

# ALASKA SCIENTIFIC CRIME LABORATORY REPLACEMENT PROJECT

Legislative Brief  
SB 226/HB 299

February 18, 2010



*Prevent crime...protect Alaskans*



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# EXECUTIVE SUMMARY

**Summary:** The state needs a new crime lab to prevent crime and protect Alaskans. The proposed lab is the right size. It is the right cost. It will benefit Alaskans now and long into the future.

This legislative brief presents general information about the Alaska Scientific Crime Laboratory Project in support of SB226/HB299, a bill to provide \$75.75 million in funding for finishing lab construction. The brief explores the following topics:

- Benefit
- Scope
- Cost
- Status

## **The benefit: prevent crime and protect Alaskans**

Alaska ranks 1<sup>st</sup> in the nation in rape and 9<sup>th</sup> in violent crime. The state clearly needs a new lab to responsibly attack its problem. A new lab does more than process evidence to convict the guilty. It actually reduces rape and other violent crime rates by preventing some of these crimes from occurring in the first place.

It prevents crime in several ways. The capacity of a new lab provides more timely analysis of evidence to move perpetrators off the street before they commit more crimes. Most significantly, for the first time it enables the state to apply DNA techniques to evidence from “gateway crimes” such as home burglaries, providing possible answers when latent fingerprints cannot. Evidence from these crimes often link criminals to more serious crimes and gets them off the street before they victimize others.

A new lab protects Alaskans in other ways. It can shield the innocent from false accusation with timely evidence processing to clear them of suspicion. And it can lead to the exoneration of the wrongly convicted.

Further, new laws virtually mandate the construction of a new lab. HB316 requires long term evidence retention. The existing lab does not have the capacity to sustain this requirement. Finally, post conviction DNA testing will increase case load and require a larger DNA suite.

**The scope: a crime lab sized to meet today's need, with room for future growth**

The lab is sized optimally with compatibility for future growth. Most of the new 84,000 sf lab building will be finished internally to meet today's highest priority needs. About 19% of the facility will remain unfinished ("shelled out") for completion when further funding is available to meet second priority needs. This strategy will carry the laboratory for the next 20 years. The site is large enough to permit subsequent building expansion to serve the state's forensic need beyond the next 75 years.

**The cost: optimized, validated, delivered with synergy**

Synergy at the local level benefits all Alaskans. The state leased the lab's 12 acre site from the Municipality of Anchorage at \$1 per year for 50 years with an option to extend for 25 years. The Municipality of Anchorage's contribution benefits all Alaska as the crime lab processes evidence for all law enforcement agencies throughout the state. This will be especially beneficial for rural Alaska where over 60% of the state's violent crimes occur.

The state spent \$8 million to date on design and \$8.8 million on site construction. The \$75 million appropriation under SB226/HB299 will fund the completion of the construction work.

The project team optimized and validated the cost of the project. It trimmed \$20 million from its initial budget through value engineering and deferred build-out of some lab spaces to time of need.

**The status: hammer ready**

The design of the new crime lab is finished and we are now under contract with Neeser Construction, Inc. All site preparation work is finished. SB226/HB299 will fund the rest of construction from the foundation up. The project is currently on time and on budget. It will provide an immediate economic boost with over 250 new jobs, \$30 million toward Alaskan wages, \$30 million toward materials supplied by local vendors, and business for 15 Alaska subcontractors.

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# INTRODUCTION

The state needs a new crime lab to prevent crime and protect Alaskans. The proposed lab is the right size. It is the right cost. It will benefit Alaskans now and long into the future.

This legislative brief explores several topics of relevance to a new crime lab for the entire state of Alaska. The Governor introduced SB226/HB299 to the legislature in January, 2010. The bill requests an appropriation of \$75.75 million to supplement prior appropriations amounting to \$16.8 million. The new appropriation will fund the completion of work on the new lab located on Tudor Road in Anchorage, Alaska.

The brief opens with an explanation of why the state needs a new crime lab and how it benefits Alaskans. It follows with a description of the project's scope and how it meets the needs of the state, its cost, and finally the status of the project.

## **Services provided**

The state's new crime laboratory will be the only full-service, accredited forensic lab supporting Alaska's state and municipal law enforcement agencies. Its mission is to provide forensic science support to all Alaskan law enforcement agencies and the criminal justice system. This is accomplished by:

- Examining physical evidence in a manner that is objective, reliable, and timely.
- Conveying the results of these examinations through clear and objective laboratory reports, consultations, and expert witness testimony.
- Managing the state breath alcohol testing program.
- Providing crime scene investigation support.
- Providing investigative information through the use of individual characteristic databases.
- Providing training to law enforcement and other members of the criminal justice system in the proper use and application of forensic evidence.

The lab provides expert and professional forensic examination and testimony to aid in the investigation, prosecution, and defense of criminal defendants through the analysis of physical evidence collected and submitted by law enforcement personnel.

Examination of evidence utilizes sophisticated equipment and scientific techniques. The majority of evidence submitted to the forensic laboratory establishes an association among offenders, victims, scenes, and objects (weapons, tools, etc.). The lab receives evidence for the purpose of corroborating or refuting other information gathered by investigating officers from victims, witnesses, and suspects. Evidence often helps reconstruct how a crime actually occurred. Examiners prepare written reports of examination results.

In addition to providing forensic testing services, the examiners from each laboratory section frequently provide expert witness consultation and/or testimony in criminal proceedings. The staff can be called upon to provide information relevant to chain-of-custody issues as well. Staff might also give scientific expertise to assist law enforcement personnel with crime scene review or case investigation. Forensic technicians are called to crime scenes to assist in evidence collection.

Also, the forensic laboratory provides training of in-house staff and external personnel, such as law enforcement officers, attorneys (both prosecution and defense) and students.

### **Laboratory sections**

The existing laboratory provides 12 functions that will carry over into the new lab. The functions include:

- Laboratory Administration
- Laboratory Support
- Training/Classroom/Break Room
- Central Evidence Section
- DNA section (including CODIS)
- Bio-Screening Section
- Firearms/Tool Marks Section
- Controlled Substances Section
- Latent Prints Section / AFIS / Footwear and Tire Impressions
- Breath Alcohol Section
- Blood Alcohol Section
- Crime Scene / Vehicle Exam

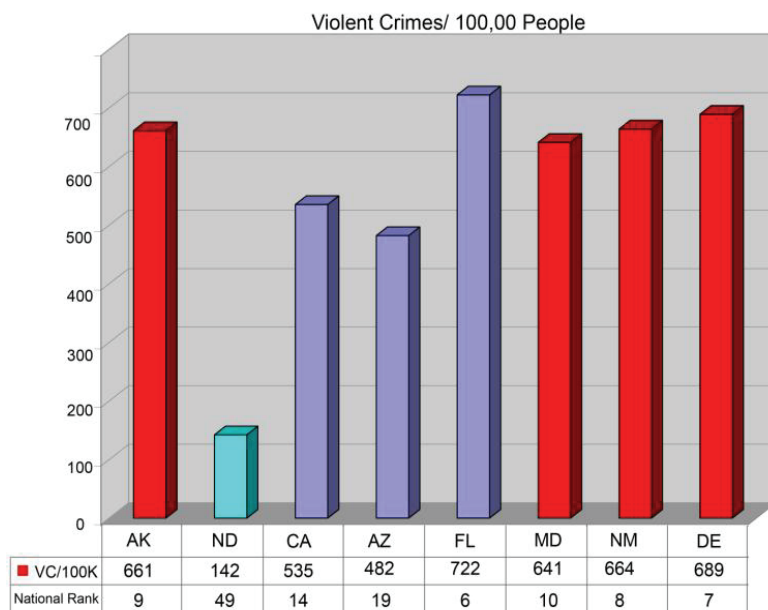
The new lab will still include all of these programs, but will also include three new lab sections when funding is available to complete them.

- Trace Evidence Section
- Toxicology
- Questioned Documents / Digital Evidence Section

# NEED

Alaska is ranked 1<sup>st</sup> in the country in per capita rape. It ranks 9<sup>th</sup> in the nation in violent crime, sandwiched between Florida and California. Alaska simply cannot afford to see its current state of affairs continue or deteriorate further. Without a new lab the state's problems may persist and become worse.

The state's new crime lab is a key element of a comprehensive strategy to prevent crime and protect Alaskans.



