active faults. Moreover, these findings confound an emerging pattern of late Holocene deformation that covers much of the Puget Sound region (Fig. 12). The pattern of deformation observed in Puget Sound suggests that the entire region is susceptible to the effects of large earthquakes.

We can attribute the deformation in southern Puget Sound to three main sources: rupture along a local fault, rupture on the Seattle fault, and deformation related to a great earthquake along the Cascadia subduction zone. At present, no source is ruled out, because the dates of submergence in southern Puget Sound, the last Seattle fault event, and the penultimate Cascadia subduction zone earthquake all overlap in time.

Faulting on Local Structures

Faults in southern Puget Sound are candidate sources for the subsidence that affected that part of the sound. These sources include high-amplitude geophysical structures identified in southern Puget Sound (structures L and K of Gower et al., 1985), and several smaller faults throughout the area (e.g., north of Nisqually delta, University of Washington, Department of Geological Sciences report). Structures L and K were originally interpreted as simple folds in Eocene bedrock, but they may be associated with fault-propagation folds above blind faults. The observed pattern of deformation conforms reasonably well to the high-amplitude geophysical anomalies (Fig. 12).

Paleoseismologic evidence indicates that uplift occurred about 1100 yr ago in a broad band between Lynch Cove and Burley, about 20 km north of Nisqually delta and Little Skookum Inlet (Bucknam et al., 1992). While this band of uplift lacks a clearly defined fault source, it occurred at about the same time as the Seattle fault event and appears to conform to the north side of structure K. Furthermore, the distance separating the areas of uplift and subsidence (Fig. 12) suggests that more than one structure or splays of a large structure are responsible for the pattern of late Holocene land deformation.

Bourgeois and Johnson (2001) documented evidence for as many as three earthquakes in the past 1200 yr at the Snohomish River delta. Liquefaction features and a tsunami deposit from the oldest event have ages that fall within the age range for the Seattle fault event between 1050 and 1020 cal yr B.P. (Atwater et al., 1999; Bourgeois and Johnson, 2001). Bourgeois and Johnson also identified liquefaction features from two younger events, one between 1040 and 960 cal yr B.P. and the other between 550 and 310 cal yr B.P. Thus, their ages indicate two earthquakes closely spaced in time between 1050 and 960 cal yr B.P. It is possible that the liquefaction features dated between A.D. 910 and 990 at the Snohomish River delta and subsidence in southern Puget Sound are related to the same earthquake, which postdates the 1050–1020 cal yr B.P. Seattle fault event. The large amount of inferred subsidence at Skookum Inlet (possibly >3 m) may be the combined subsidence from two earthquakes closely spaced in time, each of which resulted in <1.5 m of subsidence. Two buried soils at Nisqually delta also suggest two earthquakes over a short time period.

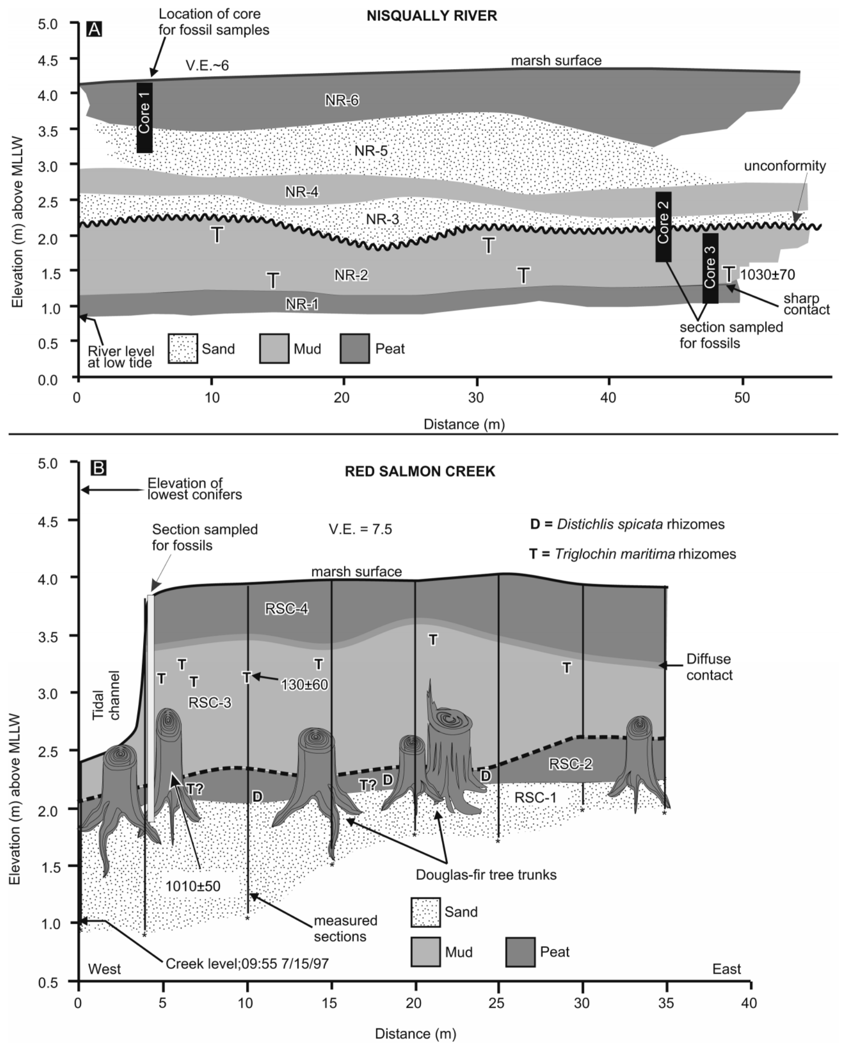

Figure 8. (A) Stratigraphy of the Nisqually River locality. (B) Stratigraphy of the Red Salmon Creek locality.

Effects of Seattle Fault Rupture

A low-angle thrust contiguous with the Seattle fault is among the possible earthquake sources, because the ages for subsidence in southern Puget Sound fall within the 1050–1020 cal yr B.P. age range for the most recent Seattle fault earthquake (Fig. 2). An earthquake on the Seattle fault is best dated by a Douglas fir log found embedded in a tsunami deposit exposed in excavations at the West Point sewage treatment facility (Fig. 1). Several high-precision ages on a single radial section through this log indicate that the tree died between 1050 and 1020 cal yr B.P. (Atwater, 1999; Atwater and Moore, 1992). High-precision radiocarbon ages on wood samples from submergence-killed trees in southern Puget Sound indicate that a large earthquake struck between 1150 and 1010 cal yr B.P. Probability distributions of calibrated radiocarbon ages for tree death from southern Puget Sound and West Point show considerable overlap, suggesting that the Seattle fault earth-

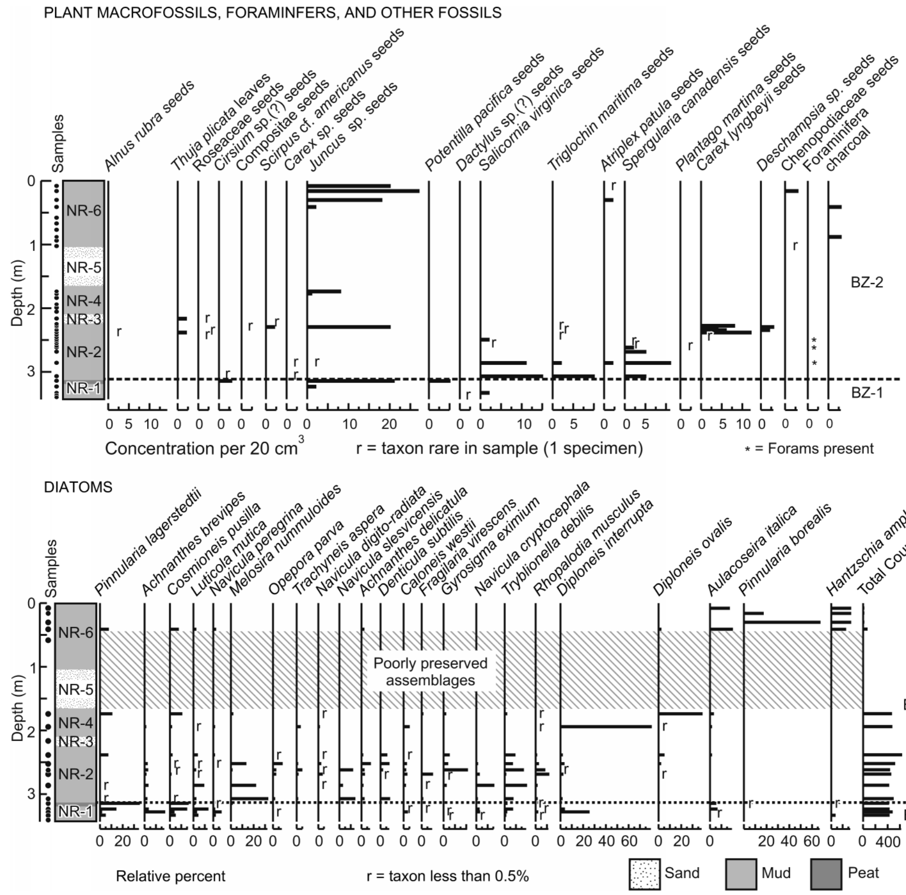

Figure 9. Fossils recovered from the Nisqually River locality. Biozones are labeled on the right. Lithologic patterns are the same as those shown in Figure 4. (Top) Plant macrofossils and foraminifera, expressed as number of fossils per 20 cc (cc = cm³) of sediment. (Bottom) Relative abundance of fossil diatoms grouped according to stratigraphic succession.

