.2	17.6	56.8	50.0	25.9	29.4	7.2	11.8	17.3	20.6

**Interpretation/Discussion of Management & Supervisors Category Responses (Table 7)**

- The Engineer I & II group shows somewhat more disagreement across the board with all questions relating to management and supervisors, compared with the All Employees group.
- The engineers are significantly less favorable with respect to management/supervisors making job expectations/goals and then providing sufficient feedback, compared with the All Employees group.
- Both the Engineer I & II group and the All Employees group disagree most about the provision of sufficient/effective mentoring, with engineers in even greater disagreement.
- Both employee groups agree quite highly that supervisors/managers are knowledgeable and caring people (about 60% level of agreement or higher).

**Table 8. Summary of Fellow Employees Category Responses**

Subcategories	% Strongly Agree		% Agree or Strongly Agree		% Neutral		% Strongly Disagree		% Disagree or Strongly Disagree	
	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II
6a. They demonstrate appropriate/proper temperament toward colleagues	10.6	5.9	74.8	82.4	20.1	14.7	0.6	0	5.2	2.9
6b. They engage in appropriate/adequate fellowship with colleagues	10.3	8.8	72.5	73.5	22.6	26.5	1.4	0	4.9	0.0
6c. They provide adequate, effective mentoring as needed by colleagues	11.5	5.9	62.8	61.8	27.1	29.4	1.7	0	10.1	8.8
6d. They demonstrate willingness to adequately/fairly share workload with colleagues	13.3	8.8	65.9	64.7	24.6	29.4	1.7	0	9.5	5.9
6e. They demonstrate willingness/efforts to resolve issues that interfere with workgroup effectiveness	8.7	9.1	60.0	51.5	29.3	39.4	2.3	0	10.7	9.1

**Interpretation/Discussion of Fellow Employees Category Responses (Table 8)**

- Neither group appears to have a problem with fellow employees (at least 60% agreement for almost all questions related to fellow employees).
- The Engineer I & II group appears to care somewhat less about fellow employees (generally more neutral opinion) than the All Employees group.

**Analyzing Questionnaire Section III Questions**

Tables 9, 10, and 11 each contain six rows, one for each of the six basic categories of employment satisfaction defined in this study. The work done by employees filling out Questionnaire Section II served in part as a training function to prepare them for the ranking process in Section III.

The respondents were asked to rank each category, indicating its relative importance as a contributing factor to their overall job satisfaction, with 1 for highest ranking and 6 for lowest ranking.

The responses were analyzed in three ways: (1) the percentage of employees who ranked the category Number 1; (2) the percentage of employees who ranked the category either Number 1 or Number 2; and (3) the average ranking for each category. The results are shown in the following three tables.

**Table 9. Percentage of Respondents Who Ranked Category as No. 1**

Work Satisfaction Category	% Number 1 Ranking			
	All Employees	Rank Order	Engineer I & II	Rank Order
Salary	30.1	1	18.2	3
Workplace Activity	29.8	2	30.3	1
Management & Supervisors	14.5	3	15.2	4
Fellow Employees	13.6	4	6.1	6
Work Environment	11.0	5	12.1	5
Employee Benefits	10.7	6	21.2	2

**Table 10. Percentage of Respondents Who Ranked Category as No. 1 or No. 2**

Work Satisfaction Category	% Number 1 or 2 Ranking			
	All Employees	Rank Order	Engineer I & II	Rank Order
Salary	52.2	1	60.6	1
Workplace Activity	45.7	2	39.4	2
Employee Benefits	39.1	3	36.4	3
Management & Supervisors	29.3	4	30.3	4
Fellow Employees	28.9	5	24.2	5
Work Environment	19.1	6	15.2	6

**Table 11. Average Ranking of Satisfaction Categories, All Employees**

Work Satisfaction Category	Average Ranking by All Respondents	
	All Employees	Rank Order
Salary	2.7	1
Workplace Activity	2.9	2
Employee Benefits	3.3	3
Management & Supervisors	3.6	4
Fellow Employees	3.7	5
Work Environment	4.3	6

**Interpretation/Discussion of Ranking of Work-Satisfaction Categories**

- The relative importance of the various work-satisfaction categories is not readily determined based solely on the percent of No. 1 rankings.
- The relative ranking of the work-satisfaction categories becomes apparent when the percent of individuals responding with *either No. 1 or No. 2 rankings* (sum of both percentages) are considered.
- Relative ranking using average ranking scores (Table 11) corroborates the conclusions from the second ranking method (No.1 or No. 2 rankings). In fact, the rankings are identical using either method, at least for the All Employees group.
- Salary and workplace activity rank highest.
- More than 50% of all respondents and 60% of Engineers I and II placed salary at either first or second in rank of importance.
- Work environment appears at the bottom of the rankings.

**Analyzing Questionnaire Section IV Numerically-scored Questions**

The two questions in questionnaire Section IV address the likelihood that *present employees* will leave ADOT&PF employment in the near future, assuming two different economic scenarios. The questions were

1. How likely is it that you would leave ADOT&PF during the next three years if Alaskan economic conditions remain relatively stable?
2. How likely is it that you would leave ADOT&PF during the next three years if a major engineering/construction project, such as a natural gas pipeline, were begun in earnest during that time?

Each subcategory in Section IV was scored 1 (very likely), 2 (somewhat likely), 3 (not likely), or 4 (I'd stay no matter what)

**Table 12. Opinion about Leaving ADOT&PF Employment**

Subcategories	% Very Likely		% Somewhat Likely		% Not Likely		% I'd Stay No Matter What	
	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II	All	Eng. I & II
Likelihood of leaving ADOT&PF in next 3 years if economic conditions remain stable	16.9	12.5	26.2	21.9	52.7	53.1	4.2	12.5
Likelihood of leaving ADOT&PF in next 3 years if major projects have started	25.5	12.5	32.2	40.6	39.2	40.6	3.1	6.3

### ***Interpretation/Discussion of Opinion about Leaving ADOT&PF Employment (Table 12)***

- The Engineer I & II group is not very likely to leave ADOT&PF employment, regardless of whether major projects are going on in the state.
- For the Engineer I & II group, the percentage very likely to leave is the same whether a major project is going or not (only 12.5%).
- If economic conditions remain stable, approximately one-third of the Engineer I & II group and 43% of the All Employees group describe themselves as very likely or somewhat likely to leave in the next three years.
- If a major project is started, about 53% of the Engineer I & II group and 58% of the All Employees group describe themselves as very likely or somewhat likely to leave in the next three years.
- The Engineer I & II group is only half as likely to leave as the All Employees group, even in the event of a major Alaska project (12.5% vs. 25.5%).
- The Engineer I & II group is more likely to “stay no matter what” regardless of economic conditions in Alaska.

### **Evaluation and Summary of Text Answers**

Both current and former employees were asked three questions that required some subjective evaluation of text responses. The questions were

1. What are the primary reasons that employees remain with the department (“Why stay”)?
2. What are the primary reasons that employees leave the department (“Why leave”)?
3. What are the three most important things the department could do to make ADOT&PF a more attractive place to work (“Three things”)?

The questions were completely open-ended; no suggested responses were included in the questionnaire.

We evaluated this section by grouping similar responses into categories, counting the numbers in each category, and summarizing the results graphically and in tables. Text answers that did not fit into categories were scored as “other” and listed in Appendix I and Appendix J.

Review of the “why stay” and “why leave” responses led to the following alphabetically listed categories:



<b>“Why Stay” Categories</b>	<b>“Why Leave” Categories</b>
Benefits, including medical	Advancement
Co-workers	Bureaucracy
Leave policy	Co-workers
Management	Job satisfaction
Other	Loss of retirement tiers
Pay	Management
Pride, accomplishment, like the work	Other
Retirement	Pay
Stable, secure job	Politics
Training, apprenticeship	Retirement
Vacation, holidays, flexible hours	Work environment
Work environment, low stress	

It is apparent that each of these categories relates to the thirty-eight subcategories in the previous section. The questions in this section were open-ended and required respondents to choose their own words for answers. Thus, the interpretation of those answers required judgment and subjective evaluation. Some comments seem to be in order regarding the selection of these categories.

Among the “Why Stay” categories, “leave,” meaning formal annual leave which is defined in benefits, has been separated from “vacation, holidays, flexible hours” which was interpreted as being more informal. Note that while “benefits” could include “medical” as well as “leave” and “retirement,” some employees chose to name “medical” explicitly. It appeared that “low stress” referred to the work environment and its daily tasks and, thus, is probably not different from the category of “environment.” Likewise, the “team” category, which might have referred to co-workers and management, was counted if the respondent used the word “team.”

In the “Other” category were two somewhat frequent remarks that could have been categories. One might be called “work/life balance,” which contrasts with some private sector jobs, where work such as unscheduled overtime often seems to take precedence over family life. A number of responses appeared to refer to promotional opportunities, although these were articulated differently. A great number of respondents used the “view of others” point of view; that is,

answering as if the intended question was why they think others stay/leave, rather than why they themselves might stay/leave.

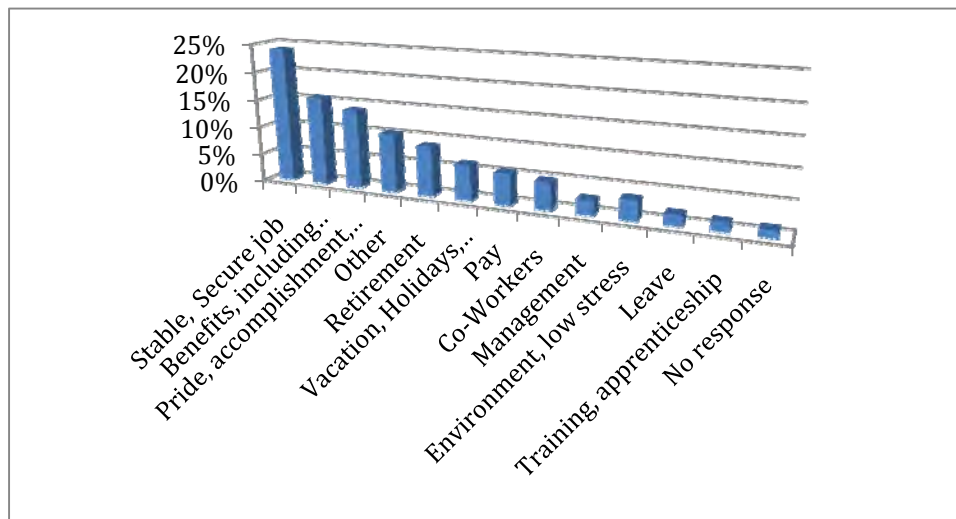
Among the “Why Leave” categories, “retire” means simply that their retirement was their reason for leaving, rather than that dissatisfaction with the retirement system was their reason for leaving. Reasons such as “spousal relocation” and family issues, including family health, were given in the “retire” category, because these reasons caused the employee to leave without regard to employment situation. “Advancement” as a reason for leaving can mean advancement opportunities elsewhere or lack of advancement opportunities within ADOT&PF. (Responses about lack of training were included in the “advancement” category.)

Three hundred twenty-one questionnaires provided usable text responses. Point of view clearly varied. Some respondents reported their personal feelings, but most gave what they felt was the prevailing attitude throughout the organization.

For the first two questions (Why stay? and Why leave?), each response was assigned 5 points; the 5 points were then distributed into categories based on the terms most often used in the text responses. For example, if an answer to “why stay” was “ADOT&PF does important and valuable work, retirement benefits, excellent short courses,” the 5 points were distributed as follows: 2 points to “Pride, accomplishment, like the work,” 1 point to “Retirement,” and 2 points to “Training, apprenticeship.” For responses that did not fit into the categories, we assigned points to “Other” and recorded their text response in Appendix I.

### **Why Stay?**

The graph in Figure 6 shows the results of the analysis of the “why stay” question for all usable responses.



**Figure 6. Reasons for Staying.**

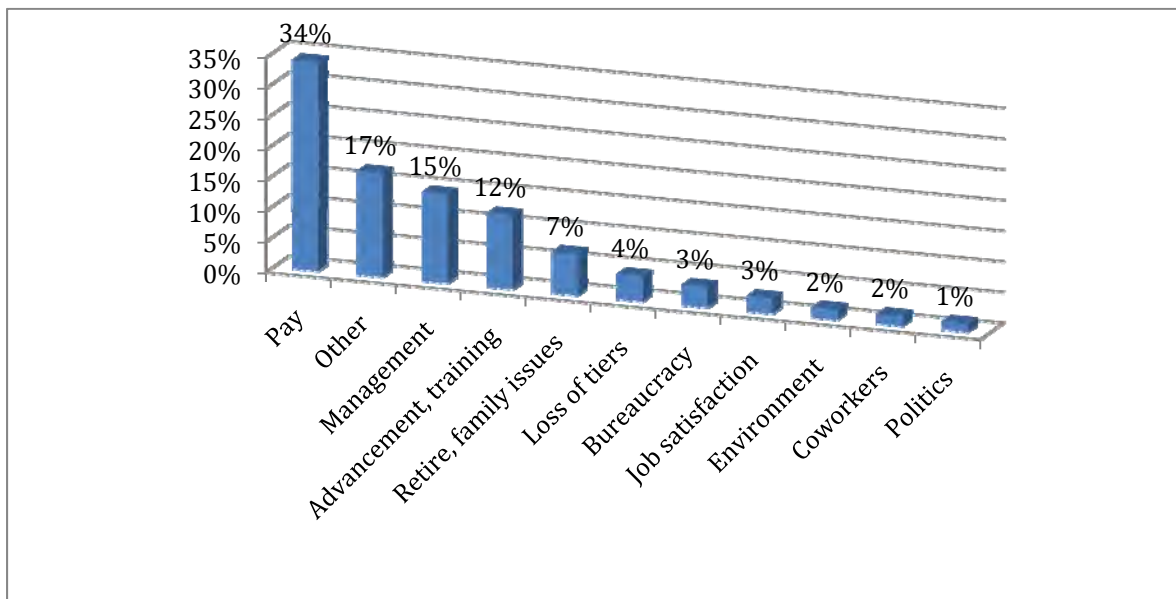
Based on the manner in which the responses were categorized, there are no clear, highly popular reasons for staying with ADOT&PF. The most popular category was chosen by less than one-quarter of the respondents. Nonetheless, the trends in Figure 6 indicate that employees tend to

stay at the department because it provides stable, secure employment; because the work is enjoyable and carries pride and a sense of accomplishment; and because they like the benefits.

Nine of the responses placed in the “Other” category seemed to refer to the “work/life balance.” A typical response was “family, friendly schedule – can have a life outside of work.” Ten of the responses classified as “other” referred to promotion potential. All these “other” responses are in Appendix I.

### **Why Leave?**

In a manner similar to that used for the “why stay” responses, we summarized the stated reasons for leaving the department. Figure 7 shows the results.



**Figure 7. Reasons for Leaving.**

Note that “pay” was the reason mentioned most often for leaving, followed by “other,” “management,” and “advancement, training.” Although the 90 comments included under “other” were quite varied, some could be grouped around common themes. Thirteen respondents mentioned a lack of appreciation of their work. Eight respondents described an issue with long hours, and fourteen mentioned workload and/or burnout, which is probably related to long hours. Thus, over twenty respondents mentioned some aspect of hours or workload. Seven respondents mentioned geography-related issues in weather or commuting. Many complained that work seems to fall on the good workers and is avoided by or not assigned to the poor workers. Depending on how it was stated, such a response was assigned to either the “Other” or “Management” category.