## Governor Sean Parnell ~

"Last month, I promised Alaskans that we would take every step necessary to move this state out of our shameful first-place ranking among the states in this terrible category," Governor Parnell said. "This legislation won't solve the problem on its own, but these are important steps we must pursue, even as we take action in the executive branch and urge our civic leaders to spread the message that epidemic rates of domestic violence and sexual assault must be ended."

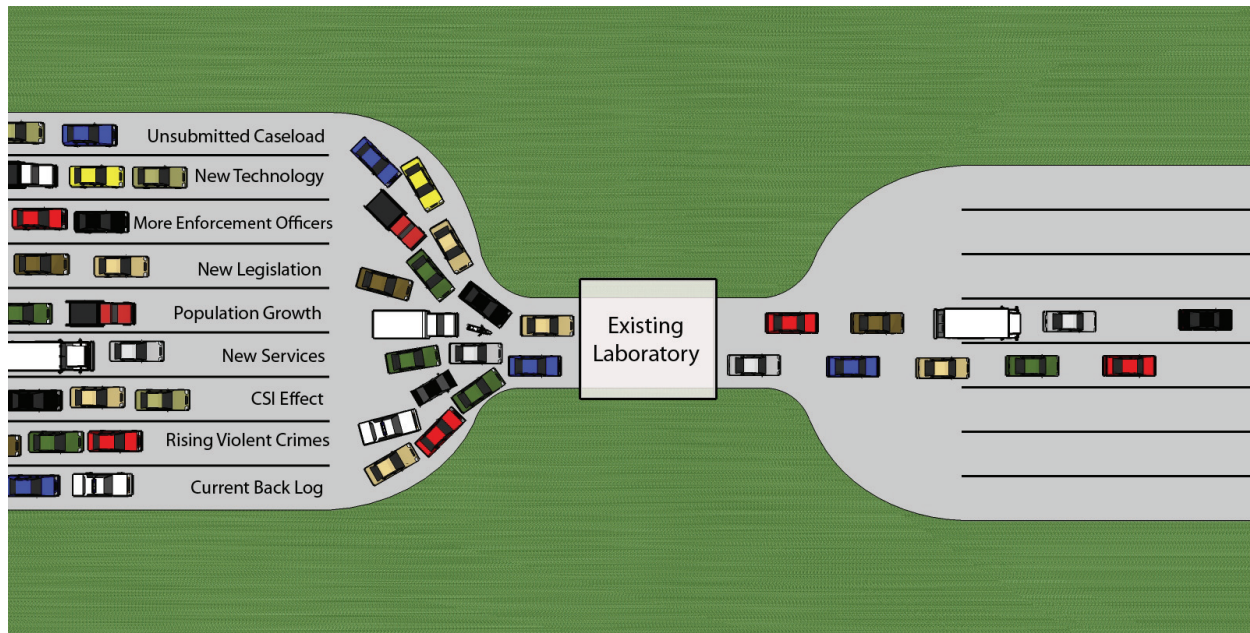
On January 18, 2010 Governor Sean Parnell announced that he will present the Legislature with four bills related to his 10-year plan to end the scourge of domestic violence and sexual assault in Alaska. The bills include:

- The Alaska Scientific Crime Detection Laboratory in Anchorage (\$75.75 million)
- Specific procedures for post-conviction DNA testing
- A revision of bail laws
- Changes in crimes and sentences involving sexual assault and domestic violence

Unfortunately the state has long outgrown its existing laboratory to the extent where it can no longer keep up with the demand to process evidence from crimes. The problem has become so severe that the size of the lab, not the number of people employed there, is what restricts lab output. Placing roughly the same number of employees in a new lab sized to meet need will enable the

state to keep up with current forensic caseloads. That is what this project accomplishes.

### The existing crime lab creates a traffic jam in the criminal justice system.



Major developments creating a worsening problem for the state's existing crime lab include:

- **Recent legislation increases work load.** HB90 generates an additional 7,000 samples per year. HB 316 requires long term retention of all biological evidence. The existing lab does not have the secure storage capacity to accept more evidence for retention.
- **The CSI effect.** Law enforcement agencies, judges and attorneys expect far broader arrays of analytical methods in part because they know it's available. The expectations of forensic crime laboratories by the public and juries continues to escalate, creating higher case loads for the lab.
- **New technologies.** New technologies as Low Copy DNA, YSTR, and Minifiler increase demand on the lab and the need for more building space to accommodate them.
- **Increased numbers of law enforcement officers.** More boots on the ground will lead to a significant increase of evidence requiring analysis. The state will add 150 new Village Public Safety Officers (VSPOs) to its force. Municipalities will increase their number of patrol officers as well. The old lab can't handle higher evidence submission rates. The lab's backlog will

increase and/or the law enforcement agencies may not submit evidence to the crime lab or collect it at the crime scene.

- **New crime lab services.** New services create a need for more lab space. Toxicology samples are presently sent to outside labs for analysis. However the state's crime lab can do it for less cost and more efficiently. Similarly, funding constraints of the FBI require that the state's computer forensics work occur in a certified crime lab. The new lab has space for the computer forensics section.
- **Population growth.** Evidence submissions to the lab may increase as the state's population continues to grow. Population growth projections published by the State of Alaska show a steady increase for the future.

Noteworthy signs of the traffic jam caused by the lab include:

- **DNA backlog is not eliminated.** The new lab is sized to eliminate the DNA backlog. Without it the backlog will remain. The existing laboratory has eliminated its backlog of database samples, and significantly reduced its backlog of cases awaiting biological screening. However, the backlog of cases awaiting DNA analysis remains high. Currently, 422 cases (227 violent crimes, 195 property crimes) are backlogged awaiting DNA analysis. A committee of prosecutors from the Department of Law was formed to prioritize which DNA cases will be worked each month. Officers and prosecutors must plead their case to this committee as to why their case is more important than other cases and warrants being worked ahead of another case. Likewise, sexual assault cases where there is not a readily identifiable suspect are given lower priority for investigation (due to backload of cases) than those with a more readily identifiable suspect.
- **Cannot handle evidence from burglaries.** With the backlog of violent crime cases awaiting DNA analysis, crimes related to lesser offenses are simply not being worked. The backlog DNA requests for the analysis of property crimes has remained unchanged for years, and the submissions of these cases stopped nearly completely two years ago as agencies realized their cases simply were not getting worked.
- **Evidence not submitted by law enforcement agencies.** A recent study documented that law enforcement agencies withhold a very significant body of evidence from the state's crime lab that is plugged with an evidence backlog. When evidence goes un-submitted, it goes un-worked, related crimes may go unsolved, the public loses some measure of protection, and the justice system is compromised. The phenomenon of



evidence withholding to a backlogged lab is a clear and present danger to Alaska.

Popular notions offered to enhance the existing lab's output would not solve the problem either.

- **Outsourcing to reduce lab crowding is not effective.** Outsourcing DNA analysis costs more than processing it in-house. When the costs of analysis, testimony, discovery, and case consultation are evaluated, even with the cost of the new crime laboratory amortized over the life of the building, the Alaska Scientific Crime Detection Laboratory is a more cost effective operation than outsourcing.

In addition to being cost effective, the State must have an accredited crime laboratory and DNA section (including a CODIS administrator and Technical Manager) to participate in the DNA database. No private laboratory is permitted to have access to the database. When DNA cases are sent to private labs to be worked, the Alaska crime laboratory must "Take Ownership" of the case by performing technical and administrative reviews of the casework, site visits and proficiency testing of the private laboratory, as well as having analysts proficient in the techniques used by the private lab. This burden of case ownership places 80% of the work load of case work on the Alaska crime lab for outsourced cases.

- **24-hour shifts to improve output do not work.** To reduce the problems of overcrowding, the crime lab is currently operating 13 hours a day through flexible scheduling. While shift work can be used for short term relief, it is not a cost effective solution. If analytical space and reagents are to be shared, then the measures needed to prevent cross contamination (complete cleaning and storage of evidence at the end of a shift, set up at start of a shift) will consume 1 hour (30 minutes front and rear) of a 7.5 hour work shift.

Also, while officers work 24 hour shifts, prosecutors, defense attorneys, and the courts (felony trials) work roughly 8-5 shifts. This creates the problem of B and C shift scientists not being available, and having to continually shift and adjust their hours to be available for court testimony. Furthermore, the requirements of technical oversight and quality assurance compliance, as well as other staff to support second and third shifts greatly increases expenses without a corresponding return in productivity.

