Tillamook County Documentation
For Support of Chief Justice Findings
Under 2014 House Bill 5703
(Ch. 121 OR Laws 2014)

ONE COPY - SUPPLEMENTAL INFORMATION

Q 11 bonds for courthouse projects may not be issued unless the Chief Justice of the Supreme Court makes certain findings under the above cited act. Those required findings and the rationale for such findings in the case of Tillamook County's proposed courthouse replacement project are described below.

(1) The courthouse with respect to which the bonds will be issued has significant structural defects, including seismic defects, that present actual or potential threats to human health and safety;

From 1932 to 1997, the county jail occupied a major portion of the top floor in the County Courthouse. As part of a major jail renovation in 1983, it was required to provide an outside exercise area on the courthouse roof. This required a concrete slab on the roof enclosed with a chain link cage. As part of design, a structural analysis of the courthouse was conducted. Concrete tests taken in 1983 showed low concrete strengths. Core samples were taken from various areas indicating that highly loaded concrete columns did not meet required strengths. This was subsequently confirmed by a follow-up Windsor Probe test. The consulting engineers, KPFF concluded in a November 22, 1983 letter that the test results for the columns could safely resist the design dead and live loads for the proposed exercise area ". . . even though concrete strengths in many areas appear to be substandard." **(EXHIBIT A)**

A local newspaper article in the early 1990's reported that concrete used at the county hospital (and presumably the County Courthouse) was mixed with salt sand instead of washed sand. **(EXHIBIT B)** Unwashed sand may contain chlorides and sulfates which will deteriorate concrete over time. These allegations led to a series of investigations and findings. The subsequent structural report issued in 1993 concluded that the Courthouse was susceptible to severe damage from an earthquake stating in part:

> ". . . There was no way to physically increase the strength of the existing Concrete and in fact the strength may be deteriorating due to the chemical Composition of the material (unwashed sand)." **(EXHIBIT C, pp. 2-3)**

The 1993 report also found:

> "Whether the Courthouse . . . will fall down in a major (code design) earthquake is anyone's guess. It is better to err on the side of safety and assume this would happen." **(EXHIBIT C, p. 5)**

We believe the findings of the 1993 report remain valid and legitimate today. The Courthouse has not changed structurally since the report; what has changed is stricter Building Code criteria, design factors, classifications, and requirements regarding structural design OR structural upgrading for new and existing buildings. As time has passed, knowledge of seismic risk, particularly on the Oregon Coast, has dramatically increased and become a Building Code focus of attention.

The architectural/engineering firms that authored the 1993 report continue to assert there is no way to achieve absolute compliance with Building Code structural design standards for the existing Courthouse – whether 1993 criteria or current criteria. Structural seismic upgrading would offer positive structural improvements to the building but will leave it short of compliance with today's standards.

The Tillamook County Courthouse is a legitimate risk of suffering crippling damage from a Cascadia Subduction Zone earthquake. Such a seismic event was barely a design consideration in 1993.

(2) Replacing the courthouse, whether by acquiring and remodeling or repairing an existing building or by constructing a new building, is more cost effective than remodeling or repairing the courthouse.

The 2008 "Oregon Court Facilities Assessment" by Hennebery Eddy concluded that $17.4 million would be required to mitigate current state court facilities at the Tillamook County Courthouse. If this were increased by the All Goods Consumer Price Index (CPI) from 2008 to 2014, the remodel costs would be approximately $19.5 million. But that is only part of the story.

The 2008 Hannebery Report only allocated $879,000 of the $17.4 million for seismic upgrades. As noted in the Hannebery Report at p. 6;

> "An upgrade may be necessary for the entire building and not just the court's designated area. As such, because the scope may be much larger than only the court's area, it is possible that some court facilities could be replaced for less than the cost of the estimated upgrades".

This is particularly true when it comes to the needed seismic improvements at the Tillamook County Courthouse. The attached May 5, 2015 letter from RSS Architecture **(EXHIBIT D)** indicates that seismic upgrade would be required for the entire courthouse building at a cost of between $7.2 and $10.8 million. When added to the cost of the remaining state court improvements, the total cost of the existing courthouse renovation is estimated at $26.7 to $29.58 million. A new court facility can be constructed for approximately $18 million.

The new facility would be constructed as a wing or annex to our existing Jail and Justice Facility located at 5995 Long Prairie Road, just three miles south of the current courthouse in the City of Tillamook. The land is also zoned appropriately. Public utilities are available and present on the site. When the current facility was constructed almost 20 years ago, additional court space was contemplated but not constructed. The proposed new wing for court facilities would contain three courtrooms; two for circuit

court and one for Justice Court. It should be noted that the Justice of the Peace is also the circuit court's only pro tem judge. The new Justice courtroom would be FTR compliant and enable opening up the state court docket even further.

In June 2014 the architectural firm of DLR Group conducted a predesign programing for the proposed new court facility **(Exhibits E and F).** This exercise anticipated a programing need of approximately 46,640 gsf. Based on an assumption of $400/sf, this would require approximately $18.6 million total project costs. For reasons described below in this section and in the following section, we believe that 38,000 gsf will be needed.

The initial programming contemplated two state agencies; DMV and state police. The DMV has since been dropped from consideration. The state police on the other hand would prefer to remain in their present quarters located at the current Jail and Justice facility to which the new court facility will be physically connected as a wing.

(3) Replacing the courthouse creates an opportunity for colocation of the court with other state offices.

In 1997 the state police entered into a 20 year lease agreement with Tillamook County for 2,029 rentable square feet in its newly constructed Jail and Justice Facility. It consisted of 10 rooms of demised office space and common areas that include an interview room, observation room, mail/work room, conference/briefing room, Trooper work room, armory, equipment room, women's locker room, exercise room, men's locker room, and restrooms. **(Exhibit G)** The monthly rent was $2,536.25 on a full service basis consisting of $2,130.45 net rent @$1.05 per sq. ft. and $405.80 Base Building Operating Costs @$0.20 per sq. ft. per month. The Building Operating Costs are subject to an escalation/de-escalation provision, but this has never been utilized due to increasing facility operational costs. In July of 2004, the lease was amended to add 1,120 sq ft for boat storage and an additional 1,626 sq ft of office space. For this amendment a one-time payment of $8,000 was made representing an additional $51.28 per month for the duration of the initial lease term which expires June 30, 2017. There are additional provisions for five year renewals up to an additional 20 years continuing at the base monthly rental rate of $2,536 with the Building Operating Cost Component continuing to be subject to the escalation/de-escalation provisions.

Tillamook County is currently under an Energy Savings Performance Contract with Mckinstry Essention, an Oregon ESCO, for the existing Jail and Justice Facility where the state police are presently leasing their space from the county. An investment grade energy audit has been completed and on May 13, 2015 the Board of Commissioners will consider a McKinstry proposal for a Project Development plan to replace the HVAC, interior and exterior lighting, the security system and to construct a new pitched metal roof to replace the existing flat roof. It is expected that these upgrades will cost approximately $1.5-2 million.

In as much as the proposed new state court facility will become an interconnected wing to the present Jail and Justice Facility, Tillamook County is proposing to the Oregon Judicial Department (OJD) that the County would waive all future rents and Building Operating costs for the state police in its present location if OJD is willing to consider this arrangement as qualifying Tillamook County for the 50% state match for purposes of a state office colocation. There are significant advantages to the state and county for doing so, not the least of which is the construction cost savings from a smaller state court facility.

EXHIBIT A

~~83359~~
83037

kpff

consulting engineers

November 22, 1983

Mr. Ken Mouchka
Zimmer Gunsul Frasca Partnership
320 S.W. Oak, Suite 500
Portland, Oregon 97204

RE: Tillamook County Jail

Dear Ken:

At your request, we have reviewed the load carrying capacity of the existing structure of the Tillamook County Jail. We have reviewed the original structural drawings and spot checked the reinforcing in several beams, slabs, and joists and the reinforcing in all columns. All members checked are properly reinforced. We also determined required concrete strengths and found that the most highly loaded columns require a concrete strength of 1,200 psi and the beams, joists, and slabs require a concrete strength of 1,500 psi. Core samples taken from various areas, tested on August 23, 1983, indicated that concrete strengths may not meet these values.

Based on the information from the core samples, we recommended that a portion of the second floor be load tested and that core samples be taken and tested from two basement columns. The load test was run and the floor behaved satisfactorily. The core tests from the columns did not show adequate strength.

To further check column capacities, we recommended that Pittsburg Testing Laboratory run Windsor Probe tests on several columns. On October 27, they tested seventeen different columns at the ground floor level. With one exception, these tests showed concrete strengths of 2,600 psi or more and indicated strengths of over 3,000 psi in areas where cores tested to less than 1,500 psi. According to Don Scott of Pittsburg Testing Laboratory, the Windsor Probe tests are more accurate than the core tests. He will be sending us information shortly, further correlating the Windsor Probe tests to the cores.

Based on our review and analysis of the original plans, the load test results for a portion of the second floor structure, and the Windsor Probe

421 s.w. 6th avenue, suite 911, portland, or 97204 (503) 227-3251
anchorage los angeles portland seattle

test results for the columns, we feel the structure can safely resist its design dead and live loads even though concrete strengths in many areas appear to be substandard.

If you have any questions or need any further information, please call me.

Very truly yours,

Arthur W. Johnson
Vice President

AWJ/bjp

EXHIBIT B

FLIP AND SLIDE – Minutes after emerging uninjured from his overturned sports car, Ross Thomas of Bay City tells Tillamook County Sheriff's deputy Mike Fox about a one-car accident on Bayocean Road Jan. 22. Thomas said he rounded a curve just east of Bayocean peninsula, hit mud, flipped into a ditch, then slid about 50 yards. Thomas was trapped in the vehicle for 10 minutes before escaping with the help of bystanders.

(H-H photo by Ed Langlois)

Hospital expansion in jeopardy

y Carl Anderson

Tillamook County General ospital (TCGH) has to expand in rder to maintain its accreditation, ut expansion cannot be accomlished at the present facility ecause it does not meet earthquake gulations on structures, according Doug Anthes, TCGH vice-presient.

Anthes said the lab, surgery facily, and emergency room have to be xpanded to meet accreditation tandards. TCGH was accredited in 992 but the accreditation board aid the present cramped situation annot continue, or accreditation ll be withdrawn. If withdrawn, CGH would not be able to handle Medicare, which in turn would ause big problems. So expansion is must, Anthes said.

The problem on earthquake stanlards was discovered when expanion was initiated with a May 15, 992 engineering study, which evealed weak concrete. The conrete tested at a per-square-inch load apacity considerably under earthuake regulations, at a range of ,200 psi to 2,500 psi when 3,000 si is required. Anthes said TCGH's rchitect was told by the state that resent operations can continue, but o additions, thus creating a dilemha because of accreditation requirements. He said the engineer said the uilding is as safe today as it was 0 years ago.

The hospital was built in 1948 hen building codes were not as strict as today in an earthquake zone, and when concrete was made with salt sand instead of washed sand, Anthes explained. Salt sand disintegrates concrete over time.

Any addition attached to the hospital, or major remodeling, would be prevented by present regulations, because the concrete in the present structure does not test strong enough to withstand an earthquake.

The hospital is as safe today as it was 10 or more years ago, however, except that it would not withstand an earthquake of expected magnitude, according to Anthes.

"If the concrete would have been OK, we were looking at spending $120,000 for expansion," Anthes said. But now, if the present structure is used as a base, columns and floors would have to be replaced at prohibitive cost, he said. Or, a separate structure would have to be built adjacent, but not connecting. Or, a new site for the entire operation would have to be considered.

Anthes said the hospital should stand in an earthquake because it will be sorely needed. The engineer's report says that the present building, in terms of earthquake standards, has a "grossly inadequate" lateral system. "Walls, beams, columns and floors cannot be counted on to resist lateral loads [caused by earthquakes] due to the apparent low strength concrete...the reinforcing is very poorly detailed by today's standards...we believe the building would probably collapse" in an earthquake of expected magnitude.

The above analysis was based on core concrete samples taken on May 15 and the conclusion is based on

Continued on Page A11

Transient room tax considered

by Ed Langlois, H-H staff

With board chair Ken Burdick leading the call, the Tillamook County Commissioners on Jan. 20 decided to begin investigation that could establish a county transient room tax (TRT).

BURDICK

According to Burdick, opposition from local chambers of commerce in part quashed past attempts to establish a TRT, which would be imposed on hotels, motels, and other temporary housing rentals.

The topic arose when Commissioner Jerry Dove reported that area chambers of commerce had run out of brochures that advertise the county. Dove, who said "it doesn't look good" to lack a brochure, asked the other commissioners if they wanted to appropriate funds for the publications.

Burdick said that a room tax – traditionally understood as a funding source paid by tourists to benefit tourism – could help fund the brochures. Otherwise, said Burdick, brochures are not a high priority in the current fiscal famine.

"I can't justify spending money on brochures when services are lacking," said Burdick, noting that money to jail woman defendants and offenders had almost run dry.

Commissioner Gina Mulford suggested that the county chip into the brochure effort, finding other contributors to make up the slack.

"We barely have enough money to take care of our own people," Mulford said. "But we also need to promote the county."

The commissioners agreed to form a committee or committees to study a possible county TRT.

Neighbors do it

Some neighboring counties and cities within Tillamook County already impose a TRT. Most offi-

Continued on Page A11

ink – $5 general admission; $10 ringside, call 842-7878.

easure set

ity of Tillamook and Tillamook on District will vote March 23 on city's fire department to the rural rvices, fire department property, nt and bonded fire debt would 1993, from the city to the rural dis- ax base will be created by subtract-

tation on the Oregon Coast Highway Corridor Study, sponsored by the Intergovernmental Policy Coordination Committee, Jan. 28, 5-8 p.m., Pine Grove Community Club, 225 Laneda, Manzanita. The commitee will meet at 3:30 p.m. The meeting and open house are rescheduled from a previous cancellation because of weather. The Oregon Department of Transportation will have specialists in attendance. The presentation will concern cities from Astoria to Tillamook. For more information, call Jeanne Lawson, 235-5881; or June Carlson, 378-2940.

knowledgeable about federal, state and local taxes, and are certified by IRS. Those with complex returns will be advised to seek professional tax assistance.

Scam alert posted

Jan Margosian of the Oregon Attorney General's Office said a nationwide scam is active in Oregon and residents should be aware of it. People call and offer round trip airfare to Hawaii for $300, using company names such as Travel Word, Inc.; Worldwide Travel; E.C.L.; Air Travel Corporation; and Great American

Honestly, we need to look at cutting and eliminating some services."

To gather input on what should be cut and what left alone, Curelo distributed a survey among staff and interested patrons. So far, no district reduction plans are etched in one, he said.

Along with juggling the budget line items, Curelo has asked the community to contact legislators.

"We need to let them know that we think schools are important."

Tom Wogaman, Tillamook District 9 superintendent, has asked department managers to prepare three budget proposals – one with the same funding level as last year, one with a 10-percent cut, one with a 10-percent increase.

servative fiscal stance because of the uncertain future.

The college operates in part with a $575,000 levy.

In his budget message, TBCC President Jerry Hallberg said the college will face "difficult financial conditions" beginning in the 1993-94 fiscal year unless the state finds replacement revenue.

Under the limit

Measure 5 will not seriously dent the education budgets in the county. Beaver School, Nestucca Union High School, and Cloverdale School have the good fortune to be in districts where tax rates have not approached the property tax cap. The state will not need to replace funds in those districts.

receive $4,250 per elementary student per year and $4,500 per high school student per year.

This, not Measure 5, will hurt Beaver School, Prevenas said. In the past, the district has each year been spending about $6,000 per student. In the best scenario, the district faces a $1,750 per-pupil reduction. The cuts could get worse as school funding sources dry up, said Prevenas.

"The districts getting extra funding from timber won't get that any more."

The Neah-Kah-Nie School District has spent $5,600 per pupil. Part of its deficit includes making up $1,100 per student.

Though Prevenas lauded the state's effort to equalize, he said the new system puts the squeeze on small districts. Whether a district is large or small, each needs basics such as a superintendent, a deputy clerk, a physical education instructor, an art teacher, and a music program, he said.

"These things cost as much if you have 400 students as if you have 4,000."

Small districts lack political clout that could help their situation, said Prevenas.

to $1.51 billion in betwe and 1995.

The Tillamook ESD has to cut, Molendyke said.

However, according September 1992 Associated Industries poll, Oregon vot approve new taxes for sch not for other programs. Alr of 10 people questioned s replacement revenue is nee school property tax relief. H only three of 10 would app the same action for state pro

"It looks as if people hav spot for schools," said Mol "We want to make sure th services for the kids. That it's all about."

Hospital

Continued from Page A1

assumption the samples "are representative of concrete strengths throughout the building." The report concludes that the building could not be upgraded.

The situation with the hospital came to light when TCGH officials informed the county about the engineering study. The county owns the building and leases it to TCGH for per year.

All three county commissioners – Ken Burdick, chair, Gina Mulford and Jerry Dove – expressed concern over the dilemma and emphasized they will be working closely with TCGH on solutions. They said, first, they will get a second opinion on the concrete, not to say that the one by the hospital's engineer is flawed, but to have an independent study contracted by the county.

Next, they will explore ways to maintain the hospital here, possibly with a bond issue on a new building on a new site.

They pointed out that if the present site is used, either with a separate addition or complete new earthquake-proof building, the tsunami danger remains because the site is in a major floodplain. Anthes concurred, noting that if a new structure is built, it should be out of tsunami danger if possible. A tidal wave is expected if an earthquake occurs, according to geologic studies.

The commissioners and Anthes noted that other buildings in the area, built in the same era, probably have the same flaw. "The hospital is not alone with this problem," Anthes said. "But we should be standing if the others crumble in an earthquake, so we need to consider location."

Anthes and the commissioners emphasized that safety is not a concern with the present building, except in the context of an earthquake.

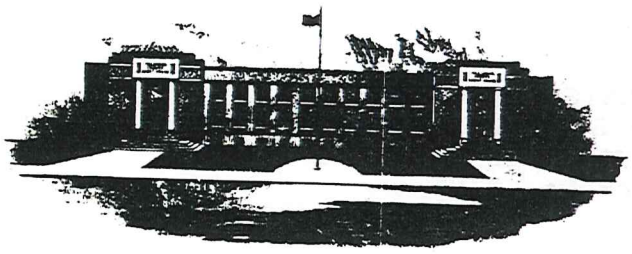
"The typical resident here probably looks at the hospital and says it's a nice building, why build another, but you have to understand our need to expand" because of accreditation requirements, Anthes said.

EXHIBIT C

STRUCTURAL REVIEW AND ANALYSIS

OF THE

TILLAMOOK COUNTY COURTHOUSE & HOSPITAL



Tillamook County
Land of Cheese, Trees and Ocean Breeze

FOR

TILLAMOOK COUNTY BOARD OF COMMISSIONERS
TILLAMOOK COUNTY COURTHOUSE
201 LAUREL AVENUE
TILLAMOOK, OREGON 97141
(503) 842-3403

BY

ARCHITECTURE, P.C.

Randal S. Saunders • Architect/President

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APRIL 1993

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April 7, 1993

Tillamook County Board of Commissioners
Tillamook County Courthouse
201 Laurel Avenue
Tillamook, Oregon 97141

Re: **EVALUATION, ANALYSIS & REPORT ON THE STRUCTURAL INTEGRITY OF THE TILLAMOOK COUNTY HOSPITAL & COURTHOUSE Architect's Project No. 9303**

Dear Commissioners,

Enclosed is our final report regarding analysis, comparison, and recommendations concerning the structural integrity of the Tillamook County Courthouse & County Hospital. We have reviewed both structures with particular emphasis on how to comply with new State of Oregon Building Codes seismic design criteria. Mr. David Morris, P.E. of ENDEX ENGINEERING, INC. and myself have spent time reviewing each building, examining previously prepared material regarding the structural integrity of each structure, and have further explored the ways to structurally up-grade the buildings, and why such improvements need consideration.

This report will explain the activities & efforts we have made in preparing the information, documenting the findings, and outline our recommendations. We believe the enclosed material will provide you with an understanding of how the two buildings are affected by new building code seismic design regulations.

With this report in hand you now have a data base from which to discuss facility needs and to assess a direction to pursue for future Hospital and Courthouse improvements.

I have to admit the recent earthquake here in the Willamette Valley has graphically shown to us what type of damage older buildings may encounter from seismic activity. Mr. Morris and myself have appreciated the opportunity to work with you on this project; we will be making a verbal presentation in which you can further question and discuss this report. If there is any way we may be of further service to the County please feel free to give me a call.

Sincerely,

Randal S. Saunders
Architect/President

David Morris, P.E.
ENDEX ENGINEERING, INC.

RSS/dr

ACKNOWLEDGEMENTS

Client: Tillamook County Board of Commissioners
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(503) 842-3403

Consultant: **RSS ARCHITECTURE P.C.**
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223 N.W. 2nd Street
Corvallis, Oregon 97330
(503) 754-9517
Gary Feuerstein, P.E.

This report was published April 1993.


STOP


EMERGENCY
ENTRANCE

SEQUENCE OF WORK

RSS ARCHITECTURE, P.C. and ENDEX ENGINEERING, INC. have completed the following tasks to prepare this report. Our efforts have been as follows:

On March 8, 1993 Mr. Randal S. Saunders, Architect and Mr. David Morris Professional Engineer met in Tillamook at 8:00 a.m. to review both the County Courthouse and County Hospital. Until noon of the same day both consultants were taken on tours of each building. Mr. Irv West assisted us with touring the County Courthouse and Mr. Tom Stackhouse assisted us with touring the County Hospital. Various notes and photographs were taken at this time to document our observations. One item of particular interest to Mr. Morris was concrete that appeared to be falling/damaged at the County Hospital. After this on-site review the Architect and Engineer returned to their respective offices and continued to research the project. Mr. Saunders contacted the State Building Codes Agency and talked to Mr. Don Lee concerning State concerns with renovation, remodeling or additions at the County Hospital. Mr. Morris spent time researching the concrete damage at the Hospital, reviewing test results from previous concrete testing at the County Courthouse, and he also reviewed a letter from KPFF Engineers concerning the structural integrity of the County Hospital.

With the assistance of Mr. Paul Levesque, Executive Assistant for the County, Mr. Saunders and Mr. Morris were able to obtain further information from the Architect for the County Jail project that occurred in 1983. This material included a variety of test information on the County Courthouse used to determine if the jail addition could safely be built. These test results and the test results from the County Hospital were compared and discussed. Mr. Morris continued to prepare calculations, examine the two buildings in comparison, and consult with Mr. Saunders. The result of these efforts is this report.

BUILDING REVIEW

The County Courthouse was constructed in approximately 1932 and the County Hospital was built in approximately 1948. Both of these buildings continue to serve their intended function. It appears that both structures have been reasonably maintained over their lifetime. During the on-site inspection of both structures, the Architect and Engineer could not locate any signs of structural failure for either building. It is common sense to project that these buildings should continue to serve their function. There are two conditions which could change the structural integrity of either one. These conditions are apparent low concrete strength and seismic (earthquake) loads.

LOW CONCRETE STRENGTH

Concrete tests taken in 1983 at the County Courthouse and more recent, i.e. 1992, tests at the County Hospital have both shown low concrete strengths for each structure. Testing at the Courthouse has been done with both cored concrete cylinders and a Windsor

LOW CONCRETE STRENGTH (CONTINUED)

Probe Test. These two tests have shown different concrete strengths, with the cylinders tests being consistently lower than the results from the probe test. Based on past experience and conversations with a testing laboratory we believe the cored cylinders will provide a more accurate test of the concrete strength. The test cylinders taken at the Courthouse in the early 1980's and at the Hospital within the past year are extremely low for concrete, whether old or new.

We have read an article from the Tillamook newspaper which reported that concrete used at the Hospital was mixed with salt sand instead of washed sand. If this indeed was the case, there can be a serious problem maintaining the strength of the concrete. Unwashed sand may contain chlorides and sulfates which will deteriorate concrete over time. The use of such sand would cause concrete to continue to deteriorate and lose strength indefinitely.