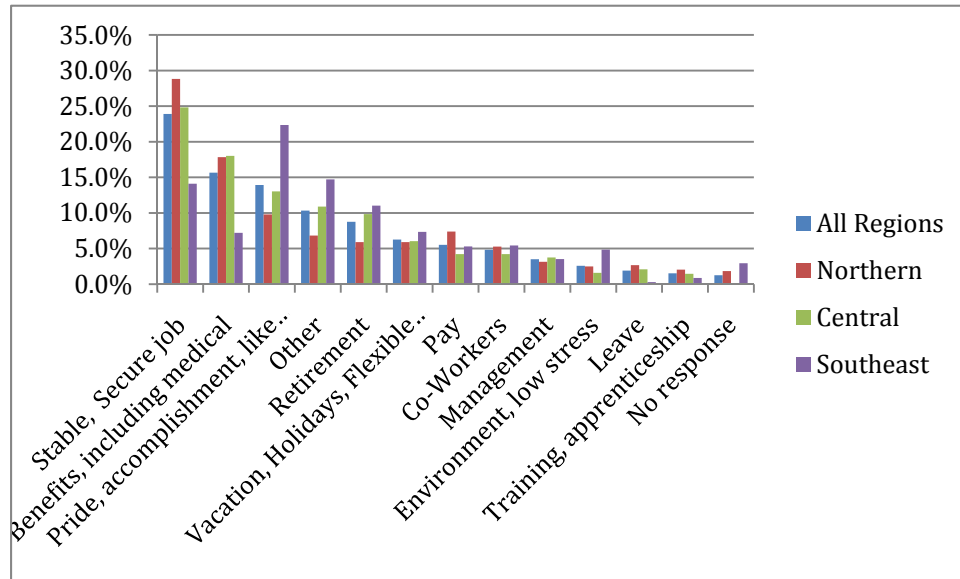
All the “other” responses are listed in Appendix J.

### **Why Stay and Why Leave, by Demographics**

We next analyzed the reasons for staying and leaving, using several demographics: region, age, supervisor/non-supervisor, and employment classification.

### **Why Stay, by Region**

With regard to the possible differences among the three regions for staying with the department, the results of the analysis are shown in Figure 8. Results for all responses (indicated by “All Regions” and shown in Figure 6) are included for comparison.

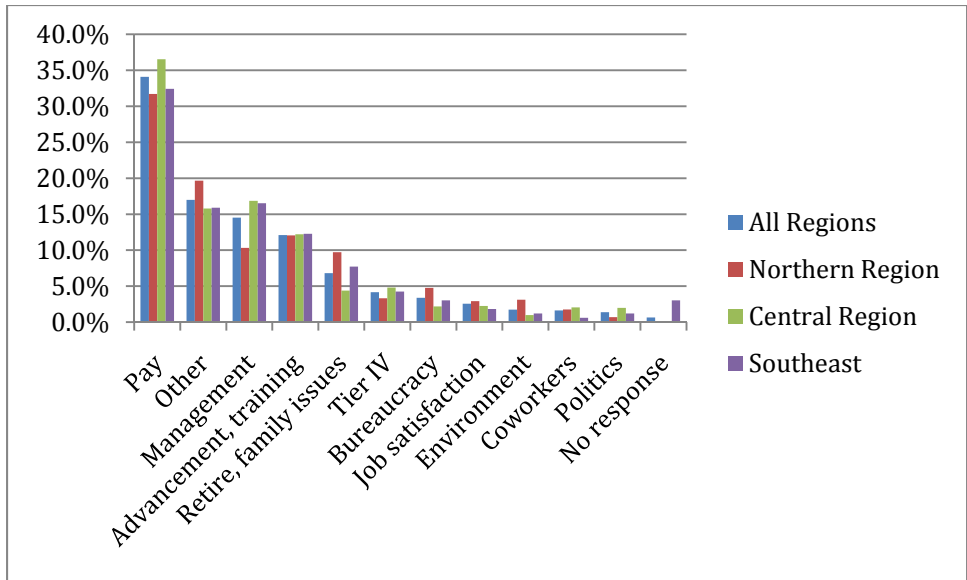


**Figure 8. Reasons for Staying, by Region.**

It appears that employees in the Northern Region feel that a stable and secure job is a more important reason for staying than those in Southeast, while employees in the Southeast Region feel that pride and work accomplishment is more important. Employees in the Central Region seem closer to the mean in all categories.

### **Why Leave, by Region**

Figure 9 shows the results of the analysis of reasons for leaving ADOT&PF, broken down by region, as well as for all responses.

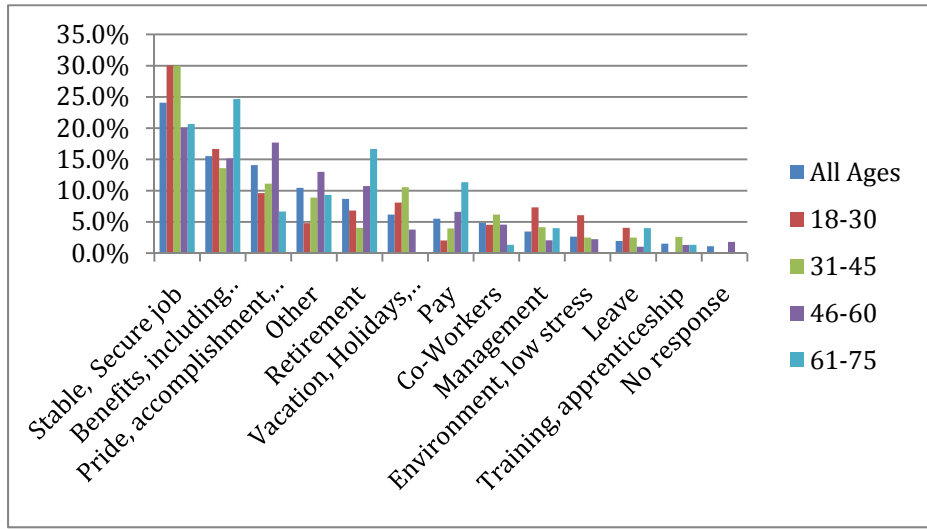


**Figure 9. Reasons for Leaving, by Region.**

Responses to the “why leave” question are strikingly similar among the three regions. It could be discerned that “management” is less often cited in the Northern Region, but some management-type responses were categorized as “Other,” where the Northern Region seems to have a slightly greater response.

**Why Stay, by Age**

The four employee age categories defined and counted earlier were analyzed for responses to the question of why employees stay with the department. Results are shown in Figure 10.



**Figure 10. Reasons for Staying, by Age.**

Since the sense of the question was “Why do you and your fellow employees stay?” not “Why do you stay?” the question really asked each respondent’s analysis of the motivation of others. It appears that younger workers are more impressed with the security of the ADOT&PF job. One

might conclude that this response reflects their opinion of why other workers, presumably older, stay.

Note overall the low response for “Pay,” relative to “Benefits, including medical.” A strong trend related to pay is evident among the age groups, with more importance attached to that category as age increases. The very high rating among older workers for “Benefits including medical” is not surprising. The “Pride, accomplishment, and liking the work” category shows increasing importance as age of respondent increases, through age 60, with the 46 to 60 age group indicating that this category figures relatively heavily in retention.

**Why Leave, by Age**

As shown in Figure 7, the overwhelming opinion is that people leave because of pay. This opinion is especially strong among workers over 60. Figure 11 shows that younger workers attach less importance to management issues, while advancement and training issues are of greater importance to those over 46. While the retirement system tier issue was not mentioned frequently throughout the responses, it is of note that younger employees, more so than their older colleagues, regard it as less of an issue.

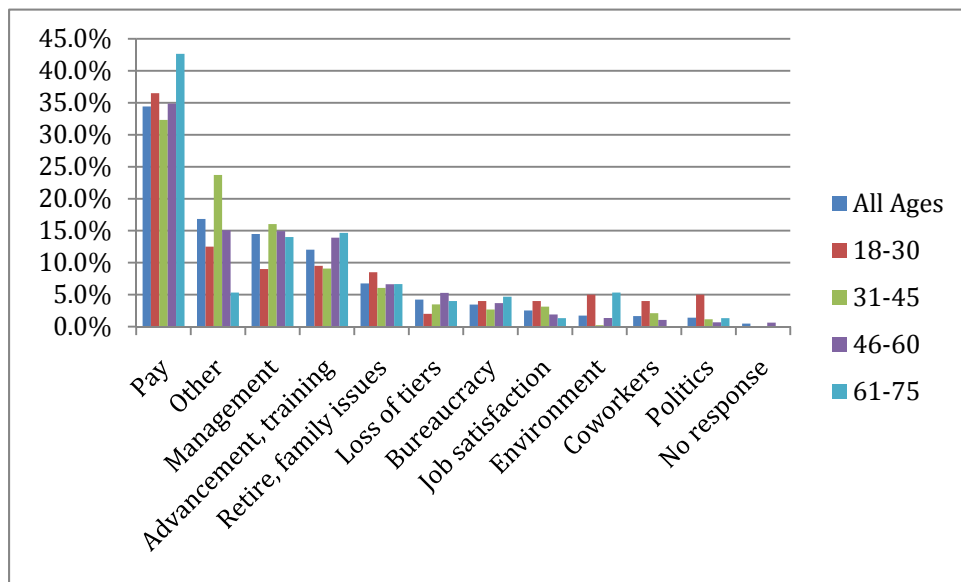


Figure 11. Reasons for Leaving, by Age.

**Why Stay and Why Leave, by Supervisor/Non-supervisor**

We analyzed responses to distinguish between those of supervisors and non-supervisors. As shown in Figures 12 and 13, little difference was evident between these two types of employees.

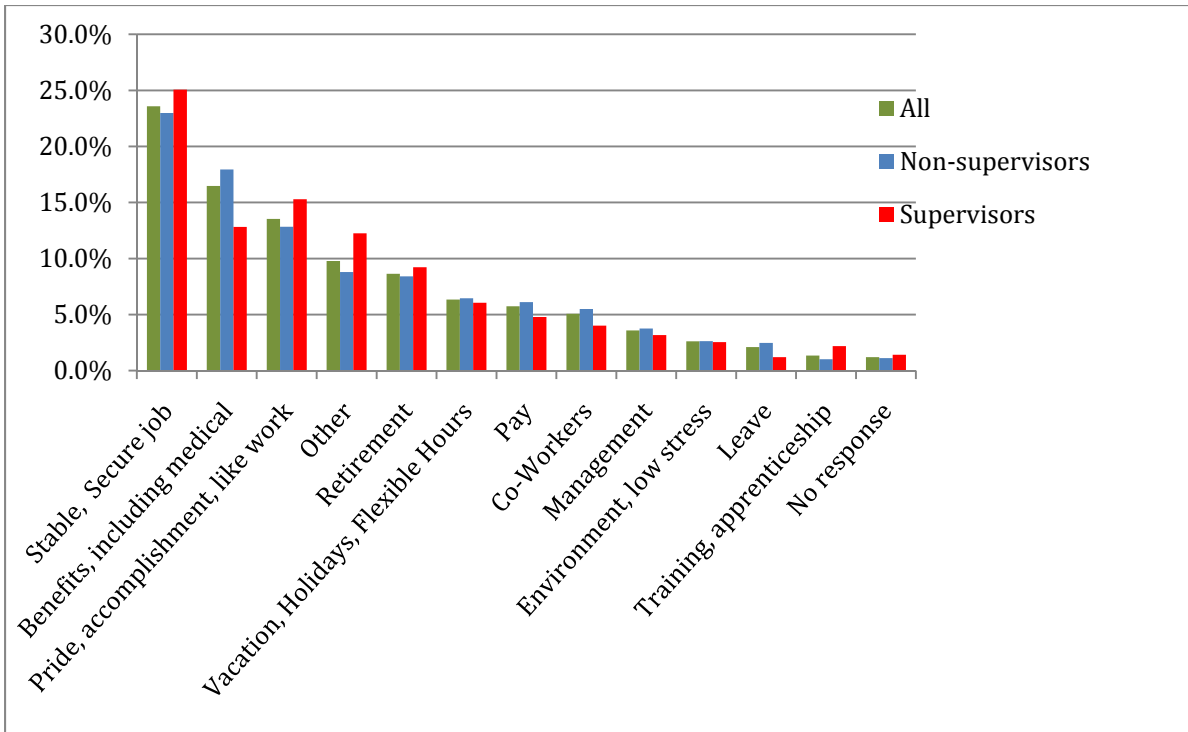


Figure 12. Reasons for Staying, Supervisor vs. Non-Supervisor.

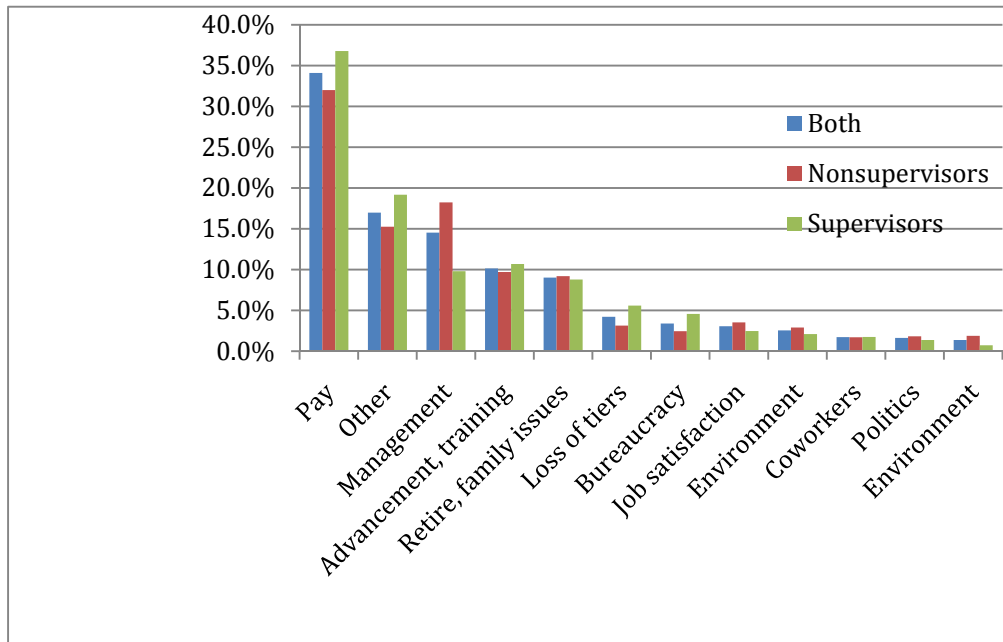


Figure 13. Reasons for Leaving, Supervisor vs. Non-Supervisor.

### **Why Stay, by Job Class**

Next, we examined by job class the responses to the question “Why stay?” We combined some classes where the number of respondents was low. A few job classes, including Surveying, received no responses. The full list of job classes is in Appendix E. A combined list of job classifications follows:

<b>Job Classification</b>
Engineering Assistant I
Engineering Assistant II
Engineering Assistant III
Engineering Associate
Engineer/Architect I
Engineer/Architect II
Engineer/Architect III
Engineer/Architect IV and V
Technical Engineer/Architect I and II
Engineering Geologist I, II, and IV
Right of Way Agent IV and VI
Environmental Program Manager I, Environmental Impact Analyst Manager I and II, Environmental Impact Analyst I, II, and III
Transportation Planner I and II
Transportation Planner III and Planner III

Figure 14 is a chart of “why stay,” sorted by job class. The first series is all job classes combined. This chart may be helpful as an overview, but the raw data in table form are in Appendix G.