**Conclusion: Alaska needs a new crime lab sized to get the job done.**

# BENEFIT

**Prevent crime and protect Alaskans:** A new crime lab will do more than process evidence used to put criminals in jail. It will effectively prevent some crimes from occurring and it will protect Alaskans in meaningful ways, some of which appear below.

- **Convict the guilty before they commit other crimes.** The crime laboratory provides accurate and objective information that reflects the events that have occurred at a crime. On the path of justice, the crime laboratory bridges law enforcement (boots on the ground) with correct and successful prosecution of the guilty. Once removed from society, perpetrators can no longer offend.
- **Protect the innocent from false accusation.** Reliable scientific testing ensures protection of the wrongly accused and identifies the true perpetrator. In 40% of DNA cases submitted for analysis, the suspect is eliminated as the source of DNA. Once a suspect is eliminated, the investigation can continue to identify other possible suspects.
- **Reduce rape – Alaska is number 1 in the nation.** While Alaska's rape rate holds steady, it declines elsewhere around the country. A new crime lab will help Alaska follow the national trend. From USA Today 10/6/2009—Reported rapes hit 20-year low

“Reported rapes have fallen to the lowest level in 20 years as DNA evidence helps send more rapists to prison and victims are more willing to work with police and prosecutors, victims’ advocates and crime researchers say. Rape prosecutions have improved dramatically over the past two decades because of advances in DNA testing to pinpoint a rapist rather than forcing prosecutors to rely solely on a victim’s identification of her attacker, says Kim Gandy, past president of the National Organization for Women and a former prosecutor. Use of DNA evidence has expanded gradually over the past 15 years and can put a rapist in prison the first time he’s caught, preventing him from harming other women, Berkowitz says. Many rapists are repeat offenders.”
- **Reduce violent crime – Alaska is 9th in the nation.** Alaska is nearly as bad as Florida (6<sup>th</sup>). Early identification of criminals prevents further criminal activity. A crime laboratory with sufficient capacity ensures timely analysis and rapid identification of the perpetrator.
- **Process evidence from home burglaries.** The new lab will enable routine evidence processing for burglary cases and reduce crime in Alaska.

Intervention in the criminal cycle at the non violent stage affords the opportunity to affect real change in Alaska's violent crime rate. Studies show most burglars are caught by their 9<sup>th</sup> break-in. Studies also show that burglars may be involved with other more serious crimes, or go on to commit them. A study by the Urban Institute of Justice Policy Center determined that evidence from 40% of these non-violent crime scenes could contain evidence leading to a match from a previous assault, rape or murder.

In other words the lab will result in more burglars being caught before they violate the sanctity of more homes and before they move on to more serious crimes. The lab may also link about half of the burglars to other more serious crimes.

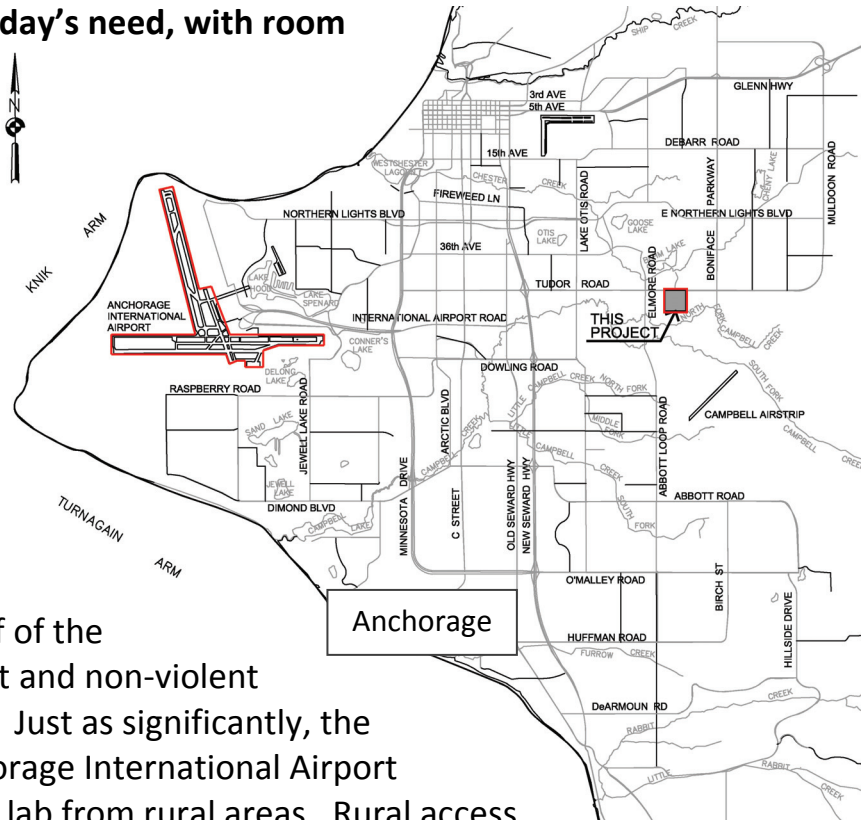
- **Solve more cases with new techniques and faster output.** A properly sized crime laboratory will allow for more efficient operations and enhanced techniques yielding greater scientific information.
- **Support rural Alaska** – 60% of Alaska's violent crimes happen outside Anchorage. Although the lab is located in Anchorage, it benefits the entire state. Anchorage yields the best access to and from rural Alaska because of Anchorage International Airport, the air hub of the state.
- **Economic boost** - over 50 new jobs within 1<sup>st</sup> month of construction, 250 jobs overall, \$30 million to Alaska wages, \$30 million to materials supplied by local vendors, business for 15 Alaska subcontractors

# SCOPE

**A crime lab sized to meet today's need, with room for future growth**

## Location

The new crime lab is under construction on an approximately 12 acre parcel of land in Anchorage, Alaska. It is situated conveniently near the Anchorage Police Department off Tudor Road. Being near the APD benefits Anchorage because over half of the state's total caseload (violent and non-violent crimes) comes from the city. Just as significantly, the lab's location near the Anchorage International Airport provides direct access to the lab from rural areas. Rural access to the lab is important because, while fewer crimes occur in rural areas, more of the crimes committed there tend to be violent. In fact, over 60% of the state's violent crimes happen outside of Anchorage.



**East Tudor Road Vicinity Map**



## Synergistic Municipal Land Lease

Synergy at the local level benefits all Alaskans. The state leased the lab's 12 acre site from the Municipality of Anchorage at \$1 per year for 50 years with an option to extend for 25 years.

### Size

The new lab facility is approximately 84,000 gross square feet, of which 19% will be unfinished, or "shelled out" initially until time of future need. The building space is broken down as follows:

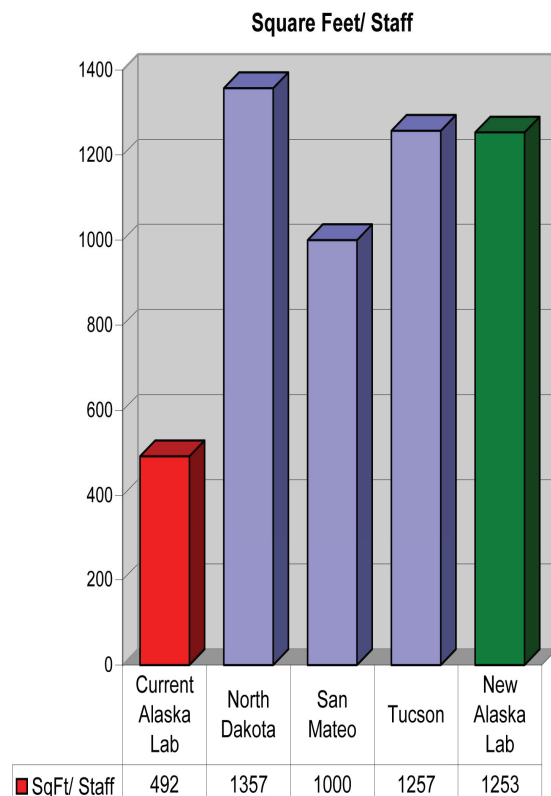
- Laboratory 45,000 sf
- Evidence storage 6,000 sf
- Office 10,000 sf
- Mechanical support\* 12,000 sf
- Building support\*\* 11,000 sf

TOTAL: 84,000 sf

\*Boiler rooms, hvac rooms, etc.

