

UNION STATION, TACOMA, WASHINGTON:
A DESIGN STUDY FOR A SURPLUS RAIL SITE

by

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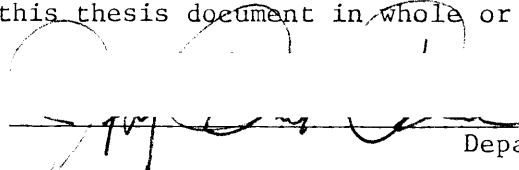
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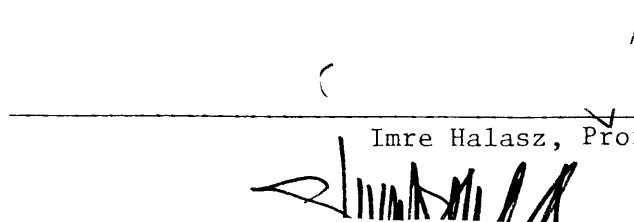
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UNION STATION, TACOMA, WASHINGTON:
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NEAR AN URBAN CENTER

by

JEFFREY DAVID RHOADS

Submitted to the Department of Architecture on
May 7, 1982 in partial fulfillment of the requirements
for the degree of Master of Architecture

ABSTRACT

Recent technological changes in railroads, mergers, major shifts in urban land use patterns, and declining rail passenger travel has resulted in a surplus of urban rail lands. These lands represent a significant resource for land poor cities. An unparalleled opportunity exists for major new intervention without the usual adverse effects of land assemblage and so called "urban renewal".

This work is an urban design study for a 22 acre rail site and 15 acres of adjacent waterfront land in Tacoma, Washington. The site, including Union Station and its yards, is on the edge of Tacoma's central business district. Union Station represents the largest assembled parcel of developable land in the downtown area. An attempt is made to illustrate a possible site use scenario which reflects the divergent and often conflicting goals of various differing interests.

Thesis Supervisor: Imre Halasz

Title: Professor of Architecture

This thesis is dedicated to Ted Moulton, Architect of San Francisco. I will always be your apprentice and forever thank you for your support, encouragement, and friendship.

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PREFACE

A tarnished but grand old dame of a railroad station cried out for attention when my wife Ann and I visited Tacoma, Washington in August of 1981. Through subsequent inquiry, I found that a number of different organizations in the community were trying to encourage and support development of a viable contemporary use for Union Station.

Tacoma's Urban Policy Committee, an advisory body to the City Council, approved a resolution asking that the city use community development block grant money to conduct a feasibility study. Subsequent action by the council directed the city manager to communicate with Burlington Northern Railroad, owner of the station and yards, and assist (implicitly through provision of information and ideas) in saving the old station building and developing its adjacent lands.

Encouraged by these events and by verbal communication with members of the city staff and the city manager, I drafted a proposal for "A Study of Future Use Alternatives for the Rail Station and its Site." This was forwarded to City Manager Mork.

Objectives of this effort included entering into a consulting capacity with the city of Tacoma to prepare a study with compensation set at travel and production expenses. The findings were to address development and urban design issues for the city and various other participants in the process, and were to be in partial fulfillment of requirements for the Masters of Architecture degree at the Massachusetts Institute of Technology.

The proposal was denied, initially by the city of Tacoma, and later by Burlington Northern Railroad. City Manager Mork's letter dated December 15, 1981

provides an explanation: "Your proposal is interesting. However, since the city of Tacoma does not control the Union Station property, we are obviously not in a position to respond."

As initially drafted, the proposal may well have been overly ambitious considering the distance from Cambridge to Tacoma and time limitations on my thesis. Denial, therefore, has proven to be a mixed blessing and has allowed a shift away from the initial approach. This thesis reflects that shift from a study of use alternatives to a specific form design study. The program for the design is conjectural, however. It is based upon my analysis of community urban design objectives, the existing context, certain specific forms I wish to study, and an attempt to find a plausible use for this site in Tacoma. Throughout the design of this project I have strived for an urban image rather than a suburban one.

In February 1982 I visited the Tacoma area for a week. The purpose of this journey was to gain a better understanding of conditions on site, in Tacoma, and in the Puget Sound region. Clearly there are limits to the powers of observation in the span of seven days. Gaining a fundamental understanding of a place can take as much as a lifetime. Circumstances allowed me only limited time in the field and several months of telephone conversation and digesting of written source material. I can only hope that my observations are accurate and that conclusions drawn from them generate a design for the Union Station site that is useful and relevant.

Motivation behind the thesis topic is partially founded on Union Station's variety of interesting

qualities and issues brought on by its development.