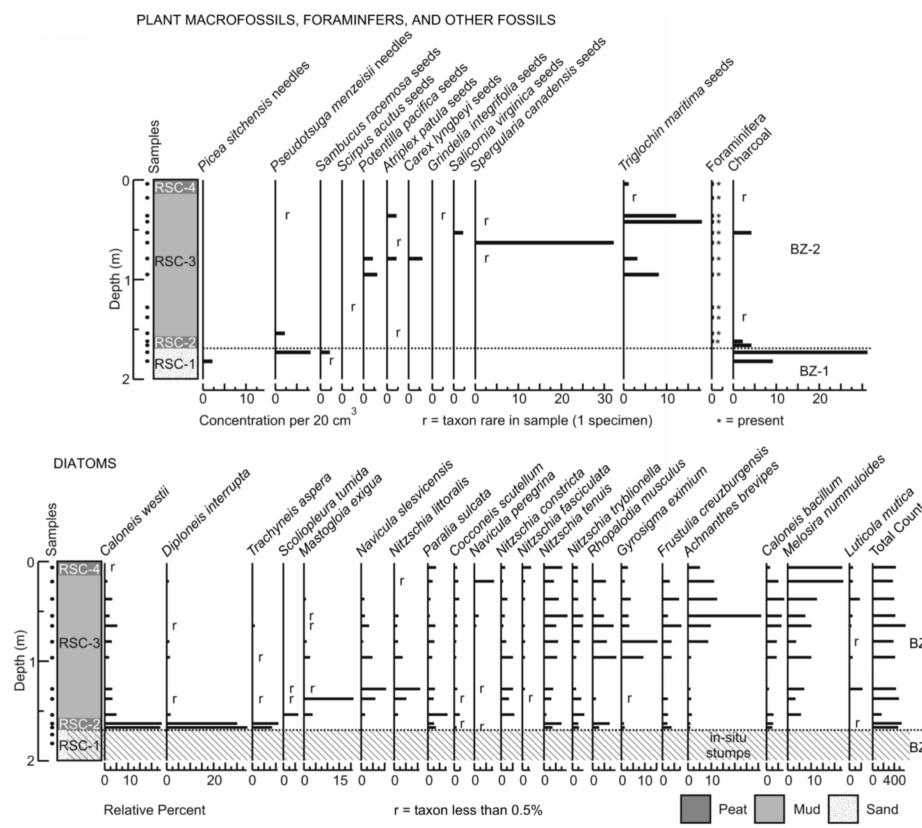

Figure 10. Fossils recovered from the Red Salmon Creek locality. Biozones are labeled on the right. Lithologic patterns are the same as those shown in Figure 4. (Top) Plant macrofossils and foraminifera, expressed as number of fossils per 20 cc (cc = cm³) of sediment. (Bottom) Relative abundance of fossil diatoms grouped according to stratigraphic succession.

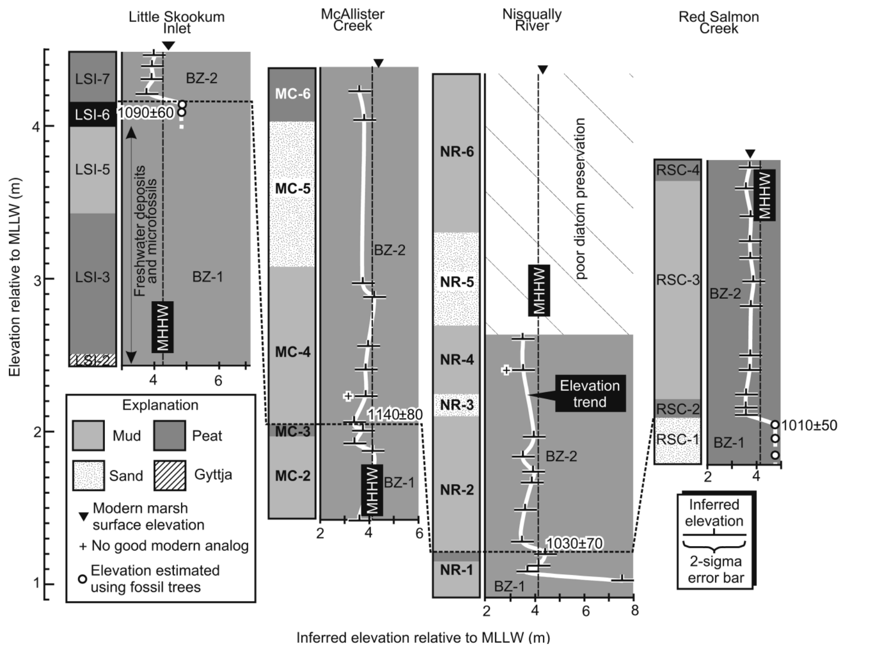

Figure 11. Inferred elevation changes from weighted averaging of fossil diatom assemblages. The horizontal dashed line correlates the buried soil at each locality; selected radiocarbon dates are shown. Note abrupt subsidence across the contact of buried soil and overlying deposit. Diagonal-ruled area in Nisqually River plot indicates a stratigraphic interval where reconstructions were not possible because of poor preservation.

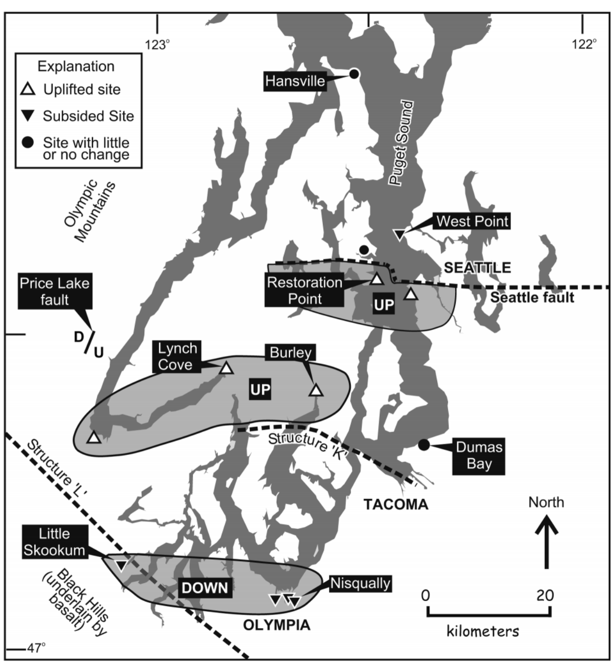

Figure 12. Map showing areas of uplift and subsidence in Puget Sound about 1100 yr ago (Bucknam et al., 1992; Atwater and Moore, 1992). Fault locations are from Johnson et al. (1999) and Gower at al. (1985).

quake and submergence in southern Puget Sound occurred either as a single, large event or during two events closely spaced in time (Fig. 2).

Distal Effects of Coeval Plate Boundary Earthquake

Subsidence in southern Puget Sound coincides roughly with submergence of wetlands and an unusual eruption of liquefied sand along the Pacific coast about 85 km to the west of Little Skookum Inlet (Atwater, 1992; Atwater and Hemphill-Haley, 1997). The wetland submergence and sand eruption occurred during a Cascadia subduction zone earthquake about 1100 yr ago. Submergence along the Pacific Coast and in southern Puget Sound at about the same time suggests that both areas subsided during the same event. However, geophysical models of the Cascadia subduction zone suggest that submergence during a great earthquake would not extend into the Puget Sound area (Hyndman and Wang, 1993).