\*\*stairs, elevators, corridors, bathrooms, etc.

At 45,000 sf, the new lab space is slightly over double the size of the existing lab. As shown in the figure below, the size of Alaska's new lab compares well with those of other states. Its existing lab is significantly undersized.



## Basis of sizing

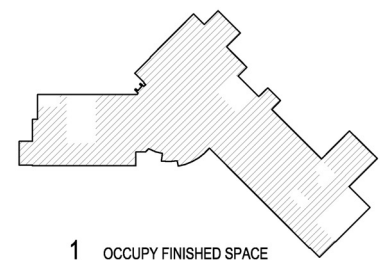
### Internal Expansion, Compression & Growth

The lab is sized optimally for today with compatibility for internal growth without an expansion of the building footprint for 20 years or more. Expansion and growth are accommodated in the design in several ways. Sufficient space has been included in the floor plan to accommodate new laboratory sections including Toxicology, Trace Evidence, Questioned Documents, and a dedicated CODIS lab. These sections can be rapidly brought online when staff, equipment, and finish funding is appropriated in the future. No expansion of the building footprint or structure will be necessary. However, once the programmed space is fully occupied and maximum compression is reached, building expansion can occur on site, attached to existing infrastructure. The orientation of the building wings will accommodate future expansion in four directions.

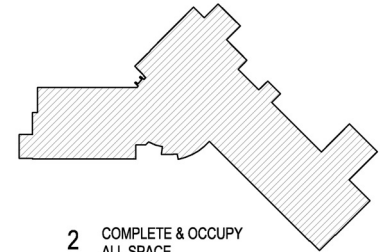
To meet today's highest priority needs, about 81% of the building will be finished initially and the current staff of 40 employees plus a few new positions will work within the finished space. To meet second priority needs of today, the remaining 19% of unfinished "shell space" will be built out when possible. A supplemental appropriation may be necessary for shell space build-out. Expansion within shell space is the most cost efficient way to serve today's need while planning for near- and long-term growth.

### Building expandable to meet need beyond 75 years

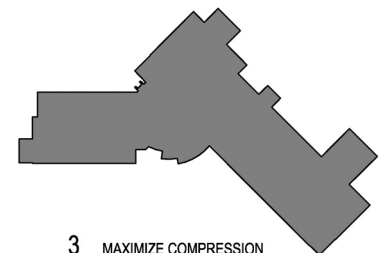
The building is designed for expansion without disruption to lab operations. As shown in the figure at right, additions to each wing of the building can accommodate future growth. This planning assures the state will not find itself in another situation like today