There are many characteristics which this particular facility and its rail yards share with numerous others of its type in cities large and small throughout North America. It is closely proximate to the central business district of a 19th century city. It is large (approximately 22 acres) and adjacent to 15 acres of developable waterfront land. Also it has a virtually empty rail passenger terminal in the typically grand classical idiom of the years at the century's turn. So far nothing exceptional. However, when one considers certain attributes of the site it becomes more attractive. Union Station is situated on Tacoma's grand boulevard, Pacific Avenue, the gateway to downtown from Interstate Five. The site slopes dramatically from Pacific Avenue down to the rail yards and down further to the nearby waterfront. There are wonderful views of the waterfront, the Cascade Range, and the mountain, Mt. Rainier, from the station proper. Union Station is set in a rich urban context of handsome old brick commercial buildings already designated a historic district.

Problematic aspects affecting site development include continued rail use and a projected freeway spur, requiring a portion of the site for a downtown connection to Interstate Five. Amtrak currently uses the station as a passenger facility for six train movements daily. These are passenger trains connecting all major metropolitan areas on the west coast between Seattle and San Diego. Burlington Northern and Union Pacific run over fifty freight trains every 24 hours through the site on main line tracks shared with Amtrak. Access to a busy grain terminal, north of town on the waterfront, is on the main line or its

spurs.

The most troublesome factor which clouds development, however, is not the movement of trains. It is the projected freeway I 705 which could take as much as half of the total land area of the station and yards. Litigation is likely on the freeway. Washington state and the Federal Highway Administration seem poised to sever yet another town from its waterfront unless the community and fiscal constraints in this "era of limits" stop the juggernaut.

The freeway is, in addition to many other things, a sign of aspirations from both within and outside of the community to make Tacoma something more than a satellite of her metropolitan neighbor thirty miles to the north. Few would question the hopelessness of ever elipsing cosmopolitan Seattle. (In a previous era such thoughts were entertained!) There does, however, seem to be a clear effort to strengthen Tacoma, Washington's third largest city, as a major regional office and service center. Tacoma talks boom in spite of a regional recession more severe than found in most other areas. A twenty five thousand person sports arena/convention center is already under construction. Cornerstone Development Company, a Weyerhaeuser affiliate, is committed to a one hundred million dollar development in the central business district and much of the city's older housing stock is undergoing gentrification.

ACKNOWLEDGEMENTS

Special mention is due for those people in Seattle, Tacoma and in Cambridge who were so supportive and generous with their time. Richard Vincent of Glacier Park Company provided the architect's drawings of Union Station, aerial photographs of Tacoma, and shared his thoughts about development of the site and other subjects. Earling Mork, City Manager, and Ron Nelson in the Community Development Department familiarized me with the nuances of waterfront development in the city waterway area and other issues related to Union Station. Councilman Tim Strege offered his knowledge and support. Patricia Sias, Historic Preservation Office, provided substantial amounts of information under the general heading of historic preservation. Bill Bailey in the Planning Department gave maps and thoughts and Eli Messinger was my guide in the Puget Sound area.

I would like to express gratitude for the guidance and encouragement I received from M.I.T. Professors Julian Beinart, Gary Hack and Imre Halasz, thesis advisor. Ann Levy Rhoads, my wife and companion, and Steve Kanner, my friend, have helped me and stood by me during this critical time. Yanna Colombotos, typist, has somehow turned illegible scrawl into a reasonably cohesive thesis.

Thank you all.

NATIONAL TRENDS AND USE OF SURPLUS RAIL LANDS

Dramatic changes in the use of land and movement of people and goods in the U.S. since 1945 have had considerable impact on the railroads. During the Second World War railroads moved 90% of the nation's freight and 97% of her armed forces. This marked the last brief moment of glory for rail, particularly passenger traffic. When peace was established the discontinuity brought on by a shortage of gasoline and tires ended. A trend that began in the twenties resumed. America's romance with automobiles, trucks and airplanes returned with a vengeance in the prosperous post war years. Massive highway programs made travel within metropolitan regions and intercity travel far less time consuming than ever before. Air travel lessened the time between coasts from days to hours.

By 1973 the railroads' share of inter-city freight traffic had fallen to about 40% of the total. Revenue ton miles were nearly double what they were in 1929 but the market share declined to about half. Inter-city passenger travel for all practical purposes ceased to exist except in the northeast corridor between Boston and Washington. The railroads also lost mail and parcel post contracts to trucks and aircraft.

Significant changes in urban land use patterns and technological changes in the railroads themselves both affected operations. Manufacturing and bulk material handling shifted away from confined and expensive sites in the city center to less restricted and relatively inexpensive sites on the periphery. The ancillary rail facilities once serving them became idle. Trains grew longer and freight cars larger. Classification was computerized in many

cases and intermodal containers entered into wide use. Old urban rail yards were commonly inadequate or improperly located for contemporary requirements. Improved efficiency in modern rail freight operations allowed volumes handled to increase and at the same time right of way requirements remained the same or in some cases declined. Mergers resulted in abandonment of redundant facilities. Urban lands formerly required for rail operations became surplus throughout North America. Marshalling yards, spurs, sidings, terminal buildings, terminal yards and freight sheds gradually became available for new uses.

