ALASKA STATE LEGISLATURE
**SENATE TRANSPORTATION COMMITTEE**
October 16, 2001
9:58 a.m.

**MEMBERS PRESENT**

Senator John Cowdery, Chair
Senator Jerry Ward, Vice Chair (via teleconference)
Senator Robin Taylor (via teleconference)
Senator Gary Wilken (via teleconference)

**MEMBERS ABSENT**

Senator Kim Elton

**OTHER LEGISLATORS PRESENT**

Representative Fred Dyson
Representative Joe Green
Representative Vic Kohring (via teleconference)

**COMMITTEE CALENDAR**

KNIK ARM CROSSING

**WITNESS REGISTER**

Mr. Bill Sheffield, Director
Port of Anchorage
PO Box 196650
Anchorage, AK 99519

Mr. Bill Bredesen
2909 Arctic Blvd. #103
Anchorage, AK 99503

Mr. Dennis Nottingham
Peratrovich Nottingham & Drage Inc.
1506 W 36th Ave.
Anchorage, AK 99503

Mr. Allen Christopherson
Peratrovich Nottingham & Drage Inc.
1506 W 36th Ave.
Anchorage, AK 99503

Ms. Vicky Hutton Glenser

No address provided
Anchorage, AK

Mr. Devery Prince
505 W Northern Lights Blvd. #219
Anchorage, AK 99503

Mr. Frank Dillon, Executive Vice President
Alaska Trucking Association

Ms. Sarah Palin
Mayor of Wasilla
290 East Herning Ave.
Wasilla, AK 99654

Mr. Frank Dillon
Alaska Truckers Association
Anchorage, AK

Mr. Dick Katno, Executive Director
Associated General Contractors
No address provided

Mr. Jerry Stewart
19561 Upper Skyline Dr.
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Mr. Glen Glenser
No address provided
Anchorage, AK

Mr. Cliff Ames
Alaska Center for the Environment
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Ms. Sandra Garley, Planning Director
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Mr. Jim Sykes
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Mr. Michael Kean
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Mr. Don Lowell
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Mr. James Armstrong, Manager
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Mr. Marc Van Dongen, Port Director
Port of Mackenzie
Matanuska Susitna Borough
350 East Dahlia
Palmer, AK 99645

Mr. Dan Jacobsen
Mat-Su Valley
Alaska

Mr. Larry Whiting
PO Box 1549
Palmer, AK 99674

Mr. Carl Anderson
Tugboat Captain
Anchorage AK

**ACTION NARRATIVE**

**TAPE 01-23, SIDE A**
Number 001

**CHAIRMAN JOHN COWDERY** called the Senate Transportation Committee meeting to order at 9:58 a.m. Present were Senators Taylor, Wilken and Cowdery. Chairman Cowdery noted that a Knik Arm crossing was studied many years ago; that study included tidal power generation. In an effort to bring the best minds together for a discussion on a Knik Arm Crossing, he scheduled this meeting. He informed committee members that Congressman Young has secured funds for a study and environmental impact statement. The study will include a simulation model of Cook Inlet built by the Corps of Engineers on acreage in Mississippi and will incorporate the development of the port and of Fire Island. He asked former Governor Bill Sheffield to testify first.

SENATOR WARD joined the committee via teleconference.

MR. BILL SHEFFIELD, director of the Port of Anchorage, said the Knik Arm Crossing has been talked about for the 49 years he has been in Alaska. One mayor, Ken Hinchey, had to resign because he wanted to build a causeway and owned the only concrete company in the area.

CHAIRMAN COWDERY noted the Rothschild study, which reviewed tidal energy, occurred a little bit before Mayor Hinchey's term.

MR. SHEFFIELD said regarding tidal currents, the National Oceanic and Atmospheric Administration (NOAA) plans to look at upper Cook Inlet in December and will probably return in the spring to do a full-fledge current and tide study from below Nikiski up to the Port of Anchorage. That study will compile badly needed information.

MR. SHEFFIELD informed the committee that the Port of Anchorage is looking into building road and rail access behind the port to provide for a freight facility to load containers on rail cars. This major intermodal connection to the port will provide access to a Knik Arm causeway or a bridge at Cairn Point. He felt it is very important that a crossing include a rail link. Plan site connections on both sides of Knik Arm to a Knik Arm crossing should be looked at now and road systems developed to make it work. Some funds were made available for an Ingra–Gambell connection to the port and rail yard some time ago but nothing has happened yet. The Ingra-Gambell, Fifth Avenue, Seward and Glenn Highway connection must be considered. Mayor Wuertz has promised to move the truck traffic out of downtown Anchorage. If funds are appropriated by Congress this year to do an environmental impact statement for the Knik Arm crossing, all of that would come together – the crossing, the Ingra-Gambell, the freeway into a rail yard and port, and a passage around government hill. He assumes the Department of Transportation and Public Facilities (DOTPF) will provide leadership on that project.