The concrete testing previously done at both buildings has not addressed the chemical composition of the material. Testing for chemical make-up would identify chlorides, sulfates, and other deleterious substances within the concrete. We recommend that chemical testing of the concrete be done before any final decisions are made on how to deal with structural deficiencies at each building. The purpose of the testing would be to identify the chemicals in the concrete and determine whether or not it is continually losing strength.

BUILDING CODE INFORMATION

On January 1, 1993 the State of Oregon Building Codes Agency adopted new uniform building code regulations concerning construction in the State of Oregon. One of those new regulations is that structures west of the crest of the Cascade Mountains shall meet Seismic Zone 3 requirements. While this typically applies to new construction the County Hospital, according to Mr. Don Lee at the State Buildings Code Agency, would be required to upgrade to meet Seismic Zone 3 requirements if a new addition or remodeling occurs. According to the State's interpretation of the new building code regulations, work at the Hospital requires structural up-grading. It is interesting to note that the elevator addition at the County Courthouse, completed last year under the previous Uniform Building Code, did not cause this requirement to go into affect.

When evaluating to see if the structures can be up-graded to meet Seismic Zone 3 requirements there are two significant building components which cannot be improved. These are:

* The concrete strength at both buildings is generally less than 3,000 pounds per square inch. Seismic Zone 3 requirements call for a minimum of 3,000 pounds per square inch concrete strength and all members shall be designed to resist lateral loading. There is no way to physically increase the strength of the existing concrete and in fact

BUILDING CODE INFORMATION (CONTINUED)

strength may be deteriorating due to the chemical composition of the material (unwashed sand).

* The steel reinforcement in the concrete, at both buildings, is not designed or detailed to meet current standards for resisting lateral loads. There is no way to retrofit reinforcing steel incased in concrete to meet this requirement.

The structural Engineer has analyzed the lateral load carrying system of both the Courthouse and Hospital under the influence of required Seismic Zone 3 earthquake forces. The strength of the existing members at each building are inadequate to resist this seismic zone load.

It is obvious by looking at past history that both buildings do have resistance to lateral loading. They both have withstood the 1962 Columbus Day storm, they both have withstood the recent March 25 earthquake, with a magnitude of 5.7 at a distance of approximately 65 miles. While this recent "test" indicates some lateral loading resistance, as of January 1, 1993, the State of Oregon has set Seismic Zone 3 lateral loading requirements as the standard to be met.

EARTHQUAKE LOADS

Seismic zones are a measure of seismic risk and they do not correlate directly to the Richter Scale for measuring the intensity of an earthquake. In 1976 when the Uniform Building Code established Seismic Zones 1-4, the upper boundary for a Zone 3 earthquake was set at a distance of 25 miles from a fault considered capable of generating an earthquake of magnitude 7.0 or greater, and 15 miles from a fault that could generate an earthquake of magnitudes between 6.0 and 7.0. The recent March 25 earthquake, here in the Willamette Valley, was measured at 5.7 on the Richter Scale. A one point increase in the Richter Scale corresponds to a 30 fold increase in energy. A 6.7 magnitude earthquake would have 30 times more energy than the recent 5.7 trembler and a 7.7 earthquake would have 900 times as much energy. The 1989 San Francisco earthquake was measured at 7.0. This is a very approximate guide to gauging seismic loads because there are many factors, including soil conditions, that determine the actual earthquake force. Based on the above you can gain a general idea of the forces which the new Uniform Building Code regulations require be designed for. The recent earthquake near Woodburn (5.7) was very small when compared to the approximate design earthquake size (6.0-7.0) for Seismic Zone 3.

To compare wind loads to earthquake loads we offer the following information: Both the Hospital and County Courthouse are very heavy structures. They are built of concrete & masonry and react very strongly to earthquake loads. This same weight is in turn an advantage when resisting wind loads upon the structure, but by comparison a Seismic Zone 3 earthquake acting on either building

EARTHQUAKE LOADS (CONTINUED)

would have at least 7 times the force of a 90 mile per hour wind. It is easy to conclude that a Seismic Zone 3 earthquake would be a much greater force than either of these structures has ever had to resist.

COUNTY COURTHOUSE & HOSPITAL

Trying to predict that the Hospital will collapse in the event of a Seismic Zone 3 earthquake, while not a certainty, is a very real possibility. The design loads for Seismic Zone 3 tremblers are very powerful. Older reinforced concrete and masonry structures such as the Hospital have had a history of poor performance in severe earthquakes. The structural calculations done for this report show that the lateral load system is not adequate to sustain a building code design earthquake. In addition, the structure is not constructed with the proper detailing to absorb energy without failing. On the other hand the building did pass through a recent earthquake without any discernable damage.

The construction of the Courthouse, similar yet better than that at the hospital, is still not up to current seismic load requirements. The Courthouse has one less floor which is to its advantage. The Courthouse also has wider concrete panels between windows at the exterior walls which helps stiffen the structure. The basic interior concrete column, beam, and slab system is very similar to that at the Hospital. The same deficiencies in detailing of steel reinforcement is present in both structures. The problem of low concrete strength and the potential problem of further deteriorating strength appears at both buildings as well.

CONCLUSIONS & RECOMMENDATIONS

Both buildings do not and can not meet current Zone 3 seismic design requirements. The ability of the structures to resist earthquake loads can be improved, but it is not physically possible to increase the strength of the concrete or revise the existing reinforcement. Any plan to up-grade either structure would be subject to cooperation and negotiation with the State Building Codes Agency. How the new seismic design requirements are interpreted, as we have witnessed with the recent earthquake here in Woodburn, is anyone's guess.

Should retrofitting of either structure be deemed appropriate the first order of business would be to verify and confirm that the strength of the concrete has stabilized. Next would be to design for utilization of existing concrete floors to act as "diaphragms" to carry seismic loads and other lateral loads to the foundation. This would involve the placement of concrete shear walls or steel braced frames at the existing exterior walls. Existing clay tile and plaster walls would have to be removed where new shear walls within either building would be constructed. Any new shear walls or frames would have to start at the foundation and run upward to the roof deck of the building. This would also involve new

CONCLUSIONS & RECOMMENDATIONS (CONTINUED)

footings at the basement level of either building. Because of the limited ability of the existing floors to act as a diaphragm, shear walls would have to be closely spaced throughout either building; 30-40 feet apart. In addition, a new anchoring system would have to be installed to connect the floor diaphragm to the new shear walls. Such renovation requires extensive demolition, remodeling, and renovation of existing space, existing finishes, and existing mechanical & electrical systems. We estimate that the cost for such a structural renovation would be approximately $50.00 per square foot at the County Courthouse and approximately $80-$100.00 per square foot at the County Hospital.

It is important that the County recognize the following issues:

* Both the Courthouse and the Hospital <u>are</u> susceptible to severe damage from a major earthquake.

* Whether the Courthouse or the Hospital will fall down in a major (code design) earthquake is anyone's guess. It is better to err on the side of safety and assume this would happen.

* The general structural condition of each building, based on our visual observations, is very good for the age of each structure.

* We believe the condition and structural stability of the County Courthouse, because of its smaller size and configuration, is better than the County Hospital.

* The deteriorating concrete and potential loss of strength in the concrete at the County Hospital is of major concern to us. We again recommend that chemical testing be done to determine the chemical composition of that concrete. Simultaneously it would be advisable to test the concrete at the County Courthouse as well. We did not observe any visible deteriorating concrete at the County Courthouse.

* Further renovation, remodeling, or expansion of the County Hospital is subject to the State Building Codes Agency approval. It appears they would not approve any improvements without up-grading for Seismic Zone 3 earthquake design loads.

* The structural integrity of each structure is no different today than it was one year ago, five years ago, or 50 years ago unless the concrete strength is deteriorating. Each building was susceptible to earthquake damage 10 years ago, 50 years ago, and is just as susceptible today. The thing that has changed is the regulations & requirements now in force by the State Building Codes Agency.

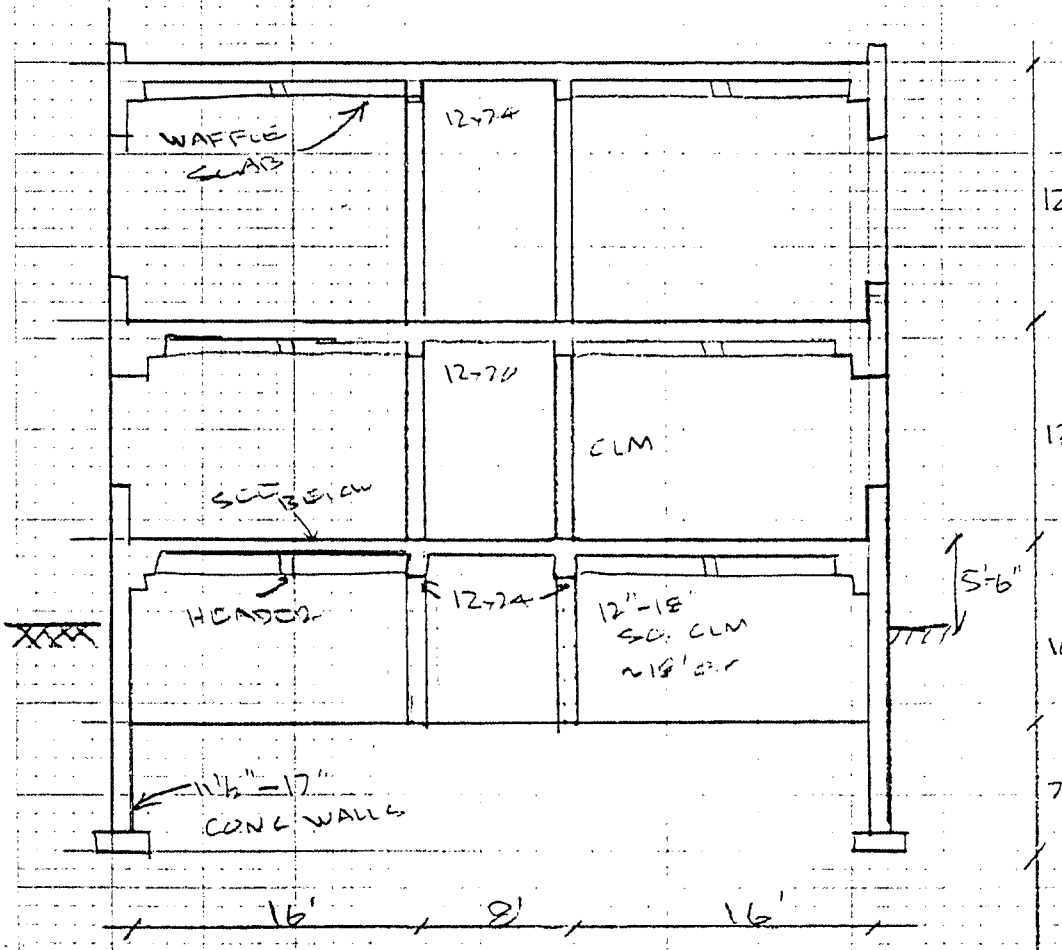
* If the County is going to retrofit each structure for earthquake loading we would also advise you to retrofit for protection against terrorist attack, nuclear explosion, and volcanic eruption.

COURTHOUSE & HOSPITAL
DESIGN CALCULATIONS

TILLAMOOK COURTHOUSE

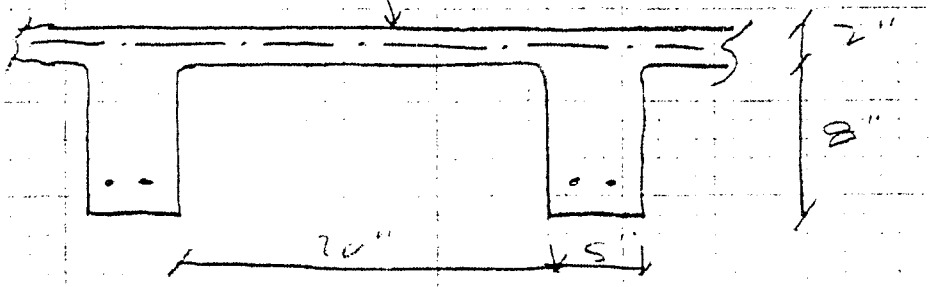
TYPICAL CONC.

BASEMENT PLUS TWO FLOORS



TYPICAL WAFFLE SLAB

2" DECK WITH WIRE MESH



CH-1

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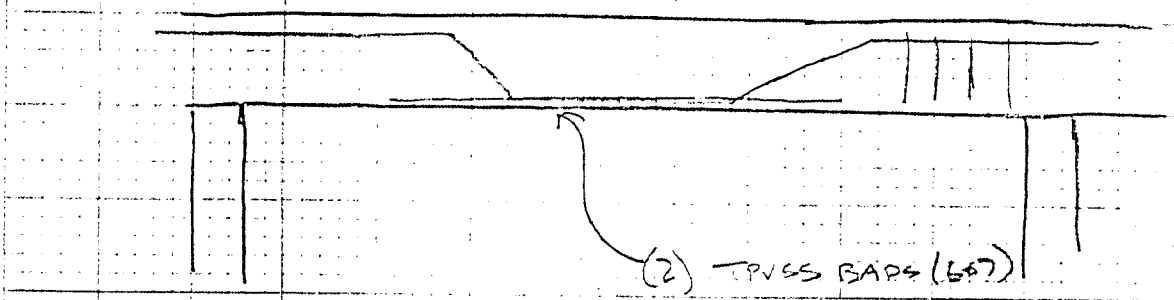
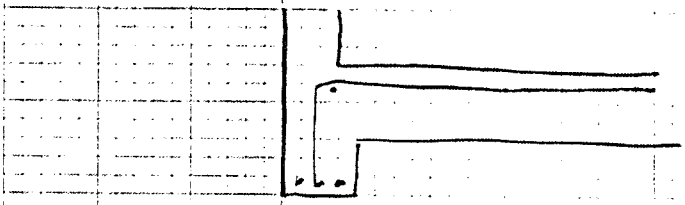
TYPICAL BEAMS



(2) TRUSS BARS (6#)
23 STRAIGHT BARS



PERIMETER MEMBER
W/ REINFORCEMENT

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Courthouse

Typical Column 12, 14, 16, 18 square

12	14	16	18
8-#3	8-#3	8-#5	8-#6
#4	#4	#5	#5
		8-#6	8-#5
		#5	
		9-#6	9-#6
		#5	

Size	Rebar	ρ
12-12	w/ 8-#3	.0111
14-14	w/ 8-#3	.0082
16-16	8-#5	.0064
	8-#6	.0138
	9-#6	.0155
18-18	8-#6	.0109
	8-#5	.0074
	9-#6	.0123

$\rho_{min} = .01$

$\rho_{max} = .06$

Minimum Reinforcement not met for

14-14 w/ 8-#3

18-18 w/ 8-#6

16-16 w/ 8-#5

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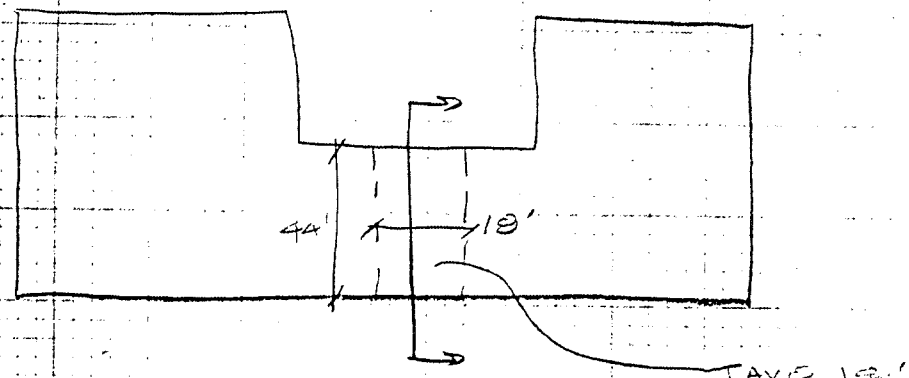
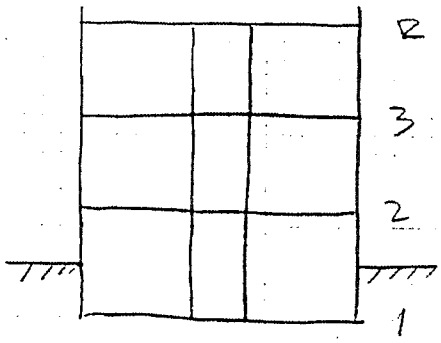
Court House

Lateral Analysis



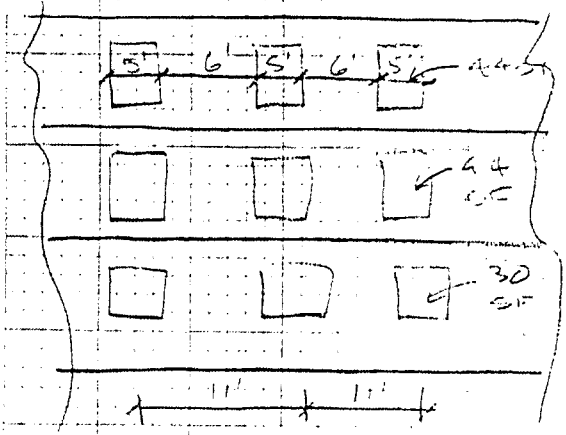


Dead Loads

Roof / Floor

18 × 44 = 792 s.f.

Exterior Walls



Basement

Avg 16" concrete 200 PSF

First

6½" conc (81 psf)
Built up roofs = windows
4" brick (40 psf)

121 psf

Second same

121 psf

Parapet from windows up

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CONC $10 \times 3^{2} = 3^{2}$

$1^{1} \times 0^{2} = 0^{2}$

4^{1} CF/LF × 150 = 615 PLF

BRICK $3^{5} \times 0^{33} = 1^{2}$

$2^{33} \times 1^{2} = 2^{2}$

$10 \times 1^{2} = 1$

4^{2} CF/LF × 110 = 510 PLF

1132 PLF

÷ 6.5 LF HEIGHT

174 PSF

AVE

WALL HEIGHTS

B	10'		200 PSF
1	12'		121 PSF
2	10'	TO WINDOWS	121 PSF
3	6.5	WINDOW TO PARAPET	174 PSF

INTERIOR WALLS

TYPICAL

3 - 16 LF PARTY WALLS

2 - 18 LF CORRIDOR WALLS

84 LF

BASEMENT	84	10	= 840
FIRST	84	12	= 1008
SECOND	84	12	= 1008

4" CONC TILE WITH LATH + PLASTER BOTH SIDES

18 PSF

5

22 PSF

CH-5

Floors

2" Floor	.17 x 150 =	26 psf
Add 1" for Topping	.08 x 150 =	12 psf
30% at 8" Additional	.30 x .67 x 150 =	30 psf
		68 psf
Carpet/Flooring		3 psf
Ceiling		5 psf
		76 psf

Use 80 psf for Flooring

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TILLAMOOK COURTHOUSE — RANDY SAUNDERS ARCHITECTS — 03/23/93 05:03 PM

LATERAL LOAD ANALYSIS — ZONE - TYPICAL ZONE — LOAD DIRECTION - PERPENDICULAR

UNIT WEIGHTS (lbs/sf)	Floor	Int Walls	Ext Walls	Roof
	80	30	175	80

Structural Level	Floor sf	Floor kips	Int. Wall sf	Int. Wall kips	Ext. Wall sf	Ext. Wall kips	Roof sf	Roof kips	Total kips
Basement		0.00	840	25.20	360	63.00	0	0.00	88.20
First	792	63.36	1008	30.24	432	75.60	0	0.00	169.20
Second	792	63.36	1008	30.24	432	75.60	0	0.00	169.20
Roof	0	0.00	0	0.00	234	40.95	792	63.36	104.31
Total	1584	126.72	2856	85.68	1458	255.15	792	63.36	530.91

TOTAL ZONE SEISMIC FORCE
V = ZICW/Rw 87,600 lbs.

Zone	1	2A	2B	3	4
Z	.075	.15	.20	.30	.40

Import	Essential	>300	Other
I	1.5	1.25	1

Assigned Values: Z = 0.3, I = 1, Rw = 5.00, Ct = 0.02 OTHER, S = 1.5, T = Ct*(hn^.75) = 0.353, C (<= 2.75) = 2.750

SEISMIC FORCE AND DEAD LOAD ASSIGNMENT

Structural Level	hx (ft)	Floor	Roof	Wall Above	Wall Below	Total (kips)	Wxhx (kips-ft)	Fx (kips)	Cumulative (kips)
Basement	0	0	0.00	44.10	0	44.10	0.00	0.00	87.60
First	10	63.36	0.00	52.92	44.10	160.38	1603.80	10.56	87.60
Second	32	63.36	0.00	52.92	52.92	169.20	5414.40	35.64	77.04
Roof	46	0.00	63.36	20.48	52.92	136.76	6290.73	41.40	41.40
Total		126.72	63.36	170.42	149.94	510.44	13308.93	87.60	

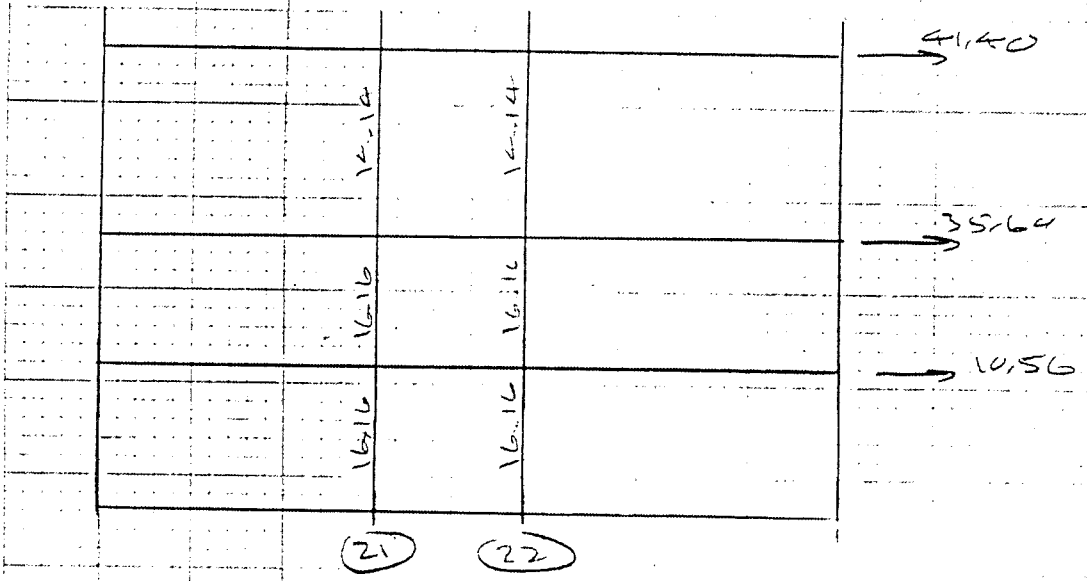
WIND LOAD - LATERAL FORCE

Ce = 0.8 (0.8 - exposure B & 20-40' height 1.3 - exp. C) UBC Tbl 23G
Cq = 1.3 Press. Coeff. (1.3 @< 40' height) UBC Tbl 23H
qs = 21 13 psf @ 70 mph, 17 psf @ 80 mph, 21 psf @ 90 mph, 26 psf @ 100 mph UBC Tbl 23F
I = 1 Importance 1.3 Essential, 1.25 > 300, 1.0 Other UBC 2311h
P = Design Wind = Ce*Cq*qs*I = 21.84 psf

Structural Level	Ht ft	Exposure ft	Projected Area sf	Wind load (kips)	Cumulative (kips)	DESIGN LOAD Type	(kips)
Basement	0	18	0	0.00	12.78	SEISMIC	87.60
First	11	18	198	4.32	12.78	SEISMIC	87.60
Second	12	18	216	4.72	8.45	SEISMIC	77.04
Roof	9.5	18	171	3.73	3.73	SEISMIC	41.40