At several sites in Puget Sound, meager evidence exists for submergence coincident with other great earthquakes along the Cascadia subduction zone. A buried soil at Henderson Inlet near Olympia dates to around 300 yr ago and may correlate to the last subduction zone earthquake (Bucknam, 1999; B.F. Atwater, 2000, personal commun.). A submergence event at Restoration Point along the Seattle fault dates to 1870–1530 cal yr B.P. and may correlate to the Cascadia subduction zone event marked by soil S of Atwater and Hemphill-Haley (1997) dated to about 1600 yr ago (Sherrod et al., 2000). Additional dating of buried trees and organic material and detailed micropaleontology studies of these buried soils may help clarify whether the submergence resulted from a subduction zone earthquake. The 1964 Alaska subduction zone earthquake provides an analog, during which subsidence of up to 2 m occurred several hundred kilometers inland (Plafker, 1969).

Lack of Tsunami Deposits

Sand sheets indicative of a paleotsunami are conspicuously absent in coastal marsh deposits around southern Puget Sound. Tsunami deposits presumably associated with the A.D. 900–930 Seattle fault event were identified at several coastal marshes in central and northern Puget Sound (Atwater and Moore, 1992; Bucknam et al., 1992). All but one of these sites are located between Seattle and Whidbey Island, along the coastline of Puget Sound's main basin, the exception being Lynch Cove on Hood Canal (Fig. 1). The lack of a tsunami deposit at Nisqually delta from the Seattle fault event about 1100 yr ago suggests that the tsunami did not make it into southern Puget Sound or was too small in southern Puget Sound to leave a lasting geologic record.

CONCLUSIONS

A buried soil records abrupt submergence between 1270 and 910 cal yr B.P. at Little Skookum Inlet and at three localities in the Nisqually delta. High-precision radiocarbon ages place the time of submergence between 1150 and 1010 cal yr B.P. The most likely cause of submergence is subsidence during an earthquake. The coseismic subsidence was at least 1 m at Little Skookum Inlet (possibly >3 m) and about 1 m at the Nisqually delta. A sand dike connected to vented sand at the Nisqually delta indicates ground shaking at the time of subsidence

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Strong-motion Amplification Maps of the Olympia Area: Validation by the Nisqually Earthquake

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Non-Technical Summary

In 1997, the Division of Geology and Earth Resources received a grant from the National Earthquake Hazard Reduction Program to map those parts of the Olympia area that are at greater risk of earthquake damage because of the effects of near-surface geology. That project was completed in 1999, and much of that report is incorporated below. The February 28, 2001 Nisqually earthquake, centered near Olympia, validated our mapping to a great degree. The locations that suffered the greatest damage were generally those underlain by between 60’ and 120’ of loose sand and silt, such as the south Capital neighborhood, where most chimneys were severely damaged. In the northeast neighborhood, however, with equally many chimneys, there was no chimney damage at all. In the northeast neighborhood, this loose sand and silt is less than 10’ thick and does not contribute to strong ground shaking.

Introduction

In 1999, we began to prepare a prototype earthquake ground motion hazard map that is directed toward a variety of end-user communities, including structural and geotechnical engineers, building officials, emergency managers, land-use planners, private businesses, and the general public (Palmer and others, 1999). The final product will be a 1:24,000-scale GIS coverage delineating areas of moderate to severe ground shaking hazard, and a 1:48,000 printed map with an accompanying report documenting the methodology used in constructing the hazard map. The Olympia area was chosen for this prototype study for a number of reasons:

1. The Quaternary glacial geology of the Olympia area is less complex that of the Seattle-Tacoma area;
2. Olympia experienced significant building damage and ground failures during the 1949 and 1965 Puget Sound earthquakes;
3. accelerograms of the 1949 and 1965 Puget Sound earthquakes were recorded in downtown Olympia at a site where shear wave velocity profile was well determined and studies relating modified Mercalli intensity and weak-motion amplification to surficial geology had been previously published; and,
4. a large number of geotechnical borings and water wells in the study area allow for the development of a detailed three-dimensional geologic/soil model.

Bodle (1992) analyzed modified Mercalli intensity data from the 1965 Seattle-Tacoma earthquake (ML 6.5) and the 1981 Elk Lake earthquake (ML5.5) in the north Thurston County area. His investigation suggests a strong correlation between increased Mercalli intensities and the near surface fine-grained late Pleistocene glaciolacustrine/glaciofluvial deposits (designated as unit Qvrs). King and others (1990) reported results from a weak-motion ground response at various sites in the Olympia area using portable seismometers that recorded large blasts from a nearby coal mine. Weak-motion amplifications in three spectral bands were calculated from these data using reference seismograms recorded on a local bedrock outcrop. King and others (1990) found that, in general, the highest amplifications were recorded at sites underlain by the unit Qvrs.

The following tasks required to produce the ground motion amplification hazard map for the Olympia area performed to date are:

1. Preparation of surficial geologic map;
2. acquisition of representative shear-wave velocity data in Quaternary stratigraphic units and bedrock;
3. parametric modeling of bedrock-to-surface amplification in spectral bands of importance to structural performance and hazard mapping procedure;
4. preparation of subsurface geological model of Quaternary stratigraphic units and bedrock; and,
5. solicitation of comments from end-users of the ground motion amplification hazard map.

Preparation of Surficial Geologic Map

The 1:24,000-scale surficial geologic map for the study area has been completed, and entered into a GIS digital format. Significant effort was directed toward mapping two distinct textural units within the recessional deposits of the Vashon (late Pleistocene) glaciation. These units are gravel-dominated recessional outwash sediments (Qvr), and glacio-lacustrine/fluvial deposits composed predominantly of sand and silt (Qvrs). Other important stratigraphic units mapped in the study area include Vashon till and advance outwash (Qvt and Qva, respectively), and older Pleistocene glacial and non-glacial deposits (Qu).

Acquisition of Representative Shear Wave Velocity Data

Seven downhole shear-wave velocity surveys were conducted in borings drilled as part of this investigation. The borings were located to acquire shear-wave velocity (Vs) data in key geologic units. The Vs profiles from these surveys are summarized in Figure 1.

Data presented in Figure 1 indicate that there is a significant velocity contrast between unit Qvrs and older stratigraphic units (Qvr, Qvt, Qva, and Qu). In order to perform a regional ground motion hazard analysis we assigned "characteristic" shear-wave velocities to the stratigraphic units encountered in the study area. The older stratigraphic units (Qvr, Qvt, Qva, and Qu) are assigned a shear velocity of 2100 ft/sec [640 m/sec]. In areas of deep ground water unit Qvrs is assigned a constant velocity of 1100 ft/sec [335 m/sec], whereas in shallow ground water areas the upper 60-80 ft [18-24 m] of the deposit has a lower velocity of approximately 600 ft/sec [180 m/sec].

Shear wave velocity profiles have been obtained at three of the western Washington accelerometer sites that recorded the 1965 Seattle-Tacoma earthquake (M L 6.5). These sites are located in Tacoma (County-City Building), Seattle (Federal Office Building), and Olympia (Highway Test Lab). At two of the accelerometer sites (Seattle and Olympia) a shear-wave velocity exceeding 3000 ft/sec [915 m/sec] was measured in older Pleistocene deposits at depths of 300 ft [91 m] or greater.

Parametric Modeling of Bedrock-to-surface Amplification and Hazard Mapping Procedure

Ground motion amplification modeling performed by using the solution of one-dimensional equivalent-linear SH-wave equation, embodied in the computer code SHAKE (Schnable and others, 1972) and its PC-version SHAKE91 (Idriss and Sun, 1991). Simplified models were developed to represent the geologic conditions within the study area. Figure 2 shows Qvrs overlying older Pleistocene deposits with deep ground water conditions. Shear wave velocity for Qvrs is assigned a value of 1100 ft/sec [335 m/sec] and a velocity of 2100 ft/sec [640 m/sec] is specified for the older Pleistocene deposits (see Figure 1). SHAKE requires a constant velocity half-space at the base of the soil column; consequently a "seismic bedrock" with shear wave velocity of 3200 ft/sec [975 m/sec] is placed at a depth of 380 ft [116 m] as shown in Figure 2. These values are based on the deep shear wave velocity profile obtained at the Highway Test Lab accelerometer site in Olympia.

The model shown in Figure 2 is used in a parametric analysis of the effect of Qvrs thickness on bedrock-to-surface amplification. Qvrs thickness is varied from 0 ft to 380 ft [0 m to 116 m] in 10 ft [3 m] or 20 ft [6 m] increments, and SHAKE is used to model amplification averaged within spectral bands determined to have engineering significance. Sensitivity of the resulting amplification values to choice of input time history and soil dynamic properties and variation of shear wave velocity can be evaluated.