OPPORTUNITIES FOR UTILIZATION OF SURPLUS RAIL LANDS AND BARRIERS

It is virtually impossible to generalize about surplus rail lands and the new uses that have been found for them. Conditions vary dramatically from place to place both in characteristics of the sites themselves and in the opportunities and barriers presented by the context of each location. Several examples of new uses for rail lands are worthy of mention in that they are illustrative of the range of alternatives that exist.

Seattle built its King Dome Stadium on former rail yards. Spokane hosted a Worlds Fair on 100 acres of land that included two railroad stations and their yards and a few scattered parking lots and old industrial buildings. The Worlds Fair left some permanent buildings and grand park adjacent to downtown. This year's 77 acre Knoxville Worlds Fair is also on former rail yards.

One particularly common trend following the

Second World War has been use of either active or abandoned rail rights of way as other types of rights of way. Regional rapid transit authorities and state highway departments have looked upon rail lands as a resource. It is common to see a stacking of freeways and railroads or railroads and rapid transit, or all three in the same corridor. This kind of thinking may well be behind the Washington State Department of Transportation's route proposal for the Tacoma Spur I 705. Rationale behind this includes a desire to concentrate noise sources, minimize land acquisition costs, and minimize condemnation of separately held parcels of private land. Adverse effects also result, however. The combined barrier of an active railroad and a freeway can be tremendous. In Tacoma, existing rail lands are to be utilized for freeway right of way under the recommended concept seven of the Tacoma Spur Design Report (1981). This would further isolate downtown from City Waterway. Lands proposed for the interstate are also suitable for uses other than right of way. Far happier examples of public rights of way on scaled down or abandoned rail lines exist. In San Francisco, unused spurs of the belt line on the Embarcadero were removed and have become a public promenade. The old Northwestern Pacific/Southern Pacific tracks between Mill Valley and Sausalito, California are now a bike path. Conversion of privately held rail lands into public held park land is rarely something that the railroads get enthusiastic about! A narrow strip of right of way is usually not attractive for development, however. Donating an unneeded right of way to the public can have positive tax implications.

Larger rail sites at or near the city center are where most major development efforts have or are likely to occur. It is these parcels that hold great promise for major new development. In some cities land owned by railroads represents sizable land reserves. Burlington Northern holdings in Denver along the South Platte River total approximately 500 acres. About 200 acres are adjacent to downtown. Boston has two sites of similar magnitude, the Boston and Maine yards west of Charlestown, and the New York and New Haven yards southeast of the Fort Point Channel. Holdings of this size represent altogether different problems than most urban development. Rather than assembling parcels there is a need to reduce scale through phasing. Infrastructure must be provided at considerable expense. Fiscal responsibility is great for projects of such magnitude. Large diversified corporations like Burlington Northern find it prudent to joint venture rather than accept all risk. Examples of recent development suggest that development formulas must be specifically structured for each situation.

ADAPTIVE USE OF RAIL BUILDINGS

There are numerous interesting examples of new uses for former rail buildings. A common scenario for depots is conversion to commercial use. Two Berkeley California stations have been converted to restaurants. The New London Connecticut Depot by H.H. Richardson is now offices and shops and has a small area allocated for Amtrak operations. A Redlands California Southern Pacific Station is now a produce market. In Strasbourg, France an old

station became a public market in 1972. Aside from being one of the first conversions in Europe it is interesting to note the similarity between the old train sheds and public market structures of the same generation. In Paris, Gare d'Orsay is to be converted into a museum. Other more utilitarian structures such as round houses and machine shops have also found new uses. The Virginia and Truckee shops in Carson City, Nevada are to become a specialty shop complex. The round house and machine shops for the San Francisco Belt Line are also awaiting conversion to commercial use. It is perhaps fitting that railroad buildings, so important as images and activity generators in cities of another era, are now being converted into specialty shopping centers in our generation. The specialty center effectively uses image as a marketing device and brings action back into the city.

AIR RIGHTS DEVELOPMENT

A pattern of air rights development over active downtown rail terminals has existed in intensively developed cities in the U.S. since the turn of the century. Examples of combined station-commercial buildings include Grand Central Station in New York, Michigan Central Station in Detroit, Pennsylvania Station in Pittsburgh and two stations in Philadelphia, Broad Street and Reading.

Two conditions were usually present to make this building type financially viable. Locational advantage existed since railroads had a virtual monopoly on access to the center city from its suburbs or beyond in the pre-automotive era. Secondly, adjacent

land values were usually high enough to justify the cost of "making new land" over trackage. As rail passenger traffic has declined in recent years, so has the advantage of being proximate to the terminal. Currently the predominant issue of air rights development is cost of comparable buildable land. (Except in some European cities where rail travel is still significant or in rare North American examples of highly traveled commuter railroads). Major North American cities with recent air rights development either underway or completed include Montreal, Toronto, Vancouver, and New York. Few if any generalizations can be made about the development that has occurred except that the building types all reflect high land costs in their generally high floor area ratios and they are generally a mixture of uses. Air rights development are not common in smaller cities as adjacent land values are rarely high enough to justify the cost.