MR. SHEFFIELD maintained that Anchorage has run out of room to grow: in 20 years, Anchorage will run out of residential land. Acres and acres of developable land would be opened up if a Knik Arm crossing is built. A crossing would also open up vast recreational areas, shorten travel time to Fairbanks, provide for the more efficient movement of freight, and provide for the development of natural resources, which will create jobs. This is a unique opportunity for economic development activities on a

regional basis and a way to provide for jobs. DOTPF is doing some planning on the East Fifth Avenue – Seward Highway now. When money becomes available, the state must be prepared to act. The state, Municipality of Anchorage, and Mat-Su Borough will have to work together to make this project happen.

CHAIRMAN COWDERY said he agrees 100 percent and that he believes that Congressman Young has secured the funding for the environmental impact statement, as well as other funding for the necessary Mississippi project. He thanked Mr. Sheffield and called the next person to testify.

MR. BILL BREDESEN, a commercial real estate broker in Anchorage, said he considers the Knik Arm crossing to be one of the most important projects to the future of the greater Anchorage area. Since a Knik Arm crossing was first suggested by Mr. Hinchey, almost every square foot of developable land has been eaten up. He feels the quality of life issue is an important one. The 2020 plan calls for 80,000 more Alaskans [in Anchorage] by the year 2020. The people working on the master plan for the airport are also concerned about a shortage of land and the Knik Arm crossing was used in many of their scenarios as a component. For those reasons alone, he supports a Knik Arm crossing.

MR. LARRY WHITING, a resident of Palmer, said he attended the meeting to present the possibility of building a tunnel instead of a bridge across Knik Arm. Tunnels have been designed and built in Iceland that cross active seismic zones, one at a cost of $75 million five years ago. He encouraged the committee to choose the least expensive project.

MR. DENNIS NOTTINGHAM, with Peratrovich, Nottingham, and Drage, a consulting engineering firm, informed committee members that he worked on this project as a state engineer in the early 1970s. He advised the committee that projects go from harebrained ideas to reality with time, therefore the paperwork for this project needs to continue until the time comes when it is appropriate to build this crossing. He said he cannot overemphasize the importance of Chairman Cowdery's earlier statement about the need for a cohesive study in the upper Cook Inlet area. Other related development could be going on in upper Cook Inlet, for example Fire Island and a ferry system. He believes the environmental impact study will be done at a very opportune time. Whether anything comes of that study is not as important as the ability to consider all of the options.

MR. NOTTINGHAM turned to a discussion of the technical aspects of a Knik Arm crossing. He showed a conceptual drawing of a

crossing at Cairn Point, one of the potential crossings mentioned by Governor Sheffield. That crossing is about 12,000 feet - it takes off from the bluffs and provides a relatively high level clearance. Contrary to what many believe, the ground in that area is hard and dense underneath and will provide a very good foundation for a bridge. The Elmendorf Air Force Base side requires about a one-mile clearance, so the access would have to be designed to avoid that area. The geometrics will be very important in the study of this crossing. The Port MacKenzie side is not quite as critical but the other side has all kinds of access constraints.

CHAIRMAN COWDERY noted there is talk of future ports and development and asked whether that would happen on the Seward or Palmer side of the bridge.

MR. NOTTINGHAM said the present port is down-inlet from Port MacKenzie.

CHAIRMAN COWDERY asked if boats will have to go under the bridge to get to the shipping facilities.

MR. NOTTINGHAM said they will not. As one goes up Inlet, it shoals, so the crossing will have to be designed so that it does not impact any port development on that side. He suggested that a girder system will have to be used with 400 to 600 foot spans and heavy piers placed intermittently. The piers would be used in deep water, up to 100 feet, similar to those used for the 15 oil platforms in the inlet. Similar piers are also used for the North Slope where ice forces are much greater. The dense foundation underwater would probably support pilings, either driven or drilled.

CHAIRMAN COWDERY asked if all piers would be uniform.

MR. NOTTINGHAM said the only thing that would differ would be the length of the piles.

CHAIRMAN COWDERY asked if the pilings, or tripods, would be about 10 feet in diameter and filled with concrete.

MR. NOTTINGHAM said the range would be from 8 to 10 feet. He told members similar designs have been used in the past. A bridge across the Yukon River carrying the TransAlaska pipeline was designed in 1971 by the Department of Highways. Its spans are 410 ft. and the ice gets to 5 ft. thick, which is twice as thick as ice in Cook Inlet. He noted, "These kinds of technical problems are not difficult."

He noted that the highest towers on the Yukon River crossing are 120 ft. high, not unlike ones that would be on the Knik Arm. Even after 30 years, the Yukon crossing is the most sophisticated bridge design ever built. He stated, "An airplane could run into the side of this bridge, cut it in half and it would not fall down. It is designed for that event."

MR. NOTTINGHAM showed committee members pictures of the big steel, tortionally resistant box girders and said, "In other words, if you chop one of those girders in half, it can't twist and fall over. The other one is stiff and holds the other girder up. That's how these work."

He explained the bridge is made out of orthotropic steel. The pipeline hangs from brackets on the side. It has room on the other side for the gas line; that was the original design intent clear back in 1971. He stated, "The Knik Arm crossing wouldn't be any more different; it wouldn't be any more difficult."