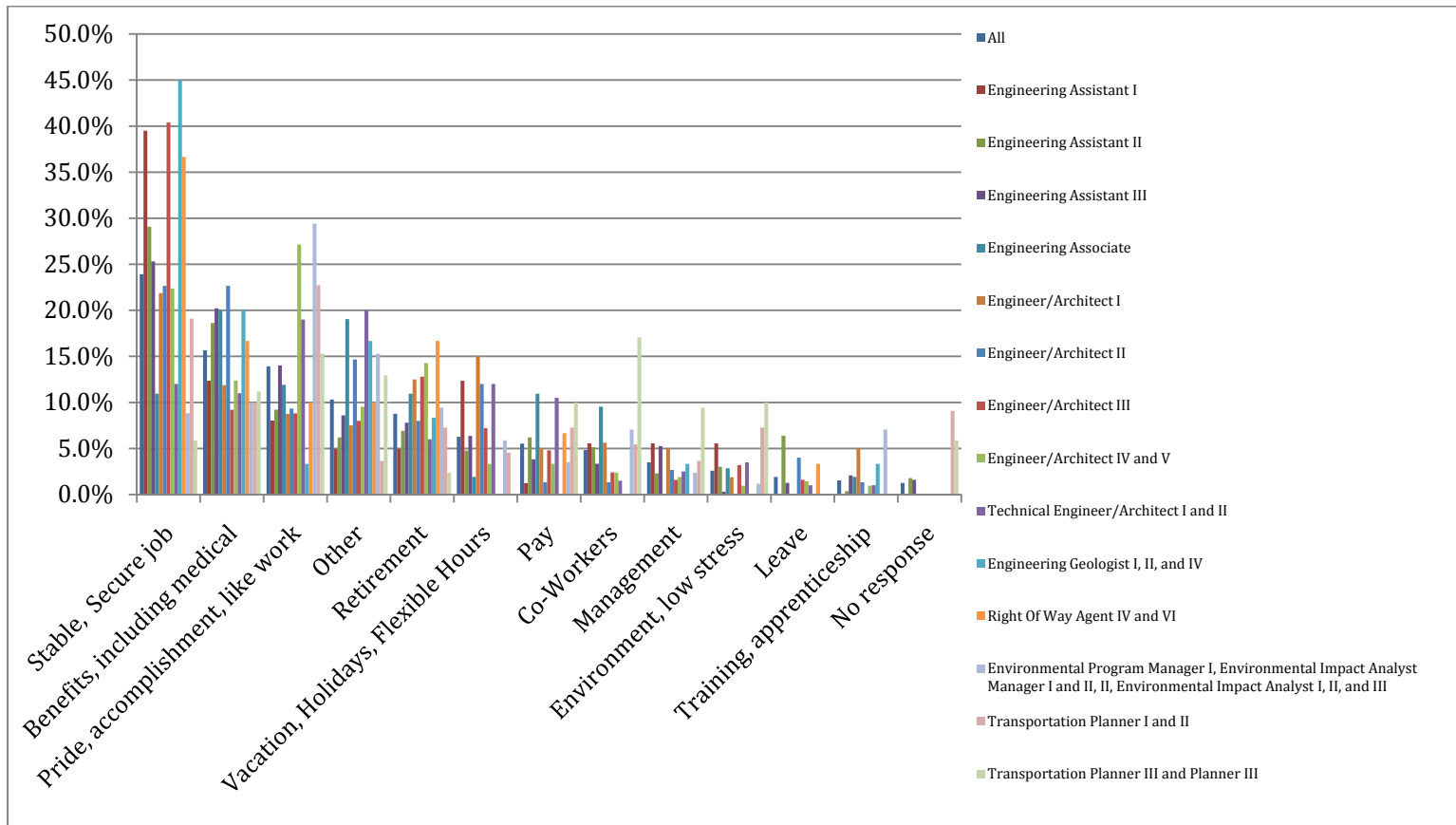
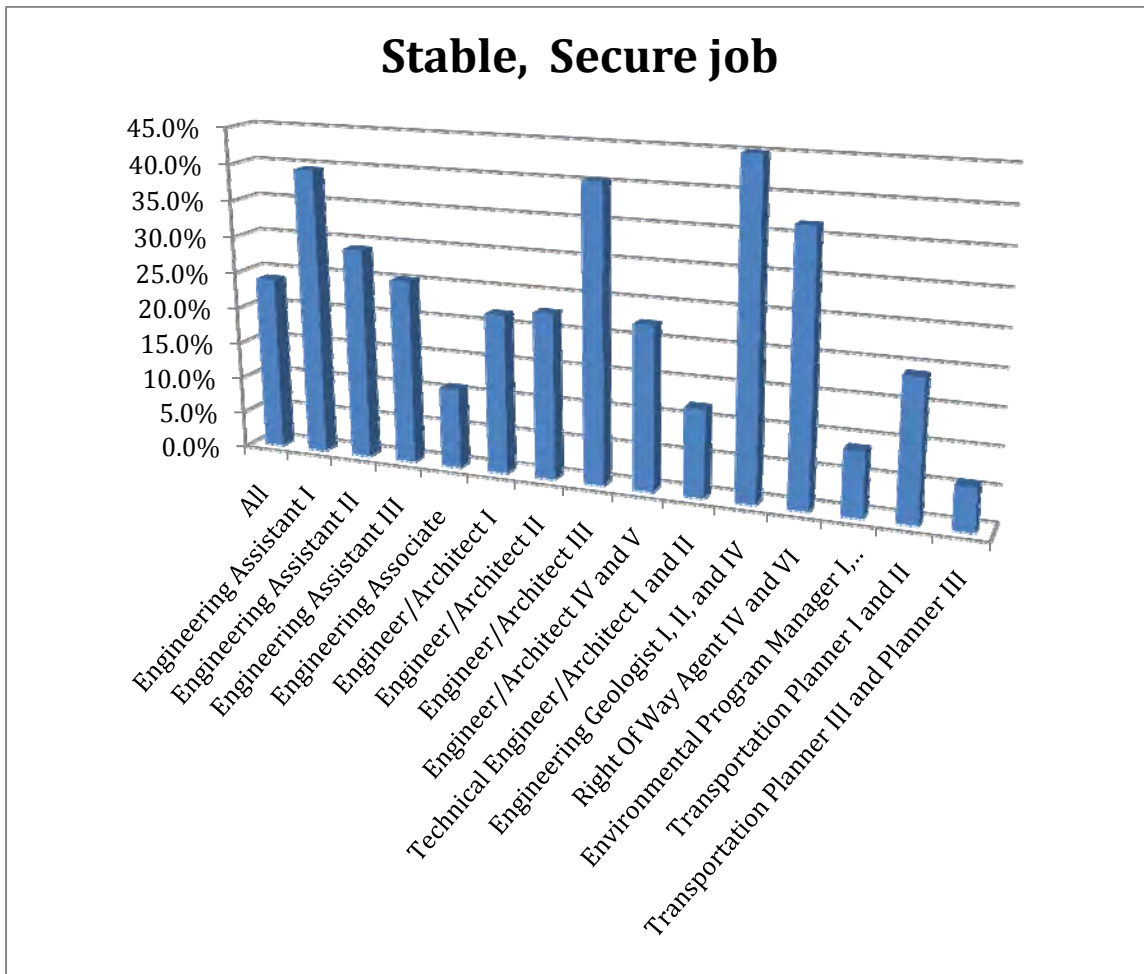


Figure 144. Reasons for Staying, by Job Class.

The following sections contain several interesting detailed charts that are based on observations of the data in Figure 14 and the table in Appendix G.

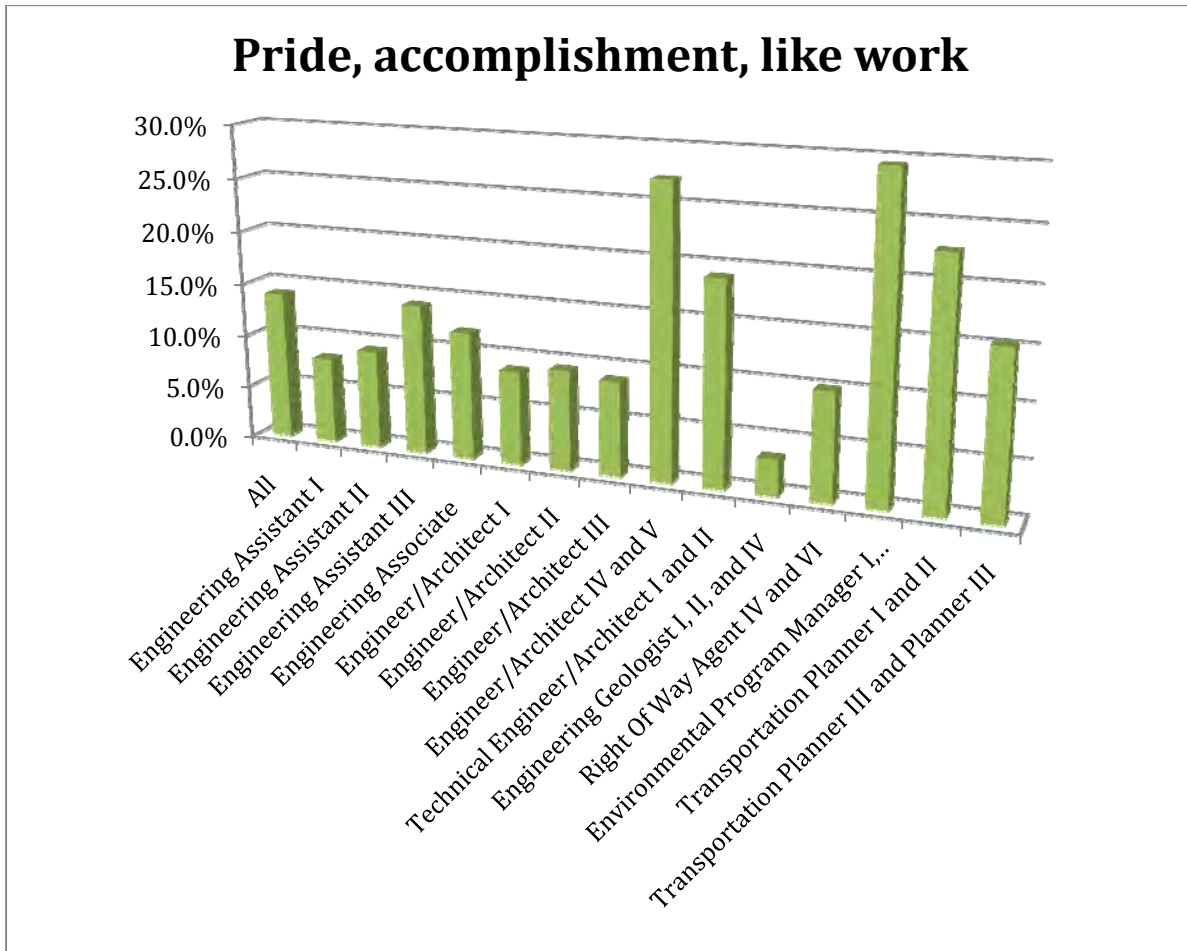
**More Detailed Reasons for Staying**

In Figure 15, we see that the Engineering Assistant I, Engineer/Architect III, Engineering Geologist, and Right of Way Agent job classes feel more strongly that a stable secure job is a reason why people stay. On the other hand, Engineering Associate, Technical Engineer/Architect I, Environmental Program Manager, and Transportation Planner and Planner III job classes do not feel stability and security are reasons why people stay.



**Figure 15. Job Security Reason for Staying, by Job Class.**

Note in Figure 16 that the Engineering Assistant I, Right of Way Agent, and Engineering Geologist job classes do not feel that pride, accomplishment, and liking work are strong satisfiers, while they feel that security is a strong motivator (Figure 15).



**Figure 16. Pride and Enjoyment Reason for Staying, by Job Class.**

***More Detailed Reasons for Leaving***

Next, we examined by job class the responses to the question “Why leave?” Figure 17 is an overview chart. A table containing all the response details is in Appendix H.

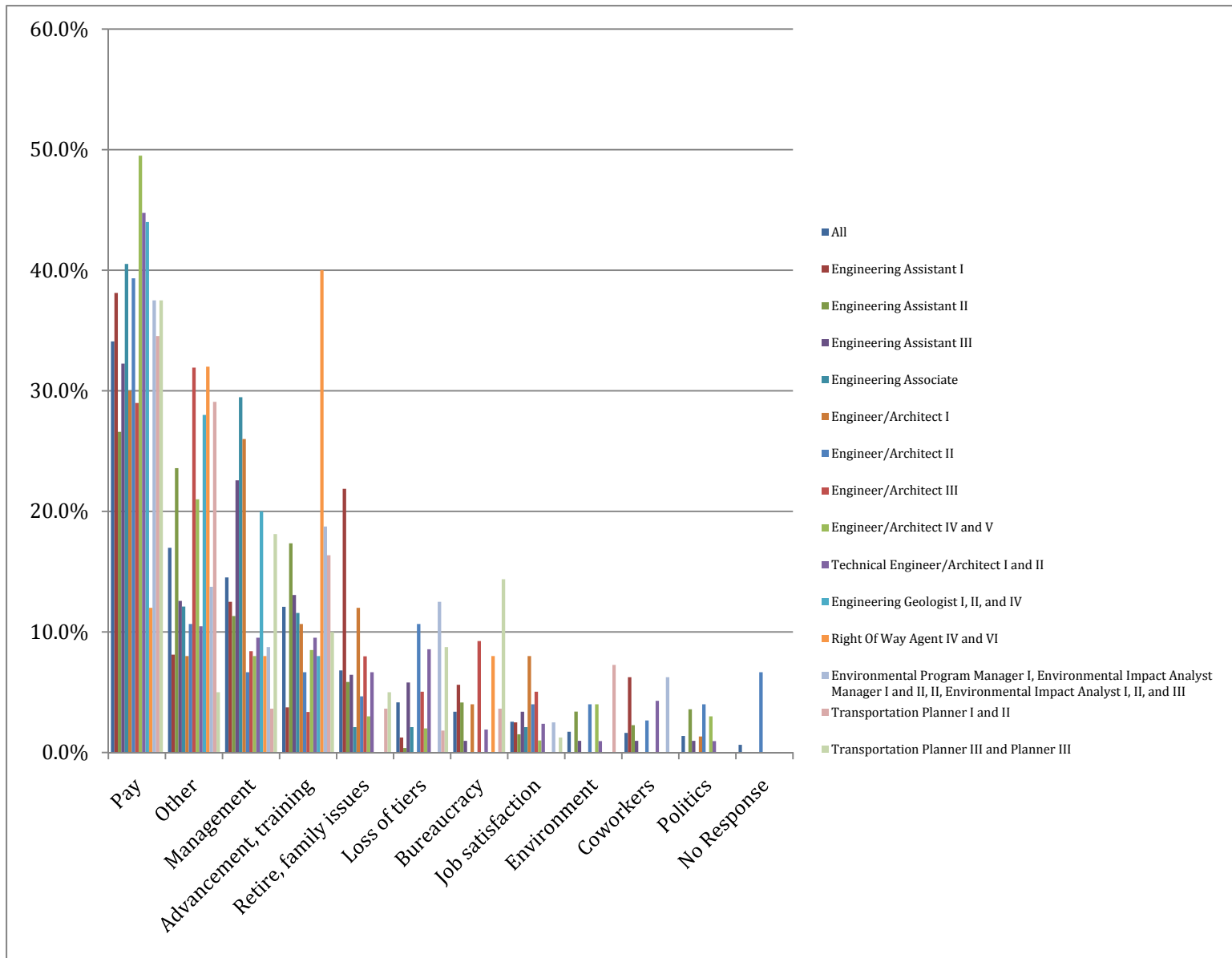


Figure 17. Reasons for Leaving, by Job Class.

Figure 18 shows the percent of each job class that felt pay was one of the three main reasons for why people left.