Figure 3 shows the variation of bedrock-to-surface amplification with Qvrs thickness; amplification is averaged within spectral bands of 2-4 Hz and 0.75-1.25 Hz. The input time history is scaled so that Aa and Av (effective peak acceleration and velocity-related coefficients) have an approximate value of 0.2. Modulus reduction and damping coefficients correspond to the upper and lower bound, respectively, for sands (Seed and Idriss, 1970).

Sensitivity analysis of the model shown in Figure 2 indicates that calculated spectral amplifications are most affected by the choice of soil dynamic properties (modulus reduction and damping), and are less sensitive to variation in shear wave velocity within the range of values shown in Figure 1. Figure 3 also shows the results of SHAKE modeling using average modulus reduction and damping values for sand (Seed and Idriss, 1970). Absolute amplification factors are decreased in this model run, but the general relation of spectral amplification with thickness of the Qvrs unit is preserved. This pattern of ground motion amplification with Qvrs thickness will be the basis of generating the hazard map for the Olympia study area. One approach for determining relative ground shaking hazard compares the amplification factors at various thicknesses of Qvrs to that where the Qvrs thickness is zero (i.e., in areas where older Vashon or other Pleistocene deposits outcrop). The 25th and 50th percentiles between the maximum amplification and baseline (zero thickness) value are used as criteria for determining areas of high or moderate ground shaking hazard as shown in Figure 4.

Preparation of Subsurface Geological Model

A three-dimensional model of the subsurface geology was generated using logs from water wells and geotechnical borings. We utilized a digital database of water well data developed by the U.S. Geological Survey Water Resources Division as part of a cooperative ground water resource investigation of north Thurston County (Drost and others, 1998). These data are supplemented or in-filled with other available water well and geotechnical boring information. Particular attention is made in the differentiation of the Qvr and Qvrs units. The data were interpreted and entered in a GIS format. Figure 5 shows part of the thickness model of the Qvrs deposit.

On February 28, 2001, the Nisqually earthquake provided a fortuitous test of these maps. Damage in the Olympia area was not uniformly distributed. Areas of ground failure caused much damage in low-lying, water saturated sandy soils. Building damage not related to ground failure was concentrated in the south Capital neighborhood (Figure 6 and 7) and downtown (Figure 8). Figure 9 shows similar downtown damage one block away from which Figure 8 shows similar damage caused by the 1949 earthquake, about the same size and location as the Nisqually earthquake. Figure 10 shows the distribution of chimney damage during the Nisqually earthquake as an overlay on the thickness map of unit Qvrs. Note that the most intense damage occurred where unit Qvrs is between about 60 and 120 feet, where amplification is highest in the 2-4 Hz range (Figure 4), the natural frequency of low rise buildings. Note also that similar age residential neighborhoods where Qvrs is significantly thinner (for instance, a few miles northeast of the most concentrated damage, were much more lightly damaged.

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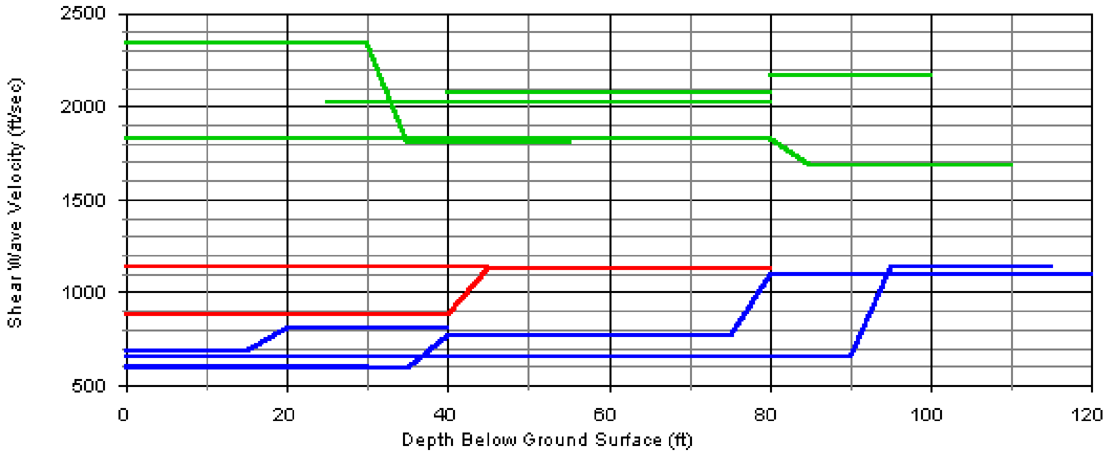


Figure 1. Summary of shear-wave velocity (Vs) measurements made in borings drilled in the Olympia area. Green lines are Vs measurements within stratigraphic units Qvr, Qvt, Qva, and Qu. Red and blue lines are Vs measurements within unit Qvrs.

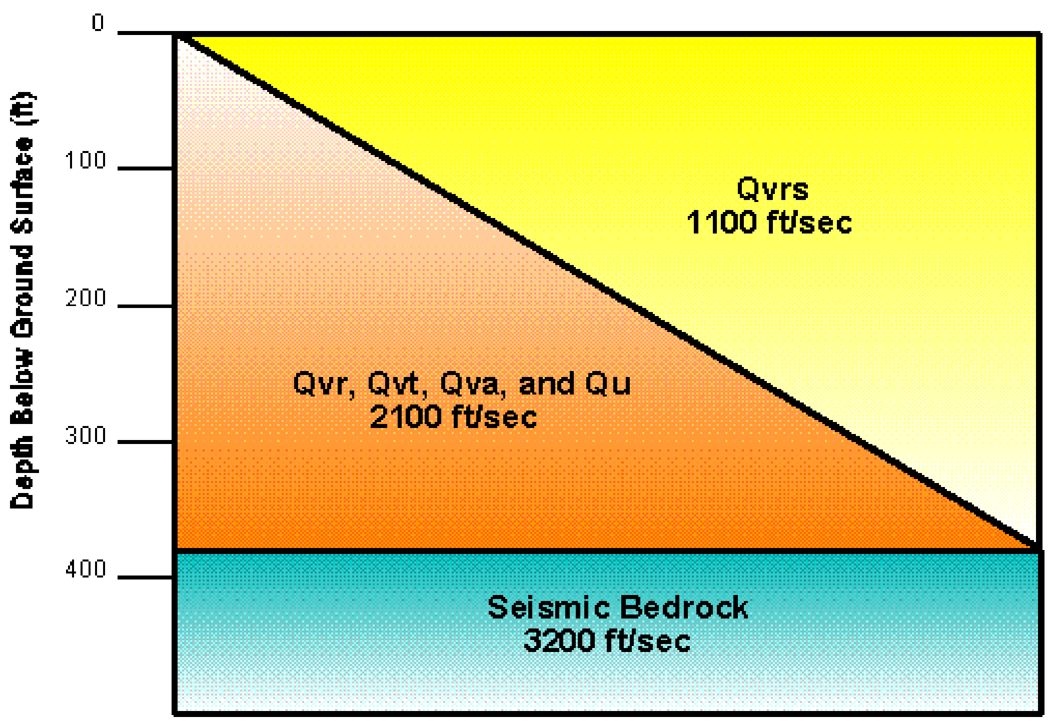


Figure 2 . Simplified shear-wave velocity (Vs) model representing the Qvrs unit having deep ground water overlying older Pleistocene deposits.

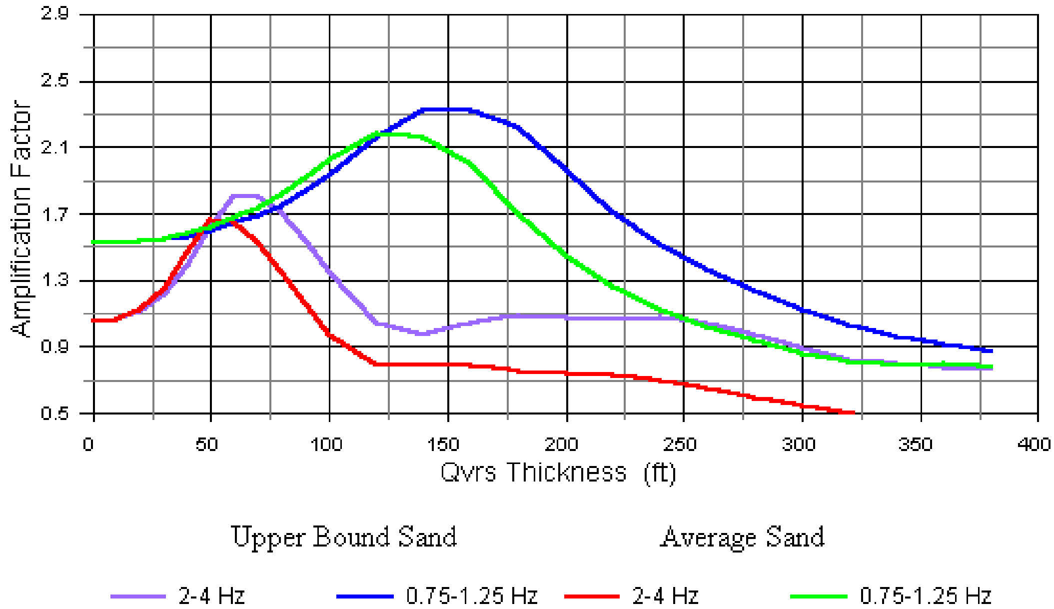


Figure 3. Variation of spectral amplifications (averaged over 2-4 Hz and 0.75-1.25 Hz bands) with thickness of the Qvrs unit (1100 ft/sec [335 m/sec] layer). Modulus reduction and damping coefficients for sand taken from Seed and Idriss, 1970; with the upper bound sand in purple and blue and the average coefficients for sand in red and green.