INTERIOR

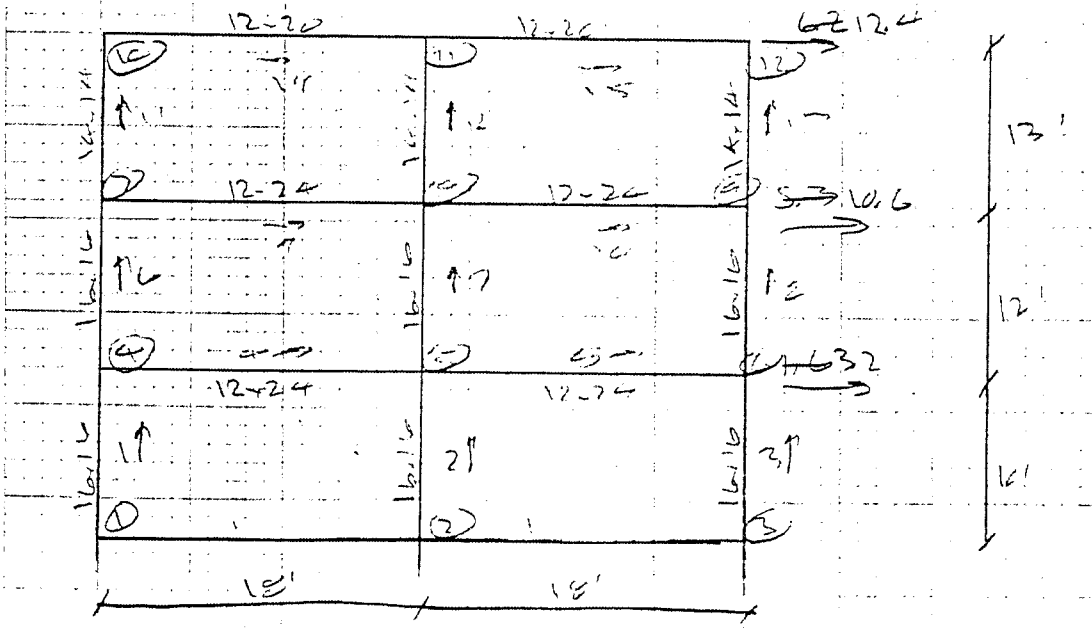
FRAME ANALYSIS – INTERIOR



35 15 15 35

PARALLEL TO CORRIDOR

ABOVE LOAD = .15 × 2



$E = 57\sqrt{3000} = 3{,}120{,}000$ psi

ANALYSIS BY COMPUTER

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RISA-2D (R) Version 3.02

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TILLAMOOK COURTHOUSE
TYPICAL PARALLEL TO CORRIDOR FRAME

Units Option : US Standard

AISC Code Checks : No

Shear Deformation: No

P-Delta Effects : No

Redesign : No

Edge Forces : No

A.S.I.F. : 1.333

Node No	X-Coord (ft)	Y-Coord (ft)	Boundary Conditions X-dof (in,K/in)	Y-dof (in,K/in)	Rotation (r,K-ft/r)	Temp. (F)
1	0.00	0.00	R	R	R	0.00
2	18.00	0.00	R	R	R	0.00
3	36.00	0.00	R	R	R	0.00
4	0.00	10.00				0.00
5	18.00	10.00				0.00
6	36.00	10.00				0.00
7	0.00	22.00				0.00
8	18.00	22.00				0.00
9	36.00	22.00				0.00
10	0.00	35.00				0.00
11	18.00	35.00				0.00
12	36.00	35.00				0.00

Material Label	Elastic Modulus (Ksi)	Poisson's Ratio	Thermal Coefficient (F)	Weight Density (K/ft3)	Yield Stress (Fy) (Ksi)
CONC	2549.00	0.20000	0.55000	0.150	1.500

Section Label	Database Shape	Matl. Set	Area (in^2)	Moment of Inertia (in^4)	As Coef	y/y
BEAM 1		CONC	288.00	13824.000	1.00	
BEAM 2		CONC	288.00	13824.000	1.00	
BEAM 3		CONC	240.00	6667.000	1.00	
COLUMN 1		CONC	256.00	5461.000	1.00	
COLUMN 2		CONC	256.00	5461.000	1.00	
COLUMN 3		CONC	196.00	3201.000	1.00	

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TILLAMOOK COURTHOUSE
TYPICAL PARALLEL TO CORRIDOR FRAME

	I Node	J Node	Section	I Releases x	y	z	J Releases x	y	z	Sec	Sway	End Offsets I (in)	J (in)	Length (ft)
1	1	4	COLUMN 1								Y			10.00
2	2	5	COLUMN 1								Y			10.00
3	3	6	COLUMN 1								Y			10.00
4	4	5	BEAM 1											18.00
5	5	6	BEAM 1											18.00
6	4	7	COLUMN 2								Y			12.00
7	5	8	COLUMN 2								Y			12.00
8	6	9	COLUMN 2								Y			12.00
9	7	8	BEAM 2											18.00
10	8	9	BEAM 2											18.00
11	7	10	COLUMN 3								Y			13.00
12	8	11	COLUMN 3								Y			13.00
13	9	12	COLUMN 3								Y			13.00
14	10	11	BEAM 3											18.00
15	11	12	BEAM 3											18.00

BLC No.	Basic Load Case Description	Load Totals Nodal	Point	Dist.
1	LIVE			6
2	DEAD			6
3	SEISMIC	3		

Member Distributed Loads,BLC 1: LIVE

Memb No	I Node	J Node	Dir	Start Magnitude (K/ft,F)	End Magnitude (K/ft,F)	Start Location (ft)	End Location (ft)
4	4	5	Y	0.600	0.600	0.000	18.000
5	5	6	Y	0.600	0.600	0.000	18.000
9	7	8	Y	0.600	0.600	0.000	18.000
10	8	9	Y	0.600	0.600	0.000	18.000
14	10	11	Y	0.300	0.300	0.000	18.000
15	11	12	Y	0.300	0.300	0.000	18.000

Member Distributed Loads,BLC 2: DEAD

Memb No	I Node	J Node	Dir	Start Magnitude (K/ft,F)	End Magnitude (K/ft,F)	Start Location (ft)	End Location (ft)
4	4	5	Y	0.960	0.960	0.000	18.000
5	5	6	Y	0.960	0.960	0.000	18.000
9	7	8	Y	0.960	0.960	0.000	18.000
10	8	9	Y	0.960	0.960	0.000	18.000

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TILLAMOOK COURTHOUSE
TYPICAL PARALLEL TO CORRIDOR FRAME

Memb No	I Node	J Node	Dir	Start Magnitude (K/ft,F)	End Magnitude (K/ft,F)	Start Location (ft)	End Location (ft)
14	10 -	11	Y	0.960	0.960	0.000	18.000
15	11 -	12	Y	0.960	0.960	0.000	18.000

Nodal Loads, BLC 3: SEISMIC

Node Number	Global X (K)	Global Y (K)	Moment (K-ft)
11	12.400	0.000	0.000
8	10.600	0.000	0.000
5	3.200	0.000	0.000

Load No.	Combination Description	Self Wt Dir	Fac	BLC	Fac	BLC	Fac	BLC	Fac	BLC	Fac	BLC	Fac	DYNA	W S	E V
1	DL+LL	Y	-1	1	-1.4	2	-1.4									
2	DL+LL+SEIS	Y	-1	1	-1.4	2	-1.4	3	1.4							
3	DL+SEIS	Y	-1	2	.9	3	1.4									

Load Combination is 1 : DL+LL
Member End Forces

No	Nodes I	J	I-End Axial (K)	I-End Shear (K)	I-End Moment (K-ft)	J-End Axial (K)	J-End Shear (K)	J-End Moment (K-ft)
1	1-	4	66.11	-2.98	-9.99	-63.44	2.98	-19.80
2	2-	5	144.70	0.00	0.00	-142.03	-0.00	0.00
3	3-	6	66.11	2.98	9.99	-63.44	-2.98	19.80
4	4-	5	-1.27	20.66	44.93	1.27	24.05	-75.41
5	5-	6	-1.27	24.05	75.41	1.27	20.66	-44.93
6	4-	7	42.78	-4.25	-25.13	-39.58	4.25	-25.91
7	5-	8	93.93	-0.00	-0.00	-90.73	0.00	0.00
8	6-	9	42.78	4.25	25.13	-39.58	-4.25	25.91
9	7-	8	0.59	20.92	46.55	-0.59	23.80	-72.46
10	8-	9	0.59	23.80	72.46	-0.59	20.92	-46.55
11	7-	10	18.66	-3.66	-20.65	-16.01	3.66	-26.94
12	8-	11	43.14	-0.00	-0.00	-40.49	0.00	-0.00
13	9-	12	18.66	3.66	20.65	-16.01	-3.66	26.94
14	10-	11	3.66	16.01	26.94	-3.66	20.24	-65.06
15	11-	12	3.66	20.24	65.06	-3.66	16.01	-26.94

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TILLAMOOK COURTHOUSE
TYPICAL PARALLEL TO CORRIDOR FRAME

Load Combination is 2 : DL+LL+SEIS
Member End Forces

No	Nodes I	Nodes J	I-End Axial (K)	I-End Shear (K)	I-End Moment (K-ft)	J-End Axial (K)	J-End Shear (K)	J-End Moment (K-ft)
1	1	4	44.96	7.95	58.11	-42.29	-7.95	21.38
2	2	5	144.70	14.82	81.18	-142.03	-14.82	67.06
3	3	6	87.26	13.91	78.09	-84.59	-13.91	60.99
4	4	5	-3.26	11.21	-49.16	3.26	33.50	-151.50
5	5	6	0.71	14.60	-0.68	-0.71	30.12	-139.01
6	4	7	31.08	4.69	27.77	-27.88	-4.69	28.50
7	5	8	93.93	14.32	85.12	-90.73	-14.32	86.66
8	6	9	54.48	13.19	78.03	-51.28	-13.19	80.31
9	7	8	-3.43	12.43	-38.88	3.43	32.29	-139.85
10	8	9	4.61	15.31	5.08	-4.61	29.41	-131.99
11	7	10	15.45	1.26	10.38	-12.80	-1.26	6.00
12	8	11	43.14	7.52	48.10	-40.49	-7.52	49.63
13	9	12	21.87	8.58	51.67	-19.22	-8.58	59.89
14	10	11	-1.26	12.80	-6.00	1.26	23.45	-89.87
15	11	12	8.58	17.03	40.24	-8.58	19.22	-59.89

Load Combination is 3 : DL+SEIS
Member End Forces

No	Nodes I	Nodes J	I-End Axial (K)	I-End Shear (K)	I-End Moment (K-ft)	J-End Axial (K)	J-End Shear (K)	J-End Moment (K-ft)
1	1	4	-26.98	11.61	70.40	29.65	-11.61	45.74
2	2	5	-25.49	14.82	81.18	28.15	-14.82	67.06
3	3	6	15.32	10.24	65.80	-12.66	-10.24	36.63
4	4	5	-1.72	-14.15	-104.32	1.72	4.00	-59.05
5	5	6	2.25	-14.91	-93.13	-2.25	4.76	-83.85
6	4	7	-15.50	9.89	58.58	18.70	-9.89	60.13
7	5	8	-17.25	14.32	85.12	20.45	-14.32	86.66
8	6	9	7.90	7.99	47.22	-4.70	-7.99	48.68
9	7	8	-3.95	-13.30	-96.63	3.95	3.15	-51.38
10	8	9	4.10	-13.83	-83.38	-4.10	3.68	-74.24
11	7	10	-5.40	5.95	36.49	8.05	-5.95	40.81
12	8	11	-9.76	7.52	48.10	12.41	-7.52	49.63
13	9	12	1.02	3.90	25.56	1.64	-3.90	25.09
14	10	11	-5.95	-8.05	-40.81	5.95	-3.00	-4.69
15	11	12	3.90	-9.42	-44.94	-3.90	-1.64	-25.09

CH-12

INTERIOR

4'-0" O.C.

GRADE 36 STEEL
1500 PSI CONC

COLUMN MOMENT CAPACITIES

12x12	w/ 8x1/2	16.7	FT-K
14x14	w/ 8x1/2	20.5	FT-K
14x14	w/ 8x5/8	27.7	FT-K ← LEVEL 3
14x16	w/ 8x5/8	33.1	FT-K
16x16	w/ 8x3/4	45.7	FT-K ← LEVEL 1&2
16x18	w/ 8x5/8	38.3	FT-K
18x18	w/ 8x3/4	53.3	FT-K

BEAM MOMENT CAPACITIES (WEAK DIRECTION)

12x24	w/ 3x3/4	ρ=.050	72.8 FT-K
12x20	w/ 3x3/4		58.6 FT-K

DL+LL

COLUMN (Mx Loads)

		1	2	3
	AXIAL	144.7	93.9	43.1
	BENDING	19.8	25.9	26.9
BEAM		1	2	3
	BENDING	75.4	72.5	65.0
	SHEAR	24.0	23.8	20.2

DL+LL+SEIS

		1	2	3
CLM	AXIAL	28.2	20.4	12.4
	BENDING	81.1	86.6	44.6
BM	BENDING	104	97	40.5
	SHEAR	14.9	13.8	9.4

CH 13

BASED ON 1500 PSI CONCRETE

BEAMS ARE OVERSTRESSED 30-40% IN MOMENT

COLUMN IS OVERSTRESSED 110-140% IN MOMENT.

MOMENT STRENGTH OF BEAMS IS 1.6-02 X THAT OF COLUMNS

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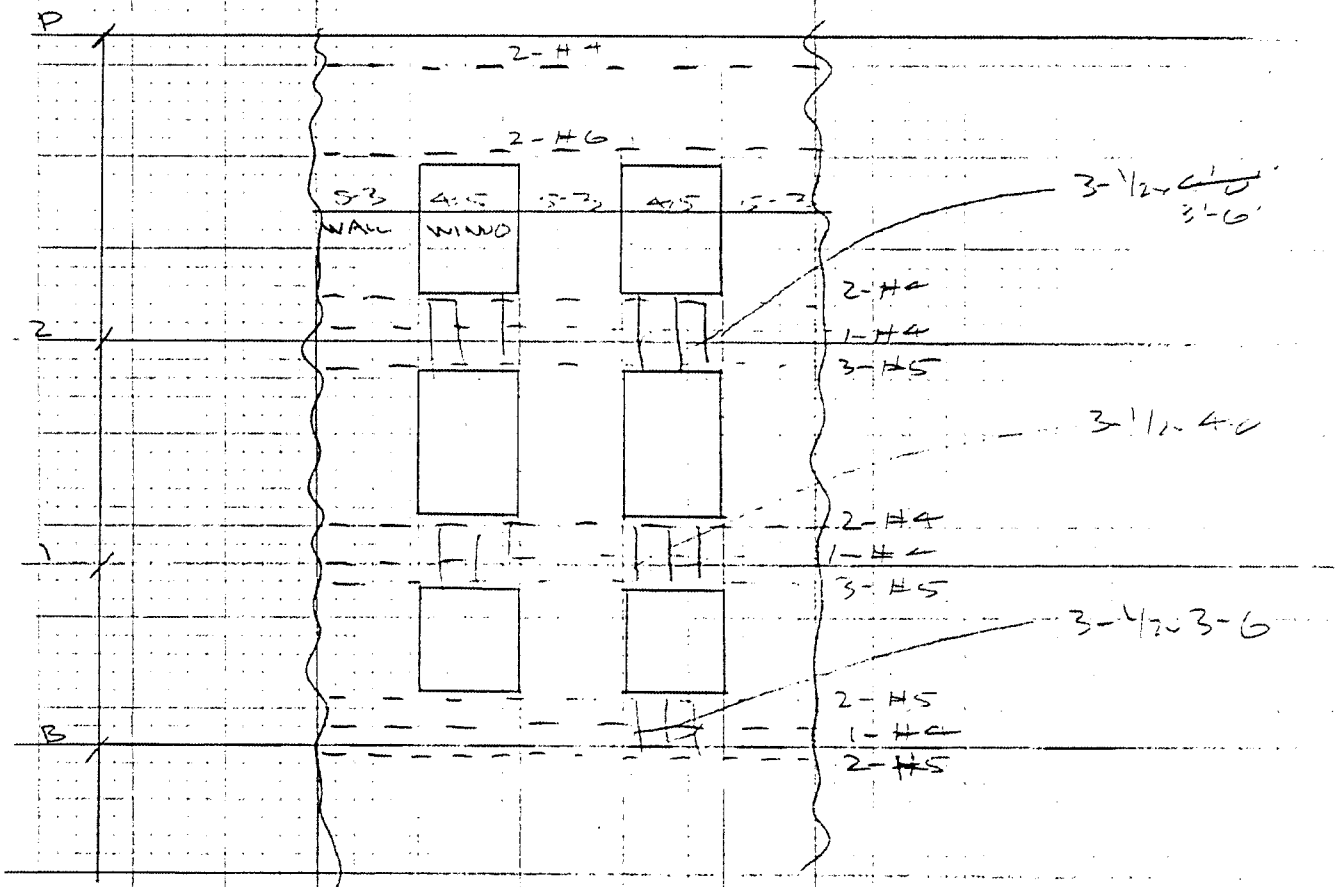
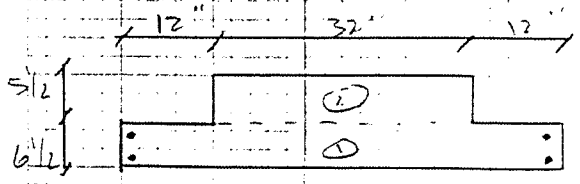
LATERAL CAPACITY OF TYPICAL EXTERIOR COLUMN & SPANDREL ARRANGEMENT

CHECK WEST ELEV



TYPICAL COLUMN



$$I_1 = \frac{6.5(56)^3}{12} = 95,125$$

$$I_2 = \frac{5.5(32)^3}{12} = 15,019$$

$$I_{gross} = 110,144$$

$$A = 540 \text{ in}^2$$

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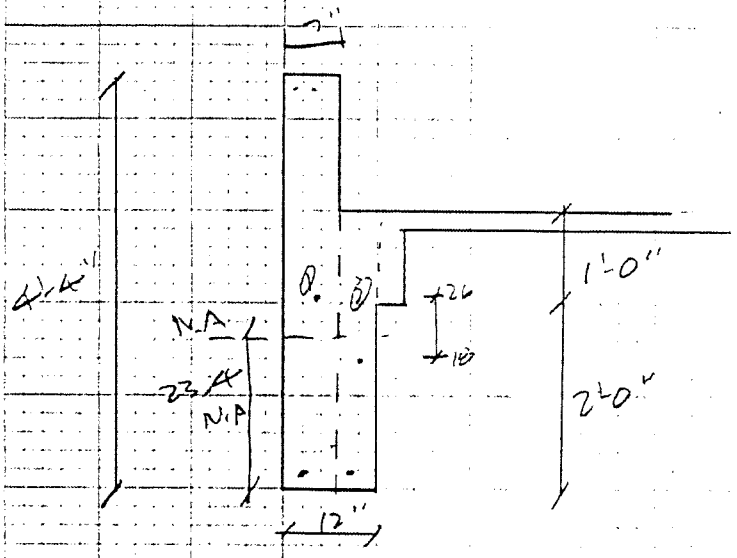
FRAME ANALYSIS - CYCLOID

ROOF SPANDREL

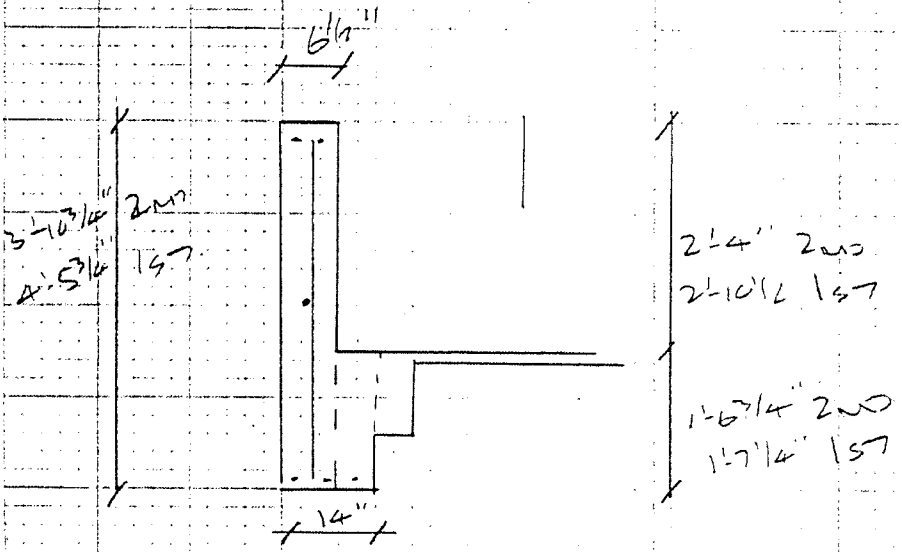


$I_o = \frac{7(52)^3}{12} + 364(16)^2 = 84,481$

$I_{2T} = \frac{5(36)^3}{12} + (5)(36)(8.2)^2 = 24,688$

$109,170$

FLOOR SPANDREL



2ND

$A_1 = 304 \text{ in}^2$ $x = 23.4$ $A_2 = 141 \text{ in}^2$ $x = 9.4$

$A = 445 \text{ in}^2$ $\bar{x} = 18.96$ in

$I_{o1} = \frac{6.5(46.75)^3}{12} + (304)(4.4)^2$ $I_{o2} = \frac{(7.5)(18.75)^3}{12} + (141)(9.56)^2$

$I_1 = 61,230 \text{ in}^4$ $I_2 = 17,006 \text{ in}^4$ $I_T = 78,236 \text{ in}^4$

1ST

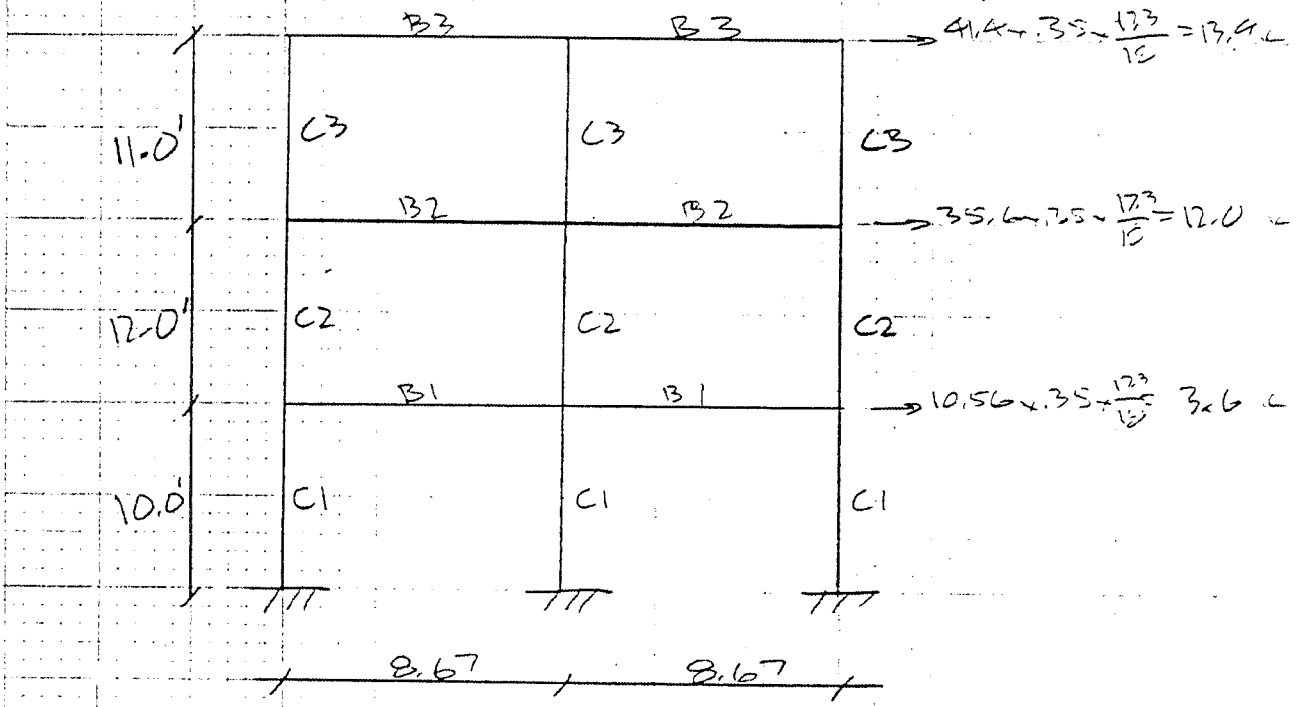
$A_1 = 349 \text{ in}^2$ $x_1 = 26.88$ in $I_{o1} = 84,113$ $Ad^2 = 8865$ $I_1 = 92,975$