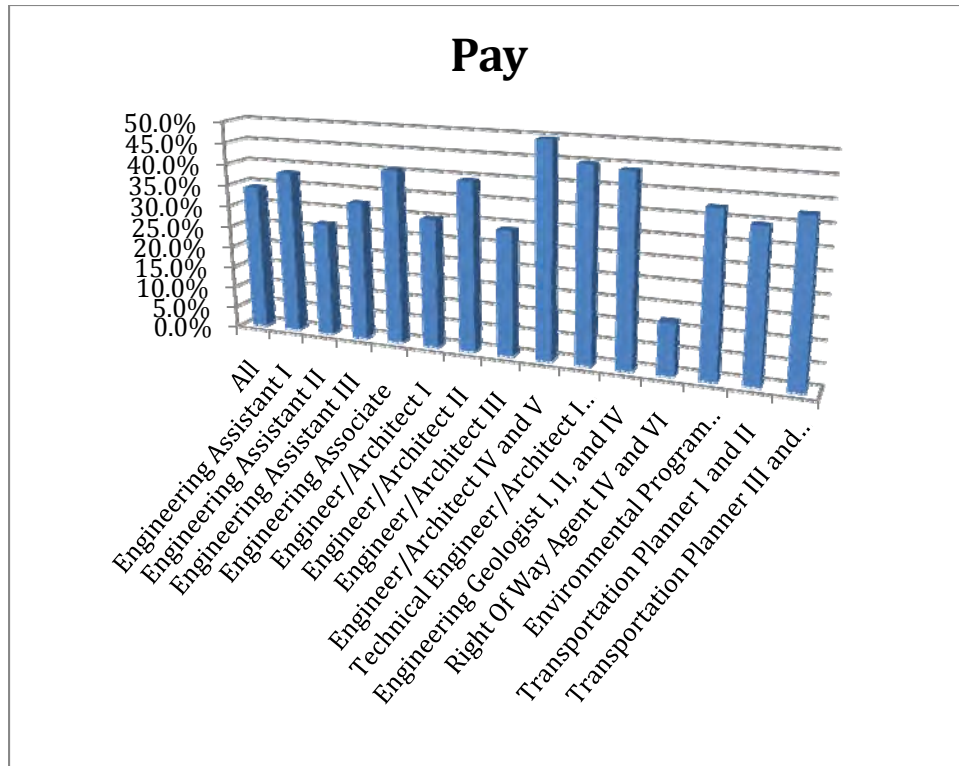
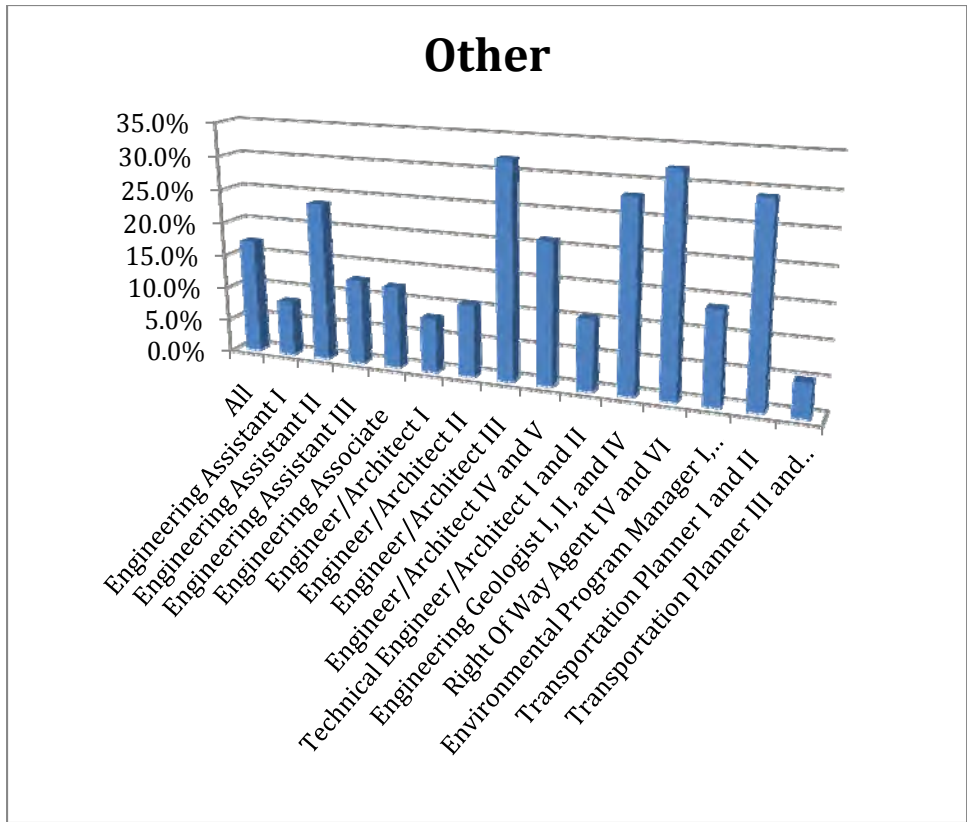


Figure 18. "Pay" as a Reason for Leaving, by Job Class.

Figure 19 shows the percent of each job class that indicated some facet of the category "Other" as the reason for leaving.



**Figure 19. “Other” as a Reason for Leaving, by Job Class.**

The data in Figure 19 would prompt a more detailed look at “Other” for those classes that had relatively high percentages, such as the Engineer/Architect III, Engineering Geologist, Right of Way Agent, and Transportation Planner I and II job classes.

Figure 20 indicates the percent of each job class that indicated advancement and training as a reason for leaving.

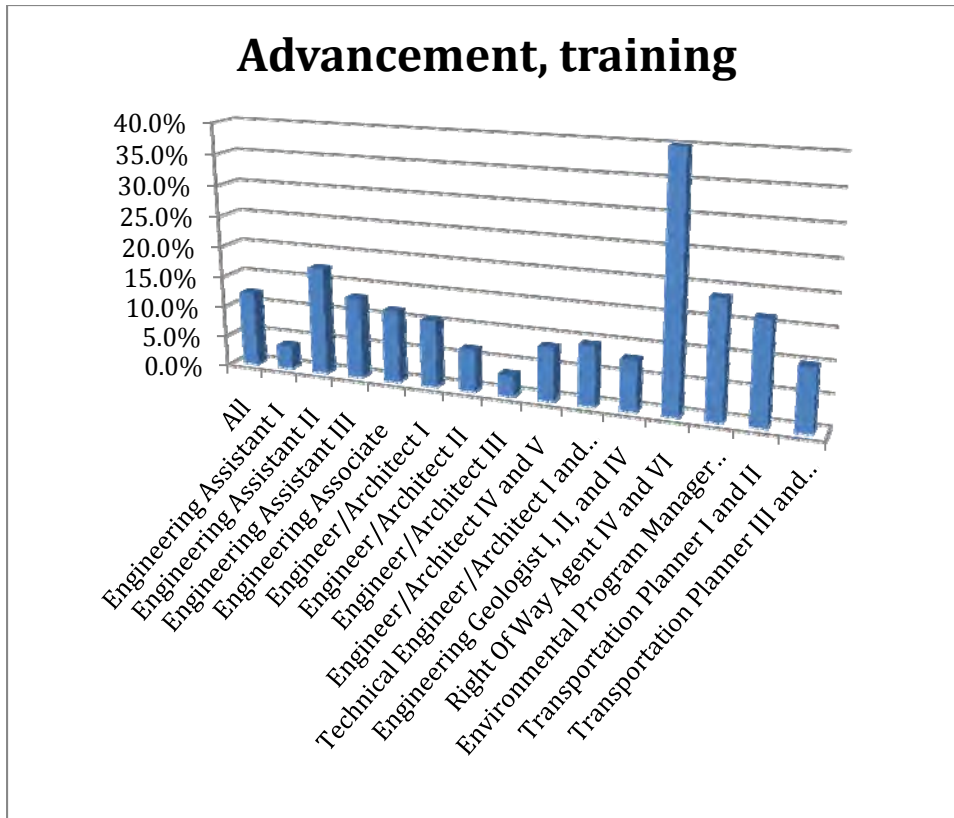


Figure 20. "Advancement and Training" as a Reason for Leaving, by Job Class.

Note in Figure 20 that the highest percentage is indicated by employees in the Right of Way job class.

### Three Things that Would Make the Department a More Attractive Workplace

The survey asked respondents to list the three most important things that ADOT&PF could do to make it a more attractive place to work; thus, three text responses were required. We evaluated these by first finding logical categories that seemed to cover the range of responses, and then counting the responses that fit each of the categories (see Table 13). Eleven percent of the total responses did not fit in these categories. In addition, the category "Management"—somewhat of a catchall category—accounted for 12% of the responses. Generally, these responses indicated that better management would make ADOT&PF a more attractive place to work, or indicated issues that could be resolved by local managers, but did not fit into other categories. We proceeded by placing the response in one of the categories, including "Management," and then we listed the 11% that did not fit into a category, as well as those "management" responses that we felt contained interesting information, in Appendix K. Most respondents cited three items, as requested.

**Table 13. Percent of Respondents –  
Question About 3 Things to Make a More Attractive Workplace**

Pay	67%
Tiers, better retirement	40%
Management	38%
Work amenities, supplies, computer	34%
Training, professional development, mentoring	29%
Better benefits, medical	14%
More flexible work hours, telecommuting	13%
Better teamwork between sections, departments, regions	11%
More praise, recognition	10%
Promotion	10%
Fairer workload distribution	9%
Fire lazy, hold people accountable	8%
Bonus, incentives	7%
HR dissatisfaction, speed hiring, rules	4%
Flexible job classes, promotion opportunities	3%
Less politics	3%
Less work, stress	1%

The following observations are based on the results shown in Table 13. The examples are typical or were included because they were notable.

1. Pay: Simply increasing the salary was indicated in many responses. Some 66% indicated pay would help make ADOT&PF a better place to work. (See below regarding overtime.)  
Examples of text responses:



- a. Expand the market-based pay adjustment that engineering staff receive to other groups
  - b. Raise salaries, especially for employees outside of the engineering positions, i.e., environmental analysis
  - c. Provide a fair contract for compensation with overtime for those who are overtime ineligible
2. Tiers, better retirement: Many negative comments were made regarding Tier IV, the current retirement system. Most were quite simple: “bring back Tier I.”
3. Management: Diverse comments indicate that better management would make ADOT&PF a more attractive place to work. Since virtually everything is a “management problem,” we have listed the types of responses that landed in this category:
  - a. Management should take responsibility for its actions
  - b. More clear task assignment instructions – preferably in writing
  - c. Establish written environmental policies and procedures following department rules
  - d. Reduce vertical bureaucratic hierarchies
  - e. Encourage and support new ideas
  - f. Monitor and hold supervisors accountable for the way they treat their staff
  - g. Establish a management philosophy that is proactive and focuses on the long term
  - h. Keep majority of work in-house
  - i. Morale – shifting priorities and high pressure for production, lack of incentives for high performers
4. Work amenities, supplies, computer: Most comments were directly about physical facilities, break rooms, cleanliness, etc. A few comments concerned software work tools.
  - a. Have break room/kitchen facilities and shower facilities in main buildings
  - b. Update work space and working conditions – state paid/provided child care facilities as a benefit
  - c. Update décor – makes for drab/depressing environment
  - d. Find money in the budget for Kleenex and kill the mice!
5. Training, professional development, mentoring: This topic was mentioned in many ways. There was a difference in text responses between “professional development” and “promotion,” but some responses overlapped. Examples:
  - a. Provide training for new employees in a timely manner
  - b. Better/more complete training of personnel new to their positions
  - c. Ongoing/programmed/continuing education opportunities for professional staff

6. Better benefits, medical: If the response mentioned “medical,” it landed here, and about half of the responses did. Leave and a variety of other benefits were mentioned here.
7. More flexible work hours, telecommuting: We note here that a number of respondents specifically asked that a branch office open in Mat-Su.
8. Better teamwork between sections, departments, regions: This item, and the next several, could have been subsumed under “Management,” but if a comment mentioned “team” or “teamwork” specifically, we put them in this category. Since 11% is a high number for a very specific term, I will give some examples:
  - a. Have more team building meetings of events, including creative ideas
  - b. Faster cooperation, teamwork and commonality between the various sections, regions and groups
  - c. Break down the functional group barriers through more team building initiatives
  - d. Encourage teamwork. Share with each other what we are working on to identify any problems to help solve
9. More praise, recognition: Comments here referred to supervisors giving more praise and to recognition from the legislature and public of the worth of ADOT&PF employees to the state.
10. Promotion: Examples of comments included
  - a. Rewrite min/hwy position qualifications to allow experience to substitute for having an engineering degree and/or P.E.
  - b. More flexibility in job classification/organization/restructuring to allow opportunity for promotion for deserving employees
  - c. Need a place/path for promotions for good designers who do not want to become project managers/supervisors
  - d. Find ways to encourage good work with incentives such as promotions
11. Fairer workload distribution: These comments referred both to overload in the summer or busy season and to workload differences between overloaded individuals and less burdened workers.
12. Fire lazy, hold people accountable: While this issue is certainly about management, we put it in a different category because some responses were blunt, indicating strong emotion. At 2.5%, this response by a small group clearly reveals that a significant number of employees have a firm opinion in this regard. Here are some examples:
  - a. Perform accurate evaluations of employees, remove employees who do not perform
  - b. Remove ineffective manager
  - c. Make it easier to fire horrible employees
  - d. Terminate all incompetent and non-productive management

e. Fire unproductive workers, don't hire more than needed

13. Bonus, incentives

14. HR dissatisfaction, speed hiring, rules: Comments included opinions about the classification system, initial classifications, and length of time to hire help, as well as miscellaneous complaints about time sheets and related matters.

15. Flexible job classes, promotion opportunities: Many comments in this category could have been combined with "Promotion," but if they specifically mentioned job classes, they were placed here.

16. Less politics: This issue may be notable because of the small number of respondents who mentioned it. However, see the unclassified list in Appendix K.

17. Less work, stress: Again, this issue is notable for how few respondents mentioned it.

Appendix K contains an unclassified list of things that ADOT&PF could do to make the department a more attractive workplace. Appendix L contains a similar list as it pertains to "management," because some of those comments were quite diverse. Here are a few recurring comments:

Union: There were some complaints about compulsory union membership, as well as complaints that the union did not do enough. Some examples:

Get rid of unions

No union, "closed shop" status

Better and more diverse representation from the union – create motivation/incentives for continuing education

Show initiative to work with the union – see the state work with the union more

Mat-Su Office: A number of responses requested an office in Mat Su

A number of responses asked for promotion from within, and for less use of consultants.

## DISCUSSION OF SURVEY RESULTS AND IMPLICATIONS

### General Discussion of Survey Results

This project sought to assist ADOT&PF in planning for its future workforce needs. The approach involved

- Acknowledgment of already active succession planning efforts
- Review of relevant literature
- Study of demographic trends in the department's workforce in the recent past
- Discussion of potential future development projects in Alaska that could impact the state's economy and its transportation infrastructure
- Survey of current and former ADOT&PF employees to ascertain their attitudes about their jobs and the department as a workplace; to solicit their opinions about the reasons for and likelihood of employees staying and leaving; and what the department might do to provide a more attractive workplace

An emphasis throughout the study was on engineer employees and related professionals.

The study leads to the conclusion that ADOT&PF is clearly faced with a problem of providing sufficient personnel in the future in order to carry out its mission. There must be enough personnel, and those personnel must be properly trained and placed in positions for which they are suited.

Stated simply, the situation results from two basic causes. The first cause relates to demographics: the workforce is aging, the number of personnel eligible to retire is increasing, and recruiting has not been sufficiently successful to fill job vacancies. The second cause relates to the attractiveness of ADOT&PF as a place to work. While a large proportion of the workforce regards the department favorably, the study identified a number of issues about the workplace that can be improved. Such improvements ought to lead to success both in recruiting new employees and retaining present employees.