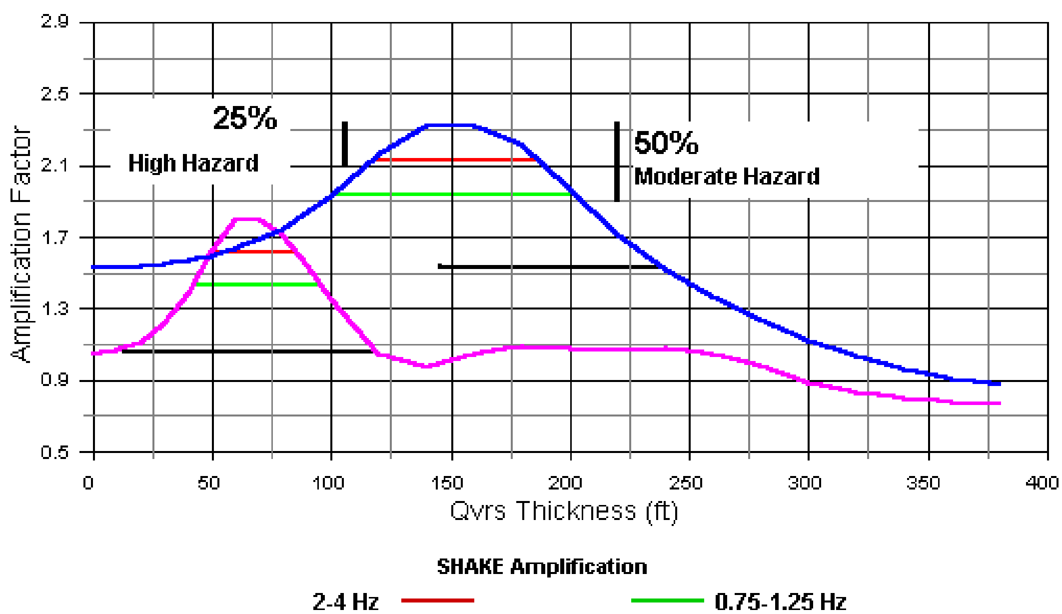


Figure 4. Method proposed for determining relative ground motion hazard based on 25th and 50th percentile thresholds. These correspond to high and moderate ground shaking hazard. Spectral amplification curves are shown for the upper bound s
and in Figure 3.

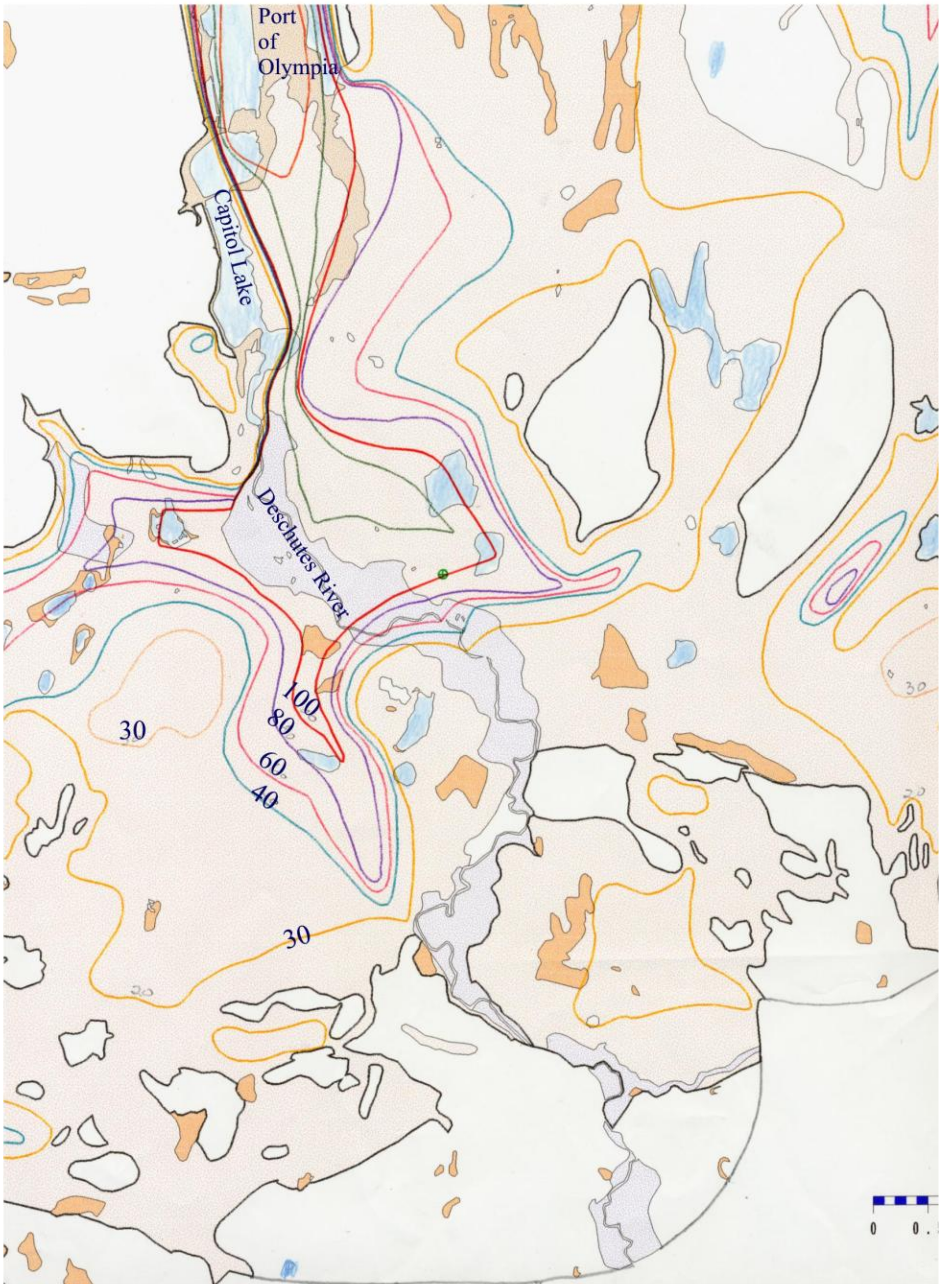


Figure 5. Thickness of unit Qvrs in the downtown Olympia area (in feet).

Figure 6. Typical chimney damage in the south Capital neighborhood, where many chimneys were completely destroyed.