CHAIRMAN COWDERY asked if any private companies would benefit from this crossing and whether they should participate in some of the costs of these studies.

MR. NOTTINGHAM answered that some might benefit:

> Normally, private companies benefit best by being on some sort of toll use rate or some kind of rate like that. In other words, they don't have to put a lot of cash up front, but they can pay for it as they go.

CHAIRMAN COWDERY remarked the Corps of Engineers study says they have to include everything, Fire Island and the Port development.

MR. NOTTINGHAM said he was talking about the construction, but the people who would potentially benefit would probably be willing to participate in the study.

MR. ALLEN CHRISTOPHERSON, Peratrovich, Nottingham and Drage, said they had talked to some of the shippers who might be interested.

10:30 a.m.

MS. VICKY HUTTON GLENSER commented:

> Years ago when that study was put out, the biggest concern with the shippers was that the bridge was coming over the shipping lane and the shippers' concern

was the area between the pilings. They only have a certain amount of space. If they lost control of a ship or barge, then it would be coming through and it would be heading directly for these pilings. Has any change been made as far as the design of spacing the pilings?

MR. NOTTINGHAM replied that designers always create the longest span possible on these types of bridges. It is also the most economic way to go. Here they are limited to the type of bridge they can use; 600 feet would be the span. He explained, "We have pushed the alignment further up the Inlet, so you're as far away from the Port as possible."

MR. CHRISTOPHERSON inserted that there has been no design and that those issues need to be looked at. The piers need to be improved or strengthened in the event of ice or a ship hitting them. The alignment, if further up Cook Inlet, would have less conflict with vessels.

MR. DEVERY PRINCE, Alaskan resident, said he supports this project for the following reasons.

- Safety - presently, there is only one road in and out of Anchorage and the congestion is too severe. There have even been incidents of road rage in Anchorage.
- Commerce – a crossing would lower the transportation costs of goods sold across the state and open up new areas. It would also encourage new growth in the economy.
- Lifestyle - the transportation corridor will allow people to live in a more suburban type of area. Larger lots across the Inlet were condensed. A crossing would help families get out of the city to enjoy the outdoors faster, which is important.
- Inefficiency - it's inefficient to drive 45 miles around Cook Inlet each way just to access recreation or business. It's a waste of time and fuel.
- Total transportation corridor bill - it should look at several things. It should support Alaska for the next 100 years. On the lower level, it should accommodate electrical transmission lines built for anticipated growth, a natural gas line, telecommunications fiber cables and the railroad. He thought the upper level should support six lanes of traffic. He would be willing to pay a toll to use this bridge and believes businesses should pay a higher toll.
- Access - the access should push due north and connect with the Parks Highway near Willow and other areas.
- Build it now - There are three reasons why it should be built now - not 30 years from now. Right now Alaska has the strongest congressional delegation it’s likely to have for the next 30 years.

- It's a bargain - DOTPF projects typically cost the state 20 percent of total cost. There are no valid reasons why it shouldn't be done now.

MR. PRINCE said he thought leadership should step forward and lead.

CHAIRMAN COWDERY said they talked about putting a railroad across but the load structure would increase dramatically. He thought the railroad had funds to put a line in from the Palmer-Wasilla area to Pt. Mackenzie with the vision of creating an industrial site.

MR. FRANK DILLON, Executive Vice President, Alaska Trucking Association, said he hopes the study will be broad enough to consider rail and motor vehicle traffic. He stated, "We really want to have a comprehensive study in which folks that are fundamentally against doing anything are going to have trouble poking holes in."

MR. DICK CATTANACH, Executive Director, Associated General Contractors, encouraged the committee to continue with the study with all due haste.

MS. SARAH PALIN, Mayor of Wasilla, said there has been a lot of discussion on this issue and much of the consensus is that it's now or never with our congressional delegation in place. She would do all she could to further the opportunities for the residents in Wasilla.

MR. JERRY STEWART, Alaska resident, stated support for a Knik Arm crossing.

MR. GLEN GLENSER, former director of the Port of Anchorage, said he talked to Ken Hinchey about this project when it would have cost a couple of million dollars. When he was an ADC manager, he brought Baron Van Rothschild to Alaska for a week, who came up with an elaborate system of three dikes, which made a lot of sense. Governor Sheffield had John Olson, an engineer, worked out some provisions for tax breaks to help fund tolls, but it went by the wayside. He also advocated for a north/south runway at the airport before an accident actually happened (with Senator Stevens' wife involved) that precipitated it. He said, "Don't let the thing diddle on the wayside. Get something done, because it can be done. We've got bridges all over the place."

MR. GLENSER suggested using the work that’s been done: "You don't have to reinvent the wheel."

MR. CLIFF AMES, Alaska Center for the Environment, asked, "What do we want to spend our still relatively limited transportation

funding on - both capital funding and maintenance funding?"