Results from the employee survey have been enumerated in detail in previous sections, and the section that follows will suggest some implementation recommendations. We have listed highlights resulting from the analysis of survey responses. Note that the All Employees group includes both engineer and non-engineer professionals who responded to the survey.

- With respect to pay, younger engineers are less satisfied with their pay than the overall employee sample.
- Younger engineers are concerned about not receiving overtime pay for overtime work.
- The All Employees group tends to be pessimistic about prospects for adequate future salary increases.
- Younger engineers tend to be less satisfied with all aspects of employment benefits than the All Employees group, but both groups view available benefits favorably.

- Of all the various types of benefits, the category rated most unfavorably includes such amenities as break rooms, restrooms, and housekeeping.
- The work environment is viewed positively, in general.
- Employees feel somewhat unappreciated and unacknowledged, and lack promotion opportunities.
- Engineers are inclined to believe they have little authority to make decisions and are less encouraged toward innovation and initiative, and they consider policies and procedures somewhat unfair, in comparison with the All Employees group.
- With regard to management and supervisors, the All Employees group tends to regard them as fair, caring, and knowledgeable.
- The All Employees group believes, on average, that sufficient and effective mentoring is lacking.
- Engineers, more so than the All Employees group, are concerned about the lack of clear expectations and goals; they also think that performance feedback could be improved.
- The All Employees group tends to feel positive about their fellow workers—their temperament, willingness to share work fairly, and efforts to resolve workgroup issues.
- When asked to rank the importance of six categories of work satisfaction, employees, both the All Employees group and the younger engineers group, believe salary is most important, followed by workplace activity, employment benefits, management and supervisors, fellow employees, and work environment. Two methods of analyzing these responses resulted in the same ranking as given in the previous sentence.
- If economic conditions in Alaska remain relatively stable, about 43% of the All Employees group and 34% of younger engineers describe themselves as very likely or somewhat likely to leave ADOT&PF within the next three years.
- If the economy in Alaska heats up, with the development of a major project such as a gas pipeline, about 58% of all respondents and 53% of younger engineers indicate that they are very likely or somewhat likely to leave the department in the next three years.
- The primary reasons that employees continue to work at ADOT&PF fall into three categories: (1) the job is stable and secure; (2) the work is enjoyable and provides a sense of pride and accomplishment; and (3) employment benefits, including medical insurance, are attractive.
- The primary reasons that employees leave the department fall into four categories: (1) pay; (2) other reasons, such as lack of appreciation, workload, burnout, and Alaska's climate; (3) management and supervision; and (4) lack of training and advancement opportunities.

### **Comparison with the McDowell Group Report**

Reference has been made to a report prepared for ADOT&PF in April 2008 by the McDowell Group (McDowell Group, 2008). That report describes an employee attitude survey conducted among all of the department's employees. Although the survey reported herein was confined to

engineering and related job categories, whereas the McDowell effort involved the entire department, a brief comparison of the two reports is in order. Table 14 compares selected results from the two studies:

**Table 14. Comparison of Selected Findings from McDowell Report and This Study**

McDowell Report (2008)	Study Reported Herein (2010)
Return rate 39% (47% if Marine Highway employees were excluded); includes all ADOT&PF employees	Return rate 66% of all queried employees (72% of current employees); confined to engineering and other technical professional ADOT&PF employees
Three best things about working for the department: 1. People and co-workers; 2. Pay and benefits; and 3. Working for Alaska's people, the greater good and the department's mission	Three primary reasons employees continue to work at ADOT&PF: 1. Stable and secure job; 2. Enjoyable work that provides and sense of pride and accomplishment; and 3. Employment benefits
Three worst things about working for the department: 1. Pay; 2. Upper management/leadership; and 3. The bureaucracy Three most important factors that cause employees to leave: 1. Finding a better salary and benefits package; 2. Retirement; and 3. Finding work with more opportunities for advancement	Primary reasons that employees leave the department: 1. Pay; 2. Other reasons such as lack of appreciation, workload, burnout, and Alaska's climate; 3. Management and supervision; and 4. Lack of training and advancement opportunities.
36% of ADOT&PF employees likely or very <i>likely to be working</i> for the department in <i>five</i> years	57% of all employees and 66% of younger engineers <i>not likely to leave</i> within <i>three</i> years if economic conditions remain stable; 42% for all employees and 47% for younger engineers if a major development in Alaska is started
28.1% of ADOT&PF employees eligible to retire within five years	29.6% of all ADOT&PF employees and 40.2% of all engineer employees eligible to retire within five years
Three top things employees said would improve their current work situation: 1. More opportunities for technical training; 2. Clearer opportunities for advancement with the department; and 3. Better software, equipment, facilities and other tools for their job	Most important things the department could do to make ADOT&PF a more attractive place to work: 1. Pay; 2. Better retirement system; 3. Management and supervision; 4. Work amenities such as computer facilities and supplies; and 5. Opportunities for training, professional development and mentoring

## CONCLUSIONS AND IMPLEMENTATION RECOMMENDATIONS

This section includes ten conclusions based on the findings of this study. After each conclusion, one or more recommendations are given, followed by suggested tools or action items.

All of the recommendations suggested below require some degree of change in the corporate culture of ADOT&PF. These changes are unlikely to come about unless the upper management of the department becomes a proponent of these changes.

### **1. Conclusion: *Critical Shortage of Skilled Engineers and Technical Professionals***

Loss of the Baby Boom age class is a nationwide succession problem for government and businesses in general; loss of staff that started during the Interstate era is a succession problem for DOTs nationwide; loss of the Pipeline era workforce exacerbates this problem in Alaska. These losses should be filled by current middle managers and incipient middle managers, typically Engineer/Architects I and Engineer/Architects II. Our research and the research of others have shown that there is a shortage at ADOT&PF of personnel in these job classes and that a significant proportion of employees in these job classes may leave. This shortage is a challenge that needs a remedy. Future challenges, such as a rise of public-private partnerships, funding for transit systems rather than highways, and the possibility of a major project, such as the Alaska gas pipeline, will require managers with a broader background and special skills. This report focuses on the issue of retention of current ADOT&PF staff, especially the incipient middle managers needed for successful succession management.

#### **Recommendation:**

*Upper management work session of at least half-day duration.* This report should be considered important factual input to the department's succession planning efforts and should lead to a half-day discussion and feedback work session with upper management where these findings and recommendations are discussed. We suggest, as part of such a work session, that a "fishbone," or cause-and-effect, diagram be developed to understand the problem fully. The diagram would take the form shown in Figure 21, where "effect" would be retention deficiencies, and "equipment," "process," etc., would be replaced with such causes as pay and benefits and supervision. The goal of the suggested exercise is to generate understanding and agreement relative to the department's retention deficiencies and the looming critical shortage of key personnel.

This recommended work session should also consider a number of issues identified from the survey that could be improved with minimal effort and expense. Examples are personal workspace, amenities, and care of personal property (questions 2d, 2e, and 2f); sense of work enjoyment, sense of personal accomplishment, sense of personal appreciation and acknowledgment, acceptance as a true member of the organization, and recommending ADOT&PF as a good place to work (questions 3a, 3b, 3d, 3f, and 3i).

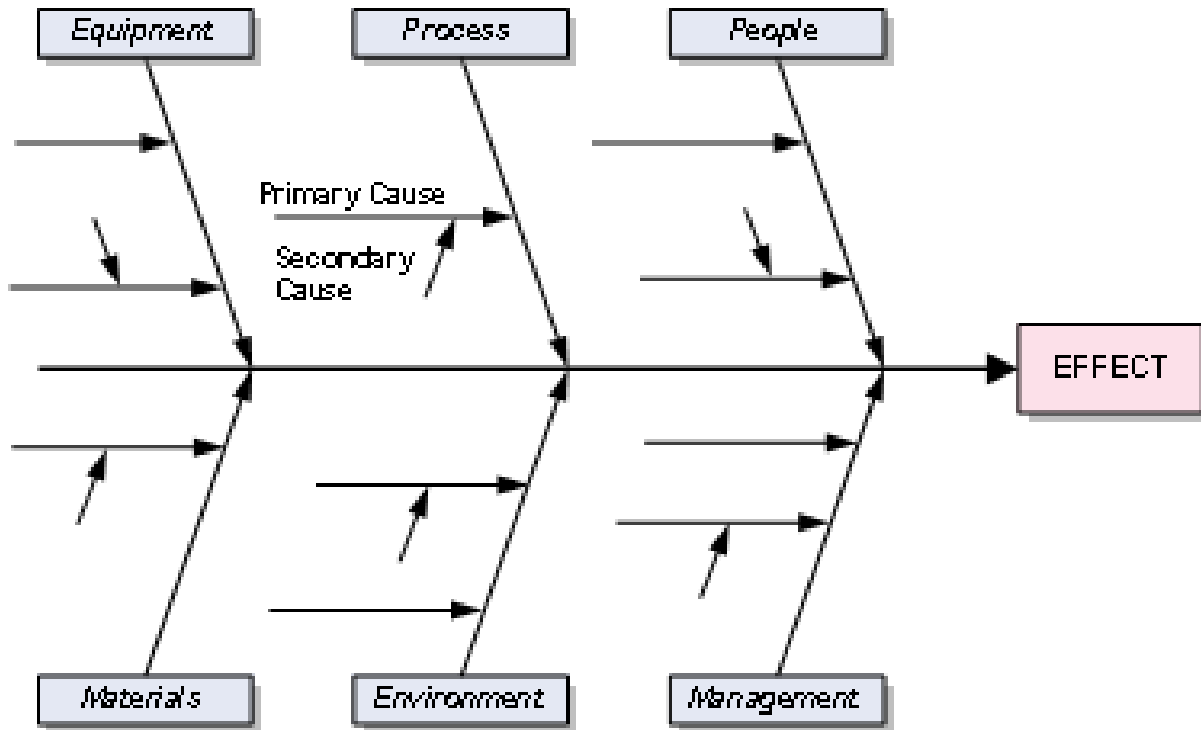


Figure 21. “Fishbone,” or Cause-and-Effect, Diagram.

## 2. Conclusion: *Lack of Relevant Job-Skills Training*

Employees believe there is a lack of relevant job-skills training.

### Recommendations:

A more complete job-skills training program that meets employee skills and future career needs and current and future ADOT&PF needs should be implemented. A change in corporate culture is needed that requires supervisors/managers to have a responsibility to train the younger generation.

- Develop a soft-skills inventory for those in leadership and management jobs.
- Develop an individual development program for these soft skills tied to the inventory.
- “Reverse performance appraisals” (360-degree performance appraisals), whereby lower staff rate their supervisors, can serve as a tool that discloses a supervisor’s lack of soft skills in human relations.
- Performance evaluations of supervisors/managers must include assurance of their training the younger generation.
- Managers and supervisors should be trained to coach, mentor, and train their direct reports.



### **3. Conclusion: *Line v. Non-Line Jobs***

Training needs are different between engineering employees and related staff professions of geology, right-of-way, environmental, and planning.

#### **Recommendation:**

The training needs of these staff disciplines should be considered separately from training needs of engineer professionals.

- An inventory of the skills needed for these groups is needed. Not all of the needed skills are required for certifications; some are soft skills.
- The inventory needs to be a part of the department's workforce planning program.

### **4. Conclusion: *Human Relations***

Many employees feel that appreciation, acknowledgment, a sense of personal accomplishment, feedback, and clear expectations are lacking in the ADOT&PF workplace.

#### **Recommendation:**

A change in corporate culture is needed to demonstrate appreciation and recognition of accomplishments. "Employee of the Month" just does not suffice.

- Human relations and teamwork training for supervisors must be expanded and ongoing. Supervisory training in goal setting, expectations, and feedback must be instituted.
- A commissioner-level program needs to consider that many employees feel they are attacked by the public, media, and the legislature for problems, but not praised by those groups for the successes.
- Lower-level staff should participate in "ribbon cuttings" and similar ceremonies.
- An Internet- and intranet-based recognition program should be considered.
- Current PR initiatives in regions should be enhanced; key employees should be emphasized in press releases.

### **5. Conclusion: *Mentoring***

In addition to training, many employees feel a lack of mentoring, which is the personal one-on-one transfer of knowledge from more-experienced personnel to less-experienced personnel.

#### **Recommendation:**

The department should institute corporate culture and policy changes to accept the transfer of knowledge via mentoring as a critical part of the job.

- ADOT&PF should evaluate its mentoring program and consider greater emphasis on one-on-one relationships between individuals at all levels of the organization.
- ADOT&PF should consider double-filling the positions of those employees about to retire, with an emphasis on mentoring during this phase-out period. If double-filling requires special budgets, they should be obtained.

## **6. Conclusion: *Pay***

Pay continues to cause dissatisfaction. For example, 53% of the Engineers I and II who responded to the survey did not believe they receive a fair and adequate total salary

### **Recommendations:**

Again, a change in corporate culture is needed. “Blame the legislature” is not helpful.

- The department should explore non-pay incentives that would offset the dissatisfaction about pay. Options could be provided for the department that are in agreement with collective bargaining agreements. If divisions and regions have a list of options to choose from that are vetted by the department, customization to individual needs is still possible. For example, Anchorage employees living in Mat-Su have a difficult commute.
- Since many employees laud ADOT&PF for honoring work/life balance, while some plainly feel this is not the case, the department should evaluate this aspect of employment to identify what can be improved.
- Since the critical Engineer I and II classifications do not get overtime pay, their compensation method should be explored.

## **7. Conclusion: *Tier IV Retirement***

Concern is expressed about the retirement system tiers. Tier IV is seen as a huge problem, because it results in inequities between similar workers within the department and hampers recruitment, while providing no disincentive to leave the department.

### **Recommendation:**

Pay increases and non-retirement benefits improvements should be considered as a means of offsetting the negative effects of the retirement tier situation. Note that many of these younger engineers and professionals belong to the Millennial Generation, which tends to put greater weight on work/life balance and less weight on retirement and other future incentives.

- Consider the issue of work/life balance – query staff directly and give supervisors the authority to make reasonable changes.
- Train supervisors regarding flexibility in work assignments and hours.

## **8. Conclusion: *Satisfactory Workplace***

There is widespread agreement that many aspects of the ADOT&PF workplace are satisfactory, including benefits (except for retirement tiers), job security, family-friendly work environment and schedule flexibility that allows work/life balance, feelings of acceptance, knowledgeable supervisors, emphasis on professionalism, and positive workplace environment.

### **Recommendations:**

Continue these positive aspects of ADOT&PF employment with no changes.

- Supervisors and managers should understand the importance of the non-pay benefits cited above.

- Although many employees agree with this conclusion, management should consider those who disagree on a case-by-case basis.
- Consider emphasizing these positive aspects in recruitment.

### **9. Conclusion: *Workplace Amenities***

Most employees are comfortable with their situations and are neither satisfied nor dissatisfied with workplace amenities. However, it is evident from the text comments that some employees have strong concerns about workplace amenities; thus, we conclude that the concerns are highly specific to certain locations—buildings.

#### **Recommendations:**

The main issues with certain buildings and situations are likely well known to upper management. However, the fact that the remedy is in some future budget request is not directly satisfying to some employees.

- In buildings and situations that are substandard, make a small budget available and ask employees for suggestions about how that money could be used to improve that building or situation.

### **10. Conclusion: *Major Development Projects in Alaska***

The prospect of a major development for Alaska in the foreseeable future is uncertain. If such becomes a reality, there will be a major impact on the ADOT&PF organization.

#### **Recommendation:**

If a major development project in Alaska is approved, major re-organization of ADOT&PF will be required. For example, a staff of five to ten may be needed just to apply for and monitor the course of permit applications during the design stage of the project.