TACOMA HISTORY AND EVOLUTION OF ITS URBAN FORM

Tacoma was a creation of the railroads. Other advantages--timber, fresh water, and a good harbor scarcely distinguished her from a handful of other little villages north and south on Puget Sound. In fact, some were older and more established. When Northern Pacific Railroad chose Tacoma as a western terminus for its transcontinental line on June 30th 1873 suddenly the place was elevated above its neighbors. Eventually it would rival Seattle for regional dominance.

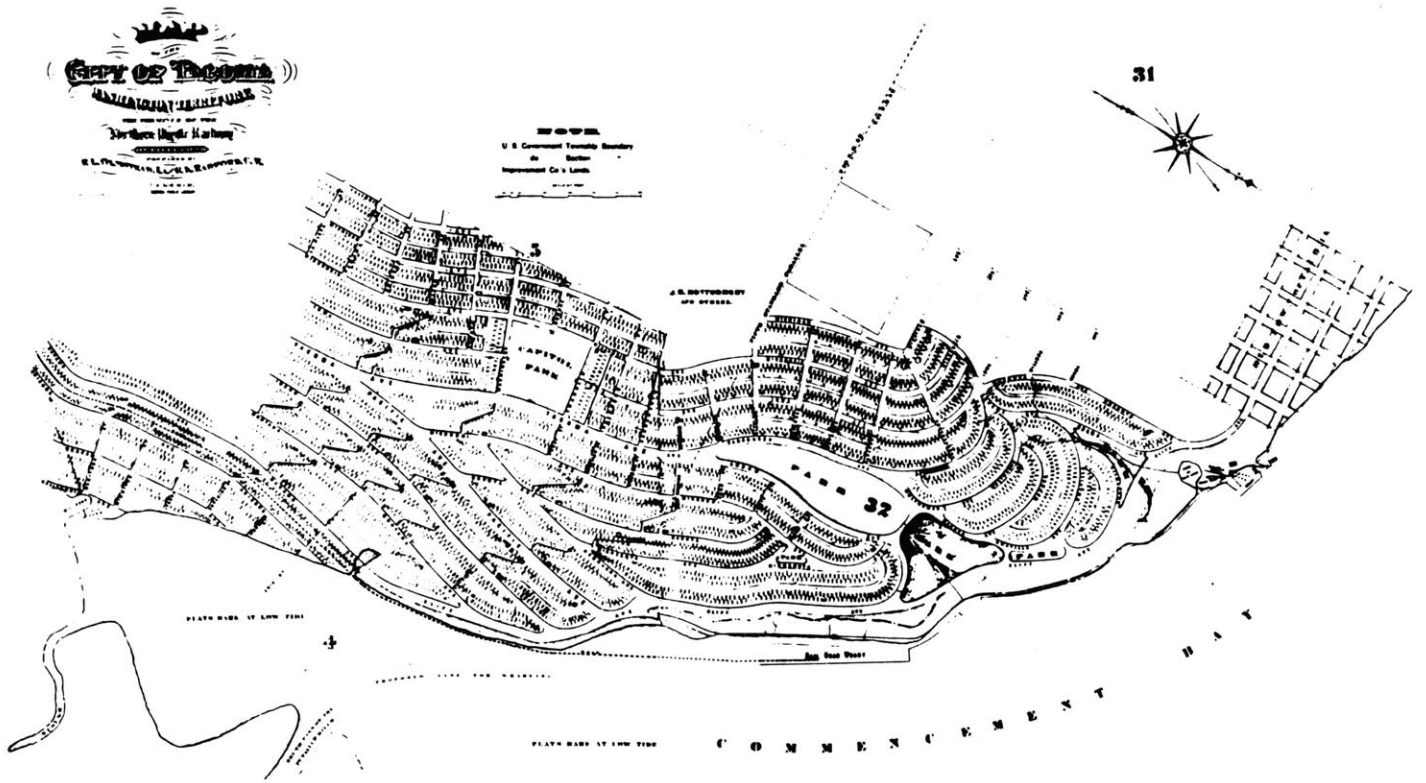
The place which Northern Pacific Railroad chose for its western terminal city was on the east edge of a thickly forested plateau-like peninsula. It was on a bluff rising from the deep cold waters of Commencement Bay and the swamp shallows of the Puyallup River Delta. A few miles to the northwest, at a little hollow in the bluff, was a small village and a sawmill. The village borrowed its name from a great volcanic peak whose presence was impossible to ignore from the shore of Commencement Bay. Native peoples called it Tacoma, meaning nourishing breast. On the west side of the peninsula was the Puget Sound Narrows, leading southward to miles of bays, islands, and fjord-like sounds. To the north and west was an eighty mile passage to the open sea via Puget Sound and the Strait of San Juan de Fuca.

Coming of the railroad scarcely meant stellar ascent to metropolitan status. Tacoma's fortunes were for the next half century to be inseparable with Northern Pacific Railroad and the whims of those who made decisions in its board of directors. As it was, fate had other plans for the city to be and its mother railroad. On September 18, 1873 Jay Cooke's bank closed, the result of a run on its deposits.