He noted that figures from the Anchorage Transportation Coalition show the capital costs of this project would be about $1-$2 billion, which is as much as the state spends on capital transportation projects over three years. He said that maintenance is always a big problem and the toll system would be a big plus. Without it, they would be spending about 10 percent of Anchorage's total maintenance budget annually, which means that other roads wouldn't get maintained.

**TAPE 01-23, SIDE B**

MR. AMES said the major thing to consider is urban sprawl. It affects areas where people live, not areas that are sparsely populated. He said:

> We would be losing open space and fish and wildlife habitat if we encourage development in the Pt. Mackenzie area instead of doing what our comprehensive plan suggested, and that is in-building on some of the underused or unused acreages in Anchorage.
>
> If reducing commuting time for existing commuters is a major goal of the project, it just really doesn't meet those goals.

He presented figures showing that about 10 percent of the existing commuters would have a quicker commute with the Knik Arm crossing while 90 percent would still use the Glen Highway.

MR. AMES said that an interesting wrinkle is the Anchorage Airport Master Plan process that is happening now. He explained:

> One of the alternatives is to move the Anchorage Airport cargo operations over to Pt. Mackenzie, which may or may not mean they would want to build a Knik Arm crossing in order to access that supplemental airport. It's not altogether clear that that is the case, since a lot of the cargo operations are touch and go and some of those that aren’t touch and go are actually merely repackaging cargo and putting them from one plane to another and don't require a trip into the Anchorage center. So, we are basically raising a number of questions that we think should be answered before we decide to build a project and that's what would happen with the studies that are being proposed at the present time.

CHAIRMAN COWDERY said he had been an Anchorage resident for a

long time and has seen the wetlands developed and the Anchorage Bowl run out of room. He envisioned a twin city concept with everything coming across the bridge - like Minneapolis and St. Paul. He said they used to build on solid gravel ground, but they ran out of that. He pointed out:

> Now our solid gravel is coming from the valley to fill in marginal land to build on. I think the one-acre lots is a sham. I think we'd have a sewer facility over there that would be tied into ours or their own.

MR. AMES responded that their proposal is not to fill existing Anchorage wetlands, but to use land that's already been disturbed and can be built on or used for a more beneficial purpose.

CHAIRMAN COWDERY asked what land he is talking about.

MR. AMES said it is identified in the comprehensive plan.

MS. SANDRA GARLEY, Planning Director, Mat-Su Borough, reinforced the concept that if a Knik Arm Crossing is built, it would provide economic development for the whole region. It has a broader impact when you look at the need for providing secondary access for not just the local commuters, but for everyone on the road system who needs to get to Anchorage from time to time. She pointed out, "It takes only a minor traffic accident to really shut down that freight movement and that commuter movement."

MS. GARLEY also emphasized that an Environmental Impact Statement will provide an opportunity to identify and resolve some of the questions that have been raised.

CHAIRMAN COWDERY said that Congressman Young assured him that funds are in place for the EIS along with $1-$2 million for studies that might need to be done. He added that the Knik Arm crossing would cut one-hour travel time from Fairbanks and interior Alaska.

MR. JIM SYKES said he supports going forward with the study, but he hopes it was comprehensive in nature and tied to realistic projections for the future. He stated:

> I certainly encourage consideration of development of not just the cargo ports on Fire Island, but to consider moving the actual Anchorage Airport to Fire Island, which would make available some pretty good land for residential and other purposes in Anchorage. If the Knik Arm bridge is going to be built, I strongly urge you to include realistic estimates for tapping tidal energy, which we have almost uniquely available

to us from anywhere in the world. There are estimates now saying that there will be shortages of Cook Inlet gas of residential gas and generation as early as 2004 and perhaps as late as 2007. So, I think we really do seriously need to consider electrical generation with tidal energy.

MR. SYKES also stated support for a rail and gas line as part of the design. The study should tie gas in with Southcentral Alaska and Interior Alaska because future forms of energy could use this corridor. Mr. Sykes commented, "It's a major project. It's not just a bridge, I would suggest to you and it needs to be very thoroughly studied..."

MR. SYKES cautioned committee members about counting on federal money, because of September 11 and because the current delegation may not be there forever. The federal government is a little stingy when it comes to operating and maintaining projects it has funded. This leads to a downward spiral if we continue to accept federal funds for roads that we can't afford to maintain. The committee needs to consider the existing transportation system and upgrades to it that might actually be more cost effective, like a parallel road to the Glen Highway that upgrades the old Glen Highway.

MR. SYKES said that even though he heard testimony about an immediate need, he doesn't believe it is there. Other communities with bridges that have been mentioned have much larger populations and greater economies. He asked members, "Please don't get into the concept that if we build it, they will come."

MR. SYKES said he supports going ahead with the study, but asked the committee to make sure it is comprehensive.

CHAIRMAN COWDERY responded that many people are attending the meeting on a workday indicating a lot of interest in this project.

MR. MICHAEL KEAN, a private citizen, stated support for the bridge concept and the study to move forward with it.