- As approval of a large project seems imminent, recognize that the project will require a contingency staffing plan. Budget will be needed for this planning and should be secured as part of the state legislature's approval process for the project.
- Recognize that even planning for the project will be a large project, and extra funding and special staff or consultants will be needed.

## REFERENCES

Alaska Division of Retirement and Benefits (2010). Public Employees' Retirement System (PERS) Plan Comparison Chart, May 12, 2010.

Charan, R., S. Drotter, and J. Noel (2000). The Leadership Pipeline: How to Build the Leadership Powered Company. Jossey-Bass (248 pp).

Department of Administration (2006). State of Alaska Workforce Profile, Fiscal Year 2006, [http://doa.alaska.gov/dop/fileadmin/dop\\_home/pdf/dopannualreport2006.pdf](http://doa.alaska.gov/dop/fileadmin/dop_home/pdf/dopannualreport2006.pdf)

Department of Administration (2009). State of Alaska Workforce Profile, Fiscal Year 2009, [http://doa.alaska.gov/dop/fileadmin/dop\\_home/pdf/dopannualreport.pdf](http://doa.alaska.gov/dop/fileadmin/dop_home/pdf/dopannualreport.pdf)

DOT/PF Engineer Employees Eligible for Retirement, May 26, 2009.

McDowell Group (2008). Employee Satisfaction Survey Report. Prepared for Alaska Department of Transportation and Public Facilities, April 2008.

Rogers, B., et al. (2005). *Socio-Economic Impacts of Gas Pipeline Development on the North Slope*. Information Insights (prepared for the North Slope Borough Mayor's Office), Alaska.

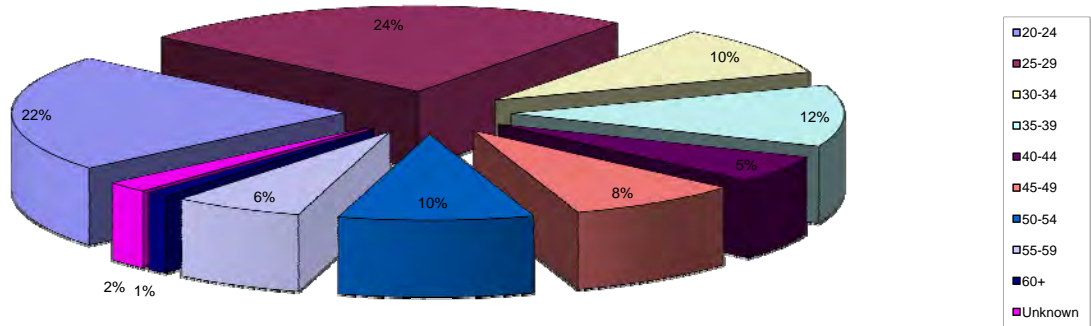
Rogers, B., D. Reynolds, and J. Peirce (2006). *Economic, Fiscal and Workforce Impacts of Alaska Natural Gas Projects*. Information Insights (prepared for Alaska Department of Revenue), Alaska.

## APPENDICES

- A. Age of Successful Engineering Assistant I/II Hires, 2006-08
- B. Current Employee Questionnaire
- C. Former Employee Questionnaire
- D. Profile of Former Employee Questionnaire Respondents
- E. Employee Job Classes for Analysis of Text Responses
- F. Condensed List of the Combined Job Codes for Analysis of Text Responses
- G. Table of the Responses to the Question, “What are the primary reasons employees remain with the department?”
- H. Table of Responses to the Question, “What are the primary reasons that employees leave the department?”
- I. Why stay? List of “other” category
- J. Why leave? List of “other” category
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# Appendix A Age of Successful Engineering Assistant I/II Hires

Appendix A  
Age of Successful Engineering Assistant I/II Hires  
2006-08



ADOT&PF Document: 10-30-08-EA I-II Recruitments from 2006–2008.xls:

## Appendix B Current Employee Questionnaire

### Current Employee Questionnaire

#### Alaska DOT&PF Workplace Survey

A few days ago, you received an e-mail from Commissioner von Scheben asking you to expect a questionnaire with some questions about the Alaska DOT&PF workplace. This is that questionnaire!

We are conducting a research project to assist the AKDOT&PF in assessing issues related to personnel recruitment and retention of its professional employees, with a special emphasis on “succession planning:” provision for adequate numbers of professional employees properly trained and positioned to carry on the department’s responsibilities.

We are asking a randomly selected set of employees to complete the questionnaire. Your responses are essential if we are to gather a representative sample of experiences. Be assured that individual responses will be kept confidential; except for the requested information on you and your position, please do not identify yourself on the document.

The questionnaire asks for the following:

- I. Information on you and your position
- II. A list of questions about your job, sub-divided into six categories, for which you will indicate whether you strongly agree, agree, etc ...
- III. A ranking of the six categories, by importance
- IV. A series of five more questions related to employee retention

Thank you for taking the time to respond to this questionnaire.

Dr. Robert A. Perkins, P.E.  
Principal Investigator  
January 2010

#### **I. First, please tell us about yourself and your position**

Male \_\_\_\_\_ Female \_\_\_\_\_

Age: 18 – 30 \_\_\_\_\_ 31 – 45 \_\_\_\_\_ 46 – 60 \_\_\_\_\_ 61 – 75 \_\_\_\_\_

Number of years with the Department? \_\_\_\_\_

Are you a supervisor? Yes \_\_\_\_\_ No \_\_\_\_\_

Job class title \_\_\_\_\_  
e.g., Engineer I, Engineering Assistant III, Planner II, etc.

Work group (section) \_\_\_\_\_  
e.g., Design, PD&E, M&O, Materials, Planning, Utilities, etc.

Job location (region & town) \_\_\_\_\_

**II. Now, please indicate the extent to which you agree with the statements listed below, using the following code:**

1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

Salary

\_\_\_ My base salary is fair and adequate for my position and background.

\_\_\_ My total salary (including overtime but not including benefits) is fair and adequate for my position and background.

\_\_\_ My future salary increases are likely to be fair and adequate.

Employment benefits

\_\_\_ The department's leave policy is fair and adequate.

\_\_\_ The department's retirement policy is fair and adequate.



\_\_\_ Insurance programs are fair and adequate.

\_\_\_ My personal work space is sufficient enough for me to do my job well.

\_\_\_ Such amenities as break rooms, restrooms, housekeeping and coffee stations are adequate.

\_\_\_ Such needs as vehicle and bicycle parking and personal storage are well taken care of.

\_\_\_ The department makes adequate provisions for employees with special needs.

1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

### Workplace Environment

\_\_\_ For the most part, I enjoy my workday.

\_\_\_ My job provides me with a sense of personal accomplishment.

\_\_\_ I have sufficient opportunities for training and professional growth.

\_\_\_ My value to AKDOT&PF is appreciated and acknowledged.

\_\_\_ Personal needs related to work scheduling and location are accommodated in an adequate manner.

\_\_\_ I am accepted as a member of the organization.

\_\_\_ I foresee adequate promotion possibilities within AKDOT&PF.

\_\_\_ The organization is sufficiently stable that I have job security and predictable work flow.

\_\_\_ I would recommend AKDOT&PF to a friend as a good place to work.

### Work activity

\_\_\_ I am assigned appropriate, interesting and well-defined work tasks

\_\_\_ My work schedules and deadlines are appropriate and achievable.

\_\_\_ I am provided the necessary equipment to carry out my work.

\_\_\_ I am given the authority to make decisions required to do my job well.

\_\_\_ Initiative and innovation are encouraged.

\_\_\_ Policies and procedures that control my work production are reasonable and effective.

1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

### Management and supervisors

Those who are managing and supervising my work

\_\_\_ have sufficient knowledge and ability.

\_\_\_ demonstrate genuine concern for me as a person.

\_\_\_ make job expectations and goals clear.

\_\_\_ provide adequate feedback – support, praise, and constructive criticism.

\_\_\_ have proper temperament for people in their positions.

\_\_\_ engage in fellowship with employees in appropriate ways.

\_\_\_ provide effective mentoring.

\_\_\_ promote teamwork and cooperation.

### Fellow employees

My colleagues in the workplace

\_\_\_ have proper temperament for people in their positions.

\_\_\_ engage in fellowship with colleagues in appropriate ways.

\_\_\_ provide effective mentoring for fellow employees as needed.

\_\_\_ are willing to share the workload in a way that is fair to colleagues and the organization.

\_\_\_ make genuine efforts to resolve issues that interfere with their workgroups' effectiveness.

**III. Please rank the six categories in order of importance to your overall job satisfaction. 1 is high; 6 is low.**

\_\_\_ Fellow employees

\_\_\_ Management and supervisors

\_\_\_ Work activity

\_\_\_ Workplace environment

\_\_\_ Employment benefits

\_\_\_ Salary

**IV. Finally, please answer the following questions:**

- a. How likely is it that you would leave AKDOT&PF during the next 3 years if Alaskan economic conditions remain relatively stable?

\_\_\_ Very likely

\_\_\_ Somewhat likely

\_\_\_ Not likely

\_\_\_ I'd stay no matter what

b. How likely is it that you would leave AKDOT&PF during the next 3 years if a major engineering/construction project, such as a natural gas pipeline, were begun in earnest during that time??

- Very likely
- Somewhat likely
- Not likely
- I'd stay no matter what

c. What are the primary reasons that employees remain with the department?

d. What are the primary reasons that employees leave the department?

e. Please list the three most important things the department could do to make AKDOT&PF a more attractive place to work.

1.

2.

3.

## Appendix C Former Employee Questionnaire

### Former Employee Questionnaire

#### **Alaska DOT&PF Workplace Survey for Former Employees**

We are conducting a research project to assist the AKDOT&PF in assessing issues related to personnel recruitment and retention of its professional employees, with a special emphasis on “succession planning:” provision for adequate numbers of professional employees properly trained and positioned to carry on the department’s responsibilities.

We are asking a randomly selected set of former employees to complete the questionnaire. Your responses are essential if we are to gather a representative sample of experiences. Be assured that individual responses will be kept confidential; except for the requested information on you and your position, please do not identify yourself on the document.

The questionnaire asks for the following:

- V. Information on you and your position
- VI. A list of questions about your job, sub-divided into six categories, for which you will indicate whether you strongly agree, agree, etc ...
- VII. A ranking of the six categories, by importance
- VIII. A series of four more questions related to employee retention

Thank you for taking the time to respond to this questionnaire.

Dr. Robert A. Perkins, P.E.  
Principal Investigator  
January 2010

- V. **First, please tell us about yourself and your position**

Male \_\_\_\_\_ Female \_\_\_\_\_

Age: 18 – 30 \_\_\_\_\_ 31 – 45 \_\_\_\_\_ 46 – 60 \_\_\_\_\_ 61 – 75 \_\_\_\_\_

Number of years with AK DOT&PF \_\_\_\_\_

Were you a supervisor? Yes \_\_\_\_\_ No \_\_\_\_\_

Last job class title \_\_\_\_\_  
e.g., Engineer I, Engineering Assistant III, Planner II, etc.

Last work group (section) prior to leaving AKDOT&PF \_\_\_\_\_  
e.g., Design, PD&E, M&O, Materials, Planning, Utilities, etc.

Last job location (region & town) prior to leaving AK DOT&PF  
\_\_\_\_\_

**VI. Now, please indicate the extent to which you agree with the statements listed below, using the following code:**

1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

Salary

\_\_\_ My base salary was fair and adequate for my position and background.

\_\_\_ My total salary (including overtime but not including benefits) was fair and adequate for my position and background.

\_\_\_ My salary increases were fair and adequate.

Employment benefits

\_\_\_ The department's leave policy was fair and adequate.

\_\_\_ The department's retirement policy was fair and adequate.

\_\_\_ Insurance programs were fair and adequate.

\_\_\_ My personal work space was sufficient enough for me to do my job well.

\_\_\_ Such amenities as break rooms, restrooms, housekeeping and coffee stations were adequate.

\_\_\_ Such needs as vehicle and bicycle parking and personal storage were well taken care of.

\_\_\_ The department made adequate provisions for employees with special needs.

1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

### Workplace environment

\_\_\_ For the most part, I enjoyed my workday.

\_\_\_ My job provided me with a sense of personal accomplishment.

\_\_\_ I had sufficient opportunities for training and professional growth.

\_\_\_ My value to AKDOT&PF was appreciated and acknowledged.

\_\_\_ Personal needs related to work scheduling and location were accommodated in an adequate manner.

\_\_\_ I was accepted as a member of the organization.

\_\_\_ I had adequate promotion possibilities within AKDOT&PF.

\_\_\_ The organization was sufficiently stable that I had job security and predictable work flow.

\_\_\_ I would recommend AKDOT&PF to a friend as a good place to work.

### Work activity

\_\_\_ I was assigned appropriate, interesting and well-defined work tasks

\_\_\_ My work schedules and deadlines were appropriate and achievable.

\_\_\_ I was provided the necessary equipment to carry out my work.

\_\_\_ I was given the authority to make decisions required to do my job well.

\_\_\_ Initiative and innovation were encouraged.

\_\_\_ Policies and procedures that controlled my work production were reasonable and effective.

1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

### Management and supervisors

Those who managed and supervised my work

\_\_\_ had sufficient knowledge and ability.

\_\_\_ demonstrated genuine concern for me as a person.

\_\_\_ made job expectations and goals clear.

\_\_\_ provided adequate feedback – support, praise, and constructive criticism.

\_\_\_ had proper temperament for people in their positions.

\_\_\_ engaged in fellowship with employees in appropriate ways.

\_\_\_ provided effective mentoring.

\_\_\_ promoted teamwork and cooperation.

### Fellow employees

My colleagues in the workplace

\_\_\_ had proper temperament for people in their positions.



\_\_\_ engaged in fellowship with colleagues in appropriate ways.

\_\_\_ provided effective mentoring for fellow employees as needed.

\_\_\_ were willing to share the workload in a way that was fair to colleagues and the organization.

\_\_\_ made genuine efforts to resolve issues that interfered with their workgroups' effectiveness.

**VII. Please rank the six categories in order of importance to your overall job satisfaction. 1 is high; 6 is low.**

\_\_\_ Fellow employees

\_\_\_ Management and supervisors

\_\_\_ Work activity

\_\_\_ Workplace environment

\_\_\_ Employment benefits

\_\_\_ Salary

**VIII. Finally, please answer the following questions:**

a. What was the reason you left the department?

b. What are the primary reasons that other employees remained with the department?

c. What are the primary reasons that other employees left the department?

d. Please list the three most important things the department could do to make AKDOT&PF a more attractive place to work.

1.

2.

3.



**Appendix D Profile of Former Employee Questionnaire Respondents**

Profile of Former Employee Questionnaire Respondents (Total = 17)

Central Region	7	41.1%
Northern Region	5	29.4%
Southeast Region	5	29.4%
Total	17	
18-30	1	5.9%
31-45	4	23.5%
46-60	11	64.7%
61-75	1	5.9%
Total	17	
Female	4	25%
Male	12	75%
Total	16	
Engineer Professional	9	52.9%
Non-Engineer Professional	8	47.1%
Total	17	
Supervisor	7	41.2%
Non-Supervisor	10	58.8%
Total	17	

## Appendix E Employee Job Classes for Analysis of Text Responses

### Employee Job Classes for Analysis of Text Responses

Evaluating responses by job class was possible because each response had a code with respondents work location and job classification. The codes were from job classes we were evaluating. Because some of the classes no responses and others just a few, we combined logical classes to give more statistical power of what we report, and also to protect the confidentiality of those in sparse classes.

Here is the overall classification scheme which shows the classes that were combined.