Cooke was the nation's financial wizzard and inventor of the modern war bond drive to finance the Civil War. He was also Northern Pacific's banker and the seller of its bonds. Collapse of Jay Cooke Company precipitated a national depression and left the railroad desperately short of cash. Completion of the transcontinental link would wait until 1883 and would reach Tacoma circuitously via someone else's tracks down the Columbia River and past rival Portland.

Out of the ashes of Cooke's interests in Northern Pacific Railroad rose Charles Wright, a successful entrepreneur and Jay Cooke's brother-in-law. For the rest of Wright's life he would be associated with the railroad, its real estate promotions and the faction on its board that stood to benefit most from the growth of Tacoma. Wright continued to live in his native Philadelphia but he was Tacoma's most important citizen if not an actual resident. He was the patron saint, benefactor, and booster that any successful, nineteenth century American city required. Wright was also an all important ally on the board. Tacoma's fortunes rose when Wright was in power and fell when he wasn't.

With bond sales slowing, Wright found it most expedient to raise capital through sales of lots in the western terminus. First the railroad needed a plat and for the task they sought out Fredrick Law Olmsted. Murray Morgan speculates in his book Puget's Sound that "probably what attracted (the board) was Olmsted's capacity for getting attention and his reputation for finding novel solutions to difficult problems of terrain." Wright and his board gave Olmsted, and his partner for this project G.K. Radford, six weeks to prepare a preliminary



F.L. Olmsted's 1873 Plan for Tacoma
 (From Puget's Sound)

study for the town site.

Reaction to Olmsted's plan of curving contoured streets with few four-way intersections was less than enthusiastic. Early settlers thought that the plan for their town resembled "a basket of melons, peas and sweet potatoes." The lack of four-way intersections was seen as a distinct disadvantage by speculators. "No one could sell a crooked lot to an honest Iowa farmer. The plots must be rectangular and there must be plenty of corner lots for the prairie states people to purchase sight unseen."

The railroad was desperate for capital in the worsening depression and the board's confidence all but evaporated. The plan was rejected in favor of the standard approach, a grid. But the tendency to seek design expertise from some of the better known professionals in the east continued with far happier results later.

The adopted plat was simply a variant of the ubiquitous grid. North-south trending streets were set at about 10° west of north and parallel to the bluff which rises about 300 feet above Commencement Bay. East-west streets went against the steep contour without regard to draft animals or pedestrians. North-south streets were far more numerous than east-west streets in what was to become the downtown area giving a distinct linear aspect to the place. Pacific Avenue was set as the main street with a 100 foot width (130 feet at Union Station). Other streets typically had 80 feet widths. The standard block in downtown Tacoma was 680' in length (north-south) and 280' in width with a 40' court set along the center line in the north-south direction. Lots were 25' in width and 120' in depth, with frontage

on the north-south streets and on the interior courts.

Initially growth in Tacoma was slow due to the national depression and weakening public faith in the railroad. The town's population was 1,094 in the 1880 census and this included both the railroads plat, New Tacoma, and the older pre-railroad village, Old Tacoma. The railroad's decision to build a direct line over the Cascades to Tacoma finally brought boom times. The village of 1880 became a city of 36,006 in 1890; only 6,831 less than Seattle's 42,837. These were exciting times. Schooners and steamers were sometimes lined up two and three deep at the docks to take on grain, lumber, or coal to far off ports in California, South America, Europe and the Orient. The city had new industry, sawmills, ship builders, iron works, and a smelter. This was also a time of intense competition with Seattle and Portland for status as "Queen City of the North West." Tacoma was a typical boomtown. In the fall of 1889, twenty-four year old British journalist Rudyard Kipling, on a tour of America, came up from California to take a look at what he had been told was a classic example of town-booming. Kipling reported in Coast to Coast, his book on American travel:

I do not quite remember what her natural resources were supposed to be, though every second man shrieked a selection in my ear. They included coal and iron, carrots, potatoes, lumber, shipping and a crop of thin newspapers all telling Portland that her days were numbered.

We struck the place at twilight. The crude boarded pavements of the main streets rumbled under the heels of hundreds of furious men all actively engaged in hunting drinks and eligible corner-lots. They sought the drinks first. The street itself alternated five-storey business blocks of the later and more abominable forms of architecture with board shanties. Overhead the drunken telegraph, telephone and electric-light wires tangled on tottering posts whose butts were half whittled through by the knife of the loafer. Down the muddy, grimy, unmetalled thoroughfare ran a horse-car line—the metals three inches above road level. Beyond this street rose many hills, and the town was thrown like a broken set of dominoes over all.