MR. DON LOWELL, Alaska Transportation Consultants, urged the committee to move ahead on funding an environmental update on the Knik Arm crossing because it would be one of the finest transportation projects of the century. He noted that he previously served on the Mat-Su Borough Port Commission and worked with Glen Glenser in the 1990s on a regional port committee. At that time, they urged the state to move ahead to support the Knik Arm EIS. He told committee members that three crossings were considered in the early 1980s: the downtown crossing, the Elmendorf crossing and the bluff crossing. The

bluff crossing was the shortest and most economical route, but it was dismissed because it encroached three-tenths of a mile on the Air Force antenna array that requires a one-mile clear zone. He said that encroachment needs to be investigated again to see if some alternative can be found to allow consideration of that crossing. Also, earlier reports found that a railroad would not be feasible until 2025, but that analysis needs to be reviewed, since a railroad serving the Pt. Mackenzie area would dramatically improve the port export capabilities and Interior mining interests.

MR. KEAN said that after conferring with some top engineering specialists, he believes the EIS should cost $5 million, not $20 million that is proposed. He said that much of the previous study could be updated and new data investigated. He had three proposals:

- Add this project to the State Transportation Improvement Program as a priority project.
- Request the $5 million or more needed to conduct the EIS for the Knik Arm crossing.
- Authorize the state match for this project.
- Add the project to the AMATS and the Mat-Su Borough's project requests.

He offered to help with anything the committee needed.

CHAIRMAN COWDERY said he was told that the previous EIS was completed for a Fire Island causeway, which cost $3.5 million.

MR. JAMES ARMSTRONG, Manager of Transportation Planning, Municipality of Anchorage, said he is speaking on behalf of Mayor Wuertz who worked closely with Congressman Young and the delegation to identify major transportation projects that would stimulate the economy. He stated:

> With the shortage of developable land and a growing population, the mayor strongly endorses the construction of the bridge over Knik Arm to the Mat-Su Borough. This transportation solution would allow Anchorage to manage its growth while protecting its existing green belts and open spaces.

He continued:

> A Knik Arm crossing is too expensive to be financed with regular transportation dollars that come to the state each year. It will require a special appropriation. The feasibility study done in 1983 is obsolete. The Native Hospital blocking access to Seward

and Glen Highways and the location of a military tank farm at the backside of the corridor are obstacles that no longer exist. Another impediment identified in 1983 that still exists is the problem with any alternative for accessing a bridge over military based property.

The Mayor recognizes all of these options are not viable and, therefore, moot. The removal of the tanks at the port gives us better options of accessing the bridge via a road that could be built at the bottom of the ridge below government hill. Details of how this would be accomplished are yet to be analyzed, but there are lots of alternatives.

This project could be a high priority project when Congress reauthorizes TEA-21 in 2003. The Mayor believes this project needs to receive special consideration to be accelerated and not subject to the routine of a long AMATS review process. This would require a special appropriation by the legislature to update the 1983 feasibility study. Once the results of that study are completed, and provided they verify the feasibility, the congressional delegation can assist us in obtaining additional congressional approval.

REPRESENTATIVE GREEN asked if the concept of removing the tanks was a result of a study.

MR. ARMSTRONG said they are revamping the port area. They already did the removal and have an existing green belt above where they removed the tanks and were reseeding it.

CHAIRMAN COWDERY asked if there was any pollution in the area of the tanks.

MR. ARMSTRONG replied that one tank had leaked that he knows of and a lot of soil had been removed.

MR. DILLON (Alaska Trucking Association) added that he understood there was potential for pollution problems from the creeks, which might pose difficulties in using that area as a park, but not using it as a road or road foundation.

MR. ARMSTRONG said the Mayor asked for a special appropriation in the municipalities' request of about $50,000 - $100,000 to update the 1983 study this year.

REPRESENTATIVE DYSON said he grew up in the Puget Sound area, where bridges were always preceded by ferry service. The ferries handled the traffic until the volume got to the point where it

made sense to build a causeway or a floating bridge. In the late ‘80s, the Anchorage Assembly did a study on the feasibility of a high-speed ferry. He asked Mr. Armstrong if he had seen it.

MR. ARMSTRONG replied that he had seen a lot of studies, but he hadn't seen that one.

CHAIRMAN COWDERY asked Representative Dyson if the high-speed ferries would be seasonal or year round.

REPRESENTATIVE DYSON replied that the study was for year-round ferries. The study showed it would take a very capable hovercraft to be able to get over the grounded ice blocks on the beaches. They also looked at extending it down to Kenai, but it wasn't economic at the time.

MR. ARMSTRONG stated that committee members have a memo that describes the AMATS process; "We're walking the Port of Anchorage through the LRTP amendment process right now with public review comments."

CHAIRMAN COWDERY asked if anyone else wanted to testify. There was no further response. He announced the committee would continue with a round table discussion and asked for comments about seismic problems that might be encountered, as in 1964.