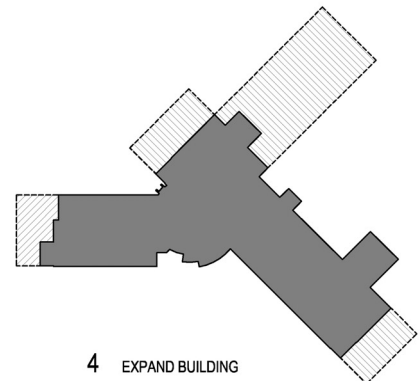
1 OCCUPY FINISHED SPACE



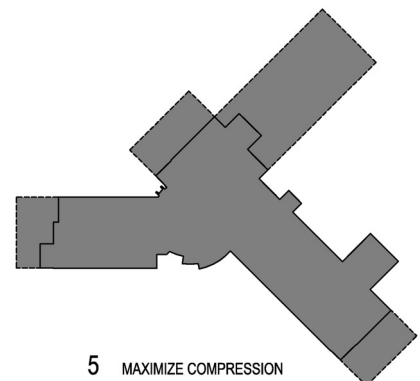
2 COMPLETE & OCCUPY ALL SPACE



3 MAXIMIZE COMPRESSION



4 EXPAND BUILDING



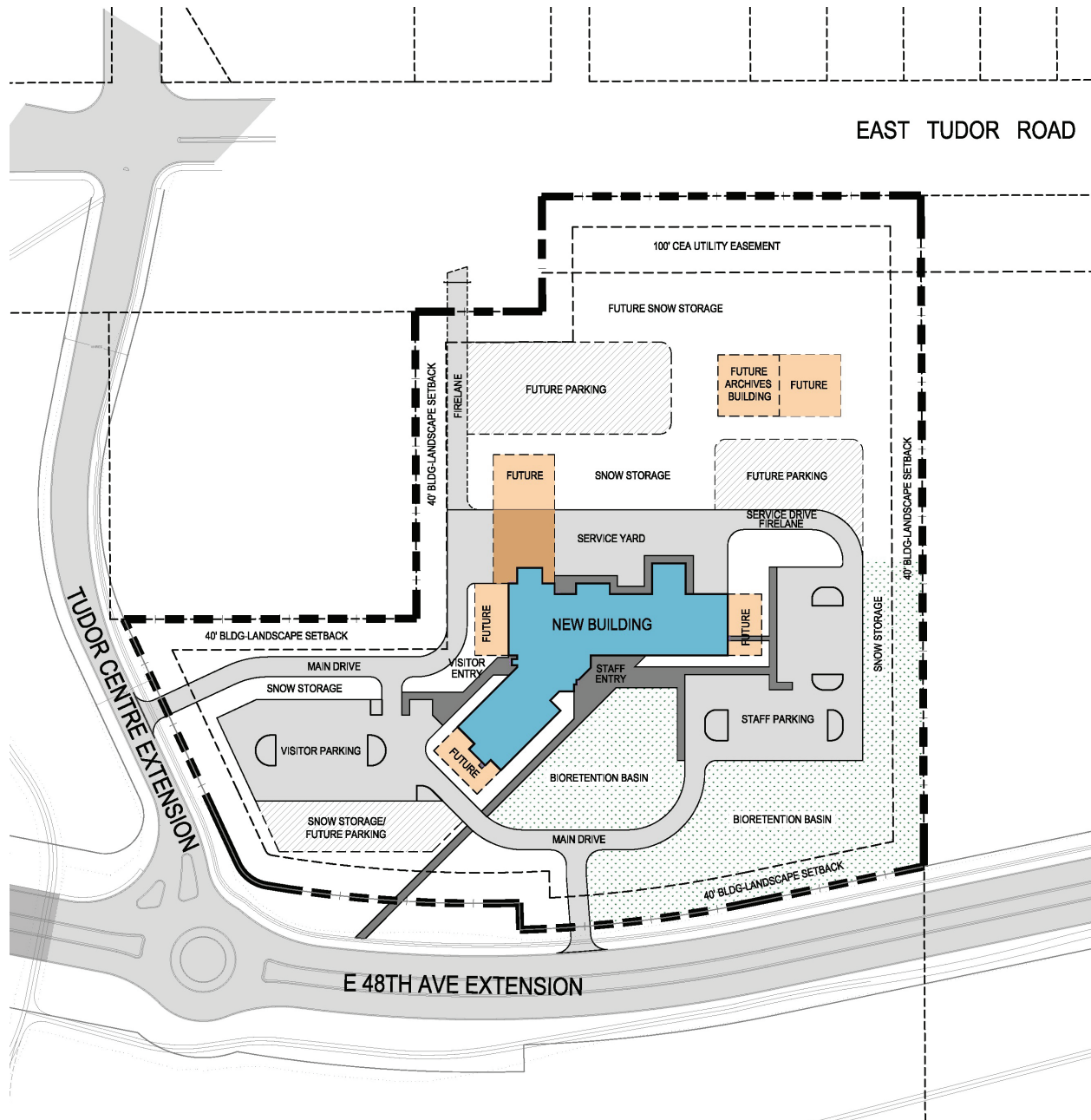
5 MAXIMIZE COMPRESSION

Expansion & Growth Plan



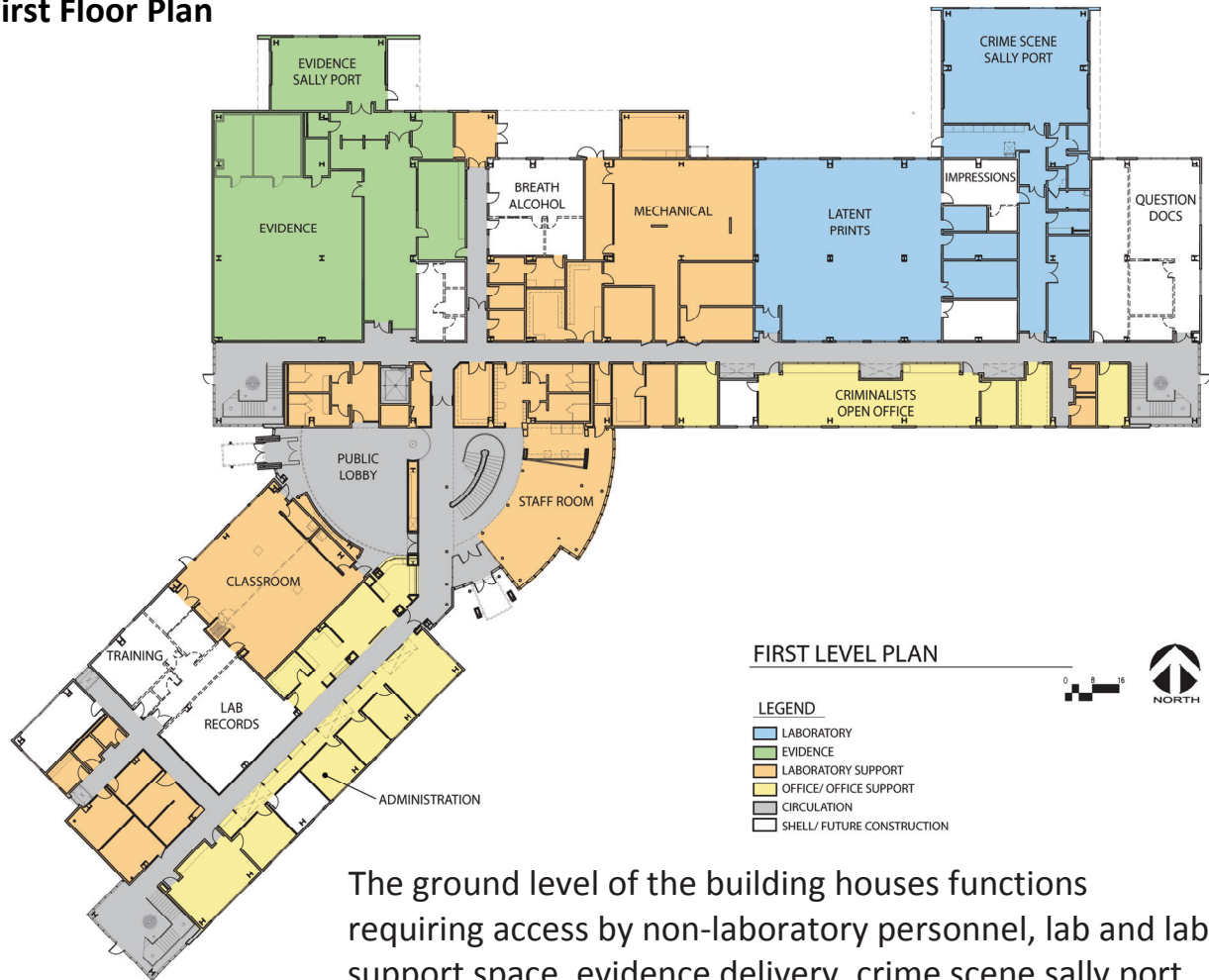
where it must relocate its laboratory. The existing lab was designed such that it cannot expand without going out of service or causing unacceptable disruption to forensic science during construction.

## Site Plan



The site is located between Martin Luther King Boulevard to the south (formerly East 48<sup>th</sup> Avenue Extension), Tudor Road at the north, and Tudor Centre Drive to the West. Public and delivery access to the lab is off the Tudor Centre Drive entrance. Staff can enter off Martin Luther King Boulevard. A driveway off Tudor Road provides north access to the site for the Anchorage Fire Department.

## First Floor Plan



The ground level of the building houses functions requiring access by non-laboratory personnel, lab and lab support space, evidence delivery, crime scene sally port, mechanical space, and administrative office areas.

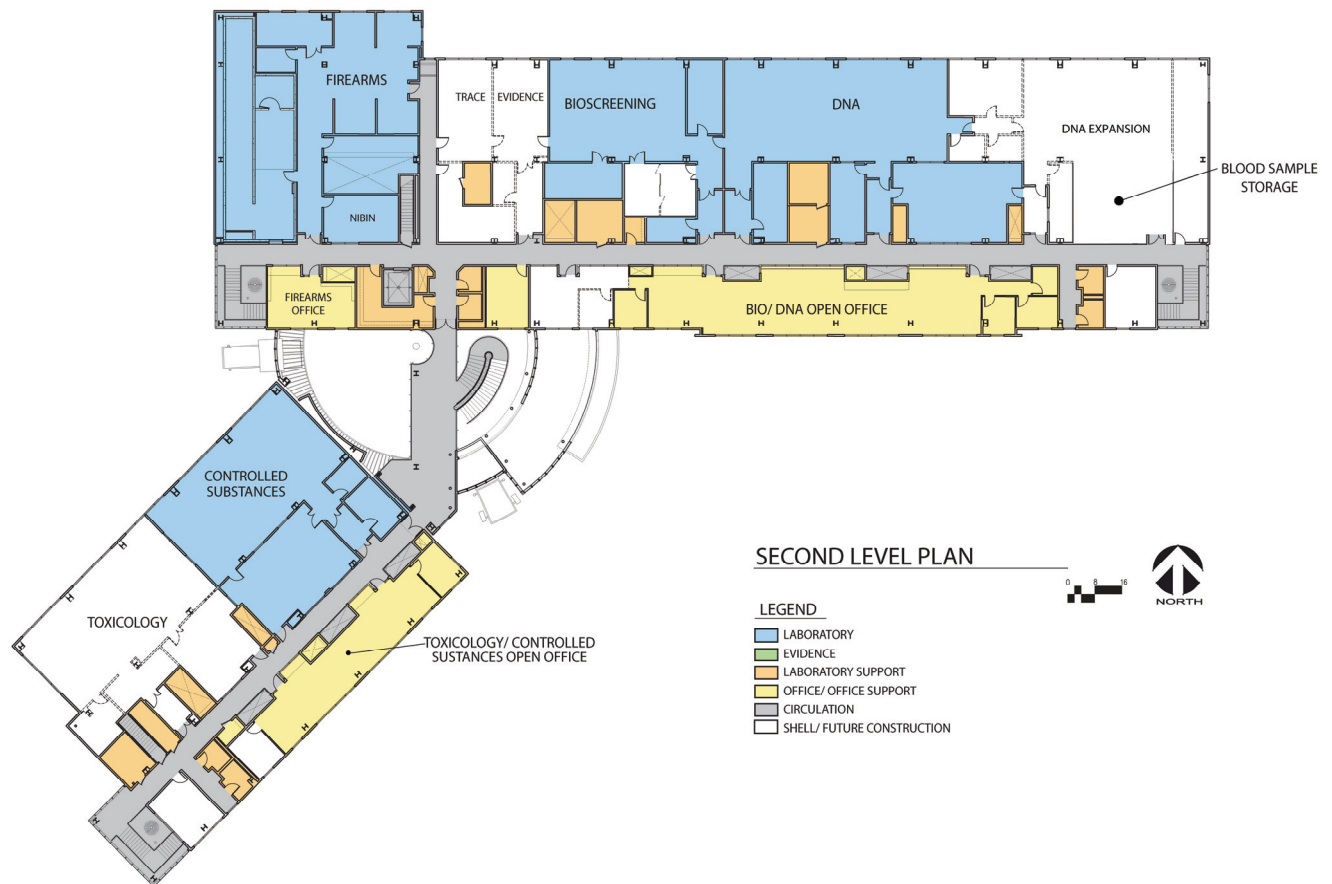
Priority functions to be finished include:

- Training Classroom
- Administrative Offices
- Public Lobby and Staff room
- Central Evidence Storage
- Evidence Receiving
- Evidence Sally Port
- Crime Scene Sally Port
- Latent Prints

Second priority spaces slated for build-out when possible include:

- Questioned Documents
- Impressions / Alternate Light Source / Latents Supervisor Office
- Breath Alcohol program
- Lab Records Storage / Library / Assistant director's office
- Training Lab & Blood Spatter
- Evidence Lab

## Second Floor Plan



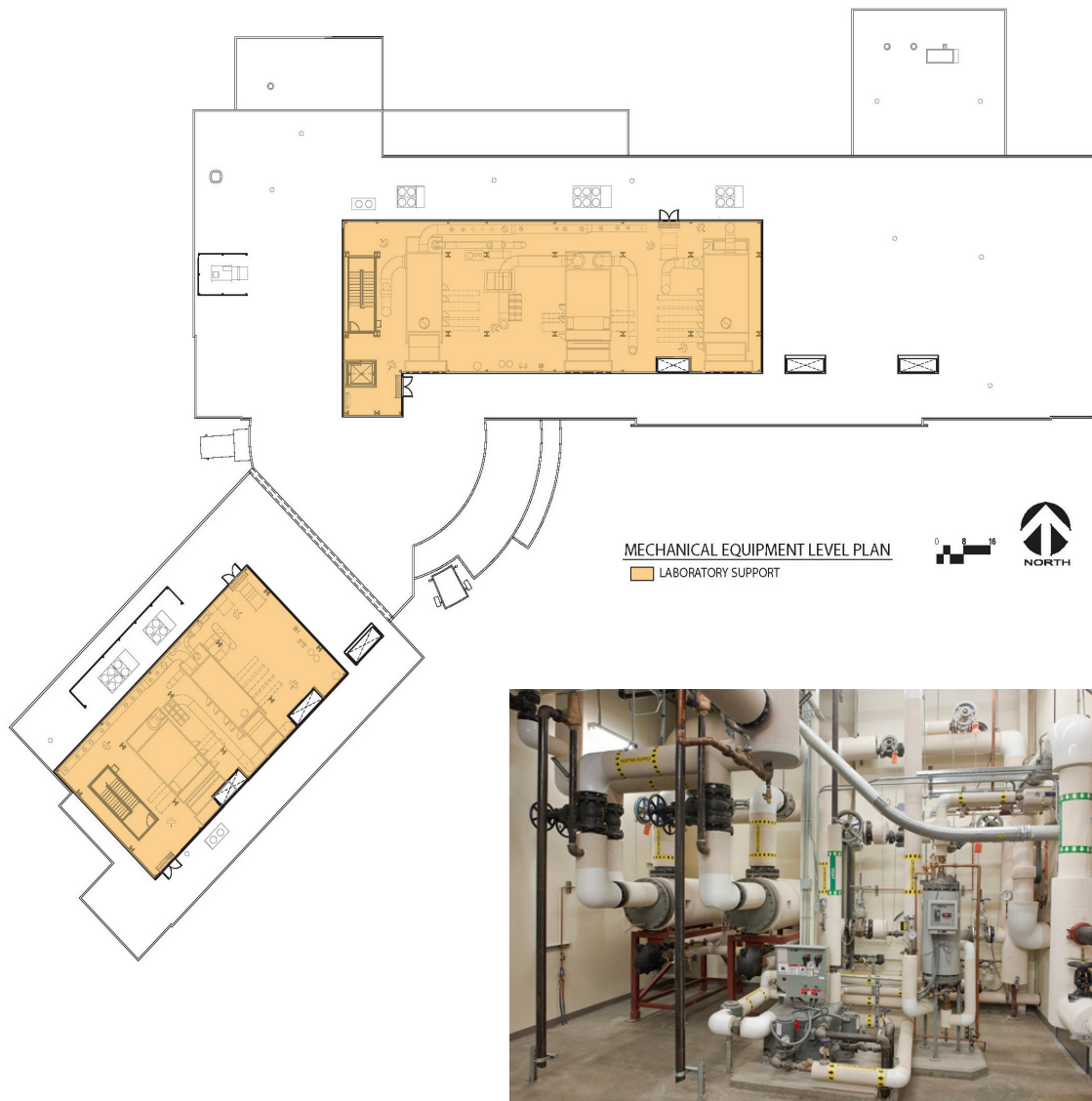
The second floor contains trace evidence, biological and chemical laboratory suites, and the forensic firearms section. Priority lab functions slated for immediate build-out include:

- Controlled substances
- Firearms
- Bioscreening
- DNA

Second priority lab functions slated for build-out when possible include:

- Toxicology
- Trace evidence
- DNA expansion
- Alternate light source labs

## Third Floor Plan



The third level of the building houses major heating, ventilating, and air conditioning systems. Subarctic conditions in Alaska make it standard practice to house major mechanical equipment in roof-top penthouses. This feature adds cost to the project, but is necessary. Similar buildings in the lower 48 states often do not require penthouses for mechanical equipment, sometimes resulting in lower cost.



# COST

## Cost of the lab

The appropriation under consideration is for an amount of \$75.75 million. It will fund the completion of construction work at the lab from the foundation up. Prior appropriations of \$16.8million for design and site work construction were used for their intended purpose.

## The construction cost is valid

The cost of the lab is in line with those of other laboratories built in the State, as shown below.



Alaska Scientific Crime Detection Laboratory  
Location: Anchorage  
Project Cost per Square-foot: \$1,258



UAF / DHHS Virology Laboratory  
Location: Fairbanks  
Project Cost per Square-foot: \$1,136

DEC Food Safety Laboratory  
Location: Anchorage  
Project Cost per Square-foot: \$949



Laboratories cost more than other types of buildings primarily because they come densely packed with lab equipment, mechanical systems and casework.

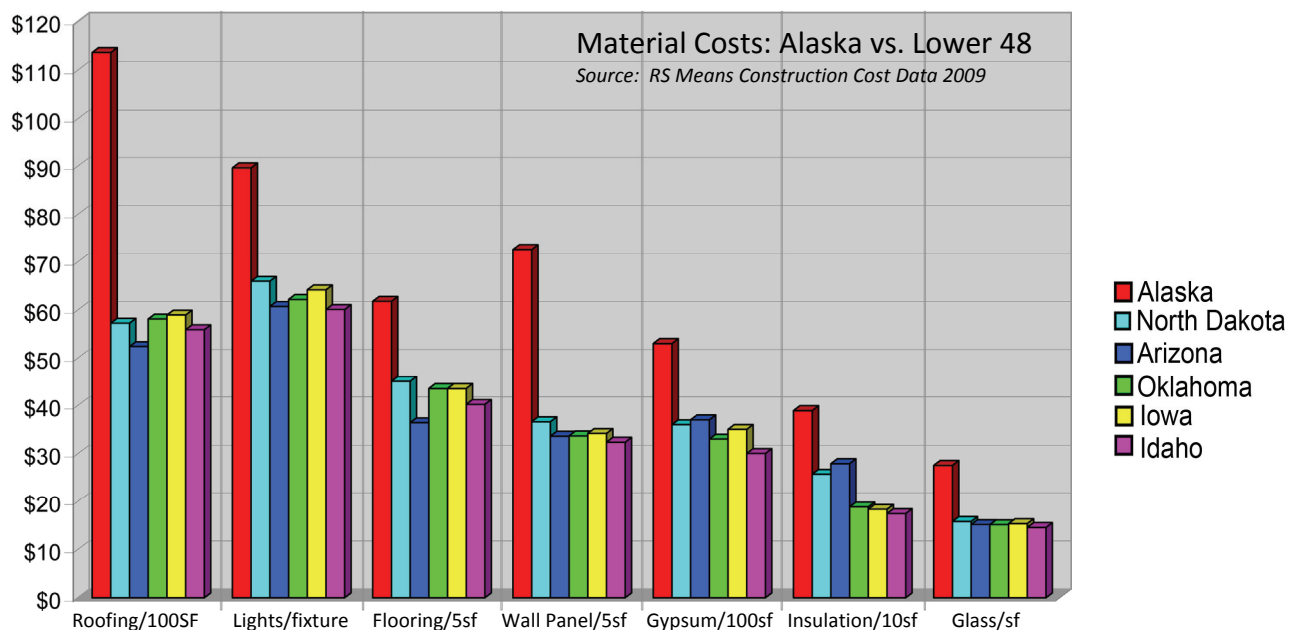
The methodology used to develop and validate the construction cost estimate is more rigorous than the industry typically applies (the project team prepared eight estimates). The process includes several elements:

- Construction Manager/General Contractor (CM/GC) delivery method - the general contractor, mechanical and electrical subcontractors bring expertise to the design team
- Independent estimates - develop and reconcile separate estimates from contractor and architect's estimator at each design phase
- Third-party opinion of cost – by an independent Alaskan estimator
- Fourth-party validation - of estimating process
- Competitive bidding – by building trades

In summary, the project team used an exhaustive estimating process to arrive at the project's cost. Cost comparisons with other labs built in Alaska show conclusively that the cost of the Crime Lab is in line with what it actually costs to build labs in Alaska.