$A_2 = 144 \text{ in}^2$ $x_2 = 9.63$ in $I_{o2} = 4458$ $Ad^2 = 21,462$ $I_2 = 25926$

$A_{TOT} = 493$ $\bar{x} = 21.84$ $I_T = 118,901$

CH-16

EXTERIOR



C1, C2, C3

$I = 110,144$ $A = 540 in^2$

B1 $I = 118,904$ $A = 493 in^2$

B2 $I = 78,756$ $A = 445 in^2$

B3 $I = 109,170$ $A = 544 in^2$

$E = 57\sqrt{2000} = 2,549,000$

FLOOR/ROOF LOADS

		LL	DL
ROOF	$8[25+80] =$	[200	$- 640]$
FLOOR	$8[50+80] =$	[400	$+ 640]$

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TILLAMOOK COURTHOUSE
EXTERIOR WALL FRAME

Units Option : US Standard

AISC Code Checks : No

Shear Deformation: No

P-Delta Effects : No

Redesign : No

Edge Forces : No

A.S.I.F. : 1.333

Node No	X-Coord (ft)	Y-Coord (ft)	Boundary Conditions X-dof (in,K/in)	Y-dof (in,K/in)	Rotation (r,K-ft/r)	Temp. (F)
1	0.00	0.00	R	R	R	0.00
2	8.67	0.00	R	R	R	0.00
3	17.33	0.00	R	R	R	0.00
4	0.00	10.00				0.00
5	8.67	10.00				0.00
6	17.33	10.00				0.00
7	0.00	22.00				0.00
8	8.67	22.00				0.00
9	17.33	22.00				0.00
10	0.00	33.00				0.00
11	8.67	33.00				0.00
12	17.33	33.00				0.00

Material Label	Elastic Modulus (Ksi)	Poisson's Ratio	Thermal Coefficient (F)	Weight Density (K/ft3)	Yield Stress (Fy) (Ksi)
CONC	2549.00	0.20000	0.55000	0.150	1.500

Section Label	Database Shape	Matl. Set	Area (in^2)	Moment of Inertia (in^4)	As Coef	y/y
BEAM 1		CONC	493.00	118904.000	1.00	
BEAM 2		CONC	445.00	78256.000	1.00	
BEAM 3		CONC	544.00	109170.000	1.00	
COLUMN 1		CONC	540.00	110144.000	1.00	
COLUMN 2		CONC	540.00	110144.000	1.00	
COLUMN 3		CONC	540.00	110144.000	1.00	

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TILLAMOOK COURTHOUSE
EXTERIOR WALL FRAME

Memb No	I Node	J Node	Section	I Releases x	y	z	J Releases x	y	z	Sec	End Offsets Sway	I (in)	J (in)	Length (ft)
1	1	4	COLUMN 1								Y			10.00
2	2	5	COLUMN 1								Y			10.00
3	3	6	COLUMN 1								Y			10.00
4	4	5	BEAM 1											8.67
5	5	6	BEAM 1											8.66
6	4	7	COLUMN 2								Y			12.00
7	5	8	COLUMN 2								Y			12.00
8	6	9	COLUMN 2								Y			12.00
9	7	8	BEAM 2											8.67
10	8	9	BEAM 2											8.66
11	7	10	COLUMN 3								Y			11.00
12	8	11	COLUMN 3								Y			11.00
13	9	12	COLUMN 3								Y			11.00
14	10	11	BEAM 3											8.67
15	11	12	BEAM 3											8.66

BLC No.	Basic Load Case Description	Load Totals Nodal	Point	Dist.
1	LIVE			6
2	DEAD			6
3	SEISMIC	3		

Member Distributed Loads,BLC 1: LIVE

Memb No	I Node	J Node	Dir	Start Magnitude (K/ft,F)	End Magnitude (K/ft,F)	Start Location (ft)	End Location (ft)
4	4	5	Y	0.400	0.400	0.000	8.670
5	5	6	Y	0.400	0.400	0.000	8.659
9	7	8	Y	0.400	0.400	0.000	8.670
10	8	9	Y	0.400	0.400	0.000	8.659
14	10	11	Y	0.200	0.200	0.000	8.670
15	11	12	Y	0.200	0.200	0.000	8.659

Member Distributed Loads,BLC 2: DEAD

Memb No	I Node	J Node	Dir	Start Magnitude (K/ft,F)	End Magnitude (K/ft,F)	Start Location (ft)	End Location (ft)
4	4	5	Y	0.640	0.640	0.000	8.670
5	5	6	Y	0.640	0.640	0.000	8.659
9	7	8	Y	0.640	0.640	0.000	8.670
10	8	9	Y	0.640	0.640	0.000	8.659

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TILLAMOOK COURTHOUSE
EXTERIOR WALL FRAME

Memb No	I Node	J Node	Dir	Start Magnitude (K/ft,F)	End Magnitude (K/ft,F)	Start Location (ft)	End Location (ft)
14	10	11	Y	0.640	0.640	0.000	8.670
15	11	12	Y	0.640	0.640	0.000	8.659

Nodal Loads, BLC 3: SEISMIC

Node Number	Global X (K)	Global Y (K)	Moment (K-ft)
11	13.900	0.000	0.000
8	12.000	0.000	0.000
5	3.600	0.000	0.000

Load No.	Combination Description	Self Wt Dir	Fac	BLC Fac	BLC Fac	BLC Fac	BLC Fac	BLC Fac	DYNA	W S	E V
1	DL+LL	Y	-1	1 -1.4	2 -1.4						
2	DL+LL+SEIS	Y	-1	1 -1.4	2 -1.4	3 1.4					
3	DL+SEIS	Y	-1	2 -0.9	3 1.4						

Load Combination is 1 : DL+LL
Member End Forces

No	Nodes I	J	I-End Axial (K)	I-End Shear (K)	I-End Moment (K-ft)	J-End Axial (K)	J-End Shear (K)	J-End Moment (K-ft)
1	1	4	47.91	-1.07	-3.66	-42.28	1.07	-7.03
2	2	5	57.49	0.00	0.00	-51.87	-0.00	0.01
3	3	6	47.89	1.07	3.65	-42.26	-1.07	7.03
4	4	5	-0.36	9.79	15.66	0.36	7.29	-4.81
5	5	6	-0.36	7.27	4.78	0.36	9.78	-15.64
6	4	7	32.49	-1.43	-8.63	-25.74	1.43	-8.52
7	5	8	37.31	0.00	0.01	-30.56	-0.00	0.01
8	6	9	32.48	1.43	8.62	-25.73	-1.43	8.51
9	7	8	-0.83	10.26	19.09	0.83	6.39	-2.31
10	8	9	-0.83	6.37	2.28	0.83	10.25	-19.06
11	7	10	15.49	-2.26	-10.57	-9.30	2.26	-14.28
12	8	11	17.80	0.00	0.01	-11.61	-0.00	0.02
13	9	12	15.48	2.26	10.55	-9.29	-2.26	14.27
14	10	11	2.26	9.30	14.28	-2.26	5.81	0.83
15	11	12	2.26	5.80	-0.85	-2.26	9.29	-14.27

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TILLAMOOK COURTHOUSE
EXTERIOR WALL FRAME

Load Combination is 2 : DL+LL+SEIS
Member End Forces

No	Nodes I	J	I-End Axial (K)	I-End Shear (K)	I-End Moment (K-ft)	J-End Axial (K)	J-End Shear (K)	J-End Moment (K-ft)
1	1	4	2.22	11.12	81.01	3.40	-11.12	30.22
2	2	5	57.47	16.92	100.96	-51.85	-16.92	68.21
3	3	6	93.59	13.26	88.33	-87.97	-13.26	44.27
4	4	5	-2.36	-11.90	-87.49	2.36	28.97	-89.69
5	5	6	1.64	-14.43	-80.06	-1.64	31.49	-118.78
6	4	7	8.50	8.76	57.27	-1.75	-8.76	47.90
7	5	8	37.31	15.88	101.54	-30.56	-15.88	88.97
8	6	9	56.48	11.62	74.51	-49.73	-11.62	64.92
9	7	8	-5.94	-6.19	-56.68	5.94	22.83	-69.10
10	8	9	4.29	-10.08	-64.47	-4.29	26.70	-94.80
11	7	10	7.93	2.82	8.78	-1.75	-2.82	22.24
12	8	11	17.81	9.31	44.59	-11.62	-9.31	57.83
13	9	12	23.02	7.33	29.88	-16.84	-7.33	50.74
14	10	11	-2.82	1.75	-22.24	2.82	13.36	-28.12
15	11	12	7.33	-1.74	-29.71	-7.33	16.84	-50.74

Load Combination is 3 : DL+SEIS
Member End Forces

No	Nodes I	J	I-End Axial (K)	I-End Shear (K)	I-End Moment (K-ft)	J-End Axial (K)	J-End Shear (K)	J-End Moment (K-ft)
1	1	4	-10.03	11.59	82.62	15.66	-11.59	33.31
2	2	5	41.08	16.92	100.96	-35.46	-16.92	68.21
3	3	6	81.34	12.79	86.72	-75.72	-12.79	41.18
4	4	5	-2.20	-16.24	-94.37	2.20	25.69	-87.39
5	5	6	1.80	-17.71	-82.35	-1.80	27.15	-111.91
6	4	7	0.58	9.40	61.06	6.17	-9.40	51.72
7	5	8	27.48	15.88	101.54	-20.73	-15.88	88.97
8	6	9	48.57	10.99	70.72	-41.82	-10.99	61.12
9	7	8	-5.68	-10.77	-64.90	5.68	19.78	-67.52
10	8	9	4.55	-13.12	-66.03	-4.55	22.13	-86.59
11	7	10	4.60	3.71	13.18	1.59	-3.71	27.67
12	8	11	14.08	9.31	44.58	-7.89	-9.31	57.83
13	9	12	19.69	6.44	25.48	-13.50	-6.44	45.32
14	10	11	-3.71	-1.59	-27.67	3.71	11.50	-29.05
15	11	12	6.44	-3.61	-28.77	-6.44	13.50	-45.32

EXTERIOR

DL+LL

COLUMN (MAX LOADS)

	1	2	3
AXIAL	57 K	37 K	18 K
BENDING	7 FT-K	9 K-FT	14 FT-K

BEAM

BENDING	15.6 FT-K	19.1 FT-K	14.3 FT-K

DL+LL+SEIS

COLUMN

	1	2	3
AXIAL	93.6	56.5	23.0
BENDING	10.1	7.0.1	5.8

BEAM

BENDING	11.9	9.5	-5.1

MOMENT STRENGTH (f_y=36, f_c=1.5) ϕ=0.90

					$M_R = \phi M_n$
COLUMNS	b=6.5	d=~~5~~4	A_s=0.40		57.3
BEAM 3-STR	b=7.0	d=50	A_s=0.~~95~~		114.6
WEAK	b=12	d=50	A_s=0.40		53.5
BEAM 2					
STRONG	b=6.5	d=44	0.93		105.4
WEAK	b=14	d=44	0.40		47.1
BEAM 1					
STRONG	b=6.5	d=51	0.93		123.0
WEAK	b=14	d=51	0.40		54.6

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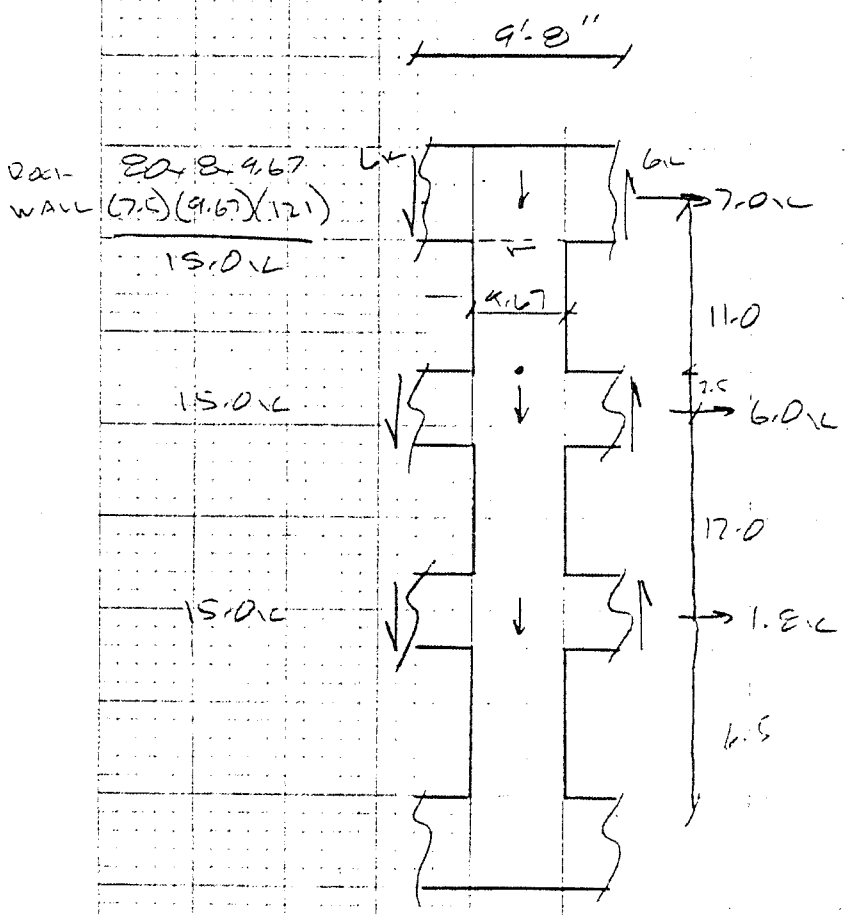
(BASED ON $\phi = 0.90$)

1) COLUMNS OVERSTRESSED IN BENDING UP TO 100%

2) BEAMS ARE CLOSE IN STRONG DIRECTION AND 100% OVER IN WEAK DIRECTION



$v = \frac{7000}{540} = 13.0$ psi

$v = \frac{13,000}{540} = 24.1$ psi

$v = \frac{14,600}{542} = 27$ psi

$M_o = (7)(29.5) + 6(18.5) + 1.8(6.5)$
$= 329$

$M_{12} = 15\left(\frac{4.67}{2}\right) = 105$

EVEN THOUGH POORLY DETAILED BY TODAYS STANDARDS THE EXTERIOR WALLS HAVE CONSIDERABLE STRENGTH.

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FLOOR DIAPHRAGM:

1200 PSI CONCRETE

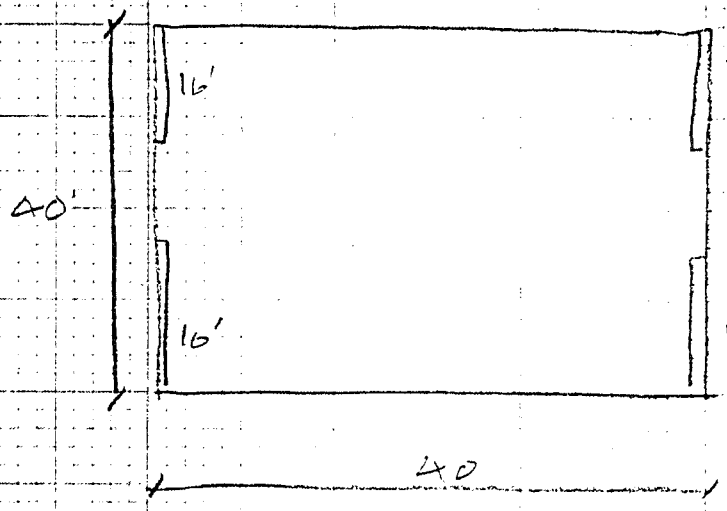
$F_N = 2\sqrt{1200} = 69$ PSI

$\times 2.0$

138 PLI $\times 12 = 1662$ PLF

DEAD LOAD ROUGHLY

$\frac{169^K}{792 SF} = 215$ PSF



$P_D = 40 \times 40 \times 215 \times .275$

$= 77,440$

$\div 2$

$\div 2C$

1935 PLF

$215 \times .275 = 48.4$ PSF

$\frac{1662}{48.4} = 34$ FT

TO AVOID OVER STRESSING DIAPHRAGMS DIAPHRAGMS MUST BE SUPPORTED ONCE 32'

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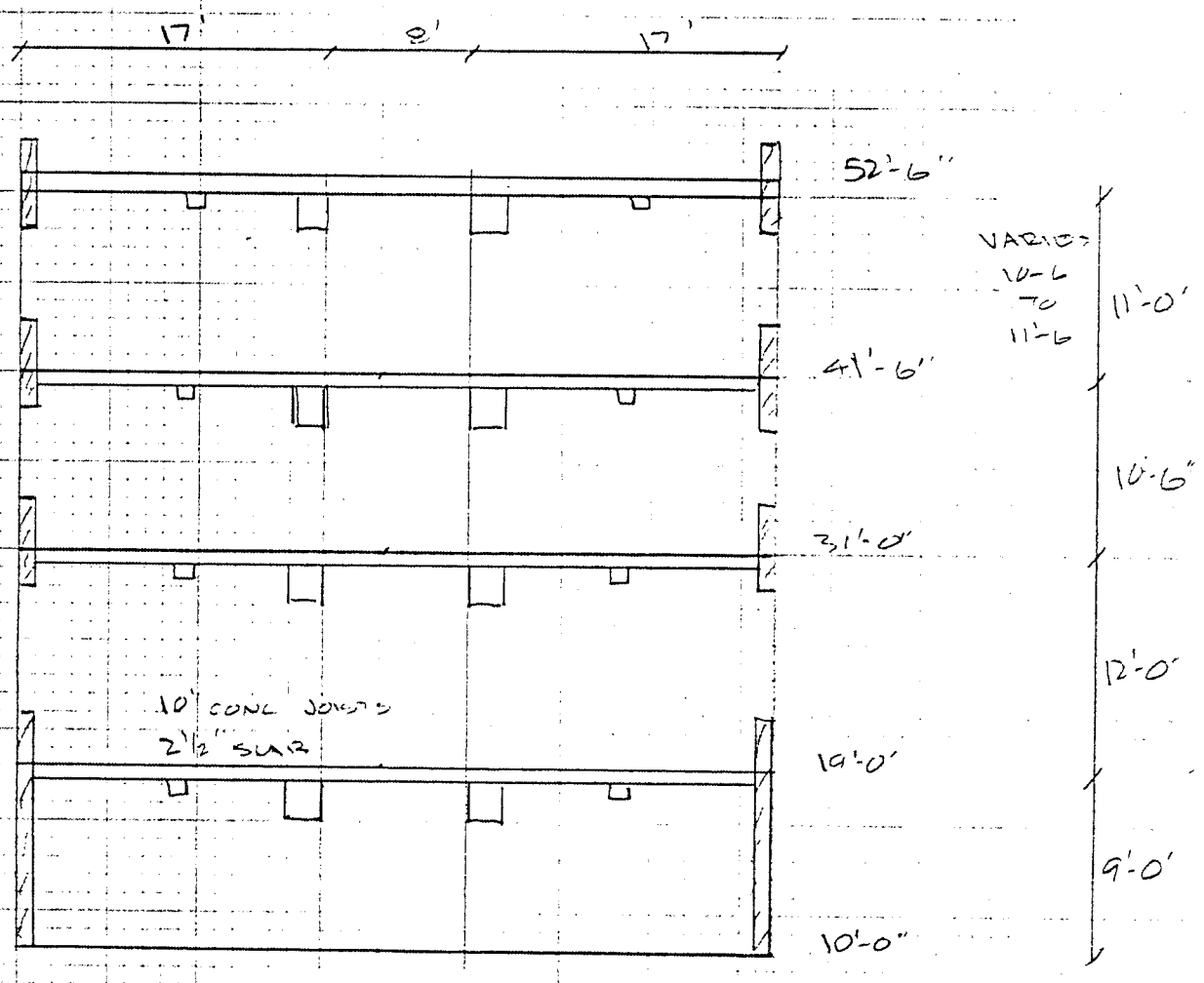
TILLAMOOK HOSPITAL

TYPICAL CONSTRUCTION
BASEMENT + 3 FLOORS



TYPICAL SPANDREL - EXTERIOR (3WB2E) 12' SPAN
9"x29" 5/8" ø S- 1/4" ø E
ALSO VARIES VENEER

TYPICAL INTERIOR BEAMS (3B7) 12' SPAN
14x28 2 3/4" ø ST 2 7/8" ø E

BASEMENT WALLS 13" & 15" WITH 1/2" ø 12" O.C.

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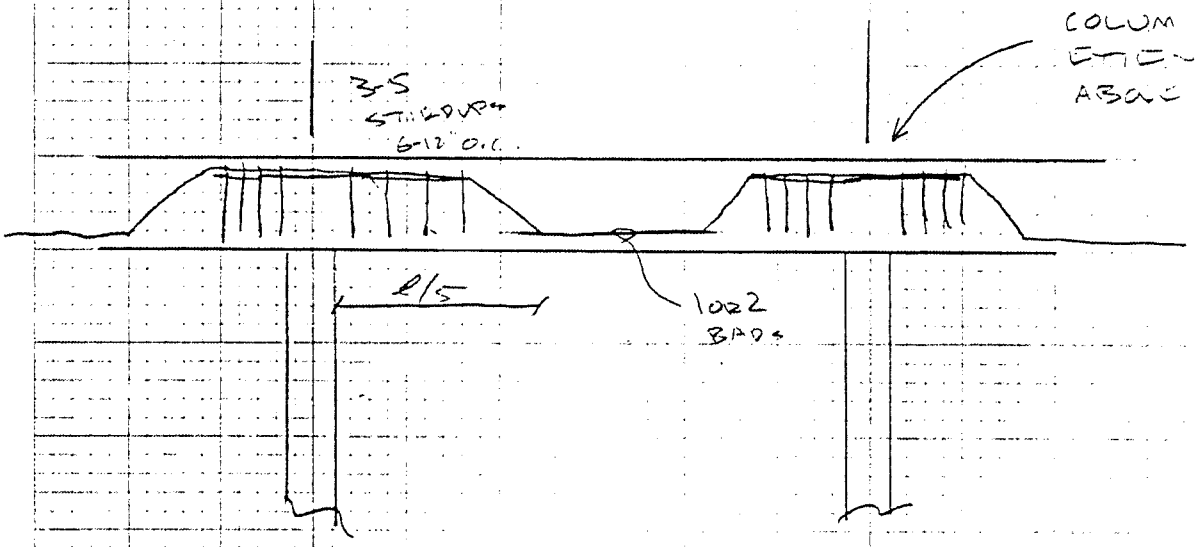
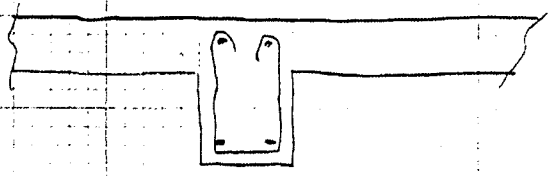
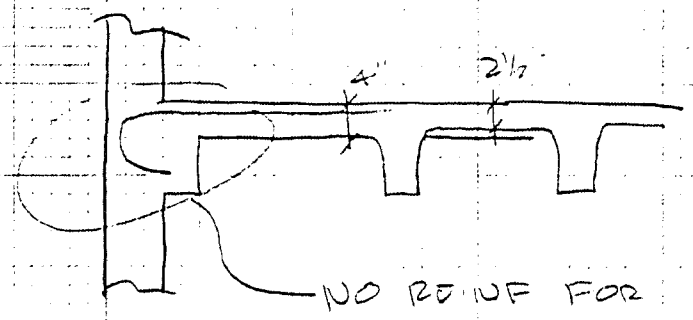
TYPICAL BEAM POINT



- NO REINFORCEMENT FOR REVERSED BENDING
- NO SHEAR POINT IN CENTERS OF BEAMS
- COLUMN SPLICES NEAR POINTS OF MAXIMUM BENDING.