We passed down ungraded streets that ended abruptly in a fifteen foot drop and a nest of brambles; along pavements that beginning in pine-plank ended in the living tree; by hotels with Turkish mosque trinketry on their shameless tops and the pine stumps at their very doors; by a female seminary, tall, gaunt and red, which a native of the town bade us marvel at, and we marvelled; by houses built in imitation of the ones on Nob Hill, San Francisco, after the Dutch fashion; by other houses plenteously befouled with jig-saw work, and others flaring with the castlemented, battlemented bosh of the wooden Gothic school.

The hotel walls bore a flaming panorama of Tacoma in which by the eye of faith I saw a faint resemblance to the real town. The hotel stationery advertised that Tacoma bore on its face all the advantages of the highest civilization, and the newspapers sang the same tune in a louder key. The real estate agents were selling house-lots on unmade streets miles away for thousands of dollars. On the streets—the rude, crude streets, where the unshaded electric light was fighting with the gentle northern twilight—men were babbling of money, town-lots and again money. . . . I think it was the raw, new smell of fresh sawdust everywhere pervading the air that threw upon me a desolating homesickness.

Tacoma Land Company, the railroad subsidiary, attempted to discourage speculation through its policies. It both specified the use of the land it sold, the types of improvements (a fence or sidewalk) and building material (brick or wood). Through its control the Land Company determined the location and character of Tacoma's residential, business, industrial, and jobbers districts. Lumber was cheap and abundant, but most buildings in downtown were brick. This was at the insistence of the Land Company who was concerned with the hazard of fire (which destroyed so many flimsy western towns, including Seattle and Spokane in 1889). Tacoma Land Company, as the railroad's agent, also was to facilitate growth of a city that served the railroad's ends. Tacoma was to handle the goods and people that the railroad carried.

When the boom went bust in 1893, again due to a nationwide depression, Tacoma was severely affected. Its more diversified and older rivals, Seattle and Portland, were better able to stand the economic

strain. Seattle took advantage of the trade generated by the Alaskan Gold Rush of the late 1890's as Tacoma languished. When the census was taken in 1900, Seattle had nearly doubled in population, increasing from 42,837 to 80,676. Tacoma, which had 36,006 in 1890 and claimed 52,329 in 1893 showed only 37,714. Seattle became dominant in the region, eclipsing not only Tacoma but Portland as well. Tacoma was destined to live in the shadow of her larger and increasingly more metropolitan neighbor some thirty miles to the north. However, she had established herself as the second city in the Puget Sound Area as Oakland is to San Francisco, Camden to Philadelphia, or Newark to New York.

Urban form patterns established in Tacoma during the boom years of 1885-1893 were intensified in a second boom period that coincided with major rail expansion in the 1905-1915 period. Union Station was built during this time and two new class one railroads entered into Tacoma. The Chicago, Milwaukee and St. Paul built its own tracks across the Cascades and Union Pacific shared the new Northern Pacific sea level approach around the peninsula from the Columbia River when it was completed in 1914. Downtown's concentration of brick buildings was a linear strip between the railroad lands at the base of the bluff and the blue collar residential district of detached woodframe houses on the top of the bluff. The business district was anchored at the north end by the "Renaissance" city hall with its clock tower and the smaller Italianate "Victorian" Northern Pacific Railroad Headquarters Building, both on Pacific Avenue. At the south end, also on Pacific Avenue,

was the grand new "Burnham Baroque" Union Station. Three to six story brick buildings lined both sides of the city's boulevard from the station to city hall. Tacoma could even boast an office building that for a time was the tallest west of the Mississippi. It had electric street railways, cable cars on South 11th Street, and a new steel draw bridge across City Waterway, also on 11th Street. The business district had a compact clearly defined quality, typical of pre-automobile cities, and had established itself as a major retail market center.

Between the railroad tracks and the water, on made land, was the waterfront. Warehouses and docks extended in an unbroken line along the shore of Commencement Bay from the end of City Waterway about a half mile south of Union Station nearly to Ruston, site of a large smelter, about five miles to the northwest. Marshlands of the Puyallup River, east of City Waterway, were opening up to accommodate new industrial development and rail yards.

The "better" residential districts were located on the highest point of the bluff northwest of downtown, with good views of Commencement Bay and near Wright Park, a small example of the many urban pleasure gardens built in American cities in the 19th century. The park had its own steel and glass conservatory (and still does).

In the Union Station area was Tacoma's wholesale jobber's district near both the railroad and the waterfront. These firms specialized in wholesale groceries, hardware, dry goods, and marine supplies. Substantial brick and heavy timber buildings were built to house this activity. Several of these were in the Chicago commercial style then

currently in vogue in "up-to-date" cities of the time.

A reliance on the Eastern U.S. for design inspiration as well as upon San Francisco went beyond mere stylistic copying. Many buildings were actually designed by prominent eastern architectural firms. Burnham and Root designed two buildings downtown. Stanford White of McKim, Mead and White designed the Northern Pacific Railroad owned Hotel Tacoma. Unfortunately this grand chateausque style building burned in the 1930's. (An earlier attempt by the railroad to build a grand hotel was abandoned in the crash of 1893. The partially completed building became Tacoma's Stadium High School.) Other buildings by eastern notables include First Presbyterian Church by Cram, Goodhue and Ferguson and Union Station by Reed and Stem, who collaborated with Warren and Wetmore on Grand Central Station in New York City.