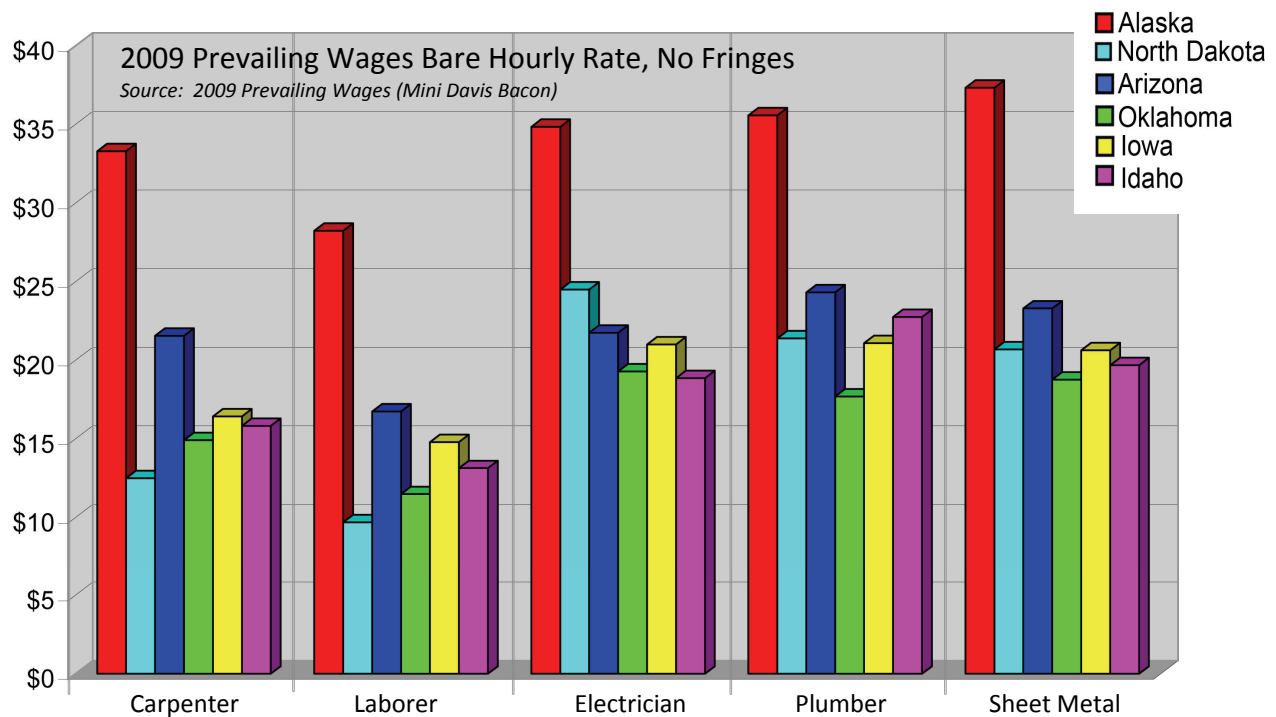
#### Construction costs are higher in Alaska than in the lower 48 states

It costs more to build in Alaska than in the lower 48 states. Many factors account for this trend. Materials in particular cost more in Alaska primarily because they must ship from the lower 48. The figure below illustrates this point.





The largest cost increase in Alaska comes from higher labor costs, because they can make up over half the cost of a building. And Alaska's labor costs greatly exceed those of the lower 48 states, as shown in the following figure.



For example, Davis Bacon Prevailing Wage Rates for some labor types are as much as five times higher in Alaska than elsewhere. Even greater discrepancies occur for 18 other states that do not require contractors to pay established wage rates mandated by “Little Davis Bacon” laws for state funded projects, or the Davis Bacon Act for federally funded projects. Alaska law requires payment of “Little Davis Bacon” wage rates for state funded construction contracts like the Alaska crime lab. That is why the labor costs for the Alaska crime lab are orders of magnitude higher than those for many other states that do not require payment of higher wage rates.

The cost of Alaska's crime lab is comparable to others in the Lower 48 when scope and cost adjusted

A question has arisen about why Alaska's proposed crime lab appears to cost more than some other, seemingly comparable labs around the country. With regard to building materials and labor costs, this trend is valid. It is an unavoidable cost of doing business in Alaska.

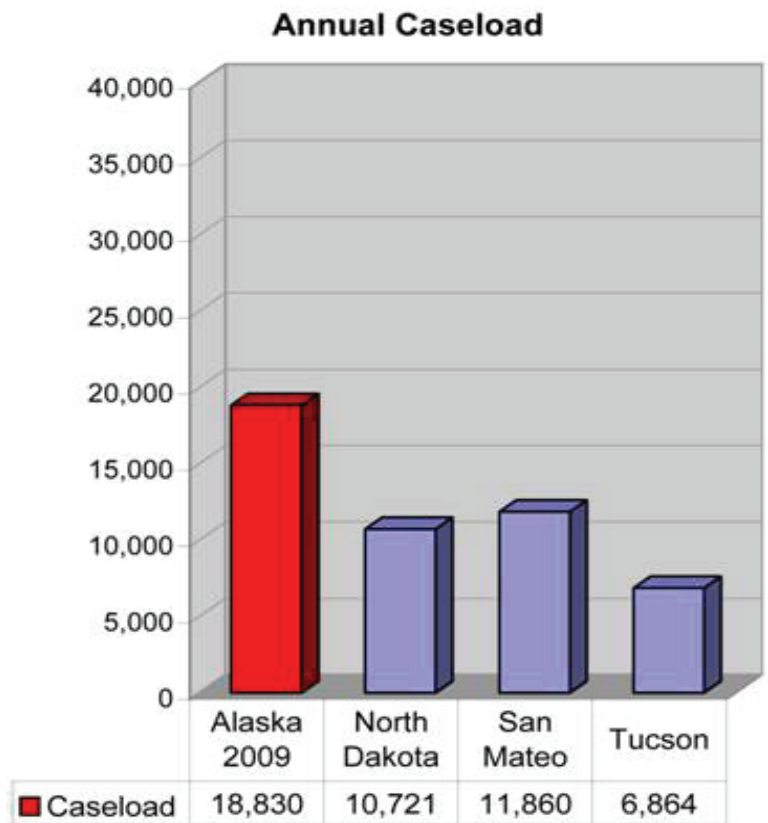
The apparent difference between the Alaska crime lab's cost and that of other labs around the country more often reflects significant dissimilarities of project scope. Incorrect conclusions occur when one compares the published cost of another lab with that of the Alaska lab without first understanding, then normalizing the scope of the two projects. For example, Alaska's annual case load is higher than those of other recently completed labs in the lower 48, as shown in the figure at right.

The figure illustrates that one cannot compare the size of labs without considering differences in case load.

Another example is the North Dakota Lab. Last legislative session it was referred to by others as an outside lab that cost significantly less to build. Upon further study it was determined this conclusion was invalid because

the scope of the projects were vastly dissimilar. By accounting for scope differences between the projects, the costs were actually proven similar.

One can continue indefinitely scope and cost comparisons with other labs anywhere around the world and, like the North Dakota Lab, they will validate the cost of the Alaska crime lab. This is because the Alaska lab was sized correctly by a team of experts. And its price is a phenomenon of the local construction market.



### **A team of experts delivers a valid project**

The state's design team consists of leading experts in all related fields. The assembly of a team of experts best assures the lab is the right size, right design, and optimized to meet the current and future needs of the State of Alaska. Their product, the new Alaska Scientific Crime Detection Laboratory, has been well vetted and it has withstood the challenge of public scrutiny. The team includes:

The best crime lab expert in Alaska. The assembly of a successful project team begins with the laboratory director. A new and more expert laboratory director, Mr. Orin Dym, came into the project at the onset to infuse national crime lab experience, and to strengthen and improve local crime lab capabilities. Mr. Dym's

experience with numerous other crime labs in the lower 48, when coupled with that gained at Alaska's lab, makes him the state's premier and unmatched authority in the crime lab arena.