MR. NOTTINGHAM said he has been in Alaska for 40 years and worked in the bridge section of the Highway Department in Juneau. During his time there, the bridge codes did not address design in seismic areas. When the TransAlaska Pipeline came along, its construction furthered seismic design 25 years ahead of other states and the rest of the world. Most people still don't understand how sophisticated the design of the TAPS is, or the contribution of that project to modern engineering. The Yukon bridge that he showed earlier was the most sophisticated design done at that time and it is still state-of-the-art. The forces that bridge was designed for are slightly smaller than those in Knik Arm. He explained:

> Certainly, the seismic zone is well understood and it's not an insurmountable problem. As a matter of fact, it's just a matter of making the bridge strong enough and of a material that's a littler lighter weight and suitable for seismic zones. We have good foundations; there should be no reason it couldn't be done.

REPRESENTATIVE GREEN asked if it is is true that boring into solid rock through the blue clay layer could increase the amplitude of a shockwave because of loose soil.

MR. NOTTINGHAM said that is right; an earthquake on loose soil

would be much worse than one on bedrock.

MR. DILLON said he doesn't know anything about the engineering of this project, but he knows a little about the money. The money comes from the Highway Trust Fund collected from taxes paid by highway users. It is not the same money used for our nation's enhanced security. The trust fund money is available and appropriated in Congress. He noted, "You have to have a pretty good argument to get Congress to appropriate $1 billion for a project."

MR. DILLON felt there is wide support for this project for Alaska. He understands that there is about $1.2 billion for the Transportation Infrastructure Committee (Congressman Young, Chair). He said:

> I'm sure we could build this Knik Arm crossing and use another $1.2 billion without any problem at all, but that's not how the system works. We're very unlikely to go out and piecemeal together $1.2 billion of additional projects and get those funded. We are, however, very likely in my opinion, going to be able to get the money appropriated to do, whether it's $1.2 or $1.5, this particular project.

REPRESENTATIVE GREEN asked if that fund is a matching fund.

MR. DILLON said he is sure there are matching components and earmarked components that wouldn't necessarily be matching. He mentioned that they are also at a cusp point of rewriting authorization of the highway bill. He explained:

> The highway bill was designed in 1956 to encourage the development of the interstate system for mobilizing in case of war. That's why we built it. We've gone beyond that now and there's been more flexibility both in ISTEA (Intermodal Surface Transportation Efficiency Act) and TEA-21 (Transportation Equity Act of the Twenty-First Century), which are more recent bills to allow for maintenance projects recognizing that the infrastructure was built 45 years ago and has lived out its lifespan. I would expect that we are strongly urging the congressman and the subcommittee on highways to allow even more discretion [indisc.] so that you can do things that are safety upgrades, road repair work or maintenance that is associated with this type of a bridge.

CHAIRMAN COWDERY asked how the design addresses a collision by a ship.

MR. NOTTINGHAM replied that they design all kinds of structures throughout the state for 900 ft.-1,000 ft. tour ships. The structures for the bridge would be many times stronger than ones that resist ships in current port facilities. He stated, "These could be fendered and handle any kind of ship impact. That would not be a problem."

CHAIRMAN COWDERY asked about the water depth.

MR. NOTTINGHAM replied that the National Oceanic and Atmospheric Administration (NOAA), one of the most valuable federal agencies as far as data gathering, have ship captains and measurement methods for our coastal waters and provide telemetry and depth of water data, which would get updated. Meanwhile, NOAA has produced charts that show the maximum depth to be about 180 ft. at low water with 35 ft. tides. This could result in depths on high tide over 200 ft. But the alignment of the bridge would not cross at the deepest part of the channel, probably being in 100 ft.-120 ft. of water.

CHAIRMAN COWDERY asked what the average depth is of the platforms in Cook Inlet.

MR. NOTTINGHAM replied that he didn't know. [An unidentified speaker said it was 60 ft.]

MR. GLENSER said they just did a study for the oil companies on the platforms. They were designed to last 20 years, which is now up. They were designed to withstand seismic activity and, consequently, they have experienced very few problems as far as ice is concerned.

REPRESENTATIVE DYSON said from his involvement in several marine science projects in Cook Inlet, he thinks the strength and impact from the sea ice would far exceed what they would get from a tour ship. The platforms in Cook Inlet have survived very well as that kind of technology is well advanced. He said that Mr. Nottingham has an immense reputation in this area in our state. He said part of the study would have to deal with the silt coming from the rivers into Knik Arm and he assumed that a properly designed causeway could work for them by diminishing the amount of dredging that has to be done in port.

He also mentioned that there are a significant number of belugas that travel up Knik Arm that the Eklutnas have been hunting for a long time. He assumed the open spans on the causeway would not negatively impact the beluga migrations, but that it should be watched.

MR. GLENSER responded that Doug Jones had just completed a computerized tide study, which shows exactly what does happen. A bridge structure has minimal affect on changing currents or sediments because very little space is taken up by supports relative to the Inlet. Other types of structures would have a significant effect and that would have to be part of the study.

MR. CHRISTOPHERSON added that the piers would have a very minimal impact on the belugas that would just swim around them. With regards to sedimentation, there would be minimal impact. He stated:

> But when you do something in the Inlet, there is often a cause and effect and it would be something that we look at as part of the navigation and flow and drainage plan for the Upper Cook Inlet. I think that's a very important document and it needs to go forward.