REVERSED REINFORCEMENT = 2 - #5



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Columns

Basement

14)	13×12
4	12×17
2	15×14
15+21	12×12
31+1	10×16
2+5	12×16
42 ~~#42~~	14×14
28	16×16
3+7	18×18
1	20×20
26	12×12
4	24×24
8	24×42

Columns typically range slightly in size and reinforcement on upper floors

Check Steel for 4 most common

				ρ_g
12×12	4-#7	#3 ties	@ 12" o.c.	.0167
14×14	4-#7	#3 ties	@ 12" o.c.	.0123
	4-#5	#3	@ 10	.0063
	4-#8	#3	@ 12	.0160
16×16	4-#10	#3 ties	@ 16" o.c.	.0192
	4-#8	#3	@ 16	.0123
10×16	4-#6	#3 ties	@ 10" o.c	.0110 ~~.0147~~
	4-#8	#3 ties	@ 10" o.c.	.0196

$\rho_{min} = .010$ $\rho_{max} = 0.060$

Min Steel

All O.K. except 14×14 w/ 4 #5

12×12	1.44	.3 in²/bar	4-#6	1.76
14×14	1.96	.49 in²/bar	4-#7	2.40
16×16	2.56	.64 in²/bar	4-#8	3.14

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MANY COLUMNS IN UPPER LEVELS DO NOT MEET ρ_{min} OF 0.01

EVERY ASPECT OF LATERAL ANALYSIS WILL BE WORSE THAN FOR COURTHOUSE

1) ONE ADDITIONAL FLOOR.
2) LIGHTER EXTERIOR COLUMNS.
3) VERY LIKELY POORER CONCRETE STRENGTH.
4) SMALLER FOUNDATIONS
5) LIGHTER EXTERIOR SPANDREL BEAMS
6) HOSPITAL IS A CRITICAL STRUCTURE

ENDEX ENGINEERING 223 NW SECOND STREET • CORVALLIS, OREGON 97330 • (503) 754-9517 • FAX (503) 754-8111

NEWSPAPER ARTICLE

COUNTY HOSPITAL

FLIP AND SLIDE – Minutes after emerging uninjured from his overturned sports car, Ross Thomas of Bay City tells Tillamook County Sheriff's deputy Mike Fox about a one-car accident on Bayocean Road Jan. 22. Thomas said he rounded a curve just east of Bayocean peninsula, hit mud, flipped into a ditch, then slid about 50 yards. Thomas was trapped in the vehicle for 10 minutes before escaping with the help of bystanders.

(H-H photo by Ed Langlois)

Hospital expansion in jeopardy

by Carl Anderson

Tillamook County General Hospital (TCGH) has to expand in order to maintain its accreditation, but expansion cannot be accomplished at the present facility because it does not meet earthquake regulations on structures, according to Doug Anthes, TCGH vice-president.

Anthes said the lab, surgery facility, and emergency room have to be expanded to meet accreditation standards. TCGH was accredited in 1992 but the accreditation board said the present cramped situation cannot continue, or accreditation will be withdrawn. If withdrawn, TCGH would not be able to handle Medicare, which in turn would cause big problems. So expansion is a must, Anthes said.

The problem on earthquake standards was discovered when expansion was initiated with a May 15, 1992 engineering study, which revealed weak concrete. The concrete tested at a per-square-inch load capacity considerably under earthquake regulations, at a range of 1,200 psi to 2,500 psi when 3,000 psi is required. Anthes said TCGH's architect was told by the state that present operations can continue, but no additions, thus creating a dilemma because of accreditation requirements. He said the engineer said the building is as safe today as it was 10 years ago.

The hospital was built in 1948 when building codes were not as strict as today in an earthquake zone, and when concrete was made with salt sand instead of washed sand, Anthes explained. Salt sand disintegrates concrete over time.

Any addition attached to the hospital, or major remodeling, would be prevented by present regulations, because the concrete in the present structure does not test strong enough to withstand an earthquake.

The hospital is as safe today as it was 10 or more years ago, however, except that it would not withstand an earthquake of expected magnitude, according to Anthes.

"If the concrete would have been OK, we were looking at spending $120,000 for expansion," Anthes said. But now, if the present structure is used as a base, columns and floors would have to be replaced at prohibitive cost, he said. Or, a separate structure would have to be built adjacent, but not connecting. Or, a new site for the entire operation would have to be considered.

Anthes said the hospital should stand in an earthquake because it will be sorely needed. The engineer's report says that the present building, in terms of earthquake standards, has a "grossly inadequate" lateral system. "Walls, beams, columns and floors cannot be counted on to resist lateral loads [caused by earthquakes] due to the apparent low strength concrete...the reinforcing is very poorly detailed by today's standards...we believe the building would probably collapse" in an earthquake of expected magnitude.

The above analysis was based on core concrete samples taken on May 15 and the conclusion is based on

Continued on Page A11

Transient room tax considered

by Ed Langlois, H-H staff

With board chair Ken Burdick leading the call, the Tillamook County Commissioners on Jan. 20 decided to begin investigation that could establish a county transient room tax (TRT).

BURDICK

According to Burdick, opposition from local chambers of commerce in part quashed past attempts to establish a TRT, which would be imposed on hotels, motels, and other temporary housing rentals.

The topic arose when Commissioner Jerry Dove reported that area chambers of commerce had run out of brochures that advertise the county. Dove, who said "it doesn't look good" to lack a brochure, asked the other commissioners if they wanted to appropriate funds for the publications.

Burdick said that a room tax – traditionally understood as a funding source paid by tourists to benefit tourism – could help fund the brochures. Otherwise, said Burdick, brochures are not a high priority in the current fiscal famine.

"I can't justify spending money on brochures when services are lacking," said Burdick, noting that money to jail woman defendants and offenders had almost run dry.

Commissioner Gina Mulford suggested that the county chip into the brochure effort, finding other contributors to make up the slack.

"We barely have enough money to take care of our own people," Mulford said. "But we also need to promote the county."

The commissioners agreed to form a committee or committees to study a possible county TRT.

Neighbors do it

Some neighboring counties and cities within Tillamook County already impose a TRT. Most offi-

Continued on Page A11

ink – $5 general admission; $10 ringside, call 842-7878.

neasure set

ity of Tillamook and Tillamook on District will vote March 23 on city's fire department to the rural rvices, fire department property, nt and bonded fire debt would 1993, from the city to the rural dis- ax base will be created by subtract-

tation on the Oregon Coast Highway Corridor Study, sponsored by the Intergovernmental Policy Coordination Committee, Jan. 28, 5-8 p.m., Pine Grove Community Club, 225 Laneda, Manzanita. The commitee will meet at 3:30 p.m. The meeting and open house are rescheduled from a previous cancellation because of weather. The Oregon Department of Transportation will have specialists in attendance. The presentation will concern cities from Astoria to Tillamook. For more information, call Jeanne Lawson, 235-5881; or June Carlson, 378-2940.

knowledgeable about federal, state and local taxes, and are certified by IRS. Those with complex returns will be advised to seek professional tax assistance.

Scam alert posted

Jan Margosian of the Oregon Attorney General's Office said a nationwide scam is active in Oregon and residents should be aware of it. People call and offer round trip airfare to Hawaii for $300, using company names such as Travel Word, Inc.; Worldwide Travel; E.C.L.; Air Travel Corporation; and Great American

Honestly, we need to look at cutting and eliminating some services."

To gather input on what should be cut and what left alone, Curelo distributed a survey among staff and interested patrons. So far, no district reduction plans are etched in one, he said.

Along with juggling the budget line items, Curelo has asked the community to contact legislators.

"We need to let them know that we think schools are important."

Tom Wogaman, Tillamook District 9 superintendent, has asked department managers to prepare three budget proposals – one with the same funding level as last year, one with a 10-percent cut, one with a 10-percent increase.

servative fiscal stance because of the uncertain future.

The college operates in part with a $575,000 levy.

In his budget message, TBCC President Jerry Hallberg said the college will face "difficult financial conditions" beginning in the 1993-94 fiscal year unless the state finds replacement revenue.

Under the limit

Measure 5 will not seriously dent the education budgets in the county. Beaver School, Nestucca Union High School, and Cloverdale School have the good fortune to be in districts where tax rates have not approached the property tax cap. The state will not need to replace funds in those districts.

receive $4,250 per elementary student per year and $4,500 per high school student per year.

This, not Measure 5, will hurt Beaver School, Prevenas said. In the past, the district has each year been spending about $6,000 per student. In the best scenario, the district faces a $1,750 per-pupil reduction. The cuts could get worse as school funding sources dry up, said Prevenas.

"The districts getting extra funding from timber won't get that any more."

The Neah-Kah-Nie School District has spent $5,600 per pupil. Part of its deficit includes making up $1,100 per student.

Though Prevenas lauded the state's effort to equalize, he said the new system puts the squeeze on small districts. Whether a district is large or small, each needs basics such as a superintendent, a deputy clerk, a physical education instructor, an art teacher, and a music program, he said.

"These things cost as much if you have 400 students as if you have 4,000."

Small districts lack political clout that could help their situation, said Prevenas.

to $1.51 billion in betwe and 1995.

The Tillamook ESD has to cut, Molendyke said.

However, according September 1992 Associated Industries poll, Oregon vot approve new taxes for sch not for other programs. Alr of 10 people questioned s replacement revenue is nee school property tax relief. H only three of 10 would app the same action for state pro

"It looks as if people hav spot for schools," said Mol "We want to make sure th services for the kids. That it's all about."

Hospital

Continued from Page A1

assumption the samples "are representative of concrete strengths throughout the building." The report concludes that the building could not be upgraded.

The situation with the hospital came to light when TCGH officials informed the county about the engineering study. The county owns the building and leases it to TCGH for per year.

All three county commissioners – Ken Burdick, chair, Gina Mulford and Jerry Dove – expressed concern over the dilemma and emphasized they will be working closely with TCGH on solutions. They said, first, they will get a second opinion on the concrete, not to say that the one by the hospital's engineer is flawed, but to have an independent study contracted by the county.

Next, they will explore ways to maintain the hospital here, possibly with a bond issue on a new building on a new site.

They pointed out that if the present site is used, either with a separate addition or complete new earthquake-proof building, the tsunami danger remains because the site is in a major floodplain. Anthes concurred, noting that if a new structure is built, it should be out of tsunami danger if possible. A tidal wave is expected if an earthquake occurs, according to geologic studies.

The commissioners and Anthes noted that other buildings in the area, built in the same era, probably have the same flaw. "The hospital is not alone with this problem," Anthes said. "But we should be standing if the others crumble in an earthquake, so we need to consider location."

Anthes and the commissioners emphasized that safety is not a concern with the present building, except in the context of an earthquake.

"The typical resident here probably looks at the hospital and says it's a nice building, why build another, but you have to understand our need to expand" because of accreditation requirements, Anthes said.

PREVIOUS REPORTS

COUNTY HOSPITAL

kpff

TILLAMOOK COUNTY HOSPITAL

STRUCTURAL ANALYSIS REPORT

January 21, 1992 *(Revised December 22, 1992)*

The existing Tillamook County Hospital is a three story reinforced concrete structure with a full basement. The structure was built in 1948. The footprint of the building contains approximately 18,000 square feet. The first floor has a U-shape floor plan. The eastern leg of the U-shape, approximately 2,800 square feet in area and containing the central kitchen, extends to the second level only. The central core has an additional level for a conference and board room, and has an area of approximately 1,300 square feet. The first floor has an opening of approximately 900 square feet for the boiler/mechanical room in the basement in the east wing.

The building was renovated in 1975. The changes carried out were mainly architectural. Canopies were added above the main and ambulance entrances. Windows on the south side and interior layout were upgraded. A fire exit was replaced by a new staircase in the east wing of the building.

The typical floors are constructed with 8 or 10 inch deep concrete joists, 5-1/2 inch wide, spaced 25-1/2 inches on center, with a 2-1/2 inch concrete topping. The joists are supported by concrete beams that are typically 14 inch x 24 inch. The central hallway is a 4 inch thick concrete slab. The perimeter beams are typically 5 feet deep. The span of the joists is typically 15 feet, and the beams vary from 12 to 24 feet in length. The columns increase in size at the lower floors and are typically 15 inches square at the base. The columns are supported by spread footings of varying size, most of them between 3 and 5 feet square. Cladding is typically a horizontal band of 5 feet high masonry veneer alternated by a 6 foot high strip window. The basement is fully enclosed by a 13 inch thick concrete wall that also retains the soil.

To verify the structure for adequacy against dead and live loads, several of the slabs, joists, beams, and columns were originally analyzed assuming f'c = 3,000 psi concrete. To verify the concrete strength assumption, cores were taken on May 15, 1992. Based on strengths obtained from these tests, the building no longer satisfies code. The bearing on the soil is found to be on the order of 7,000 psf. The drawings state that the assumed soil bearing capacity in the original design is 12,000 psf.

Seismic Analysis

The criteria used for the seismic analysis is the 1988 Uniform Building Code (UBC). Since the structure houses a hospital, an importance factor of 1.25 was used. Also, the structural model was subjected to seismic Zone 3 lateral loads.

First, the base shear was computed based on UBC Method A. Then a full three dimensional dynamic analysis of the structure was carried out. Per the UBC, the computer analysis was factored to produce the base shear equal to the one derived by using Method A. The dynamic analysis incorporates the response spectrum given in the UBC for a Zone 3 earthquake. The base shear of the structure is 1,140,000 pounds, or 17 percent of the total weight of the floors and walls above the ground level.

To satisfy the criteria of 5 percent eccentricity of loading per the code, the center of mass was shifted to either side of the center by 5 percent of the building dimension in the plan to produce the maximum possible stresses. The model was subjected to seismic forces in the east-west direction and in the north-south direction.

The resultant forces in the lateral load resisting elements are taken to be the maximum of the east-west/north-south and the plus/minus eccentricity.

Lateral Load Elements

The deep spandrel beams on the perimeter and the beam/column frames were not used in the model. The beams lack reinforcement to resist the reversal of the moments and are detailed to resist gravity loads only. Also, the stirrups, or shear ties, are provided only where required for the gravity loads. Under seismic loads, the maximum shear in the beams generally remains constant throughout the span. The beam/column connections also lack adequate detailing such as stirrups, hooks, extension of rebars, etc., to resist any lateral loading.

The walls on the outside of the exterior stairwells were not used for the lateral loads. These walls are not tied in any satisfactory manner to the floor diaphragm.

The system that can be relied on to contribute to the lateral stiffness of the structure consists of the following walls:

- The boiler/mechanical room walls that extend to the second level.
- The concrete wall enclosing the kitchen, that extends to the second level, although with large openings for the doors and the windows.
- The east wing walls, approximately 44 feet in length, that extend the full height of the building.

- The small wing walls at the entry way.
- Walls around the interior stairwells.

All walls are 8 inches thick, except for the 44 foot east wing walls which are 10 inches thick. The concrete strength is between 1,200 and 2,225 psi based on tests and the steel is assumed to be 40,000 psi.

The lateral system was found to be grossly inadequate. Walls, beams, columns and floors cannot be counted on to resist lateral loads due to the apparent low strength concrete. In addition, the reinforcing is very poorly detailed by today's standards.

None of the shear walls have boundary elements, or columns embedded at the ends of the walls, to resist overturning.

Recommendations

Assuming that the May 15th cores are representative of concrete strengths throughout the building, we cannot visualize how this building could be upgraded. In addition, we believe that the building would probably collapse in the event of a code earthquake.

Respectfully submitted,

Grant L. Davis
Principal/Manager Structural Engineering

GLD/be

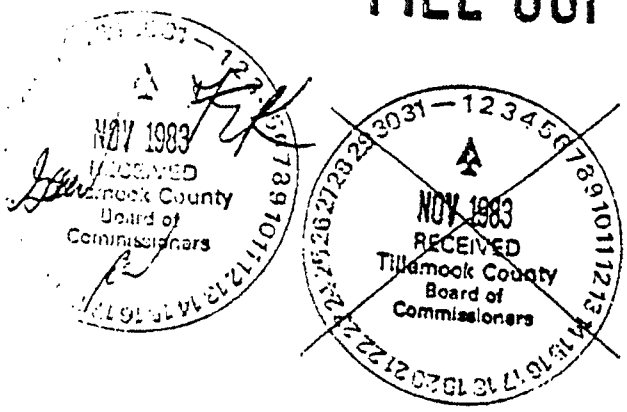
1983 JAIL CONSTRUCTION REPORTS

COUNTY COURTHOUSE

FILE COPY

kpff

consulting engineers



November 22, 1983

Mr. Ken Mouchka
Zimmer Gunsul Frasca Partnership
320 S.W. Oak, Suite 500
Portland, Oregon 97204

RE: Tillamook County Jail

Dear Ken:

At your request, we have reviewed the load carrying capacity of the existing structure of the Tillamook County Jail. We have reviewed the original structural drawings and spot checked the reinforcing in several beams, slabs, and joists and the reinforcing in all columns. All members checked are properly reinforced. We also determined required concrete strengths and found that the most highly loaded columns require a concrete strength of 1,200 psi and the beams, joists, and slabs require a concrete strength of 1,500 psi. Core samples taken from various areas, tested on August 23, 1983, indicated that concrete strengths may not meet these values.

Based on the information from the core samples, we recommended that a portion of the second floor be load tested and that core samples be taken and tested from two basement columns. The load test was run and the floor behaved satisfactorily. The core tests from the columns did not show adequate strength.

To further check column capacities, we recommended that Pittsburg Testing Laboratory run Windsor Probe tests on several columns. On October 27, they tested seventeen different columns at the ground floor level. With one exception, these tests showed concrete strengths of 2,600 psi or more and indicated strengths of over 3,000 psi in areas where cores tested to less than 1,500 psi. According to Don Scott of Pittsburg Testing Laboratory, the Windsor Probe tests are more accurate than the core tests. He will be sending us information shortly, further correlating the Windsor Probe tests to the cores.

Based on our review and analysis of the original plans, the load test results for a portion of the second floor structure, and the Windsor Probe

test results for the columns, we feel the structure can safely resist its design dead and live loads even though concrete strengths in many areas appear to be substandard.

If you have any questions or need any further information, please call me.

Very truly yours,

Arthur W. Johnson
Vice President

AWJ/bjp

Form 407 PO

PITTSBURGH TESTING LABORATORY

ESTABLISHED 1891

6115 S. HARRISON STREET
PORTLAND, OREGON 97223

ORDER No. POR-9077 LABORATORY No

CLIENT'S No. 6043-02 October 28, 1983 FILE No

REPORT

Report #5

Zimmer, Gunsul, Frasca
320 S. W. Oak St., Suite 500
Portland, Oregon 97204

Re: Tillamook Co. Court House
Windsor Probe Tests
Strengths based on Moh's
Hardness #6

Gentlemen:

On October 27, 1983, a representative from this laboratory was present at the above job site to conduct Windsor Probe Tests on columns and walls of the ground floor level. Interpretations of these tests and locations are as follows:

Test #	Location	Probe Exposed Inches, Average	Setting	PSI
1	Column #18	1.683	H.P.	3000
2	Vault wall	2.275	L.P.	3040
3	Stairway #2	1.775	H.P.	3600
4	Column #23	2.375	L.P.	3120
5	Column #21	1.775	H.P.	3600
6	Column #24	1.8	H.P.	3800
7	Column #28	1.65	H.P.	2600
8	Column #27	2.05	H.P.	5800
9	Column #32	1.625	L.P.	1080**
10	Column #17	2.15	L.P.	2640
11	Column #20	1.7	H.P.	3000
12	Column #22	1.75	H.P.	3400
13	Column #35	2.3	L.P.	3120
14	Column #34	2.325	L.P.	3200

-continued-

Form 407 PO

PITTSBURGH TESTING LABORATORY

ESTABLISHED 1...

611 S E HARRISON STREET
PORTLAND, OREGON 97...

ORDER No. POR-9077 LABORATORY No.

CLIENT'S No. 6043-02 October 28, 1983 FILE No

REPORT

Report #5

Zimmer, Gunsul, Frasca
(Page 2)

Test #	Location	Probe Exposed Inches, Average	Setting	PSI
15	Column #33	2.3	L.P.	3120
16	Column #3	1.808	H.P.	3800
17	Column #1	2.075	H.P.	4800

** Lowest Result

Inspector: H. Westlund

Respectfully submitted

PITTSBURCH TESTING LABORATORY

Donald R. Scott

Donald R. Scott, Manager
Portland District

DRS/jbw
Enclosures

tute to the hydration and curing of the cement in the cylinder. Consequently, a 24 hour field cylinder will be much lower than the in place strength (ACI 301-72 Field Reference Manual).

* Under winter concreting conditions, the in place concrete may cure at a much slower rate than a field cylinder held in a curing box.

* Cores drilled from 40 to 50 year old concrete will almost always break lower than the actual in place concrete strength. It has been established that minute cracks at the interface of the aggregate/paste have a tendency to propagate due to drilling vibration. This, in combination with the core being removed from the restraint of the reinforcing steel and the load of the structure will cause a misleading low strength indication. Conversely, the Probe may not completely detect a weakened bond at the aggregate interface. The correct strength of such old structures is likely to be somewhere between core strength and Probe strength and the data should be interpreted by an Engineer.

* Round Gravel. When stream rounded gravel is used for coarse aggregate, the bond at the paste aggregate interface is not always firmly developed at early ages and results in low press breaks which do not compare well with actual in place strength. Tests have been made using polished steel balls as coarse aggregate to study and identify this condition. Correlation to in place strength is even more difficult when this situation exists.

High Strength Concrete. Probe Strength Tables were calibrated from in place test data. Lab controlled tests and other correlation to conventional test specimens such as drilled cores or cylinders, properly reported according to ACI, is usually excellent up to 4000 psi strength levels. However, it is increasingly difficult to consistantly make accurate 6000 psi or higher cylinders or cores due to the many inherent variables (60 Reasons that effect Cylinder Strength Results) - Table I (Journal of the ACI). As strength increases, the difficulties in making accurate cylinders or drilled cores increases. At these high strength levels, the Probe is unaffected and the cylinders or cores should be carefully analyzed if lower than the in place strengths are indicated.

Loose Probes. When Probing concrete in excess of 6500 psi, certain types of concrete will not retain the Probe. If this condition exists, clean the hole made by the Probe with a hand bulb syringe and measure the depth of the hole, then subtract from 3.125 inches (Probe Length). Use this dimension to convert to psi (Table I).

Firmness of Probe Embedment. Tap all Probes for verification of final seating and correction of any minor rebound.