The most experienced crime lab architect in the United States. The keystone of the design team is the laboratory architect, Bill Lawrie, of McClaren, Wilson & Lawrie, Inc. Bill's experience and reputation is virtually unparalleled in the design industry. He has designed over 90 crime labs when his peers at best can offer the experience of only a few labs. His experience and international reputation are well deserved. Alaska can rest assured that its new crime lab design is sized optimally to meet its needs.

The most experienced lab designer in Alaska. To put crime lab concepts onto paper, a local architectural firm, Livingston Slone Inc., teamed with Bill Lawrie. LSI has successfully designed 5 large, state-of-art labs in Alaska in addition to several smaller labs. LSI's experience in Alaska lab design is virtually unchallenged in the State.

The most experienced lab project manager in Alaska. The design team is under the management of the Statewide Public Facilities Section of the Department of Transportation and Public Facilities. Project manager, Matt Tanaka P.E., has successfully delivered other laboratory projects for the state. He completed the Department of Environmental Conservation's Environmental Health Lab, and also the Department of Health and Social Service's Virology Laboratory on time and under budget. Mr. Tanaka has more recent experience managing laboratory projects than anyone in the State of Alaska and his track record is excellent.

A most experienced and reputable contractor in Alaska. Assisting the design team is one of the state's leading and most experienced contractors, Neeser Construction, Inc. They built the State's Public Health Laboratory & Medical Examiner's Facility, a building comparable in sophistication to the crime lab. Their expertise with design-assist and construction projects in the state further validates the project cost, and assures it will arrive on time and under budget.

# COST SAVINGS

When the legislature considered the crime lab for funding in 2008, the design was largely complete. A significant capital investment of about \$8 million went to planning and design activities. But, concern arose about the size of the \$95 million capital appropriation the State would need to build the facility. To address this concern, the State considered at least three options to reduce capital and operating costs without diminishing forensic service to Alaska.

## Options include:

- **On-site expansion** – expand the existing lab and renovate the existing lab
- **Split facility** - build a smaller new lab elsewhere and stay in existing lab
- **Smaller replacement lab** – build a smaller new lab and stop using existing lab
- **Full size new lab** - build the full laboratory structure but leave some space unfinished and seek a smaller capital appropriation.

## On-site expansion

Several consultants have explored the concept of on-site renovation and expansion, beginning with the original 2005 Expansion Study conducted by USKH, Inc. in association with Earl Walls Associates (lab design specialists), and continuing through the site analysis and site selection process conducted independently in 2007 by DOWL/HKM in association with Livingston Slone and McClaren, Wilson & Lawrie. It is important to note that both the 2005 Expansion Study and the later site analysis process both indicated that this option, while possible, was less practical and more costly in the long term than building a new lab on a different site. Taken together, the significant disadvantages of renovation and expansion make the option simply unworkable.

## Split facility

The existing lab is deficient and needs a \$12 million capital appropriation to remain in service. The funding will correct failed mechanical, roofing and other building elements, and code problems. Most significantly, **the existing lab will shut down for up to 6 months** to make way for construction work.

Split facility use is also infeasible operationally. This is because forensic departments must often pass evidence between themselves to work all sides of a case. If some departments reside in different buildings, evidence must pass outside the secure perimeter of the lab. This may compromise

defensibility of forensic results and slow down lab operations, creating chain-of-custody and evidence handling issues that may compromise the evidence and the possibility of securing criminal convictions. All departments should be under one roof.

### **Smaller replacement lab**

This option is not cost effective and will delay the project several more years. The State spent about \$8 million on design for the new lab. It will lose most of this investment and spend millions more to scale back the design. Redesign costs and potential escalation during the delay will offset savings achieved by building a smaller lab. The State will spend about as much to build a smaller lab as to build the full size lab.

### **Build full size new lab**

This option is most cost effective and offers the greatest benefit to the state. It delivers the full building structure now but leaves some areas within it unfinished, or “shelled-out”. The State finishes interior space it needs most urgently and defers finishing lower priority, shelled-out space until it is possible to finish it.

Today, this option saves the State \$20 million. Tomorrow it reduces operating costs by about \$43,000 per year. The annual energy cost of the new laboratory with shell space is about \$412,000. This figure is about 2.7 times higher than that of the existing crime lab.

# STATUS

## Construction

The new crime laboratory is under construction. 2009 saw the completion of site clearing, utilities construction, and building pad preparation for a cost of \$8.8 million. The \$75 million appropriation under SB226/HB299 will fund the continuation of building construction from the foundation up. The project is literally “hammer ready” and it awaits a final appropriation of funding.

| <u>Regulatory Approvals Obtained to-date:</u>  |         |
|--|---------|
| US Army Corps of Engineers<br>US Environmental Protection Agency                             | Federal |
| US Bureau of Land Management<br>US Fish & Wildlife Service                                   |         |
| Department of Environmental Conservation<br>Department of Transportation & Public Facilities |         |
| Department of Natural Resources  |         |
| Municipality of Anchorage  | State   |
| Urban Design Commission<br>Anchorage Water & Wastewater Utility                              |         |
|  |         |
|  |         |
|  | Local   |
|  |         |
|  |         |
|  |         |



## Design

The design of the lab is finished. It began 5 years ago with the support of a series of appropriations amounting to about \$8 million. A fully-vetted design process has yielded numerous planning and design deliverables, including:

|   | <u>Investigation, Planning &amp; Design Documents:</u>  |
|---|---|
| USKH / Earl Walls Associates                      | 2005 Existing Lab Expansion Study   |
| DOWL Engineers                                    | 2007 Site Evaluation Study, republished 2008  |
| R&M Consultants, Inc.                             | 2008 Phase I Environmental Site Assessment  |
| Shannon & Wilson, Inc.                            | 2008 Geotechnical Engineering Report  |
| McClaren Wilson & Lawrie, Inc.                    | 2007 Space Needs Assessment   |
| Earthscape / DOWL / Livingston Slone              | 2008 Public Facility Site Plan & Landscape Plan Review  |
| Livingston Slone / McClaren Wilson & Lawrie, Inc. | 2007 Conceptual Design<br>2008 Revised Conceptual Design<br>2008 Schematic Design<br>2008 Design Development Submittal<br>2009 Early Site Preparation Documents<br>2009 Construction Documents<br>2009 Revised Construction Documents (shell space) |
| AMC Engineers Inc.                                | 2008 Projected Energy Use Estimate  |
| Affiliated Engineers, Inc.                        | 2009 Mechanical & Electrical Design Peer Review   |
| HMS, Inc.   | 2009 Construction Cost Estimate Peer Review   |
| RWDI Consulting Engineers & Scientists            | 2009 Exhaust Re-entrainment Assessment  |
| Neeser Construction / Estimations Inc.            | 2007 Conceptual Design Cost Estimate<br>2008 Schematic Design Cost Estimate<br>2008 Design Development Cost Estimate<br>2009 Early Site Preparation Bid<br>2009 Construction Documents Cost Estimate  |

## **Public Process**

The crime laboratory project went through a rigorous public process spanning the course of over 5 years. The public process involved municipal, state, and federal arenas associated with various elements of the project. The process included:

### State

The Department of Public Safety and/or the Governor's Administration introduced the crime lab to three legislative sessions to obtain funding for the project. Current Governor Sean Parnell also introduced a bill to a fourth legislative session to obtain the balance of construction funding. During each session the project received public comment and legislative scrutiny.

### Municipal

- Planning and Zoning Commission - review and approval
- Urban Design Commission - review and approval
- Heritage Land Bank board - approval obtained prior to assembly approval of land lease.
- Assembly - hearing and approval obtained prior to municipal land lease
- Municipal land lease – signed by the Mayor of Anchorage and the State of Alaska
- Campbell Creek Community Council – briefing and resolution of approval
- Fire marshal - approval
- AWWU - approval of water and sewer utilities
- Chugach Electric Association - approval of power service
- Re-platting - requiring public notice period
- Enstar Natural Gas - approval of natural gas service

### Federal

- Corps of Engineers wetlands permit – for construction in class B wetlands, requiring public notice periods
- NEPA storm water permit