By 1915 Tacoma had virtually all of the appropriate furnishings of a small self contained city. It had all of the civic monuments though usually in scaled down versions, and two private colleges. Tacoma also had a big new military base, Fort Lewis, and ever growing numbers of automobiles trucks, and buses.

TACOMA TODAY

Tacoma is a city of 159,000, and the center of a metropolitan area with a population of 376,400. Her major industries include wood, paper products, primary metals, and chemicals. There are a number of boat building firms and national defense is a significant employer with many civilian and military personnel. Many people are employed in professional

services in and around downtown. Much of the city's industrial activity is centered near the port of Tacoma, east of downtown on the Puyallup River Delta. This area has replaced the old waterfront, and old industrial districts south of Union Station as the site for most of Tacoma's industry. In the years since the First World War industry has been attracted to the port area due to excellent rail and deep water access. Inexpensive hydroelectric power provided by the city owned utility has also encouraged industry to locate here. Tacoma still has some of the least expensive electric power in the northwest.

Increased use of automobiles has affected Tacoma in much the same way that it has affected most older cities since 1920. In Tacoma, however, the trend toward suburbanization may have been more severe. Development of an expensive regional road network encouraged suburban expansion starting around 1920 and accelerated it in the post war years. Suburban development now covers most of Tacoma's peninsula. Construction of Interstate Five tied the suburbs of Tacoma into the urban region which now extends with few breaks along the eastern side of Puget Sound from Everett to Olympia. Seattle has become more accessible and Tacoma's influence on its own suburbs eroded.

Downtown Tacoma has not fared well in the automotive era. The dense cohesive character of the central district has been weakened as numerous buildings were demolished under the guise of urban renewal. So far only parking lots and one or two freestanding buildings surrounded by parking (in the suburban pattern) have replaced them. Several major department stores left Tacoma's retail hub Broadway for the new

Tacoma Mall four miles south on Interstate Five. With five anchors, this mall currently has the highest sales volume in the Pacific Northwest. In effect the heart of downtown, its retail trade, has moved to the suburbs. Perhaps the city may consider itself fortunate. At least this trade, its jobs, and tax revenues is still within the corporate limits. The wholesale jobbers have also left. Their space needs have changed to large flat sites accessible to the regional road system rather than rail or water. Fortunately most of the jobber's buildings remain although they are as a whole underutilized. In 1979 it was estimated that the Union Depot Historic District, which contains the old jobber's district, had approximately 390,000 square feet of vacant space.

Better days may lay ahead for the central business district. A number of major projects in and around downtown have either been completed or are underway. A commitment to downtown has existed for decades. Among the earliest efforts was the construction of the Winthrop Hotel in 1925 on the site of the old Chamber of Commerce building. In an unsuccessful attempt to stop the decay of the shopping district a pleasant but not particularly memorable mall was built on Broadway, as were a number of parking structures (with retail space at street level) in the late 1960's and early 1970's. Pacific National Bank of Washington built a 20 story office building in 1969. A convention center, Bicentennial Pavillion, was completed in 1976. The old Rhodes department store became the University of Puget Sound Law Center. An art deco skyscraper, the Medical Arts Building (similar to 450 Sutter in San Francisco though smaller) was converted into city offices. Old City Hall, after

remaining vacant for many years, was converted into a specialty shopping center. This proved unsuccessful and it is now first class office space. Projects currently underway include restoration of the 1918 Pantages Theater Building for use as a performing arts center, and several different projects on Broadway by Cornerstone Development Company. Cornerstone is a wholly owned subsidiary of Weyerhaeuser Corporation. George Weyerhaeuser, a Tacoman by birth, is said to be interested in aiding the Renaissance of downtown. Cornerstone has approximately 100 million dollars of construction underway or planned, including restoration and conversion of the old Sears department store into office and retail, construction of a twenty story office tower, and construction of a first class hotel (Sheraton has been mentioned as the tenant). Most of this development is centered at Broadway and 13th Streets near Bicentennial Pavilion. A 25,000-seats sports arena, the Tacoma Dome, is now under construction near downtown on Interstate Five.

National trends such as urban resettlement--commonly referred to as gentrification--and historic preservation are also visible in Tacoma. Tax incentives for restoration of older buildings, particularly ones designated "historic," are likely to encourage further investment. A sizable inventory of suitable buildings exists here and most similar inventories in other west coast metropolitan areas have already been redeveloped. Housing is also less expensive in Tacoma than in much of the region, and far less expensive than in other major metropolitan areas on the west coast. With approximately two million square feet of office space in the central business district,

Tacoma has already established itself as a regional office center. If present trends continue it should strengthen that position.