Job Classification	Code	
Engineering Assistant I	01	
Engineering Assistant II	02	
Engineering Assistant III	03	
Engineering Associate	04	
Engineer/Architect I	05	
Engineer/Architect II	06	
Engineer/Architect III	07	
Engineer/Architect IV	08	Combine
Engineer/Architect V	09	
Technical Engineer/Architect I	10	Combine
Technical Engineer/Architect II	11	
Engineering Geologist I	12	Combine
Engineering Geologist II	13	
Engineering Geologist III	14	
Engineering Geologist IV	15	
Right Of Way Agent I	16	Combine
Right Of Way Agent II	17	
Right Of Way Agent III	18	
Right Of Way Agent IV	19	
Right of Way Agent V	20	
Right Of Way Agent VI	21	
Right of Way Assistant	22	

Land Surveyor I	23	
Land Surveyor II	24	
Environmental Program Manager I	25	Combine
Environmental Impact Analyst Manager I	26	
Environmental Impact Analyst Manager II	27	
Environmental Impact Analyst I	28	
Environmental Impact Analyst II	29	
Environmental Impact Analyst III	30	
Transportation Planner I	31	Combine
Transportation Planner II	32	
Transportation Planner III	33	Combine
Planner I	34	
Planner II	35	
Planner III	36	

## Appendix F Combined Job Codes for Analysis of Text Responses

### Condensed List of the Combined Job Codes for Analysis of Text Responses

Job Classification
Engineering Assistant I
Engineering Assistant II
Engineering Assistant III
Engineering Associate
Engineer/Architect I
Engineer/Architect II
Engineer/Architect III
Engineer/Architect IV and V
Technical Engineer/Architect I and II
Engineering Geologist I, II, and IV
Right Of Way Agent IV and VI
Environmental Program Manager I, Environmental Impact Analyst Manager I and II, II, Environmental Impact Analyst I, II, and III
Transportation Planner I and II
Transportation Planner III and Planner III

**Appendix G Table of the Responses to the Question, “What are the primary reasons employees remain with the department?”**

Number in Class		15	56	63	20	15	15	25	21	21	6	6	17	11	16
	All	Engineer Asst I	Engineer Asst II	Engineer Asst III	Engineer Assoc	Engineer/Architect I	Engineer/Architect II	Engineer/Architect III	Engineer/Architect IV and V	Technical Engineer/Architect I and II	Engineer Geol I, II, and IV	ROW Agent IV and VI	Envir. PM I, Envir. Impt Anal Mgr I and II, Envir. Impt Anal I, II, and III	Trans Planner I and II	Trans Planner III and Planner III
Stable, Secure job	23.9%	39.5%	29.1%	25.3%	11.0%	21.9%	22.7%	40.4%	22.4%	12.0%	45.0%	36.7%	8.8%	19.1%	5.9%
Benefits, including medical	15.7%	12.3%	18.6%	20.2%	20.0%	11.9%	22.7%	9.2%	12.4%	11.0%	20.0%	16.7%	10.0%	10.0%	11.2%
Pride, accomplishment, like work	13.9%	8.0%	9.2%	14.0%	11.9%	8.8%	9.3%	8.8%	27.1%	19.0%	3.3%	10.0%	29.4%	22.7%	15.3%
Other	10.3%	4.9%	6.2%	8.6%	19.0%	7.5%	14.7%	8.0%	9.5%	20.0%	16.7%	10.0%	15.3%	3.6%	12.9%
Retirement	8.8%	4.9%	6.9%	7.8%	11.0%	12.5%	8.0%	12.8%	14.3%	6.0%	8.3%	16.7%	9.4%	7.3%	2.4%
Vacation, Holidays, Flexible Hours	6.3%	12.3%	4.8%	6.4%	1.9%	15.0%	12.0%	7.2%	3.3%	12.0%	0.0%	0.0%	5.9%	4.5%	0.0%
Pay	5.5%	1.2%	6.2%	3.8%	11.0%	5.0%	1.3%	4.8%	3.3%	10.5%	0.0%	6.7%	3.5%	7.3%	10.0%
Co-Workers	4.8%	5.6%	5.1%	3.3%	9.5%	5.6%	1.3%	2.4%	2.4%	1.5%	0.0%	0.0%	7.1%	5.5%	17.1%
Management	3.5%	5.6%	2.3%	5.3%	0.0%	5.0%	2.7%	1.6%	1.9%	2.5%	3.3%	0.0%	2.4%	3.6%	9.4%
Environment, low stress	2.6%	5.6%	3.0%	0.3%	2.9%	1.9%	0.0%	3.2%	1.0%	3.5%	0.0%	0.0%	1.2%	7.3%	10.0%
Leave	1.9%	0.0%	6.4%	1.3%	0.0%	0.0%	4.0%	1.6%	1.4%	1.0%	0.0%	3.3%	0.0%	0.0%	0.0%
Training, apprenticeship	1.5%	0.0%	0.4%	2.1%	1.9%	5.0%	1.3%	0.0%	1.0%	1.0%	3.3%	0.0%	7.1%	0.0%	0.0%
No response	1.2%	0.0%	1.8%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	5.9%



**Appendix H Table of Responses to the Question, “What are the primary reasons that employees leave the department?”**

Number in Class		15	56	63	20	15	15	25	21	21	6	6	17	11	16
	All	Engineer Asst I	Engineer Asst II	Engineer Asst III	Engineer Assoc	Engineer/Architect I	Engineer/Architect II	Engineer/Architect III	Engineer/Architect IV and V	Technical Engineer/Architect I and II	Engineer Geol I, II, and IV	ROW Agent IV and VI	Envir. PM I, Envir. Impt Anal Mgr I and II, Envir. Impt Anal I, II, and III	Trans Planner I and II	Trans Planner III and Planner III
Pay	34.1%	38.1%	26.6%	32.3%	40.5%	30.0%	39.3%	29.0%	49.5%	44.8%	44.0%	12.0%	37.5%	34.5%	37.5%
Other	17.0%	8.1%	23.6%	12.6%	12.1%	8.0%	10.7%	31.9%	21.0%	10.5%	28.0%	32.0%	13.8%	29.1%	5.0%
Management	14.5%	12.5%	11.3%	22.6%	29.5%	26.0%	6.7%	8.4%	8.0%	9.5%	20.0%	8.0%	8.8%	3.6%	18.1%
Advancement, training	12.1%	3.8%	17.4%	13.1%	11.6%	10.7%	6.7%	3.4%	8.5%	9.5%	8.0%	40.0%	18.8%	16.4%	10.0%
Retire, family issues	6.8%	21.9%	5.8%	6.5%	2.1%	12.0%	4.7%	8.0%	3.0%	6.7%	0.0%	0.0%	0.0%	3.6%	5.0%
Loss of tiers	4.2%	1.3%	0.4%	5.8%	2.1%	0.0%	10.7%	5.0%	2.0%	8.6%	0.0%	0.0%	12.5%	1.8%	8.8%
Bureaucracy	3.4%	5.6%	4.2%	1.0%	0.0%	4.0%	0.0%	9.2%	0.0%	1.9%	0.0%	8.0%	0.0%	3.6%	14.4%
Job satisfaction	2.6%	2.5%	1.5%	3.4%	2.1%	8.0%	4.0%	5.0%	1.0%	2.4%	0.0%	0.0%	2.5%	0.0%	1.3%
Environment	1.7%	0.0%	3.4%	1.0%	0.0%	0.0%	4.0%	0.0%	4.0%	1.0%	0.0%	0.0%	0.0%	7.3%	0.0%
Coworkers	1.6%	6.3%	2.3%	1.0%	0.0%	0.0%	2.7%	0.0%	0.0%	4.3%	0.0%	0.0%	6.3%	0.0%	0.0%
Politics	1.4%	0.0%	3.6%	1.0%	0.0%	1.3%	4.0%	0.0%	3.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
No Response	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

**Appendix I Responses counted in “Other” category for the question,  
“What are the primary reasons employees remain with the department?”**

(Obvious typos were corrected)

1. Get experience before moving to the private sector
2. Job security, flexibility, freedom to work under self imposed constraints, generally work with good people
3. Stability - from workload to ability to take time off and even move around within the department
4. Better opportunities
5. Security, familiarity/habit, satisfied with position
6. Habit, predictable workload cycle, diverse field projects/travel, limited opportunities for employment
7. Has the most opportunities for serious engineering
8. Old employees- benefits, new employees - don't
9. Satisfaction, promotions
10. Competitive salary & benefits, advancement of positions, job challenges & achievements, good people to work with
11. Job stability, gain experience for future jobs in the private sector
12. In-house design is very supportive, overtime pay is good
13. Job security, variety of projects
14. Stable jobs with good benefits - jobs at the DOT are easy to keep
15. Good work hours & leave, consistent work, little chance of layoffs
16. (Depends on what dept.) There's usually a great culture that values work/life balance - retirement benefits are great. Steady nature of work is valued
17. Stable employment - this department gives a service valued by the public - comfortable working environment
18. Job security, job variety, co-workers
19. Stability, predictability, accommodation of personal life needs, training opportunities, good vacation and health care benefits, good retirement benefits
20. Stability, leave, work hours & flexibility, limited work load, health insurance & other benefits

21. Employees in tier I or II are more likely to stay with the department, those with strong sense of civic duty tend to stay, those not interesting in "marketing" a consultant firm tend to stay
22. Job security, work conditions, experience needed to advance
23. Professionalism, salary & job satisfaction
24. Satisfaction of doing an important task that is not influenced by a profit motive, employees with benefits stay for those benefits
25. Sense of being a part of something, supportive management within the region
26. Health & retirement benefits - tiers 1-3, need a job (recession), new graduates/ want on the job training
27. Retirement benefits, stable job, knowing it is difficult for management to discipline and/or fire
28. Job security, promotion potential, position relationships with co-workers & supervisors, scope & variety of work
29. Family, friendly schedule - can have a life outside of work
30. Public service, longevity with the department, job security
31. Its great supervisors and organization/structure - - I've liked our union contracts
32. They can be lazy and stay employed, there is no drug testing, health care
33. Long term benefits, don't want to work too much, management looks the other way - puts the work onto others
34. Too close to retirement
35. Job satisfaction & security, salary & benefits, promotional opportunities
36. The employee is compensated with minimal personal risk associated
37. It's a good place to work
38. Good balance between work and home life. Very interesting work
39. Family atmosphere - varied and exciting work
40. Stability, benefits, work environment, growth potential, retirement
41. Stability - - generally less demanding than private sector with work hours ect.
42. Interesting work, opportunities for advancement and diversity, stability, vacation time and 37.5 hour work week
43. Retirement program(tier1), good lifestyle balance, benefits
44. Potential career path, benefits
45. Good jobs for good people - limited job opportunities in Southeast Alaska
46. Retirement coming up, care about the work, advancement opportunities in region or headquarters
47. The work is rewarded

48. Enjoy the variety of work in the field, problem solving associated with construction, and opportunity for overtime pay
49. Slavery caused by tier 1 status
50. Stability and it used to be the retirement benefits
51. Tier 1 - stay for retirement defined benefits, rest look for better deals
52. Job security - PERS (Tiers I - III) - sbs
53. No other alternatives for their level of skills/education - - spouse has a more lucrative job in town
54. Employees remain with the department because they are so grossly incompetent that they wouldn't be able to maintain a job outside government work (private sector)
55. Secure jobs in vicinity of residence, flexible leave time
56. As with all employment, once established one becomes comfortable, expectations are understood and more easily implemented and requires no action
57. Interesting work, favorable working environment, resistance to change, economic climate, nearness to family and friends and recreational opportunities
58. Professional training aligns with department, retirement planning/benefits package, location has limited alternate professional options, family stability
59. Money, advancement potential
60. Many stay because of their existing years of service - close to retirement, the younger employees seem to be moving on
61. Good management - large department
62. No other employment
63. Close to retirement, cannot find alternate employment, need a flexible schedule

**Appendix J Responses counted in “Other” category for the question, “What are the primary reasons employees leave the department?”**

1. Salary, leave & benefits - more perks in the private sector, they've gotten good experience at DOT
2. Lack of mobility, lack of respect for non-engineers, skills not fully utilized
3. More pay, differing family conditions, leave the state, feeling jilted by promotion process being unfair
4. Poor management, inflexible hours, no opportunity for advancement, low wages
5. Lack of good office space, also management - not enough training for managers in people skills
6. Personnel feeling accepted, family matters, money & benefits, military, dislikes there supervisor & co-workers, dislikes there environment
7. Lack of adequate pay & benefits, unfulfilling job & duties, lack of interest, opportunities - job becomes mundane, don't like fellow employees/supervisors/working conditions
8. Potentially higher pay, financial rewards based upon performance
9. Wages, poor management, benefits, feeling not important or integral or appreciated, facilities are "bare bones" compared to modern corporate standards
10. Better pay, better work, more work, less bureaucratic elsewhere
11. Dissatisfaction with management, better pay & reward for personal ability, willing to prove their ability
12. More money, better retirement, better benefits
13. Retirement, lack of work during the winter
14. Desire greater challenge - want to work in field they were trained for
15. Better pay, avoid political workplace issues, work with better quality co-workers, better advancement opportunities
16. Salary and flexibility of schedule
17. Retirement, to earn more money, to leave an environment that is frustrating & unrewarding
18. Lack of interesting work in winter months, Fairbanks climate, finding other opportunities in lower 48, finding comparable employment with higher pay
19. Higher salaries - women have said they are not given the same complex projects & pros as their male counterparts
20. Poor management, no long term goals

21. Better pay, less remote travel in other jobs
22. Lack of promotional opportunity, assignments do not meet family needs, conflict with management
23. Salary/wages, in some sections work environment - lack of vision and purpose
24. Better pay, better retirement (if tier 4) frustration with the politics (start jobs that don't get finished, finish jobs that should have never been started)
25. Work in different part of country, more money, different challenges
26. Frustration with methods or personnel that will not change - if there are problems with bosses, co-workers or work environment it is unlikely the problems will be resolved
27. Money, red tape, bad employees are allowed to stay
28. Salary, medical issue
29. No defined benefit retirement program (tier 4), thus no need to remain at department for extended period of time - dissatisfaction with supervisors, work load (too much/too little), higher pay in private sector
30. Unfair employment promotions, treatment of subordinates by poor management; lack of training opportunities; no financial or professional incentives; no recognition of dedication and good performance; inflexible working hours; stressful working conditions
31. Salary, lack of chances from promotion, longevity in salary scale; no raise, without promotion and no chance for promotion, nepotism
32. Politics, government frustration, having to do co-workers work and not being recognized for it
33. Frustration with easily disrupted project delivery process, long project life cycle, political meddling & dealing with angry public, higher salaries in private sector
34. Salary, poor work environment, poor leadership, lack of incentives
35. Some leave for higher pay, aren't well suited for this type of work
36. Better pay - better promotion and training opportunities - better benefits
37. Job outside of the department, job inside department, retire, other
38. Higher pay, personal conflicts
39. Salary, benefits, supervisor, work load
40. Lack of innovation, better pay & benefits in other sectors, management insularity, poor communication
41. Only procedure manuals for engineers, outdated computer programs, information from top (Juneau) down does not flow