FRom Technical DATA MANUAL
Windsor Probe Test System
30 Sherman Street
Elmwood, Connecticut 06110

TO Summit Consulting Engineering
320 S.W. Oak Street
Portland, Oregon 97204
ATTENTION Mr. Kenneth L. Mondaka

DATE	JOB NO
Sept. 26 1985	8516
JOB NAME	
Tualatin Co-Gen Project	
JOB ADDRESS	
Tualatin, Oregon	

We are [X] Enclosing [ ] Returning [ ] Sending under separate cover

[ ] Shop drawings [ ] Prints [ ] Shop contract Modification
[ ] Change request [ ] Copy of letter [ ] Plans [ ] Samples [ ] Specifications

COPIES	DATE	NO.	DESCRIPTION
1	-	-	Layout of Test Configuration
1	-	-	Sheets 1, 2 & 3 of Test Result Data
1	-	-	Back Calculations used for loading quantities of Block used

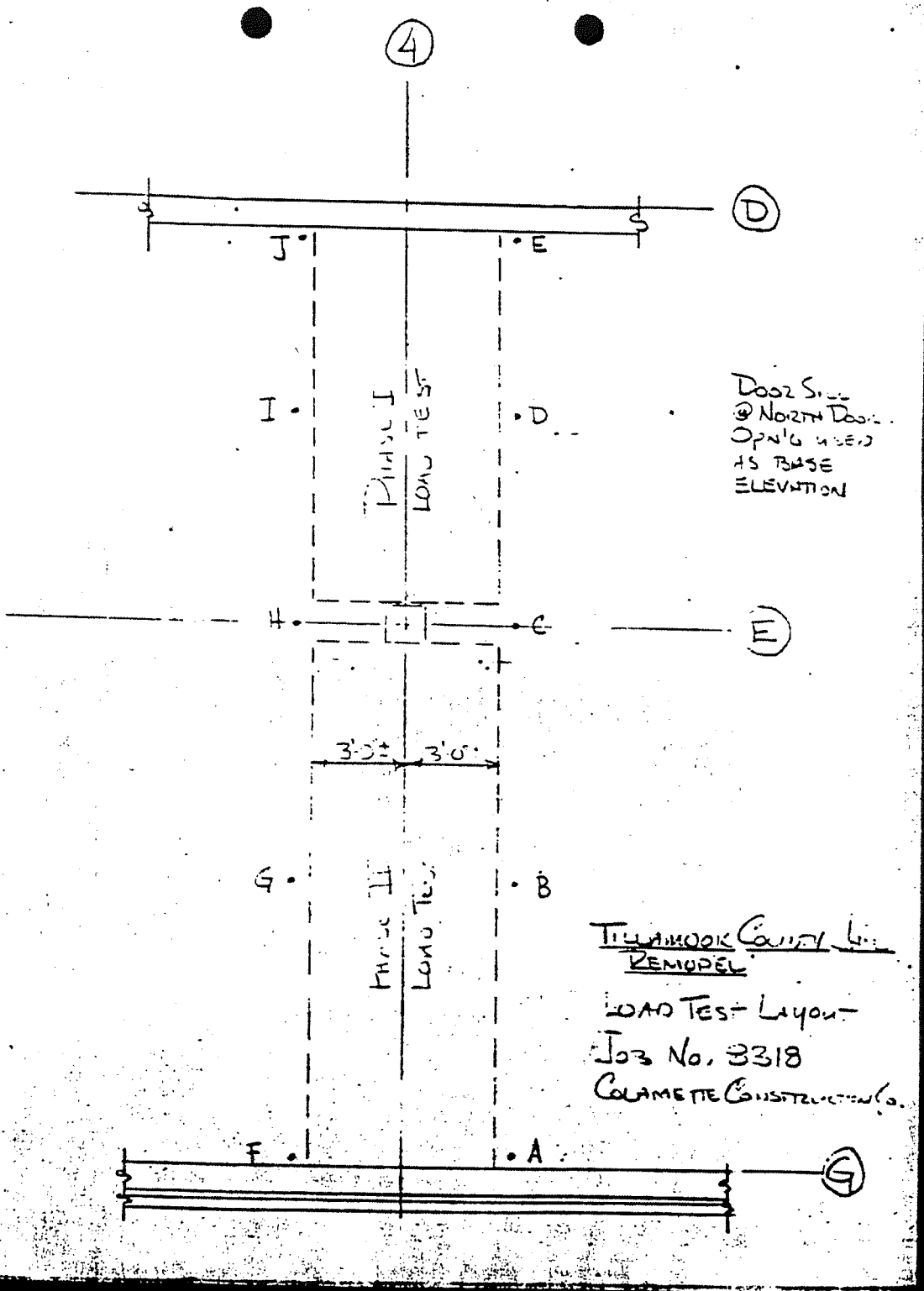
These are transmitted as checked below:

[ ] For approval
[ ] For price
[ ] As requested
[ ] For review and comment
[ ] For bids due _____
[ ] Approved as submitted
[ ] Approved as noted
[ ] Returned for corrections
[X] For your use
[ ] Resubmit ____ copies for approval
[ ] Submit ____ copies for distribution
[ ] Return ____ corrected prints
[ ] _____

REMARKS Revision of the Bench mark and height of Block required to provide appropriate loading prevented readings at stations F, G, H, I & J in 2nd Phase Test after full load was applied. Every effort was made to provide readings of a high degree of accuracy. We used both an automatic level (brand new Topcon AT-F6) and a laser operated level. If you have any questions, please call.

COPY TO _____ SIGNED _____

If enclosures are not as noted, kindly notify us at once.



DOOR SILL @ NORTH DOOR OPN'G USED AS BASE ELEVATION

TILLAMOOK COUNTY LIBRARY
REMODEL

LOAD TEST LAYOUT

JOB NO. 8318

COLAMETTE CONSTRUCTION CO.

TILLAMOOK COUNTY JAIL REMODEL
LOAD TEST RESULTS
PHASE I TEST

STATION	F.S.	H.I.	B.S	ELEV.
INITIAL READINGS - 1/6 LOAD				
B.M.		4.750	4.750	0.000
A	4.773			(-) 0.023
B	4.790			(-) 0.040
C	4.760			(-) 0.010
D	4.760			(-) 0.010
E	4.760			(-) 0.010
F	4.763			(-) 0.013
G	4.790			(-) 0.040
H	4.763			(-) 0.013
I	4.761			(-) 0.011
J.	4.761			(-) 0.011
LOAD TEST @ HALIWAY POINT, APPROX. 700#/LF				
A	4.773			(-) 0.023
B	4.790			(-) 0.040
C	4.760			(-) 0.010
D	4.760			(-) 0.010
E	4.760			(-) 0.010
F	4.763			(-) 0.013
G	4.790			(-) 0.040
H	4.760			(-) 0.010
I	4.778			(-) 0.028
J.	4.765			(-) 0.015
LOAD TEST @ FULLY LOADED APPROX 1400#/FT				
A	4.765			(-) 0.015
B	4.770			(-) 0.020
C	4.762			(-) 0.012
D	4.755			(-) 0.005
E	4.760			(-) 0.010
F	4.770			(-) 0.020
G	4.800			(-) 0.030
~~RESET~~ INSTRUMENT		4.739	4.989	0.000
H	4.998			(-) 0.009
I	5.022			0.033
J	5.005			0.016

PHASE I - TEST

STATION	F.S	H.I	B.S.	ELEV.
READINGS AFTER 24 HOURS		4.930	4.930	6.000
A	4.950			6.0020
B	4.965			6.0035
C	4.940			6.0010
D	4.952			6.0022
E	4.940			6.0010
F	4.954			6.0024
G	4.982			6.0052
H	4.945			6.0015

TILLAMOOK COUNTY JAIL
LOAD TEST RESULTS
PHASE II TEST

STATION	FS	HI	BS	ELEV.
NO LOADS APPLIED		4.930	4.930	0.000'
(SEE 24 HR. READINGS FOR PHASE I				
BEAM FULLY LOADED				
A	4.965			Θ 0.035
B	4.967			Θ 0.037
C	4.940			Θ 0.010
F	4.954			Θ 0.024
G	4.990			Θ 0.060
H	4.943			Θ 0.013
READINGS AFTER 24 HOURS				
B.M.		4.825	4.825	0.000
A	4.885			Θ 0.060
B	4.890			Θ 0.065
C	4.863			Θ 0.038
F	4.846			Θ 0.021
G	4.890			Θ 0.065
H	4.840			Θ 0.015
"REBOUND READINGS - BEAMS UNLOADED 9/22/83				
BM		4.920	4.920	0.000
A	4.940			Θ 0.020
B	4.955			Θ 0.035
C	4.929			Θ 0.009
D	4.930			Θ 0.010
E	4.922			Θ 0.002
F	4.945			Θ 0.025
G	4.962			Θ 0.042
H	4.947			Θ 0.027
I	4.960			Θ 0.040
J	4.945			Θ 0.025

PHASE I

LOAD TEST
1/ST LAYER

TEST BLOCK WT
27.75
27.25
27.25
27.00
27.50
27.625
164.375

AVG = 27.395 say 27.40 #/BK

17.71' FROM FACE OF COL. TO FACE OF COL.

17.71' X 700 #/LF = 12397 # REQ'D

∴ 12397 # ÷ 27.40 #/B = 452½ BLK FOR LOAD

	1ST LAYER	83 BLOCKS		83
168	2ND LAYER	3 @ 13 =	39	83
		1 @ 12 =	12	85
		1 @ 34 =	34	251
			85	

251	3RD LAYER	83 BLKS
336	4TH LAYER	85 BLKS
419	5TH LAYER	83 BLKS
504	6TH LAYER	85 BLKS
587	7TH "	82 BLKS
671	8TH "	85 /
751	9TH "	80 /
836	10 "	85 /
911	11TH "	75 /

FOR 1400 #/LF
REQ'D 901 BLOCKS

MF6043-02

kpff

consulting engineers

August 29, 1983

Mr. Ken Mouchka
Zimmer Gunsul Frasca Partnership
320 S.W. Oak, Suite 500
Portland, Oregon 97204

RE: Tillamook County Jail Remodel

Dear Ken:

Per our meeting of August 26, 1983, we recommend a load test be run on the second floor of the Tillamook County Jail. The beam on grid 4, from grid C to G, will be tested only to its design load of dead load plus 50 psf live load.

Test the beam as follows:

1. Measure and record floor elevations at columns C-4, E-4 and G-4 and at midspan between columns C-4 and E-4 and at midspan between columns E-4 and G-4. Measurements should be taken at the side of each column and at approximately 2 feet each side of the beam at midspan so that data points are not covered during the test. Mark each data point so that future readings can be taken at the same locations. All readings are to be accurate to within plus or minus .001 foot.

2. Load the beam between grids E and G with a uniform load of 700 lb./ft. (19 normal weight CMU units per foot). Measure and record elevations from step 1.

3. Load the beam between column E and G with an additional uniform load of 700 lb./ft. (total 38 normal weight CMU units per foot). Measure and record elevations from step 1.

4. Allow load to sit for 24 hours. Measure and record elevation from step 1.

5. Load the beam between column C and E with a uniform load of 700 lb./ft. (19 normal weight CMU units per foot). Measure and record elevations from step 1.

6. Load the beam between column C and E with an additional uniform load of 700 lb./ft. (total 38 normal weight CMU unit per foot). Measure and record elevations from step 1.

7. Allow load to sit for 24 hours. Measure and record elevations from step 1.

8. Unload beams.

During the test no other material is to be stored in the bays adjacent to the testing (including block to be used for future loading). It would also be prudent to remove people from the area under the beam while load is being applied.

We trust this test procedure is acceptable. If you have any questions, please call me.

Very truly yours,

Arthur W. Johnson

Arthur W. Johnson
Vice President

AWJ/bjp

kpff

consulting engineers
421 s.w. 6th avenue, suite 911
portland, or 97204 (503) 227-3251

CONFIRMATION RECORD

JOB NO.	CLIENT	
83237.1	Zimmer Gunsul Frasca	[X] TELEPHONE [ ] DIRECT
PROJECT		DATE
Tillamook County Jail		August 29, 1983
LOCATION		TIME
Tillamook, Oregon		4:15 pm

INITIATOR	RESPONDER
INDIVIDUAL: Tom Fowler	INDIVIDUAL: Ken Mouchka
COMPANY: kpff consulting engineers	COMPANY: Zimmer Gunsul Frasca Partnership

DESCRIPTION

Load test of concrete beams on grid 4, from grid C to G.

Load the beam that spans from grid E to G on grid 4, with 8" CMU block, in a wall 40" wide and 6'-8" high. This will take about 650 block.

Then load the beams that span from C to E with another 40" wide by 6'-8" high block wall. This will take another 650 8" CMU

Load duration, loading sequeance, deflection measurements rebounds and safety precautions all need to be elaborated.

COPIES TO	LOCATION	ACTION REQ.	FOR INFO. ONLY	COPIES TO	LOCATION	ACTION REQ.	FOR INFO. ONLY

PITTSBURGH TESTING LABORATORY
ESTABLISHED 1881
611 S E MARRISON STREET
PORTLAND, OREGON 97214

Form 407 PC

ORDER No. POR-9077 LABORATORY No.

CLIENT'S No. 6043-02 August 23, 1983 FILE No.

REPORT

Report #1

Zimmer Gunsul Frasca
320 S.W. Oak, Suite 500
Portland, Oregon 97204

Re: Concrete Core Tests
Tillamook County Jail

Gentlemen:

On August 22, 1983, compression tests were performed on twelve (12) concrete core samples submitted to this Laboratory on this date by your representative Peter Alef.

Core Number	Dia. Ins.	Area Sq. Ins.	Capped Length	Load Lbs.	L/D Ratio	PSI
#1	2.75	5.94	3.53	28,600	1.28	4502*
#2	2.75	5.94	2.45	18,600	0.89	2724**
#3	2.75	5.94	2.65	17,900	0.96	2621**
#4	3.75	11.04	2.27	80,000	0.61	6304**
#5	3.75	11.04	6.65	24,000	1.77	2131*
#6	3.75	9.38-8.83	6.90	15,000	1.84	1599-1699***
#7	3.75	11.04	7.80	12,300	2.08	1114
#8A	2.75	5.94	5.46	8,900	1:99	1498
#8B	2.75	5.94	6.92	7,700	2.52	1296
#9A	3.75	11.04	6.12	16,000	1.63	1406*
#9B	3.75	11.04	6.32	10,700	1.69	945*
#10	2.75	5.94	5.62	9,400	2.04	1582
#11	2.75	5.94	5.48	5,600	1.99	943
#12	2.75	5.94	5.42	6,100	1.97	1027

*Corrected for L/D per ASTM C-42

**L/D ratio less than 1.0 maximum correction factor of .87 used - ASTM C-42

***Void at edge of core reduced area is 15-20%

Cores #2, 4, 5, 6 and 12 contained reinforcing steel which may have affected the compressive strength results.

Respectfully submitted,

PITTSBURGH TESTING LABORATORY

Donald R. Scott

Donald R. Scott, Manager
Portland District

DRS:bps

PREVIOUS REPORTS
COUNTY COURTHOUSE

ENDEX
ENGINEERING, INC.
223 NW Second Street
Corvallis, OR 97330
(503) 754-9517
Fax: (503) 754-8111

9 January 1991

Randy Saunders
RSS Architecture
2225 Country Club Road
Woodburn, Oregon 97071

Re: Tillamook County Courthouse

Dear Randy:

The following comments relate to my inspection of the structural portion of the Tillamook County Courthouse on 4 January 1991:

1. The courthouse structure is reinforced concrete foundation and bearing walls. Floors and roof are reinforced concrete joists with integral concrete pan. There are no significant signs of settlement. Minor portions of the steel reinforcement, mentioned below, exhibit corrosion. The building is sound and fully serviceable for future use.

2. Water leakage at the roof has been an ongoing problem for at least the past ten years. Remedies are being implemented to correct this condition, however, problems persist as water was dripping from the roof/ceiling in the Jail dormitory on 4 January during dry weather. Long term effects of water leakage can result in serious structural compromises in a building of this nature.

   With the addition of roof insulation in recent years, moisture evaporation is slowed down and corrosion of steel reinforcement may be accelerated. There are signs of reinforcement corrosion in the concrete roof pans, but not in the joists. The existing corrosion is not a structural concern at this date - as long as the condition does not continue. The County should make a priority to correct all leaks before next fall.

3. Ceiling at Jail Dormitory - The ceiling is failing due to insufficient suspension. Deflection of as much as 1" was measured. It appears that the suspension wires are pulling loose, perhaps from effects of water leaks, corrosion or failure of attachment devices. In any case, the ceiling must be removed and replaced. I

recommend that temporary supports be placed as soon as possible until permanent repairs can be made. Attached is a sketch of support which should be placed under the lowest portions of the ceiling in the three locations where deflection is greatest. Details of ceiling replacement should be developed after existing ceiling is removed and the cause of suspension failure is determined. It may be possible to re-use some of the existing ceiling framing.

4. Plaster failure at Records Office - Cracks and spalling of plaster in Records Office does not appear to be a result of any structural effect. Floors, columns and ceilings in the adjacent areas are all in straight condition with no signs of settlement or deflection. Metal lath was not mechanically secured to the structural column which resulted in a weak joint. Recent pipe repairs in the basement directly below probably created vibration and impact which caused the plaster failure. Repair should include drilled anchors for attachment of lath to column.

I would be happy to discuss any of these items with you or the County. Please call if you have questions.

Sincerely,

Gary Feuerstein

June 7, 1989

Ida A. Lane, Chairperson
Robert B. Miles, Vice-Chairperson
Kenneth M. Burdick, Commissioner
Board of Commissioners
Tillamook County Courthouse
201 Laurel Avenue
Tillamook, Oregon 97141

Re: VISUAL EVALUATION
Structural Integrity of the County Courthouse

Dear Commissioners,

This letter is to formally document our conclusions regarding the structural integrity of the County Courthouse. The list of comments and observations that follow are the result of our visual examination of the building on Tuesday, June 6, 1989 between the hours of 10:00 a.m. and 12:00 noon. Our conclusions are as follows.

1. A new antenna placed on the roof should be positioned over the location of a structural column within the structure.

2. The building is not designed to today's standards for earthquake loading. Should there be a major earthquake the building will sustain damage, but not in a manner more severe than any other structure of the same age and same materials. There was no indication that the building structural system would result in the building being more/less susceptible to earthquake damage.

3. Cracks on the column in the second floor storage room may be structural damage- but based on our visual inspection we doubt this. If it is structural damage other evidence of this damage would show on/in the building. We could not see such additional evidence. You may wish to consider removing the plaster on the column, and on the wall that is cracked, to see if the cracks occur in concrete material. The appearance of the closet may not be of great concern, making this inspection easier to do- no plaster repair has to be made.

4. Cracks in the ceiling of the jail dormitory may be structural damage- but based on our visual inspection we doubt this. We did not see any obvious deflection in the ceiling or observe other evidence on/in the building to indicate structural damage. We do believe that the ceiling cracks could be due to moisture in the ceiling.

5. The roof drains and roof scuppers currently in use at the roof level should be flushed, cleaned of debris, and have the drain strains put back in place. This is a periodic maintenance item your staff should put on its "list of things to do".

6. Water damage in the jail stair tower would probably be solved with a new roof installation and sealing of the concrete block with a waterproof coating.

7. The transition detail from the prisoners recreation area surface slab to the built-up roofing looks very suspicious to us. There is always the potential for water problems where two different materials meet, particularly on a roof. We believe this detail deserves a different solution than what is currently in place.

8. The cracks in the columns at the County Clerks area are not structural. These cracks have occurred where two different materials, concrete and gypsum board, meet. No provision has been made for normal expansion, contraction, or vibrations of the two materials.

9. The water damage on the west wall of the County Clerk's office is possibly the result of water infiltration from the roof. We would need to investigate this situation further to provide a more substantial response to the problem.

10. The building needs to be re-roofed! The best way to do this, and probably the most expensive option, would be to tear <u>all</u> the existing material off and roof the structure with one system for uniformity of construction.

11. You will preserve and increase the life of the building by cleaning and sealing the exterior brick veneer with a waterproof coating. This is a maintenance item that should be scheduled on a regular (2-5 years) basis. We have sent an example information sheet on one such waterproof coating.

12. The concrete sidewalks at the building exterior have settled in a number of places, probably due to poor soil conditions. This has caused the damaged brick stairs to appear "high" or the soil to seem "pushed around". Placing compacted fill and pouring new sidewalks at the damaged areas is the solution to the sidewalk damage situation.

13. We believe the brick stairs have deteriorated because of mortar <u>and</u> bricks being damaged by water. Further investigation would better assess whether structural damage is a contributing factor. The brick steps, because they are horizontal (and the mortar joints too), are more susceptible to water damage than the brick veneer on the building. Mortar joints are the first masonry item to deteriorate, then the brick will begin to fail. Rebuilding the stairs and sealing the construction with a waterproof coating may be a course of action to consider.

The tie-rods at the building parapet (the threaded rods with large washers/nuts on them) that stick out of the brick appear to be placed to tie the brick veneer back to the concrete wall. The nuts on the rods should be tightened if they are loose. This is another maintenance item your staff can address. Deflection of the brick veneer is a structural problem worth monitoring and correcting. This problem does not compromise the structural integrity of the basic structural system. Our visual observation of the building indicated no obvious problem at this time with the brick veneer.

15. WE LOOKED INTENTLY FOR EVIDENCE OF SIGNIFICANT OR LIFE-THREATENING STRUCTURAL PROBLEMS AT THE COURTHOUSE. BASED ON OUR VISUAL INSPECTION WE BELIEVE THE BUILDING IS SOUND AND STRUCTURALLY SECURE. We could not see anything that raised concern about the structural integrity of the building. In fact, we were rather impressed at how well preserved and sound it seems considering its age and location. You should always be watching for evidence of problems and keep in mind that the building is old and susceptible to more problems of all kinds compared to a new building.

16. The County Surveyor indicated that floors and columns below the jail addition have previously been monitored for deflection and movement. We would highly recommend this monitoring continue and an accurate log of readings be kept for twelve months. This will indicate if the added weight of the jail addition is causing structural damage. We acknowledge that the jail addition has added more load to the existing structural system. That additional loading does not appear, base on our observation, to be causing damage.

A couple of other observation we want to point out to you are:

1. The building does appear to be crowded; perhaps a re-organization of space or additional space elsewhere merits consideration;

2. The County Courthouse has historical significance and in our opinion would deserve preservation/restoration/renovation;

3. You need to head off water damage problems now because they will lead to structural and aesthetic problems in the future.

We hope this summary of our visual observations and conclusions will be of value to you. Remember- regular, consistent, and planned maintenance will increase the life and longevity of the building.

If we can be of further assistance, be it handicap access issues, roofing, stair replacement, window repair, brick cleaning/sealing, space planning, or just assisting with "brainstorming" for ideas, RSS ARCHITECTURE would be pleased to assist the County! We appreciate the opportunity to be of service.

Finally, we delivered the blueprints of the Jail Addition project to the repographics company in Beaverton per the County Surveyor's request.

ake care; if we have missed an issue you believe we should address give us a call and we will accommodate you.

Sincerely,

Randal S. Saunders, Architect

Exhibit D

RSS ARCHITECTURE
A PROFESSIONAL CORPORATION
2225 COUNTRY CLUB ROAD
WOODBURN, OREGON 97071
(503) 982-1211 OR (503) 370-7929

May 6, 2015

Paul Levesque, Chief of Staff
Tillamook County Board of Commissioners
201 Laurel Avenue
Tillamook, Oregon 97141

Re: **TILLAMOOK COUNTY COURTHOUSE**
SEISMIC UPGRADE INFORMATION
Architect's Project No. 1509

Mr. Levesque,

This letter and the information within it is submitted in response to your inquiry regarding seismic (earthquake) vulnerability of the County Courthouse.

RSS ARCHITECTURE, P.C.'s history with and design consulting services endeavors for Tillamook County at the Courthouse date back to 1991. Our very initial project for the County was to do a visual observation of the Courthouse and offer an opinion on the building's structural integrity. Other projects that followed include adding an elevator within the structure, handicap access improvements, remodeling of the former jail area, security assessments, miscellaneous improvements to the State Courts spaces, and another more in-depth review, analysis, and report on the structural character and condition of the Courthouse and County Hospital structure.

The County Courthouse was built in 1932-34. The building structural system is concrete exterior bearing walls, interior concrete columns, concrete joist and pan floor/roof framing, and structural clay tile for interior non-load-bearing partition walls. Remodeling over time has resulted in the replacement of structural clay tile with wood or metal stud framing and gypsum board sheathing for partition walls, though the tile walls do remain in the majority of locations.

It is our opinion when the County Courthouse was originally constructed the structural design was very modern and consistent with technology, information, and requirements of the time. This was a solidly built structure with concrete reinforcing and surprisingly good detailing of structural elements in the 1932 construction drawings (which we and the County have copies of). Times have changed, technology has changed, requirements have changed, and construction methodologies have changed. Does the Courthouse meet current Building Code standards and criteria for general structural integrity and resistance to seismic loads? Our answer: yes to general structural integrity, no to resistance to seismic loads.

As more knowledge has been gained regarding seismic events and seismic forces impact on structures the Building Code has "ramped up" requirements and criteria for design. Prior to 1997 it was very common for wind loads to be the governing factor in structural design, now seismic loads are nearly always, based on geographic location, the governing factor. Design for new construction is different than for remodeling construction. Design for Code designated "essential facilities" which the Courthouse is classified as, is higher criteria than that required for "normal" buildings. It is impossible to go back in to concrete and add internal reinforcing, it is possible to add external reinforcing. It will be nearly impossible to do a seismic retrofit that results in the existing Courthouse building meeting all current Code criteria and requirements - of course an unlimited funding budget would allow such a possibility but we cannot see how that would ever be possible for the County.