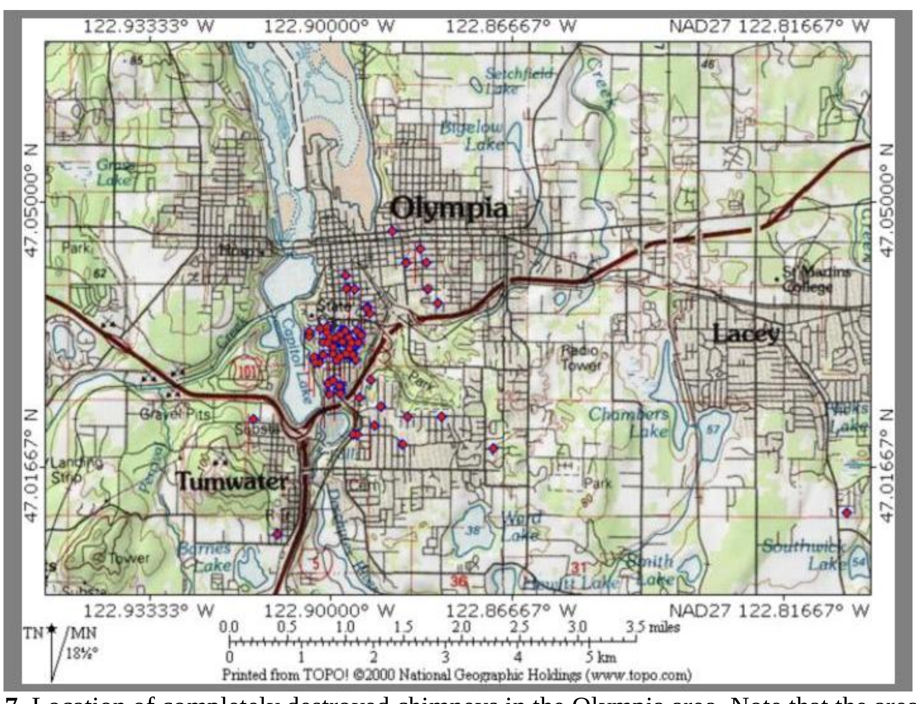


Figure 7. Location of completely destroyed chimneys in the Olympia area. Note that the area highly concentrated in the south Capital neighborhood east of Capitol Lake.

Figure 8. Parapet failure at the Washington Federal Savings Bank (an older unreinforced masonry building) in downtown Olympia, which suffered significant damage during the 2001 Nisqually earthquake .

Figure 9. This unreinforced masonry building in downtown Olympia was damaged in the 1949 earthquake. Damage was extensive to this type of building in that event. This building is about one block east of the Washington Federal Savings Bank in Figure 8.

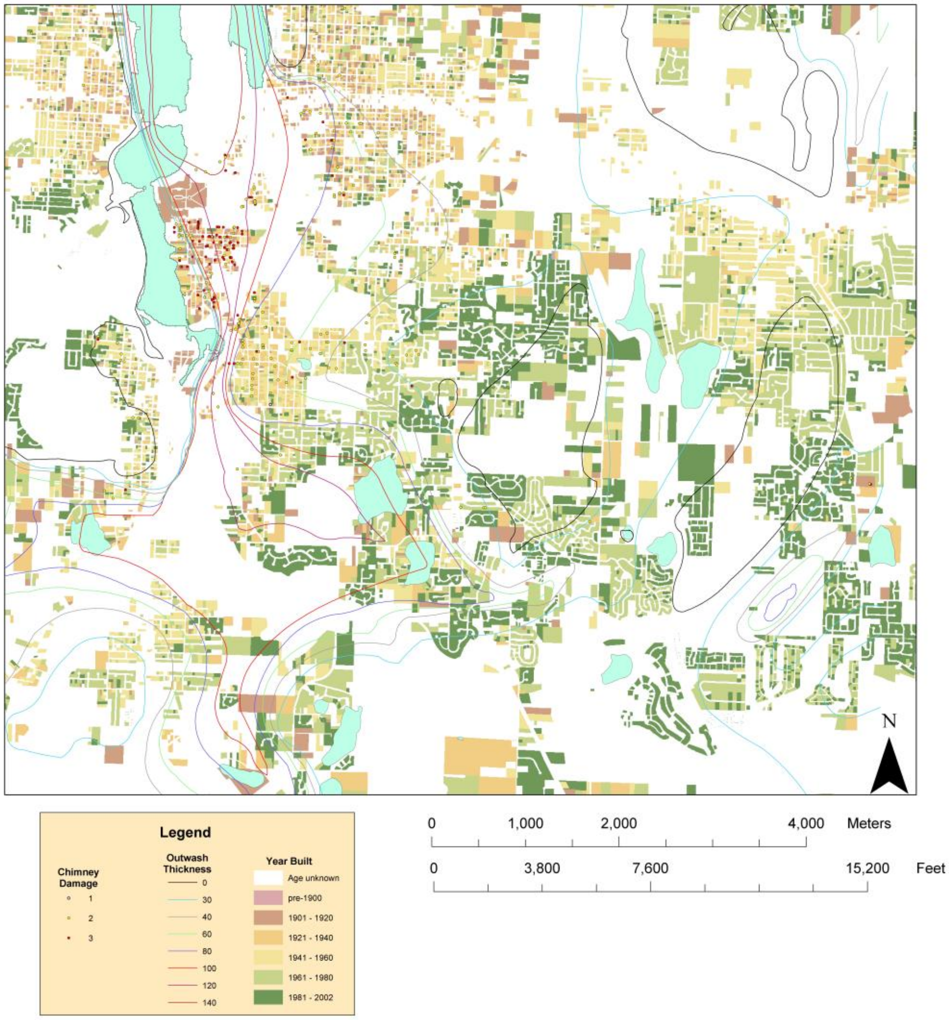


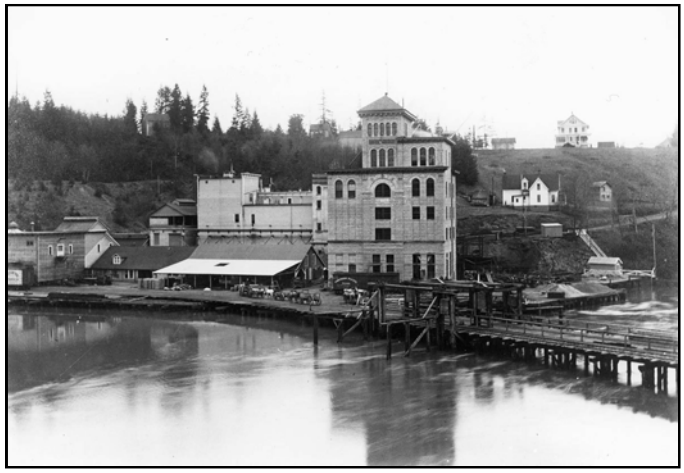
Figure 10. Severity of chimney damage and approximate age of construction plotted on thickness of Qvrs. Note that the greatest damage occurs where Qvrs is 60-120 feet thick.

Stop 3. Lunch at Tumwater Historic Park and a discussion of the Tumwater Historic District.

Old Brewhouse
Questions and Answers:

1. Why is this regionally significant landmark worth preserving?

The Old Brewhouse is the oldest industrial property in southern Puget Sound. It was the home of the internationally-famous **Olympia Brewing Company**, which provided thousands of jobs and left an indelible mark on the region's history and culture. The Old Brewhouse is the central feature of Tumwater's National Historic Register District. The landmark five-story Italianate brick tower has been emulated in architecture throughout the region.



Olympia Brewing Company Brewhouse c. 1910
Photo courtesy of Henderson House Museum
City of Tumwater – HHM #150

2. Can the structure still be saved?

The building is in deteriorated condition. Unsupported upper walls are in danger of falling, and water damage is widespread. The wooden roofs have rotted, but the copper roof above the tower is still in tact. Virtually no improvements to the building have been made by the past generation of assorted private owners. That being said, a walk-through inspection by a licensed structural engineer in 2004 did not reveal any structural deficiencies which could not be remedied.

3. What's been done to help preserve and restore the Old Brewhouse?

The City of Tumwater has taken a series of actions to encourage the adaptive reuse of the Old Brewhouse. The City first adopted Comprehensive Plan goals and policies to "protect designated … national landmarks" and "encourage the development of the Tumwater Historic Commercial Zoning District." The City then adopted special zoning and shoreline designation for the Old Brewhouse in the mid-1990's to encourage its redevelopment. The *New Market District Master Plan* provides the zoning regulations for this historic area. Finally, the City commissioned four studies to help determine the redevelopment potential of the Old Brewhouse site since 1993. The most recent report *Tumwater Historic District Infrastructure Analysis - Summary of Findings* was prepared in 2005 and is available on Tumwater's home page www.ci.tumwater.wa.us.

4. What is the Tumwater Historical Preservation Commission?

This seven member Commission is appointed by the Mayor and confirmed by the city council. They are responsible for identifying and actively encouraging the conservation of the City's historic resources. This is done by placing properties on a register of historic places, sponsoring community events to raise awareness of local history, and advising the Tumwater City Council on matters regarding historic preservation and historic register properties eligible to receive special property tax valuation. The Commission, along with the historic commissions of Olympia, Lacey and Thurston County, has proclaimed that "***Full restoration of the Old Brewhouse is warranted so that it can serve as a functioning part of the Capital Community for the next 100 years***."

5. Who should I contact with questions or comments?

Mike Matlock, Director of the Planning & Facilities Department, City of Tumwater
360 754-4210 mmatlock@ci.tumwater.wa.us

Steven W. Morrison, staff
Tumwater Historic Preservation Commission
360 956-7575 morriss@trpc.org

"Friends of the Old Brewhouse" is a non-profit corporation seeking to increase public awareness regarding the Old Brewhouse. Their website is at www.OldBrewhouse.org.