REPRESENTATIVE DYSON said that a clever design might significantly reduce the sedimentation off the face of the dock, reduce the MOA's expenses, help sell the project and make the economics work.

CHAIRMAN COWDERY said that he wanted to talk about access to the bridge.

MR. DILLON said he has been involved in two studies in the Ship Creek port access area. They are looking for a way to alleviate traffic conflicts at rail crossings and making Ship Creek more accessible to pedestrians who might want to use it recreationally. One idea was that the Ingra-Gambell area would be extended in a causeway across and a tunnel through government hill.

**TAPE 01-24, SIDE A**

MR. DILLON said that the plan became too convoluted, expensive and probably dangerous. He said they just have to look at all the possibilities and see if they make sense.

CHAIRMAN COWDERY said there has been talk about going through Elmendorf but he was told that would pose security problems, although the Glen Highway goes through Fort Richardson without a security issue.

MR. DILLON said he didn't know enough about the idea of a tunnel from an engineering standpoint to say whether it is feasible or not. From a transportation aspect, a problem would be that, generally speaking, you cannot move hazardous materials through a tunnel. Most of a railroad's business involves handling hazardous

materials. So a tunnel, unless it was an exclusive rail tunnel, probably wouldn't work. The trucking industry moves a lot of hazardous materials to the North Slope. A lot of times it's not exotic things like plastic explosives; it may be things that are labeled flammable heading for the Wal-Mart store in Wasilla.

MR. CHRISTOPHERSON added that access on the Mat-Su side, a rail link or primary road system could have feeder links.

MR. MARK VAN DONGEN, port director of Port Mackenzie, said the primary spot for the bridge or tunnel to end on the Pt. Mackenzie side is at the end of the old Pt. Mackenzie Road, which is 1.2 miles up Inlet from where the current dock is at Port Mackenzie. This is consistent with what Dennis Nottingham said earlier about ship traffic, therefore, being on the down Inlet side from the bridge.

MR. DONGEN said that road is there right now and they are putting electricity 10.5 miles down the Pt. Mackenzie Road this winter. They are looking at bringing natural gas down after that and paving it. The road can also be upgraded and it's fairly wide. He thought it was the ideal location for the crossing to terminate. He said that the near-term solution for transportation into the Mat-Su Valley would be the Pt. Mackenzie Road, which connects to the Knik Goose Bay Road, which then goes up into Wasilla. A mid-term solution would be to upgrade the Burma Road, go past Big Lake, and connect with the Parks Highway. A long-term solution would be to build an entirely new road from the port area further towards the Susitna River going up towards Willow. He said that these are all in the long-range plans of the Borough for upgrading the roads to interconnect to the crossing.

CHAIRMAN COWDERY asked if he knew about funding for a railroad extension to Port Mackenzie.

MR. DONGEN replied:

> That spur is approximately 33 miles long. It's a $60 million project. We have some funds right now - $410,000 to do an update on a prior study on the exact route that that spur would go and we also have about $1 million available through the Federal Transit Administration to do the environmental study or whatever will be required for that spur to go in. But it will entail about $48 million in federal funding and another $12 million in state matching funds to actually construct that spur.

11:40 a.m.

MR. DAN JACOBSEN, Mat-Su Borough resident, said he understood that rail spur was eight to 10 years away.

REPRESENTATIVE GREEN said he wanted to know if it is a good idea to look at a plan for developing the Port Mackenzie area along with the crossing or whether it would diffuse the issue.

CHAIRMAN COWDERY said that it's obvious they should get the traffic away from downtown.

REPRESENTATIVE DYSON said about two years ago the federal government commissioned a study called A Critical Infrastructure Analysis. The events of September 11 have added a significant priority to that study. He pointed out, "Security of our infrastructure means having alternative routes. And that certainly is true here. We're very vulnerable with our fuel and electric supply. Almost none of those are loops."

MR. DILLON said he talked to Mayor Wuertz about transportation issues and his specific interest was what has been done to accommodate security issues in the MOA comprehensive plan. This was generated by a study done last year that found a potential problem if a wildfire occurred near the Hillside because of no access for fire fighting equipment and no egress for the residents.

CHAIRMAN COWDERY said he wanted to discuss what permits would be required, how much they would cost and what their time frame is.

MR. CHRISTOPHERSON responded that it would depend on the type of permitting process. An environmental assessment or environmental impact statement could take two to three years for the normal agencies - marine, parks and different land development groups, led by the Corps.

CHAIRMAN COWDERY asked how much it would cost.

MR. CHRISTOPHERSON replied that would depend on whether it was done privately or publicly, or with an accelerated process. He thought it would cost $3 million - $5 million, depending on the scope. If it was expanded to look at access on either side, that could take more time.

CHAIRMAN COWDERY asked what a realistic timeframe would be for construction of this project, whether work could be done year-round and what would be needed to conform to this type of schedule.