Randal S. Saunders · Architect/President

We believe should a seismic upgrade of the Courthouse be implemented that work will have to be a balance of accomplishing as much Code compliance as possible within funds available - and first priorities being life safety improvements. Safety improvements we suggest would be:

- establishing shear walls for the structure; at exterior walls, at interior walls, with new concrete walls, "X" or "V" bracing at walls, or using carbon fiber wrap at existing walls.
- Anchoring the building brick veneer to prevent fall-off during an earthquake (or anything else for that matter).
- Anchoring/reinforcing exterior wall parapets to prevent fall off during an earthquake (or anything else for that matter).
- Seismic bracing for any and all suspended ceiling tile systems in the building. Newer remodeling has this feature.
- Seismic bracing for HVAC equipment, hot water heaters, boilers, piping, plumbing, and any other utility systems in and outside of the building.

There are more sophisticated seismic upgrade possibilities for the building such as foundation base isolation pads. But, our opinion is the cost of such a system would not be justified for the ultimate end "insurance" it affords in an earthquake.

It is our opinion implementing the five bulleted items above would cost at least $75.00 per square foot of structure to complete - construction cost only for seismic improvements listed only. $75.00 x 48,000 square feet of structure (three floors at 16,000 square feet each) = $3,600,000.00. It is a rare project where seismic upgrading does not impact other portions of the building - because of the likelihood of ancillary remodeling being necessary to complete the seismic upgrade we believe such remodeling would cost at least another $75.00 per square foot of structure to complete, taking total construction cost to $7,200,000.00. Added to construction cost is soft costs, those items related to but not directly "bricks and mortar" on a project. Our rule of thumb for intense remodel projects, which is what we believe the Courthouse would be, is 1.4 for soft costs: 1.4 x $7,200,000.00 = $10,080,000.00.

A 2008 assessment/report commissioned by the State of Oregon via the Department of Administrative Services (DAS) concluded there was potentially $16,500,000.00 +- worth of improvements needed at the Tillamook County Courthouse to correct functional, operational, safety, and Building Code issues at State Court System utilized area within the building. Spending up to $26,500,000.00+- on the existing structure makes no sense to us - this equates to approximately $552.00 per square foot of project cost. Perhaps this level of remodel expense is justifiable for the State Capitol Building but we do not believe even that makes practical or financial sense.

The question immediately becomes what amount of money and corresponding improvements makes sense for the Courthouse structure? Our opinion is the building is historically significant and a major architectural and cultural symbol for the community and County. Is it worth it to preserve this historic fabric? Would a State Court system structure be a better investment of the same amount of money for a new building designed to ALL current standards and designed to better meet functional needs versus investment in the Courthouse structure where MOST current standards will be met and functional needs are little or no better than currently exist? With a seismic upgrade completed will the State Court System operate better and safer than occurs now? Will the County? If the State Court system moved out of the Courthouse to a separate site/building would the County be able to consolidate its departments to vacated spaces within the Courthouse? Would such consolidation be "safe"?

Based on our familiarity with the County Courthouse structure our recommendations would be:

a) Before a seismic upgrade occurs provide/install a fire sprinkler system within the structure. The odds of a fire occurring are, in our opinion, much greater than the odds of a major earthquake.

b) If a seismic upgrade is implemented complete basic improvements (such as the previously listed bullet items) and forego more expensive investment - there is a point of "no return" where investment no longer justifies the insurance.

c) It makes the most sense to us for the Court System to move out of the Courthouse to a new location where a facility can be built that meets current Code criteria, best meets functional needs, and offers the most

Based on our familiarity with the County Courthouse structure our recommendations would be (continued):

c) (continued) value for dollars spent. The County can then utilize vacated areas of the Courthouse to consolidate departments and be more efficient in facility use. In a perfect world a new location Court System building and fire sprinkler/bulleted seismic upgrade improvements at the Courthouse would both occur.

We believe the Courthouse building is worthy of continued use. We do not believe potentially spending $10,000,000.00 +- on seismic upgrade improvements to the structure makes financial sense. Potentially spending $26,000,000.00+- for seismic upgrade and State Court System space improvements makes no sense at all. We believe the risk of fire in the building is a greater possibility and more readily mitigated than the risk of earthquake damage. We believe the State Court System space within the Courthouse is dysfunctional from an operational, safety, and security perspective; a new State Court System structure would allow addressing such needs in a highly functional manner versus "making do" with conditions in the Courthouse. There is a value judgement to be made by the County and State: historic significance versus functional use versus seismic safety versus fire safety versus operational needs. Our opinion is: end trying to "fit a square peg in a round hole", move the State Court System functions out of Tillamook County Courthouse to a new structure elsewhere in Tillamook.

Sincerely,

Randal S. Saunders, Architect/President

Exhibit E

DLR Group
Architecture Planning Interiors

DLR Group Architecture & Planning
421 SW Sixth Avenue
Suite 1212
Portland, OR 97204

o: 503/274-2675
f: 503/274-0313

June 19, 2014

Paul Levesque
Tillamook County
201 Laurel Avenue
Tillamook, Oregon 97141
plevesqu@co.tillamook.or.us

Re: Project Name: Tillamook County Courthouse Predesign

Dear Mr. Levesque:

Thank you for contacting DLR Group regarding how much Tillamook County might budget for a courthouse Predesign Services which will include space needs, operational plan, concept design, and concept cost estimating design services.

Our firm recently assisted Jefferson County as it planned for a replacement courthouse in Madras. In developing cost estimates for the County, we analyzed multiple newly constructed courthouses in Oregon, Washington and Northern California. The facilities we studied ranged in cost from $350 to $600 per square foot, depending on the level of finish and court type (Municipal, County, District or Superior).

Based on that study, we recommended to Tillamook County that a county that desires to build a durable, well-operated courthouse should budget $400 per square foot, at minimum.

Based on our preliminary assessment of the services the Tillamook County Courthouse currently provides, you indicated that you anticipated an approximately 35,000 gsf facility based on the following departments being within the facility:

- Three (3) Courtrooms
- Court Administration
- Judicial Support
- District Attorney's Office
- Police Office
- State Agency (DMV/Work Source)

Based on a quick rough order of magnitude program analysis which is attached we are anticipating a program need of closer to 47,000 gsf. At $400 per square foot and 35,000 gsf, a new Tillamook County Courthouse would have a construction cost of approximately $14,000,000.

When negotiating a fee for design services in Oregon or Washington, DLR Group typically tries to follow the Washington Office of Financial Management's Guidelines for Determining Architect/Engineer Fees for Public Works Building Projects. (The state of Oregon has no such official guidelines for public facilities construction.) Those fee guidelines are divided into three levels determined by the type and complexity of the building. A courthouse project under those guidelines is considered a Type A facility, meaning a facility "with more than average design difficulty" or a "Complex" category from a Predesign standpoint.

All told, our programming analysis for Tillamook County, which included a fully developed building program and predesign services, cost $160,320, which is less than the Washington State Predesign Fee guidelines as indicated on the attached predesign proposal document. This number includes all fees, services and reimbursable expenses. We would recommend Tillamook County budget a similar amount for its programming analysis.

Sincerely,

DLR Group

William Valdez, PE, LEED Green Associate, DBIA
Principal

DLR Group
Portland, Oregon
o: 503/274-2675 f: 503/274-0313

TILLAMOOK COUNTY COURTHOUSE

SIZE: 35,000

MACC: $ 14,000,000.00

PROJECT $ 19,890,000.00

A.1	Basic Programming	WA Predesign Fee Calcualtion	Lump sum cost for This Project	Project Management $ 225	Programming $ 165	Architecture $ 165	Engineering $ 165	Professional Support $ 110	Admin $ 85	Civil Project Engineer $ 105	Cost Estimator $ 165
1.01	Space List Assessment	basic	$ 17,460	16	60	24	-	-	-	-	-
1.02	Operational and Staffing Plan	basic	$ 7,080	8	32	-	-	-	-	-	-
1.03	Funding & Program Options	basic	$ 7,140	20	16	-	-	-	-	-	-
1.04	Block & Stacking Options	basic	$ 10,640	16	8	24	-	16	-	-	-
1.05	Site Review & Conceptual Design	basic	$ -	-	-	-	-	-	-	-	-
1.05a	Site evaluation and criteria confirmation	basic	$ 8,100	8	-	16	12	-	-	16	-
1.05b	Diagrammatic site layout	basic	$ 9,850	8	-	20	12	16	2	8	-
1.05c	On-site scope and utility	basic	$ 7,530	2	-	8	12	-	-	36	-
1.05d	Off-site scope and utility and any mitigation	basic	$ 5,550	4	-	6	12	-	-	16	-
1.05e	Review of Geotechnical	basic	$ 5,280	8	-	8	8	-	-	8	-
1.05f	Parking & Site Amenities	basic	$ 3,940	-	-	16	-	8	-	4	-
1.05g	Building Massing	basic	$ 10,310	4	-	32	8	24	2	-	-
1.05h	Concept Plans	basic	$ 12,710	12	4	32	-	24	2	12	
1.05i	System specification - System Narratives	basic	$ 10,860	8	-	24	24	-	6	6	-
1.06	LEED Requirements	basic	$ 2,850	-	-	8	8	-	-	2	-
1.07	Construction Cost Estimating	basic	$ 11,880	8	-	8	8	-	-	8	40
1.08	Operations Cost Estimating	basic	$ 8,400	8	8	-	4	-	-	-	28
1.09	Presentation - 1 County Executive Team	basic	$ 6,660	12	12	12	-	-	-	-	-
1.1	Presentation - 1 Public & County	basic	$ 4,680	12	-	12	-	-	-	-	-
	Basic Programming Services (1% of Project Budget per state fee schedule)	$ 198,900	$ 150,920	34,650	23,100	41,250	17,820	9,680	1,020	12,180	11,220
	Total Basic Programming Services	$ 198,900	**$ 150,920**								

A.2	**AE Reimbursable Expense** (note: sub-consultant reimbursable expense is lump summed in their fee)		
2.01	Travel		$ 6,800
2.02	Printing Allowance, drawings, text, funding exhibits		$ 2,200
2.03	Shipping		$ 400
	Total Reimbursable Expense		$ 9,400
	Total Lump Sum Fee		**$ 160,320**

Exhibit F

19-Jun-14

DEPARTMENT SPACE REQUIREMENTS

		Concept Program		
		5 Year	10 Year	20 Year
1.0	**Court & Justice Services**			
1.1a	Public Info	3842	4102	4283
1.1b	Courtroom	9784	9784	9784
1.1c	Judicial Offices	1457	1457	1962
1.1d	Jury Deliberation	1752	1752	1752
1.1e	Court Admin	1433	1433	1433
1.1f	IT	473	473	473
1.1g	In-Custody Defendant	4862	4862	4862
1.2a	DA & Victim Asst	5471	5639	5818
1.4a	Court Support	9566	9566	9566
2.0	**County Services**			
2.1	Police	5000	5000	5000
2.2	State Agency (DMV/Work Source)	3000	3000	3000
	BUILDING SUBTOTAL	**46640**	**47068**	**47933**
TOTAL				

Courts Total	33429
Percent of Total Facility that is Courts	71.02%
50% Total of Courts	35.51%

Exhibit G

ENDORSED
Filed
7-14, 2004
Tassi O'Neil
County Clerk

#3137

STATE OF OREGON
INTERGOVERNMENTAL OFFICE SPACE LEASE AMENDMENT

This Lease Amendment, dated June 10, 2004, is made by and between TILLAMOOK COUNTY, a political subdivision of the State of Oregon (Lessor) and STATE OF OREGON, acting by and through its Oregon Department of State Police (Lessee).

Lessor and Lessee are parties to a Lease dated May 13, 1997, (herein referred to as the Lease), covering Premises described as approximately 1,626 usable square feet of office space (or approximately 2,029 rentable square feet), use of the associated common areas and parking spaces, as described below by room numbers located at the site at 5995 Long Prairie Road, Tillamook County, Tillamook, Oregon, 97141.

Demised Office Space: Rooms #14, #15, #16, #23, #25, #26, #27, #30, #31, and #45.
Common Use Areas: Rooms #07 (Interview Room), #09 (Observation Room), #11 (Mail/Work Room), #12 (Conference/Briefing Room), #24 (Trooper Work Area), #29 (Armory), #34 (Equipment Room), #37 (Women's Locker Room), #38 (Exercise Room), #40 (Men's Locker Room), and Restroom/toilets in the facility.

Lessor and Lessee desire to amend or supplement the Lease.

In consideration of the mutual agreements contained herein, Lessor and Lessee agree that the Lease shall be amended or supplemented as follows:

1. **PREMISES.** The Premises **shall be increased by 1,120 square feet of boat storage** (Two (2) bays 14' x 40' each). The new Premises total shall be 1,626 useable square feet of office space (or approximately 2,029 rentable square feet), and 1,120 square feet of boat storage bays (Two (2) bays 14' x 40' each), and use of the associated common areas and parking spaces as described above.

2. **TERM.** The additional boat storage space shall commence on **July 1, 2004** and continue through **June 30, 2017.**

3. **RENT.** The Base Rent shall remain the same for the office space per the following Rent Schedule, but Lessee shall make to Lessor a **one time payment of eight thousand dollars ($8,000.00)** for additional rent of boat storage space within thirty (30) days of the execution of this Lease Amendment.

LEASE PERIOD	NET RENT	BASE OP EXPENSES	BASE RENT
7/01/04- 6/30/17	$2,130.45	$405.80	$2,536.25

This one time payment is the **total additional rent due for the storage space throughout the life of this Lease or June 30, 2017.** The additional rent shall be calculated as follows: ($8,000.00 ÷ 13 years = $615.38 per year ÷ 12 months = $51.28 per month). Should either party terminate this Lease prior to the termination date, Lessee shall be reimbursed for the boat storage space only, within thirty (30) days, for any un-used prorated amount of rent based on the formula above.

4. **CONFIDENTIALITY OF BUSINESS INFORMATION.** Lessor acknowledges that Lessee's permitted use of the Premises includes the creation, management and retention of business information of a personal or confidential nature, and that the unauthorized acquisition or disclosure of such information may be grounds for civil and/or criminal liability. Lessor, for itself, its agents, employees and contractors, agrees that it will take no action that would jeopardize the confidentiality of Lessee's business information or expose such information to disclosure, whether such information has been identified to Lessor as confidential or otherwise,

and will cooperate with Lessee in affirmatively protecting the confidentiality of all information so designated as confidential or otherwise of a sensitive nature. Lessor acknowledges and agrees that violation of the provisions of this section will be deemed a material breach of the Lease, for which Lessee may terminate the Lease and for which additional remedies may also be available.

Except as expressly amended or supplemented hereby, all other terms and conditions of the Lease shall remain in full force and effect.

State Workers' Compensation Act. Should Lessor employ anyone to perform any work required under this Lease, the Lessor shall comply with State Workers' Compensation Act. Lessor, its contractor or subcontractors, if any, and any employers providing work, labor or materials under this Lease are "subject employers" under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide Oregon workers' compensation coverage that satisfies Oregon Law for all their subject workers, or are exempt under ORS 656.126.

This Lease Amendment shall not become effective nor be binding on the State of Oregon or the Lessee agency until it has been executed, in the signature spaces provided below, by all parties to the agreement.

The parties have executed this Amendment the 9th day of July, 2004.

LESSOR: TILLAMOOK COUNTY, a political subdivision of the State of ~~Oregon~~

By Paul A. Hanneman

LESSEE: STATE OF OREGON acting by and through its Oregon Department of State Police

By Ken Wheeler

APPROVAL: STATE OF OREGON acting by and through its Department of Administrative Services

By Dale A. Walker
Facilities Division

Date 7/9/04

INTERGOV AMEND TILLAMOOK LONG PRAIRIE
DY 5/3/04

STATE OF OREGON
LEASE

THIS LEASE, dated May, 13, 1997, is made by and between TILLAMOOK COUNTY, a political subdivision of the State of Oregon, ("Lessor" or "County") and the STATE OF OREGON, acting by and through its Department of State Police ("Lessee" or "State"). Contact persons for the parties are as follows:

Parties: LESSOR: Property Manager
Tillamook County
201 Laurel Avenue, Tillamook, Oregon 97141
Phone: 503 - 842-3403 FAX: 503 - 842-1384

LESSEE: Business Services Manager, Support Services Bureau,
Oregon Department of State Police,
107 Public Service Building, Salem, Oregon 97310.
Phone: 503 - 378-3720 X4602 FAX: 503 - 373-1825

Lessor hereby leases to Lessee and Lessee takes from Lessor the premises together with any appurtenances thereto, described as follows:

Premises: The Premises leased are at the site and in the office facility commonly known as the Tillamook County Justice Facility, located at 5995 Long Prairie Road, Tillamook, Oregon; consisting of approximately 1,626 usable square feet of office space (or approximately **2,029 rentable square feet**), use of the associated common areas and parking spaces, as described below by room numbers and further described in the Facility's Space Plans, which is by this reference made a part of this Lease.

Demised Office Space:	Rooms #14, #15, #16, #23, #25, #26, #27, #30, #31, and #45.
Common Use Areas:	Rooms #07 (Interview Room), #09 (Observation Room), #11 (Mail/Work Room), #12 (Conference/Briefing Room), #24 (Trooper Work Area), #29 (Armory), #34 (Equipment Room), #37 (Women's Locker Room), #38 (Exercise Room), #40 (Men's Locker Room), and Restroom/toilets in the facility.

The Lessor and Lessee agree that the terms of this Lease are as follows:

1. Term. The original term of this Lease shall commence **July 1, 1997,** or as of the date the Premises are delivered to and accepted by Lessee, whichever is later, and shall continue for a term of twenty (20) years through **June 30, 2017.** The actual commencement date, if not July 1, 1997, will be memorialized by a Lease Addendum.

2. Rent. Lessee shall pay rent in arrears by the 10th day of each month for the preceding month or partial month, directly to Lessor without requiring Lessor's monthly billing. Rent for any partial month shall be prorated on a per diem basis. Monthly base rent shall be **$2,536.25** on a full service basis, which is based on @$1.25 per rentable square foot per month, consisting of $2,130.45 Net Rent @$1.05 and $405.80 Base Building Operating Costs@$0.20 per square foot per month.

2.1 The Building Operating Costs component of the rent shall be subject to escalation and/or deescalation per actual costs accounted for on an annual basis in the manner as provided in this Lease under section 23 ; the components included are: water, sewer, electricity, gas, fuel oil, trash removal, janitorial services and supplies, window washing, snow and ice removal and building security as listed under section 11 of this Lease.

2.2 The Net Rent portion of the rent is understood to contain funds to cover Lessor's costs for the repair and maintenance of the Premises as provided in section 9 of this Lease. To ensure the availability of funds for the County to perform the required repairs and maintenance of the Premises under this Lease, the parties agree that the County shall establish as a special account or accounts as the County may determine to administer the fund,

expenditure of which shall be dedicated exclusively for use by the County to perform the repair and maintenance of the Premises leased by the State. County shall have the exclusive right to the fund at the end of the Lease term, including any extensions hereunder. County acknowledges that the County shall be solely responsible for the repair and maintenance of the Premises.

3. Option to Extend. If Lessee is not in default, Lessee shall have the option(s) to extend this Lease for additional extension term/s of five (5) or more years each for a period in aggregate up to twenty (20) years. Each extension term shall commence on the day following the expiration of the immediately preceding term. Notice exercising an extension option shall be delivered to Lessor in writing not less than ninety (90) days prior to the expiration of the preceding term. If such notice is given, except as expressly amended, all terms and conditions of this Lease shall apply during the extension term. The monthly base rent for the extension term/s shall remain same at **$2,536.25** with the Building Operating Costs component therein continuing to be subject to the Escalation/ Deescalation provision of this Lease.

4. Use of Premises. Permitted uses: Lessee may use the Premises for business offices, storage, and other lawful purposes including but not limited to functions related to the conduct of its business as a state agency; Oregon State Police.

4.1 Restrictions on Use. In connection with use of the Premises Lessee shall:

(a) Conform to all applicable laws and regulations of any public authority affecting the Premises and any use. However, Lessee shall not be required to make any structural changes to effect such compliance.

(b) Refrain from any activity outside the "permitted uses" which would make it impossible to insure the Premises against casualty, or increase the insurance rate, unless Lessee pays the additional cost of the insurance.

(c) Refrain from any use which would be reasonably offensive to other tenants or owners or users of neighboring premises, or tend to create a nuisance, or damage the reputation of the Premises.

(d) Refrain from storing on or discharging from or onto the Premises any hazardous wastes or toxic substances as defined in 42 USC Sections 9601 - 9657, as amended, or ORS 466.005 *et seq.*, as amended.

(e) Refrain from making any marks on or attaching any sign, insignia, antenna, aerial, or other device to the exterior or interior walls, windows, or roof of the Premises without the written consent of Lessor, which shall not be unreasonably withheld.

5. Parking. Lessee, its employees, and clientele shall have the exclusive right to park in 25 spaces so designated by Lessor.

6. Lessor's Covenants.

(a) Lessor covenants that Lessor has the right to make this Lease and to lease the Premises to Lessee; that possession of the Premises will be delivered to Lessee free of other tenants and of conflicting claims; that the use of the Premises by Lessee for the specific uses set forth in paragraph above titled "Use of Premises" is not in violation of any federal, state or local statute, regulation or ordinance, including the acknowledged comprehensive land use plans and regulations of the city or county in which Premises are located; and that on paying the rent and performing its covenants of this Lease, Lessee may enjoy the rights granted by this Lease free from rightful interference by any third party.

(b) Lessor covenants that the Premises, including any common areas in the building to be used by Lessee, comply with all applicable regulatory and building codes requirements for occupancy by Lessee, and meet the requirements of the Americans with Disabilities Act (ADA) for accessibility in accordance with the standards provided in the ADA Accessibility Guidelines for Buildings and Facilities (ADAAG) and Oregon Revised Statutes (ORS) 447.233, if parking is provided under this Lease.

(c) Lessor covenants that Premises are free of asbestos and asbestos containing materials (ACM) based on the fact that the Premises will be a part of the County facility to be newly constructed under the current building code requirement which prohibits use of any asbestos containing materials.

7. Work to be Performed by Lessor.

(a) Prior to the commencement date of the lease term Lessor shall develop appropriate design specifications and construction plans (Construction Exhibits) for a serviceable and safe office facility which incorporate Lessee's requirements as described in Exhibits "A" (Space Plans) and "A-1" (Casework details and other specifications including electrical/data cabling/telephone wiring standards and locations), and improve the Premises with all work to be done in accordance with the utmost professional standards and in the most highly professional manner. All work shall comply with or exceed the performance standards provided in the Department of Administrative Services Leased Facilities Construction Standards, as attached hereto as Exhibit _"B"_, and Uniform Building Codes with the latest State of Oregon Amendments in effect at the commencement of such work, and shall meet all requirements for accessibility and usability by disabled persons as provided in the Americans with Disabilities Act ("ADA") in accordance with the standards provided in the ADA Accessibility Guidelines for Buildings and Facilities ("ADAAG"), and with respect to parking for the disabled, compliance with Oregon Revised Statutes (ORS) 447.233. Lessor shall obtain all required building and occupancy permits and final inspections by all applicable codes enforcement agencies.

(b) Construction Exhibits: Construction Exhibits pertaining to this project are listed below and by this reference made a part of this Lease:

Exhibit A.	Lessee's space requirements(Space Plans)
Exhibit A-1.	Lessee's work specifications
Exhibit B.	DAS Leased Facilities Construction Standards
Exhibit C.	Lessor's Construction Work Specifications
Exhibit D.	Full set of Lessor's Construction Drawings (including Space Plans, Architectural and mechanical drawings)

(c) Within forty-five (45) days of the execution of this Lease, Lessor shall deliver to Lessee the Construction Exhibits which shall incorporate Lessee's specific facility requirements (Exhibit A and A-1) and the Construction Standards (Exhibit B), prepared by applicable licensed professional(s) employed by Lessor. These Construction Exhibits are subject to review and approval by Lessee. Lessee shall have ten (10) days to review the Construction Exhibits to approve, reject or suggest changes. When changes are suggested by Lessee, Lessor shall make those changes within a reasonable time period and resubmit the Exhibits to Lessee. Lessee shall review the revised Construction Exhibits within a reasonable time period and approve them if satisfactory. The final version of the Construction Exhibits approved by Lessee shall bear the stamp(s) of Lessor's professional(s) and be finalized by sign-off by Lessor and Lessee. The Department of Administrative Services may sign-off for Lessee when so requested by Lessee. No work by Lessor shall begin until all the Construction Exhibits have been so finalized. Any changes to the finalized Construction Exhibits shall be negotiated and processed as change orders. All change orders which materially change the terms of the Lease shall require processing through and approval by the Department of Administrative Services.