TIMELINE

1895
Leopold Schmidt buys brewery site at the foot of Tumwater Falls

1896
First beer produced by Capital Brewing Co. (later Olympia Brewing Co.)

1896-1906
Additional wooden buildings and cellars added to brewery compound

1905
William Naumann, brewmaster for the Olympia Brewing Co., builds a new home in Tumwater (now The Henderson House Museum)

1905-1906
New six-story brewhouse built out of sandstone and brick

1914
Leopold Schmidt dies six weeks before Washington, Oregon and Idaho vote to ban the sale of all alcoholic beverages (effective January 1, 1916)

1919
National Prohibition
Olympia Brewing Co. switches to production of fruit juices and preserves

1920
Fruit juice operation fails due to volatile sugar prices

1921
Olympia Brewing Co. sells original brewery site as Schmidt family concentrates on other business interests

1927-29
Short-lived pulp and paper mill operation at old brewery site

1930s
Old Brewhouse stands empty through the Great Depression

1933
Repeal of National Prohibition
Schmidt family considers reopening the Olympia Brewing Co. at its original location but finds the old buildings unsuitable for modern brewing and choose a new site upriver instead

Early 1940s
Original brewery buildings purchased by Jensvold Manufacturing, a producer of parts for the Boeing Co.

Mid 1940s - Late 50s
Old brewery used by Western Metal Craft Co., a manufacturer of metal kitchen cabinets.

Early 1960s
Old Brewhouse stands empty

1965
Original brewery site, including Old Brewhouse, reacquired by Olympia Brewing Co.

1965-2003
Old Brewhouse and surrounding buildings used as warehouse and storage space

1978
Old Brewhouse included in newly established Tumwater Falls/New Market National Register Historic District

1983
Olympia Brewing Co. acquired by Pabst Brewing Co.

1993-97
City of Tumwater commissions Historic District Master Plan (1993), Long-Range Plan (1996), Environmental Site Assessment (1997) and Estimated Market Value Report (1997) to determine rehabilitation potential of Old Brewhouse

1995
Old Brewhouse named one of the state's Ten Most Endangered Historic Buildings by the Washington Trust for Historic Preservation

1998
City of Tumwater receives $250,000 grant from State Legislature for emergency repair of rotting roof on Old Brewhouse but is forced to return the funds when an expected private development deal falls through

1999
Tumwater brewery acquired by Miller Brewing Co.

2002
Miller Brewing Co. acquired by SAB, Ltd.

2003
Tumwater brewery closes

2005
Tumwater brewery property, including Old Brewhouse, acquired by All American Bottled Water Corp.

Report commissioned by City of Tumwater places estimated cost of redevelopment of the Old Brewhouse site (access roads, utilities, storm water containment, parking, rail line connection) at \$9.6-\$18.2 million—a figure that does not include the cost of acquiring the property or restoring the old brick structures

Tumwater Historic Preservation Commmision
Heather Lockman, *Writer* - Curt Wilson, *Design*
Carla Wulfsberg, *Project Coordinator*
Henderson House Museum, City of Tumwater

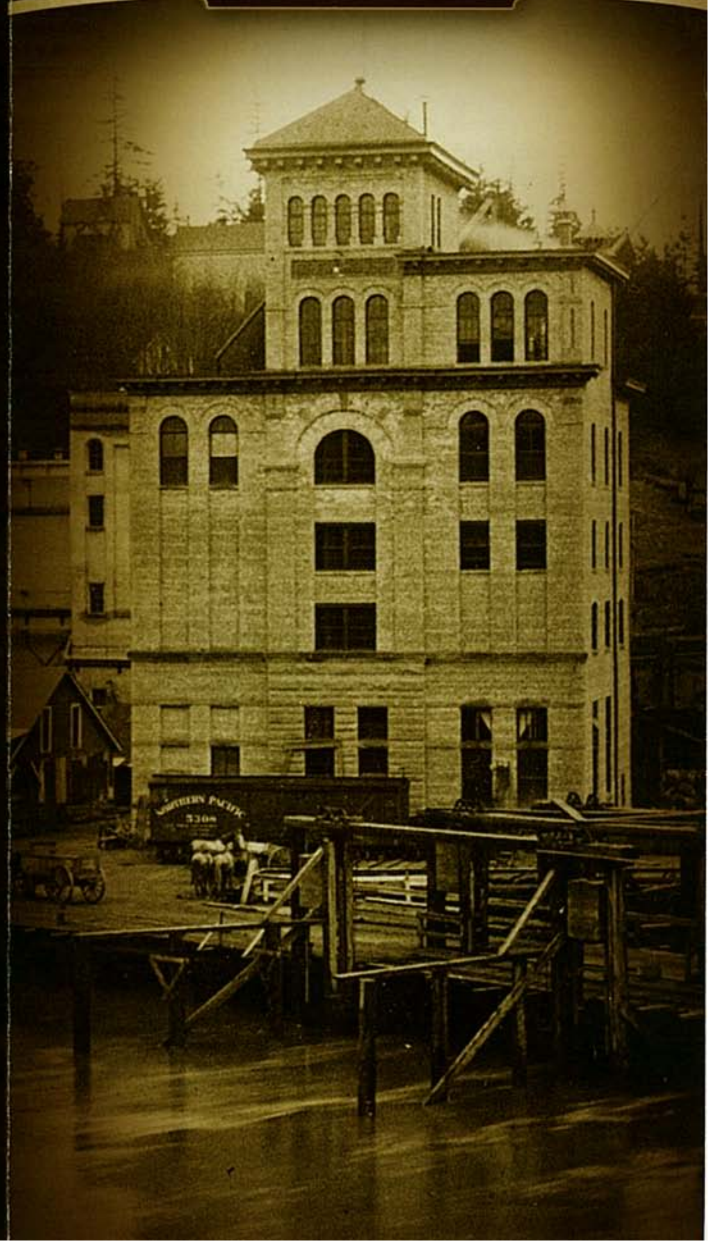
CITY OF TUMWATER
Washington's First Community

CELEBRATING 100 HISTORIC YEARS

THE OLD BREWHOUSE

TUMWATER, WA

1906 - 2006



In 1895 a German brewmaster named Leopold Schimidt chose a site at the foot of Tumwater Falls as the location for his new brewery. It had everything that he needed: access to saltwater shipping, electrical power produced by the falls and—most important of all—artesian springs of pure water that was perfect for brewing beer.

Ten years later, having outgrown its first wooden buildings, the Olympia Brewing Company broke ground on a new five-story brick brewhouse with elegant arches, a copper roof and Tenino sandstone trim. Completed in 1906, the red brick brewhouse beside the Deschutes served as the proud centerpiece of the Schmidt family brewing operation until Prohibition closed down the brewery in 1916.

Today the Old Brewhouse stands as the Tumwater's most important architectural landmark. It is a symbol, first of all, of the crucial role that the Olympia Brewing Company played in the history of this community. It is also the last reminder of the flourishing riverside industries that once formed the heart of this town.

The City of Tumwater has long understood the significance of the Old Brewhouse. When the Tumwater National Register Historic District was established in 1978, the old brewery complex was identified as its most significant feature. Since 1993 the City has commissioned four separate studies to help determine the redevelopment potential of the site, including a Master Plan that sets guidelines both for preserving the old brick buildings and for any potential new construction within the old brewery grounds.

Restoring the grand Old Brewhouse will not be simple or easy. Any effort to save and adapt Tumwater's riverside landmark will require widespread public support and enormous financial investment. But other cities—both here in the Northwest and across the U.S.—have proven that abandoned mills and factories can indeed be preserved, restored and given a second life.
Here are a few success stories:

Albers Mill, Tacoma

A modern addition that doubled floorspace and concessions on parking from the City made renovation of this 1904 flour mill possible during the redevelopment of Tacoma's Thea Foss Waterway. Today the old mill houses view condominiums and upscale retail space.

Steam Plant Square, Spokane

Spokane's 1916 Central Steam Plant Building was the cornerstone of a downtown redevelopment project that linked two historic structures with a brand-new building in between. Shops and a brewpub now share space with the old steam plant machinery still display inside.

Torpedo Factory Art Center, Alexandria VA

Local artists, federal tax credits and a cooperative city government all played a part in converting this 1918 munitions factory into art studios and galleries. The City owns the building, the artists manage the space.