42. Mismanagement, salary not always comparable to private industry, lack of promotions/hiring from within an already underutilized state employee pool, raises/range increases when in flex positions
43. Don't receive the praise and attention they deserve - no promotion from within
44. Salary, new piers (tier 4), Alaska weather
45. Higher salary and/or better fringe benefits, better promotional opportunities elsewhere, poor horizontal movement, better job duties elsewhere, retirement, mistreatment by a supervisor, commuting requirements
46. Lack of PERS/SBS advantage over private for new hires, cost of housing/lack of housing in Anchorage, conflicts with co-workers/supervisors, not interested in work
47. Personal conflict
48. Lack of encouragement for accomplishments, lack of support for career training, diversification and building
49. Primary reason is salary - could make double the money in private sectors, people stay because of the pension - also offices not enough and people don't want to make the long drive from Mat-Su valley
50. Not enough pay, people get tired of working with lazy people, co-workers are not smart
51. People that leave are the good workers who the better they do the more work they get heaped upon them
52. Tier 4 employment - cost of living elsewhere is cheaper - money
53. Long summertime work hours, "salary caps" based on what the union can negotiate with the state
54. Lack of professionalism, poor management structure, inadequate job classification system, the absence of accountability and consequences for individual actions
55. Low pay - - lack of recognition for good work
56. Overwhelmed, burnt out, better pay in the private sector
57. Higher paying wages with the contractor, more perks, conflict with other state personnel and agencies
58. Under utilized
59. Long hours - low salaries
60. Salary, equipment available, potential growth, workload reduction
61. Salary, working for a sometimes thankless public
62. Tier 4 retirement - too much construction work - long hours
63. Hired away

64. Poor retirement benefits (tier 4), poor working conditions, better salary in private industry, more reward/perks in private industry
65. Higher salary, retirement, relocation, overworked & underpaid
66. Not considering the retirement 30 yr tier 1 employees it's the lack of growth and advancement for the younger employees
67. Incompatibility with supervisor, feel unappreciated
68. Micromanaged, increase of salary, increased scope of tasks
69. Unhappy with management, over worked - ridiculous process with DOA HR to advance or promote
70. Salary, more autonomy
71. Some are "encouraged" to leave via personnel actions, some leave for better opportunities, spouses that don't like Juneau
72. Non-competitive pay, lack of adequate resources to do professional job, lack of support from management
73. Stress, overworked, inadequate staff, lack of training, lack of ability to prioritize work effectively
74. Crummy supervisors, too much work and low pay
75. Better compensated by the private sector, some supervisors are waiting to retire and just don't seem to care, it stops being a fun place to be
76. Burnout
77. Burnout, given back to back field assignments
78. Frustration, better benefits, lack of advancement, crushing workload
79. Better pay elsewhere, get tired of dealing with "lifers" who don't do any work or are terrible at their jobs but remain
80. Conflicts with management/supervisors, unsatisfying work activity, inflexible work/ leave schedule
81. Salary and benefits, not being eligible for overtime, high cost of living geographically
82. Pay increase in private sector, frustration with government bureaucracy, inadequate support from department leaders, all of the best work is "farmed out" to lesser qualified sources
83. Low pay; overworked
84. Financial, understaffing
85. Key workers, those with work ethic ground into the dirt with insane workloads, negative employees, technology
86. Work load



87. Salary, self or spouse cannot handle living in Alaska, high workload with pressure & high stress on the job, decreased moral within the section
88. Their personality is not suited to the hwy construction environment, can make more money in the private sector - don't care as much about the benefits, retirement
89. Weak supervisors, poor working environment, work goes unappreciated
90. Underhandness by very smart people

## **Appendix K Unclassified “Three things to make the department a more attractive workplace”**

1. Student loan reimbursement
2. Adjust pay system to pay every two weeks - - not bi-monthly
3. Offer a cola to compete with army corps - offer a daycare to state employees
4. Daycare on the premises, gym on the premises or gym membership
5. I make my own goals and happiness
6. Make day after thanksgiving and Christmas eve holidays
7. For employees that have proved dependability - allow more flexible schedules and some telecommuting
8. Have set standards for project development
9. Have engineers get experience with some management tasks
10. Give people more opportunity to keep the tasks/projects they have and be promoted
11. More ability to take leave
12. Purchase top-of-the-line software and the computers to run them
13. Develop a realistic transportation plan
14. More overhand funding and less straight rules on trying new technology to make us more efficient
15. Decentralize engineering standards & policy
16. Find a way to instill a sense of value to ones work, including a sense of control over ones work
17. Daycare for young families
18. Settle contracts with unions before old contracts expire
19. The department should decentralize to the extent practicable
20. Make a decision whether continuing education will be paid for or not before cheaper rate deadline passes
21. Reduce paperwork and steps required when dealing with issues such as hiring
22. Provide or reimburse for; arctic & fowl weather boots & clothes which require frequent replacement in this work
23. Institute a sabbatical policy
24. Doing away with defined benefits
25. Allow more flexibility in hiring
26. Pay for education that allows for professional license attainment with STIPs that they need to stay for a specific period
27. Job security

28. Treat employees equally
29. Childcare
30. Managers should be selected based off of skills & temperament, not technical skills & connections
31. Increase worker moral
32. Get rid of DOA & their chicken shit
33. Hire qualified people per position description
34. Daycare/health club facilities
35. Improve public image
36. Somehow eliminate low bidder policy
37. Base staffing for project engineers on project need vs. Established 'clicks' or longevity on the engineer
38. Get the politics out of the work
39. Improve dot's public image
40. Have a well defined organization and quality control system
41. Decrease interference from DOA
42. Get rid of unions
43. Become more technically competent and detail-orientated
44. Nothing - dot provides plenty of leave time, reasonable work load and plenty of training
45. Improve management mentoring - help keep people accountable for they're doing
46. Fair interview panels
47. Hire "expert" in-house help for ldd 2010
48. Improve interaction with payroll/ DOA personnel
49. Somewhat integrate agencies
50. Educate the legislature and the public about the things we do right
51. Mat-Su office
52. More modern technology (video tele-conferencing) and GIS system
53. Open branch office in Mat-Su valley, to take advantage of lower housing costs, while not having the commute cost
54. Get the legislature off our backs
55. Provide excellent supervisors that are promoted to a position they fit in
56. Simplify the hiring process
57. Support current millennium technologies
58. Eliminate engineers who are old school
59. Develop procedures manuals for all phases of a project

60. Hire someone other than an engineer to oversee the environmental section
61. No union, "closed shop", status
62. Update functional group manuals and provide opportunity for employee input in process
63. Create a "programming division" to deal with allocation of money & let the planning division plan our transportation networks & master plans
64. Hire outside help to revisit/reverse performance measures
65. Negotiate with the unions fairly
66. Train legislatures on what we do when it comes to presenting dot in the public eye
67. Keep more work in-house
68. Improve entry level access to housing - opening a mat-su office
69. 4x4 construction pick-ups
70. Encourage career building/innovation and experimentation in projects
71. Open a satellite office in Mat-Su
72. Better and more diverse representation from the union - create motivation/incentives for continuing education
73. Open a valley office (Mat-Su)
74. Provide more notice and stability when assigned future projects
75. Look at the funding agencies requirements and follow them
76. Figure out how to increase their personal services budget and learn what a budget is!
77. Exert some influence on the contract negotiation committee to settle with our union fairly and promptly
78. Hiring more staff such that summers long work hours may be reduced
79. Install a traffic signal at Spenard road and Aviation Avenue
80. Valley workplace
81. Evaluations, so employees know where they stand
82. Dot is a good place to work & it has great people and a good organization - keep up the good work
83. Show initiative to work with the union - see the state work with the union more
84. Hire new employees (engineers with prior experience) on how they will benefit the entire organization vs. One specific task or section
85. Provide new employees with all existing policies/procedures/guidelines on their first day of employment
86. Need a better management accounting system, the managers can use to get current data on expenditures

87. Already think it is a good place to work
88. Provide a more extensive & consistent orientation to the dot preconstruction manual, policies & procedures
89. Inculcate a culture of professionalism & treating one another with dignity & respect
90. Restructure environmental group to account for complexity of work, staff needs, position needs training
91. For new employees, more contact with supervisors to see how things are going
92. More focus on work product
93. Employ more entry level positions to fill out going employees, high school programs, ect.
94. Ea positions should be flexible ea i-iii so managers have ability to promote their charges when the achieve the skills and experience to take on additional responsibility
95. Provide better planned orientation, include step-by-step instructions for easier transition into the work environment
96. Help new people feel welcome and that they are part of a team, one of the spokes in the wheel
97. Hire managers from within the organizations
98. Allow people to use prior experience
99. For the ones that are interested, away of mentoring with those more experienced
100. Realize that it is an adjustment to become a state employee
101. Require use of statewide standards except for specifics needed at the project level
102. They provided improvement recommendations : implement them!!
103. Offer the geographic differential to those regions with higher costs without having to wait for it to be negotiated
104. Make overtime exempt employees non-exempt
105. A number of national organizations and associations were invited to review some dot sections they provided improvement recommendations : implement them!!
106. Stop spending tens of millions of dollars on projects that never seem to go to construction - focus on real projects that directly benefit Alaskans!
107. Track high - turnover work groups and interns if there is a systemic problem causing it

108. Department must focus on improving quality of design, construction and maintenance
109. Pr to educate public on project development processes & budget realities
110. Focus on corridor development, encourage/reward community independence with local infrastructure
111. Develop a system that weans our citizens off the federal dole
112. Fix the retirement system - fix the geographic pay differential/cost of living by locality problem
113. Important, interesting work
114. Provide regular, constructive evaluations

**Appendix L “Three things to make the department a more attractive workplace”  
classified as “management,”**

1. Policy changes are too slow to occur
2. When procedure or policy changes do occur everyone needs to know
3. Dynamic, innovative leaders who promote fairness and everyone being equally treated with respect and hold other managers accountable for improper actions
4. Streamline the environmental process
5. Establish better continuity of project priorities
6. Need a place/path for promotions for good designers who don't want to become project managers/supervisors
7. Expand the market based pay adjustment engineering staff received to other groups
8. More communication
9. Improver supervisory unit benefits to align more closely with other units
10. Provide training for employees to become knowledgeable of their industry, not just their job so they are not viewed as a joke
11. Management take responsibility for their actions
12. More clear task assignment instructions - preferably in writing
13. Provide an economic incentive to becoming a supervisor that is commensurate with the responsibility & experience
14. Upgrade right of way classification to at least be on par with other similar units such as planning and environmental
15. Training/continuing education policy needs to be standardized and fair - current procedure is up to the whim of employees, managers & department head
16. Rewrite min/hwy position qualifications to allow experience to substitute for having an engineering degree &/or P.E.
17. Have breakroom/kitchen facilities & shower facilities in main buildings
18. Establish written environmental policies and procedures following department rules
19. Reduce vertical bureaucratic hierarchies
20. Having enough work to keep busy or being able to hire when we are overloaded
21. Update work space and working conditions - - state paid/provided child care facilities as a benefit

22. Stop making it harder for people to do their jobs - - computer support constantly makes changes its hard to keep up
23. Stop hiring or promoting people based on the time they have with the department
24. Have a system that assures people at the top - - really understand what we can do, have good communication and interpersonal skills, have the back bone to stand up and lead in the direction we should be going
25. When on out of town jobs, increased ability to use state resources to make return trips to home, office on pre-specified intervals
26. Suspend the intern program, limit university seasonal hire to qualified individuals
27. Change the minimal qualifications for positions
28. Regionalize "statewide" functions and staff
29. Make better use of evaluations by making sure employees know what's expected of them and whether they are meeting requirements
30. Have the different sections work on "joint venture" projects for cross training & a better understanding of the needs of other departments
31. Encourage & support new ideas
32. Have new employees work under the direction of more experienced employees before they are given their own projects
33. Have more team building meetings of events, including creative ideas
34. Insure that those with similar education & experience advance at the same rate
35. Acknowledgement of succession planning and development of succession planning as part of the culture of the department
36. Train supervisors to eliminate the "good ol boys club"
37. Make it so non-PE's could be managers in construction
38. Target productive workers for management positions and make more engineering positions available for non-pe engineers
39. Re-structure to eliminate political appointments
40. Give the engineer associates the step increase they were cheated out of under the engineering reclass study seven years ago
41. Keep management at their desks & stop all travel and meetings
42. More vision for the department as an organization
43. Better clarification of rules, policies, opportunities
44. Training for supervisors on workplace structure to better organize work flow & increase efficiency
45. Training of management to improve personal skills when dealing with employees
46. Salary review of all job classes



47. Do more to encourage "thinking outside the box" encourage new ideas
48. Monitor and hold supervisors accountable for the way they treat their staff
49. Update décor - makes for drab/depressing environment
50. Conduct an "honest" class salary study for the row agents and the clerks
51. Raise salaries - especially for employees outside of the engineering positions, i.e. environmental analysis
52. An employee association (not the union) that would accommodate employees personal needs (break room)
53. Workplace in anchorage lack any kind of lunch room/ social gathering areas or outside group facilities
54. Negotiate "fairly" with the SU and GGU legion representatives
55. Sensitivity training to managers (supervisors)
56. More department orientated gatherings, training, etc.
57. Find money in the budget for Kleenexes & kill the mice!
58. Implement a stronger mentoring system
59. Get new blood in high management positions and allow managers to make decisions
60. Screen out projects that have little or no chance of being constructed
61. Install electric plug-ins for winter
62. More training opportunities and keeping some of the more challenging projects in-house
63. More D.O.T. employees, less construction contracts
64. Re-evaluate which projects stay in-house & which are given to consultants
65. Get rid of the union
66. Have management be more willing to fight for what is right and back their project engineers instead of giving in
67. Eliminate nepotism
68. Establish a management philosophy that is proactive & focuses on the long term
69. Offer perks such as discounted travel on the state ferry system
70. Positive attitude
71. Otherwise, dot cant much better about department of administration policies on pay, travel, overtime etc.
72. Provide the construction section with the same up to date, economic furniture that the rest of the building enjoys
73. Provide a fair contract for compensation with overtime for those of us who are overtime ineligible

74. Materials lab equipment is very load and disruptive
75. The flow of information from senior managers about mission, strategy, direction could be much improved
76. Make a better case for obtaining the resources we need to do all our work
77. Provide more defined career paths - including more flex positions, particularly for engineers & environmental analysts
78. Upgrade the se regional office building with office space designed for thinking, writing and collaborating
79. Sea building is not conducive to doing work, needs to be replaced or totally renovated, equipment inadequate
80. Senior managers shouldn't be timid about back us up
81. Convent EIS series to ES series on raise EIA steps by 2 to compete with private sectors
82. Geo-diff - purchasing power of wages earned for the same position
83. Develop a training curriculum and mentoring program for project engineers bringing them from ea i to ea iii level onto receiving their license
84. Have more of a unified department rather than - 3 separate regions acting independently
85. Burnout could be reduced by providing opportunities for project engineers given extended field assignments to get some R&R
86. Fix planning & environmental
87. Enforce personnel rules, control personality-driven supervisors, clean up nepotism in the northern region design and construction
88. Keep majority of work in-house
89. Include a geographic differential (+11%) for Juneau pay 1 1/2 over time for OT-exempt employees
90. Hire employees that can excel at the positions for which they apply too - not hire "any warm body" and expect success
91. Pay engineers for overtime as other dot's do
92. Address communication barriers/break down organizational silos
93. Geographic differential
94. Conduct meaningful organizational planning and restructuring
95. Leadership must actively work to improve AKDOT & PF culture
96. Allow sabbaticals
97. All positions overtime eligible
98. Allow drafters to become engineering assistant I or II's

99. Promote from within as much as possible to fill opening, including management
100. As the state benefits from professional registration it would be nice if the state helped/ paid for them
101. Cross train employees in aviation, highways & marine
102. Use consultants less; have more work done in-house, which builds work skills of all employees
103. Evaluate all processes for improvement and figure out how to make us old timers accept, embrace and implement the improvements
104. Make project managers responsible for a project from cradle to grave as opposed to passing off to pm in "next step" group
105. Recommend that functional managers with knowledge of work function are assigned to oversee and evaluate similar work groups rather than general supervisors who do not perform similar work duties
106. Salary among the support groups is lacking
107. Make a better effort to promote from within for management positions
108. Moral - shifting priorities and high pressure for production, lack of incentives for high performers
109. Middle managers need to be able to not only manage people & work load effectively, but need to be knowledgeable enough to train employees