(d) Upon completion of the work, Lessor shall provide to Lessee a statement, signed by Lessor, certifying that the work has been completed in full compliance with all applicable codes and in accordance with all the specifics as provided in the finalized Construction Exhibits and the Change Orders, if any; and that the Premises are ready for Lessee's inspection for acceptance. Lessor shall provide Lessee and Department of Administrative Services each a set of as-built drawings, which shall include architectural and mechanical drawings. The Lessor's statement shall be supported with appropriate attachments including permits, inspection reports, warranties, and reports of consulting professionals, as applicable. Lessee will inspect the Premises within ten (10) working days of the receipt of Lessor's statement. Lessee shall inform Lessor in writing of Lessee's determination as to the acceptability of said work and of the Premises within ten (10) working days following the inspection.

(e) Lessee shall have the right to inspect Lessor's work in progress from time to time. Lessee's approval of the Construction Exhibits, inspection of Lessor's work, and taking possession of the Premises, in no event shall be deemed a waiver of any defects in or of Lessor's work or the Premises.

(f) Lessee shall owe no rent until the Lessor has delivered the Premises to Lessee with Lessor's work complete and duly accepted by Lessee in the manner provided hereinabove or until Lessee takes possession of the Premises with Lessor's work substantially complete. If the date of delivery of the Premises is different from the commencement date of this Lease term as provided in Paragraph 1. herein, the date Lessee actually takes possession of the Premises shall be memorialized in the form of a Lease Addendum. Such possession of the Premises by Lessee shall not be construed as a waiver of any other remedies Lessee might have for Lessor's failure to deliver possession of the Premises on the commencement date of this lease.

(g) Notwithstanding subsection (f) hereinabove, if only minor faults or minor omissions of Lessor's work are noted at the inspection, Lessee may, at its option, take possession of the Premises on condition that Lessor shall complete the work with due diligence as described in the Construction Exhibits. Lessee and Lessor shall prepare a punch list of work remaining to be completed by Lessor as identified at the inspection, and all such work shall be completed by Lessor at Lessor's expense within thirty (30) days of the inspection. Any defects or omissions of Lessor's work subsequently discovered shall be reported to Lessor in writing and be corrected or completed by Lessor at Lessor's expense within thirty (30) days of Lessee's notification to Lessor. If Lessor fails to complete the work within the time specified, Lessee may, after written notice to Lessor, have the necessary work accomplished, and deduct the cost from the rent.

(h) Construction work to be performed by Lessor or Lessor's contractor is understood to be a public works contract or contracts as the term, "public works" is defined in ORS chapter 279, and Lessor as a public contracting agency is expected to comply with all applicable provisions of the statutes relating to public works contracts.

8. Improvements and Alterations. Lessee may place fixtures, partitions, personal property, and the like in the Premises and may make nonstructural improvements and alterations to the Premises at its own expense. Any tenant improvement work which modifies or affects proper operation of the HVAC system shall require written approval of Lessor. Lessee may, but shall not be required to, remove such items at the end of the Lease term.

9. Maintenance and Repair of Premises.

(a) Lessor shall perform at Lessor's sole cost and expense all necessary maintenance and repairs of: (1) the structure, foundation, exterior walls, roof, doors and windows, elevators, emergency lighting, and Lessor-provided fire extinguishers, sidewalks, and parking area which are located in or serve the Premises, maintaining the Premises and the common areas in a hazard free condition; (2) the heating, air conditioning, plumbing, electrical, and lighting systems in the Premises, replacing parts of the system as necessary, obtaining required permits and inspections from Codes enforcement authorities; (3) the Premises, improvements, grounds, and landscaping, keeping them in good repair and appearance, replacing dead, damaged or diseased plant materials when necessary; (4) interior walls, performing touch-up and repainting as necessary when it is due to normal wear or deterioration; and (5) carpets and other floor coverings. Carpets and other floor coverings shall be repaired and replaced as necessary by Lessor at Lessor's sole cost and expense when it is due to premature wear/deterioration or due to normal and expected wear and tear. Lessor understands and agrees that the carpets and other floor coverings provided or installed in the Premises at the commencement of this Lease shall be of the type and quality to last at least through the original term of the Lease, to the extent feasible; and that the areas identified by Lessee as the high traffic areas such as public/client waiting areas shall be provided with a heavy duty stain resistant vinyl backed carpet with moisture guard features. Carpets and floor coverings which fail to last through the original term of the Lease under normal and expected wear shall be considered "premature wear" for the purposes of this paragraph. Lessor shall at Lessor's sole cost and expense provide, furnish, install, and replace all exterior and interior light fixtures, including ballasts, bulbs, and fluorescent tubes, except when Lessor is NOT responsible for providing the janitorial services under this Lease, in which case Lessee shall be responsible for replacing the interior bulbs and interior fluorescent tubes. The parties acknowledge that energy conservation to the extent feasible is in the best interest to both parties, and agree to make best efforts to contribute toward gaining energy efficiency wherever possible.

(b) Property Management Service. In the event Lessor employs a property management service to perform all or part of the above listed maintenance and repair of the leased Premises, Lessee shall have the right to inform such property management service of any deficiencies in the performance of its services. In the event those duties are not performed in a satisfactory or timely manner, Lessee shall have the right to notify Lessor of such

unsatisfactory service, and request Lessor take appropriate corrective actions including termination or replacement of such property management service, if the performance continues to be unsatisfactory as determined by Lessee.

(c) Should Lessor fail to maintain the Premises in accordance with above requirements, and after reasonable prior notification to Lessor to remedy the problems, Lessee may contract for necessary labor, equipment and material to bring Premises within those requirements and may deduct related costs from future rent payments.

(d) Lessee shall take good care of the interior of the Premises and at the expiration of the term surrender the Premises in as good condition as at the commencement of this Lease, excepting only reasonable and expected wear and tear, permitted alterations, and damage by fire or other casualty.

10. Heating, Ventilating and Air Conditioning (HVAC) Standards.

(a) The HVAC system shall be so designed and sized as to satisfy all of the factors contributing to the respective cooling and heating loads of the building, and its individual spaces. Special consideration shall be given to HVAC unit zoning by sectioning every area where load variations occur. Temperature variations in any given zone shall not exceed 5° F total.

(b) System Design Parameters: The system shall be designed using the geographical summer and winter outdoor design conditions and other Energy Conservation measures as set forth in the Uniform Building Codes, 1991 Edition, and the State of Oregon 1993 Amendments, Chapter 53, or the latest current Codes applicable as of the commencement date of this Lease. Equipment, ductwork, grilles and registers shall be designed using ASHRAE Handbook to minimize noise, and to provide for balanced air flows and temperatures throughout the building. The system shall be capable of maintaining, at design conditions, the following temperature swings during occupied hours: (1) Heating: 68-78° F; (2) Cooling: 68-78° F. All HVAC systems shall have a programmable setback capability with a manual override. The system shall be setback/setup during unoccupied hours as follows: (1) Heating setback of 10 - 15° F and shall at no time allow indoor temperature to drop below 55° F; (2) Cooling setup shall not allow the interior temperature to rise above 85° F. At the beginning of the work day, building or the premises must be at the occupied temperature. Operating hours shall be regular working days (Monday through Friday), holidays excepted, commencing at 7:00 a.m. and ending at 6:00 p.m. All enclosed rooms, with the exception of janitorial closets, shall be provided with both a supply and a return air duct. System shall provide an optimum of 25 CFM but not less than 15 CFM of outside air per occupant ventilation, and shall be capable of continuous air circulation throughout the occupied areas. System shall be designed to provide one complete air change every 15 minutes.

(c) System Maintenance: Lessor shall be responsible for maintaining the system in proper operating condition to the standards set forth above. Maintenance shall be performed as frequently as may be required by the local conditions in keeping the system in proper operating condition, but shall not be less than: Every three (3) months a preventative maintenance check, every six (6) months complete filter changes, once every two years clean the coils on all units. On request by Lessee, Lessor shall provide Lessee with copies of work orders signed by the maintenance person who performed the work. Should Lessor fail to maintain the system in accordance with above standards, and after written notification to the Lessor, Lessee may contract for necessary labor, equipment and material to bring system within those standards and may deduct related costs from future rent payments.

11. Services and Utilities.

(a) Lessor will cause the utilities and services listed below to be furnished to the Premises. Charges shall be paid as indicated:

Utility or Service	Monthly Charges Paid By: Lessor	Lessee
Water	X	
Sewer	X	
Electricity	X	
Gas	X	
Fuel Oil, if used for heating	X	
Trash Removal	X	

Janitorial Service	X	____
Janitorial Supplies	X	____
Window Washing	X	____
Snow and Ice Removal	X	____
Building Security (If required)	X	____

(b) Lessor shall arrange for janitorial services that comply with the specifications appropriate for the County Justice Facility, which standards shall be subject to review, input and consent of Lessee with respect to the application to the leased Premises. In doing so, Lessor shall make best effort to support the policy of the State of Oregon, as provided in Oregon Revised Statutes 279.015 and 279.835 to 279.855, either by contracting with a qualified nonprofit agency for disabled individuals, otherwise referred to as Qualified Rehabilitation Facility (QRF), whenever such is locally available and feasible; or by allowing the janitorial services to be taken out of the lease with a reasonable reduction in rent to enable Lessee to contract directly with a QRF for the janitorial services if such becomes locally available and feasible. Lessee is hereby given such an option, which may be exercised with at least sixty (60) days advance written notice to Lessor, during which time the reasonable cost for the janitorial services to be deducted from the rent shall be negotiated and the Lease amended to effect the change.

(c) Recycling Materials: Lessor shall support the policy of the State of Oregon for recycling materials as provided in Oregon Revised Statutes ORS 279.735 by providing adequate collection areas and storage facilities for office recycling programs when recycling services are available to Lessee as a state agency.

(d) Telephone and Data Cable and Wire: Lessor shall be responsible for the installation and maintenance of all telephone and data cable and wire to the telephone/computer room/closet in the Premises including bringing sufficient number of lines to the telephone and computer room on the floor and in the area where the Premises are located for Lessee's use. Lessor shall also be responsible for installation of all station wire in the Premises during the initial tenant improvement work. Such installation shall meet the standards provided in Exhibit "B" herein. Following the completion of the initial tenant improvement work, installation of any new station wire and data cable and the maintenance of all station wire shall be Lessee's responsibility. Station wire means that wire or cable which runs between the station jack(s) and the telephone/computer room, and those which run between and among station jacks.

(e) Should Lessor fail to provide the janitorial and other services at the levels specified hereinabove, including applicable Exhibits or attachments to this Lease, and after reasonable written notification to Lessor, Lessee may contract for necessary labor, equipment and material to correct the deficiencies and may deduct the related costs from future rent payments.

12. Lessor's Liability Insurance.

(a) Lessor shall obtain and keep in effect during the term of this Lease, a Comprehensive General Liability policy or a Commercial General Liability policy for the Leased Premises, covering bodily injury and property damage from an insurance company authorized to do business in the State of Oregon. Insurance coverage shall include bodily injury coverage, contractual liability coverage for the indemnity provided under this Lease. Coverage limits shall not be less than $1,000,000 combined single limit per occurrence. Should the terms and conditions of Lessor's insurance coverage change during the term of this Lease, the State reserves the right to require that Lessor replace any coverage omitted or deleted by the change. There shall be no cancellation, material change, potential exhaustion of aggregate limits or intent not to renew insurance coverage(s) without thirty (30) days' prior notice to Lessee from Lessor or its insurer(s).

(b) The liability insurance coverage required under paragraph (a) hereinabove shall include the Lessee as written in this Lease, including its officers and employees, as additional insureds only with respect to acts or omissions of Lessor, its officers, contractors, employees or agents under this Lease.

(c) As evidence of the insurance coverage required by this Lease and prior to commencement date of this Lease, Lessor shall furnish to Lessee a certificate of insurance. The certificate(s) will specify all parties who are additional insureds (or loss payees). Insurance coverage required under this Lease shall be obtained from acceptable insurance companies or entities. The Lessor shall be financially responsible for all deductibles, self-insured retention and/or self-insurance included hereunder.

13. Lessee's Liability Coverage. Lessee agrees to be responsible for any damage or third party liability which may arise from its occupancy and use of the Leased Premises, subject to the limitations and conditions of the Oregon Tort Claims Act, ORS 30.260 through 30.300, and the Oregon Constitution, Article XI, Section 7, to the extent of liability arising out of the negligence of the State. The State shall not be required to indemnify or defend Lessor for any liability arising out of the wrongful acts of employees or agents of the Lessor.

14. Statement of Self-Insurance. The State of Oregon is self-insured for its property and liability exposures, as subject to the Oregon Tort Claims Act, ORS 30.260 through 30.300. A Certificate of Self-Insurance will be provided, upon request of the Lessor.

15. Waiver of Subrogation. Neither Lessor nor Lessee shall be liable to the other for any loss arising out of damage to or destruction of the Leased Premises or the Facility or the contents thereof, when such loss is caused by any of the perils which are or could be included within or insured against by a standard form of fire insurance with extended coverage, including sprinkler leakage insurance, if any. All such claims against one another for any and all loss, however caused, hereby are waived. Said absence of liability shall exist whether or not the damage or destruction is caused by the negligence of either Lessor or Lessee or by any of its respective agents, servants or employees. Each party shall fully provide its own property damage insurance protection at its own expense, and each party shall look to its respective insurance carriers for reimbursement of any such loss, and further, the insurance carriers involved shall not be entitled to subrogation under any circumstance.

16. Casualty Damage. If the Premises or improvements thereon are damaged or destroyed by fire or other casualty to such a degree that the Premises are unsuitable for the purpose leased, and if repairs cannot reasonably be made within ninety (90) days, Lessee may elect to cancel this Lease. Lessor shall in all cases promptly repair the damage or ascertain whether repairs can be made within ninety (90) days, and shall promptly notify Lessee of the time required to complete the necessary repairs or reconstruction. If Lessor's estimate for repair is greater than ninety (90) days, then Lessee, upon receiving said estimate will have twenty (20) days to determine if it wishes to cancel this Lease. Following damage, and including any period of repair, Lessee's rental obligation shall be reduced to the extent the Premises cannot reasonably be used by Lessee.

17. Assignment and Subletting. Lessee shall not have the right to assign this Lease or sublet any part of the Premises to another State agency, or sublet any parking spaces to state employees, without express approval of Lessor.

18. Funding. The parties understand that rental and other charges to Lessee under this Lease are to be paid only from funds derived by legislative appropriation or budget limitation. The parties mutually understand that this Lease is made by the Lessee in its official capacity as a state agency and not by its officers as individuals.

19. Non-appropriation.

(a) If sufficient funds have not been provided in the legislatively approved budget of Lessee, Oregon Department of State Police, to permit Lessee in the exercise of its reasonable administrative discretion to continue this Lease, or if by a specific legislative act, Lessee as named herein is abolished or its functions absorbed into other state agency or agencies, Lessee may terminate this Lease without further liability to Lessor with not less than one hundred twenty (120) days prior written notice to Lessor. During such termination notice period, Lessee may negotiate with Lessor for continued occupancy in a portion of the Premises at a reduced rent. If that is not feasible on mutually acceptable terms, then the Lease shall terminate as notified. In determining the availability of funds to Lessee, Lessee will use the budget approved by the Oregon State Legislature or acts of the Legislative Emergency Board.

(b) It is agreed that Lessee will make the best effort to the extent of its administrative discretion to keep the Premises occupied and continue this Lease. For the purposes of this section, the term "reasonable administrative discretion" shall not be construed to provide for termination of this Lease by Lessee to allow Lessee to move to another facility or structure within Tillamook County, solely because of Lessee's need to reduce costs.

20. Default. Neither party shall be in default under this Lease until written notice of the unperformed obligation has been given and that obligation remains unperformed after notice for fifteen (15) days in the case of a payment or for thirty (30) days in the case of other obligations. If the obligation cannot be performed within the thirty-day period, there shall be no default if the responsible party commences a good faith effort to perform the obligation within such period and continues diligently to complete the performance. In case of a default the nondefaulting party may terminate this Lease with thirty (30) days prior written notice to the defaulting party, and it shall be entitled to recover damages or any other remedy provided by applicable law, or it may elect to perform the defaulting party's obligation and recover from the defaulting party the costs plus interest at the legal rate for judgment. If Lessee make such expenditures as the nondefaulting party, those expenditures may be deducted from the rent.

21. Notices. Notices between the parties shall be in writing, effective when personally delivered to the address specified herein under **"Parties"** on Page 1, or if mailed, effective forty-eight (48) hours following mailing to the address for such party specified below or such other address as either party may specify by notice to the other.

22. Holdover. Lessee, under extenuating circumstances, may hold over this Lease for a period of two (2) months after the end of the lease term without obtaining prior consent of Lessor. If Lessee holds over the lease term, a tenancy from month to month shall be created at the same rental rate as the immediately preceding month's, and the holdover shall not be construed as an exercise of any renewal option contained herein. Lessee holding over the Lease longer than the first two months shall be subject to Lessor's consent.

23. Operating Expense Escalation/Deescalation.

(a) It is the intent of the parties that Lessee shall pay its share of the Operating Expenses for the Premises. The monthly base rent contains a component covering such expenses in terms of the best estimate, which is to be reconciled with the actual expenses on an annual bases in accordance with the procedures provided below. The component in the base rent for the Operating Expenses is $405.80 per month or $4,869.60 per year @0.20 /sf/mo. ("Base Operating Expenses"). For this purposes, the share of the Premises is to be computed as a percentage (%) of the total rentable square feet of the building or facility in which the leased Premises are located. The Operating Expense Year shall be the twelve (12) month period commencing with the first full month of Lessee's occupancy of the Premises, and each twelve (12) month period thereafter. For this Lease the first and Base Operating Expense Year shall be the first full lease year, commencing from the actual date of occupancy.

(b) Operating Expenses which are subject to escalation/deescalation shall mean only those expenses required of Lessor to furnish the utilities and services to the Premises as specified in the "Services and Utilities" paragraph in this Lease. Such Operating Expenses shall not include: Lessor's expenditure for maintenance and repairs of the Premises under the "Maintenance and Repair of Premises" and "Heating, Ventilating and Air Conditioning (HVAC) Standards" paragraphs of this Lease; nor Lessor's property management expenses, nor premiums for Lessor's insurance coverage, nor any other cost or expense items of Lessor's which are capitalized by Lessor for tax purposes, nor depreciation, nor debt service paid by Lessor.

(c) If during the term of this Lease, Lessor's Operating Expenses increase or decrease over the Base Operating Expense Year expenses estimates, Lessee shall pay its proportionate share of the increase or receive a rent reduction in the form of rent credit equal to its proportionate share of the decrease. Lessor shall provide a statement to Lessee within forty-five (45) days if possible but shall not exceed ninety (90) days after the end of the Operating Expense Year, detailing the increases/decreases in the Operating Expenses. Lessor is deemed to have waived the right to adjust the rent upward in case Lessor fails to provide the statement to Lessee within the ninety (90) day period. Lessee may choose to pay for any increase in a lump sum within thirty (30) days of receipt of statement from Lessor, or to increase its monthly rent by an amount equal to 1/12 of the increase, commencing with the next monthly rent. Lessor's failure to provide Lessee with the accounting statement shall not abrogate Lessee's right to receive the benefits of any deescalation. Lessor shall make available, upon Lessee's request, books, records, or receipts substantiating the actual expense amounts.

24. Brokerage. Lessor agrees to pay any commission due resulting from this transaction and to hold Lessee harmless from any claim for commission by any broker.

25. Subordination/Attornment Agreement. Lessee will respond to Lessor's reasonable request for subordination or attornment agreement, provided such document shall clearly state that any successor in interest to Lessor under this Lease shall assume and perform all the responsibilities and obligations of Lessor hereunder. Such document shall not contain any provision requesting Lessee to save, hold harmless or indemnify Lessor or any other third party.

26. COMPLIANCE WITH APPLICABLE LAW:

(1). Certificate of Compliance With Oregon Tax Laws. NOT APPLICABLE.

(2). Property Taxes. NOT APPLICABLE.

(3). State Workers' Compensation Act. Should Lessor employ any "worker," as defined in ORS 656.005(28), to perform any work required under this Lease, the Lessor shall comply with the Workers' Compensation Law, ORS 656.001, *et seq.* Lessor, to the extent it employs such "worker(s)," and Lessor's contractors or subcontractors, if any, and any employers providing work, labor or materials under this Lease are "subject employers" under the Workers' Compensation Law and shall comply with ORS 656.017, which requires "subject employers" to provide Oregon workers' compensation coverage that conforms to Oregon law for all of their "workers".

(4). As provided in ORS 279.312, Lessor understands and agrees that Lessor shall: (1) Make payment promptly, as due, to all persons supplying to Lessor labor or material for the prosecution of the work provided for in the Lease; (2) Pay all contributions or amounts due the Industrial Accident Fund from Lessor or its contractor incurred in the performance of the Lease; (3) Not permit any lien or claim to be filed or prosecuted against the state, county, school district, municipality, municipal corporation or subdivision thereof, on account of any labor or material furnished; and Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

(5). As provided in ORS 279.314, Lessor understands and agrees: (1) That in case Lessor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Lessor or its contractor by any person in connection with this Lease as such claim becomes due, the proper officer or officers representing the state as Lessee hereunder may pay such claim to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due the Lessor by reason of this Lease; and (2) That payment of a claim in the manner provided herein shall not relieve the Lessor or the Lessor's surety from obligation with respect to any unpaid claims.

(6). As provided in ORS 279.316, Lessor understands and agrees that no person shall be employed under this Lease for more than eight (8) hours in any one (1) day, or forty (40) hours in any one (1) week, except in cases of necessity, emergency, or where the public policy absolutely requires it, and in such cases, the laborer shall be paid at least time-and-a-half pay for all overtime in excess of eight (8) hours a day and for work performed on Saturday and on any legal holiday specified in ORS 279.334.

(7). As provided in ORS 279.320, Lessor understands and agrees: (1) That Lessor shall promptly, as due, make payment to any person, co-partnership, association or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of Lessor under this Lease, of all sums which the Lessor agrees to pay for such services and all moneys and sums which the Lessor collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service; and (2) That all employers working under this Lease are subject employers that will comply with ORS 656.017.

(8). As required by ORS 279.555(1)(e), in the performance of any work under this Lease the Lessor shall use, to the maximum extent economically feasible, recycled paper.

27. MERGER.
THIS LEASE CONSTITUTES THE ENTIRE LEASE BETWEEN THE PARTIES. NO WAIVER, CONSENT, MODIFICATION OR CHANGE OF TERMS OF THIS LEASE SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY BOTH PARTIES. SUCH WAIVER, CONSENT, MODIFICATION OR CHANGE, IF MADE, SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS LEASE. LESSOR, BY THE SIGNATURE BELOW OF ITS AUTHORIZED REPRESENTATIVE, HEREBY ACKNOWLEDGES THAT LESSOR HAS READ THIS LEASE, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

This Lease shall not become effective and shall not be binding upon the State of Oregon or any agency thereof until it has been executed, in the signature spaces provided below, by all parties to this Agreement, including those whose approval is required.

The parties have executed this Lease the 11th day of June, 1997.

LESSOR: BOARD OF COUNTY COMMISSIONERS
FOR TILLAMOOK COUNTY, OREGON

By _____
Gena Firman, Commissioner, Chair

By _____
Susan Cameron, Commissioner

By _____
Jerry A. Doyle, Commissioner

ATTEST: Josephine Veltri,
County Clerk

By _____
Special Deputy

APPROVED AS TO FORM:

By _____
William K. Sargent, County Counsel

LESSEE: STATE OF OREGON acting by and through the
Department of State Police

By _____

APPROVAL: STATE OF OREGON acting by and through the
Department of Administrative Services

By _____
Facilities Division 6-24-97

OSPTilla.doc
02/05/96 PG