With luck, Tumwater's Old Brewhouse may one day be rescued, too. As architectural historian Michael Sullivan points out, "A lot of communities, large and small, have taken on more ambitious projects. Success here is not out of reach." *Are we as a regional community ready to restore the Old Brewhouse? How much longer than 100 years will the building last?*

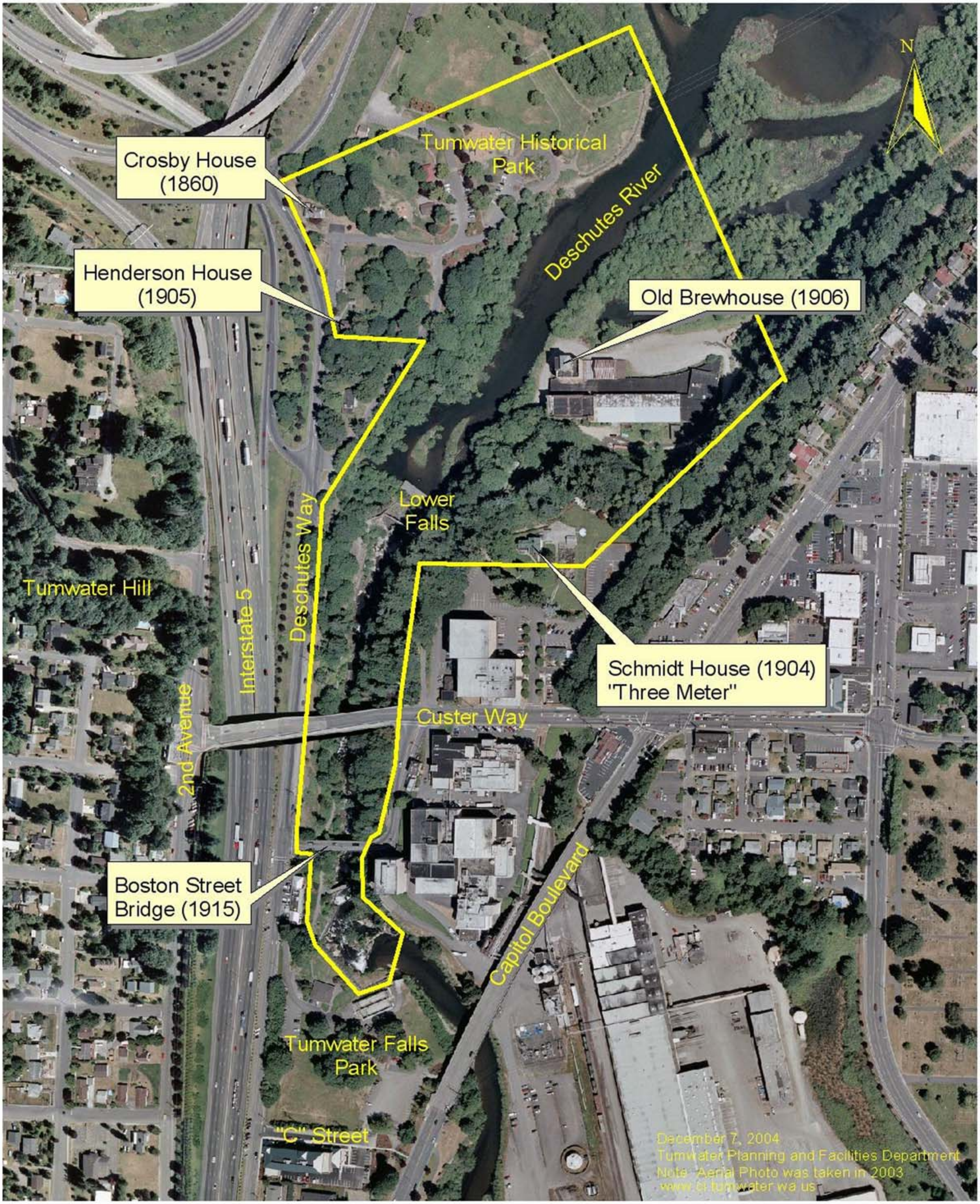
For more information about the Old Brewhouse, or to express your ideas about its future, contact:

Steven Morrison,
Tumwater Historic Preservation Commission staff
p. 360 956-7575 ***e.*** morriss@trpc.org

Mike Matlock, Director of the Planning and Facilities Department, City of Tumwater
p. 360 754-4210 ***e.*** mmatlock@ci.tumwater.wa.us

Tumwater Historic District

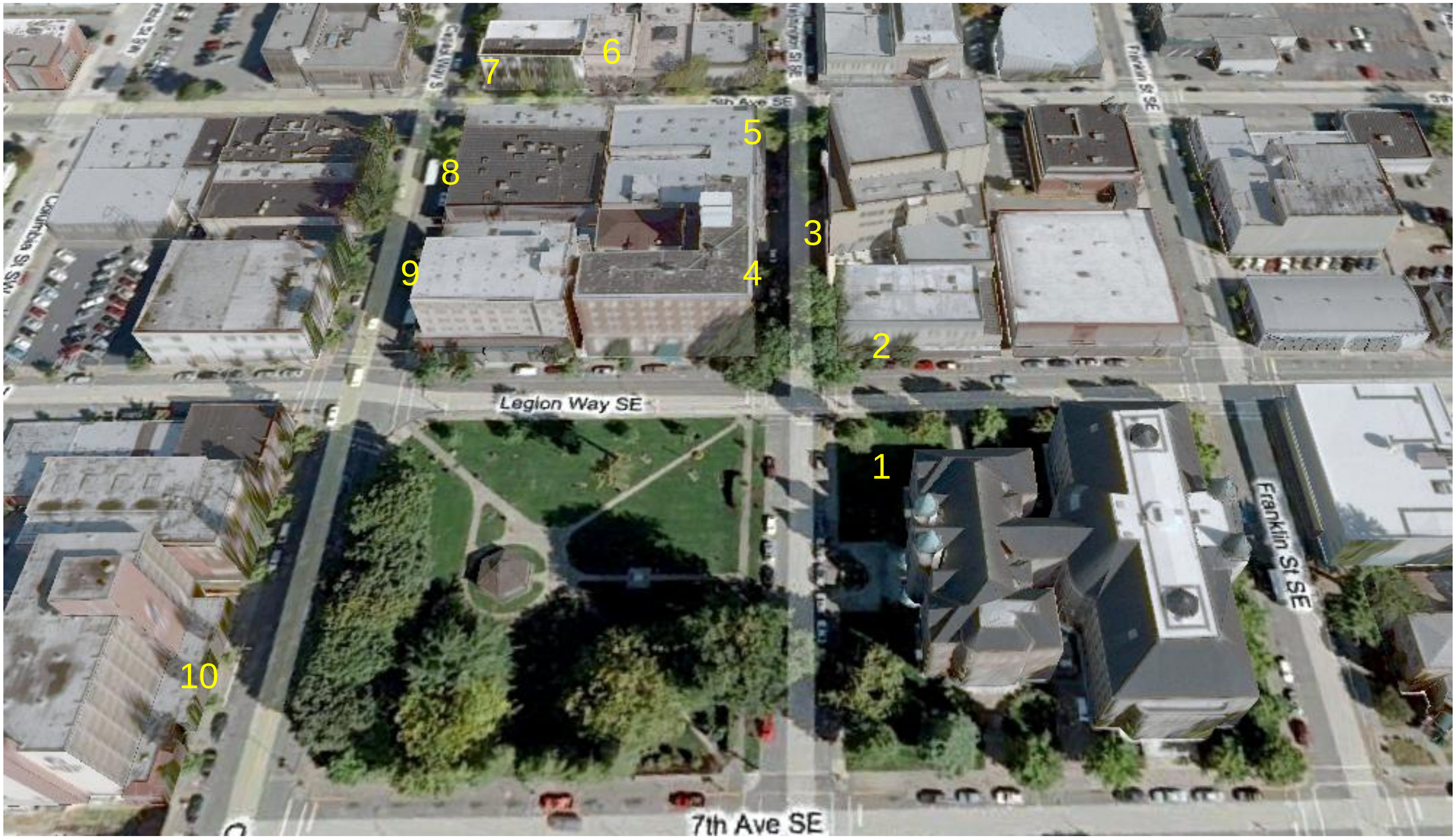
Listed on the National and State Registers of Historic Places




Pub by
Photo by Wood


28. 2. 2001


Caterpillar
Diesel



Stop 4. Location map of downtown walking tour. Numbers refer to sets of photographs of damage to these buildings in previous earthquakes.

Location 1a. Damage to "old state capitol bulding" in the April 13, 1949 earthquake. Photo supplied by Jim Sims.

Location 1b. Damage to "old state capitol bulding" in the April 13, 1949 earthquake. Photo supplied by Jim Sims.