MR. NOTTINGHAM replied that pier construction in Cook Inlet in the winter might be difficult. A lot of the substructure work would have to be scheduled for the summer, which could be as long

as eight months. The rest of the work on each side could go year-round. It would probably take two years to construct, maybe three at the outside. If the permitting were to occur concurrent with construction, it could take five to six years.

11:50 a.m.

CHAIRMAN COWDERY asked what role DOTPF would play and whether they have the qualified personnel onboard for this type of project. He asked what percentage of the cost of this project should go to DOTPF for their oversight or whatever their involvement would be.

MR. CHRISTOPHERSON replied that DOTPF plays a role in managing infrastructure projects in the state and it could play that role here. Private consultants could assist in improving its capabilities. He explained that DOTPF took a lead role in the permitting and upfront planning process for the Whittier Tunnel and that took the top ASC award in the United States. He said a lot of private firms have prepared for years doing geotechnical studies, seismic analysis, etc. in bridge design and they are capable of working with DOTPF.

CHAIRMAN COWDERY asked if he thought there are Alaskan contractors capable of working on this type of project.

MR. CHRISTOPHERSON replied that he feels very strongly about Alaskan contractors since he had worked with them for many years:

> I've worked all over the world. There are many Alaskan contractors that could do many parts of this project, whether it be working off of barges, putting in driven pile foundations, whether it be hauling gravel for the abutments or building railroad tracks. Many contractors have demonstrated that in projects in the Inlet; they are demonstrating it in projects on the North Slope. We don't get a lot of visibility developing these new oil fields on the North Slope, but there are many contractors building billion dollar off-shore islands, building pipelines in the Arctic Ocean, sub-sea pipelines, building bridges in frigid, very limited work periods on the North Slope.

CHAIRMAN COWDERY asked how we should plan to alleviate terrorist activities on this crossing.

MR. NOTTINGHAM replied that these kinds of structures are relatively enormous compared to the small framing of the towers that collapsed in New York. The terrorists knew that by hitting the light steel at the top of the tower and with a little extra

heat, they could collapse the top floors and that would pancake the rest. "That was the failing of those designs of those towers - the small little members at the top."

MR. NOTTINGHAM said the bridges are much larger and it's extremely difficult to damage them. On the Yukon bridge, the girders are 13.5 ft. deep. He said, "These would be 15 ft. deep girders of steel and if you design a redundant system, you can blow one whole span apart and it won't collapse the bridge." He said terrorism was a consideration in the design of the TAPS.

REPRESENTATIVE DYSON said the major security issue is going to be alleviating the security concerns at Elmendorf Air Force Base. He felt, "It won't be done locally, dealing with local based commanders here. You won't get that problem solved. It will have to be done at a higher level."

MR. CHRISTOPHERSON said there are some important infrastructure issues that need to be looked at in Alaska, like the TAPS, the airports and the ports. He thought the crossing would provide redundancy in both utilities and transportation.

CHAIRMAN COWDERY agreed that our ports are very critical.

MR. DILLON informed them that Governor Sheffield, in fact, left for a meeting on port readiness today to look at further ways to tighten security. He said:

> Going back to timelines for projects, he said a simple road project done with federal money now in the neighborhood of several hundred million dollars, typically after you're agreed that it's a good project to do and the preliminary work is done, it's about seven years before you can drive on it, if everything goes very well. It's not unusual for that project to take 12 years.
>
> The process is a problem. Right now Congressman Young is well aware of this and the rewrite and reauthorization of the highway bills that are upcoming - one of his goals is to streamline that process where it's possible without denigrating the environmental integrity or the quality of the work that's done, in other words, not doing shoddy engineering or considering the environmental issues. But to streamline the process in the sense that it shouldn't take 12 years from the time you've agreed to do it, the funding is available to actually start that type of construction that you guys are envisioning in going to work.

> The tension is not the highway build-up, it is the National Environmental Policy Act (NEPA). NEPA's regulations constrain what could be done in highway building as much as the highway building law itself. There is work underway in Washington, D.C. to address those issues and I would like to ask consideration be given to the Senate Transportation Committee at our State Legislature to look at that and if they believe there is a real reason to get involved, to get involved and try to shorten the timeline on these projects so that we could go to a construction phase maybe 25 - 30 percent quicker than we do now.

CHAIRMAN COWDERY commented that he and others were disappointed in the energy bill moving out of Senator Murkowski's committee. He didn't know if it was completely understood back in Washington that you can't turn oil on like you turn on a spigot. "You can't build this bridge without lead time."

MR. LARRY WHITING said that he had a concept from Iceland that answers all their questions about EIS matters.

CHAIRMAN COWDERY thanked him and asked him to give it to the committee.

MR. CARL ANDERSON said he owned a tugboat in the Port of Anchorage and thought that the bridge was far enough up the shore that a ship would probably run aground before it got to it.

CHAIRMAN COWDERY said that he was planning to have another hearing involving all the ports, the airports, the trucking industry and shipping. He thanked everyone for participating and adjourned the meeting at 12:00 p.m.