UNION STATION AND ITS CONTEXT

Times were bright for railroads in the decades before and after the century's turn. These were the twilight years of empires and empire builders. Virtually all transcontinental linkages in North America had been completed. Railroads had established themselves as central to American life. Passenger traffic and freight volumes appeared destined to grow without end. Henry Ford's tinkering with gasoline powered buggies scarcely seemed much of a threat to the iron horse.

Capital was no longer required for massive construction efforts of continental dimensions. Attention of the railroad companies was shifting to endeavors ignored in years of intensive competition for markets. Tracks and other facilities hastily thrown together and routed for ease of completion rather than durability and cost effective operation were being upgraded or rebuilt. Crudely constructed and inadequate wooden station buildings were also being replaced.

Carroll L.V. Meeks, in his book The Railroad Station: an Architectural History, has termed this the "megalomania" era of railroads. A city's railroad depot had been delegated the role of a civic monument and therefore was to appear as monumental as other major civic institutions such as courthouses, custom houses, post offices and city halls. The major urban depot was to be both a civic symbol and a symbol of railroad greatness and power. According to Meeks: "The (railroad) companies could afford magnificence and enjoyed their munificent role, as princes had in predemocratic ages."

An appropriate architectural style for the grand depot had also been identified for the "megalomania"

era. The imagery was Classical-Baroque, like other civic monuments of the time, and could be directly traced to the "City Beautiful" of the 1892-1893 Worlds Fair in Chicago. Meeks suggests that the temporary station at the Worlds Fair, by D.H. Burnham's office (probably Charles B. Atwood) was an important precedent and reaction against then current romantic and picturesque Victorian styles. He states, in reference to the temporary station:

"Regarded as a beautiful and costly building, (in the Renaissance Baroque tradition of many contemporary buildings in Europe), a "model in its way," it was used by 100,000 persons daily and fixed itself in their minds as the archetype for future stations...To Atwood's designs for the colonnade and triumphal arch across the end of the Court of Honor, the Fine Arts Palace and especially the temporary station, we can trace the ancestry of many of the ensuing monumental American stations."

The arch became an often used motif, perhaps as a kind of contemporary civic portal. It began to show up on important station buildings throughout the United States. D.H. Burnham and Company designed a number of arched Baroque styled stations, including Union Station in Washington D.C. and Union Station in Chicago. Reed and Stem, a firm which eventually developed a great and lasting reputation as station architects, paid homage to Burnham and Atwood in their numerous arched stations such as New York Central in Troy, New York, Grand Central Station in New York City, Michigan Central in Detroit, and Union Station in Tacoma. Compositions including towers and/or domes were also popular at this time as is evidenced by the numerous examples of stations built.

Tacoma's Union Station (1909-1911) is stylistically and functionally related to its siblings

throughout the United States. The fact that it is perhaps the grandest and most memorable railroad station in Washington state is a reflection on Northern Pacific Railroad's special relationship to Tacoma. This expensive (\$650,000 in 1911) civic pile was built as a monument to that relationship. Thirty thousand people attended the opening of Union Station on May 1, 1911. Among those present were the governor of Washington, the mayor of Tacoma, and Howard Elliott, president of Northern Pacific. It is not surprising that Tacoma was pleased with her new symbol of metropolitan status. The "Daily Ledger" (30 April 1911) challenged its readers to name another city:

"as young as this that has such a costly and capacious passenger station. After years of waiting, Tacoma has a magnificent new railway passenger station...This commodious and beautiful passenger station evinces the fact that Tacoma is now a metropolis, a great railroad terminal. No longer will citizens of Tacoma apologize to visitors for poor station facilities. We now have the best."

Ironically, this large and expensive artifact proved to be the last major civic contribution to Tacoma by the railroad. No one would have guessed this in 1911 though. After all, wasn't Union Station the grandest symbol of the railroad that was Tacoma's "raison d'etre?"

AN ARCHITECTURAL AND PHYSICAL DESCRIPTION OF UNION STATION

Reed and Stem, Architects, of St. Paul, Minnesota designed Tacoma's Union Station in the Renaissance-Baroque style made popular in the Chicago Worlds Fair of 1892-1893. Essentially, the building is a copper dome set on the crossing of two barrel vaults. To the

right and left of the dome, facing Pacific Avenue, are two smaller wings. Exterior finish materials are primarily common red brick trimmed with limestone. Interior finish materials include marble floors and wainscot, terrazzo and extensive use of plaster, particularly in the covering of the dome and on walls above the wainscot. The building's structure is steel and reinforced concrete, and reflects state of the art in structural engineering of its time. Technical innovations included a central oil fired heating and vacuum plant. There were vacuum outlets at the tracks to facilitate cleaning of passenger trains and also a pneumatic delivery system for baggage checks.

The entry at Pacific Avenue is about twenty seven feet above track level. Departing passengers entered through an arch 40 feet wide on Pacific Avenue and into the main waiting room, under the dome. Flanking the dome were the various accessory activities such as a ticket office, telegraph, parcel room, and news stands. Wings on either side contained separate waiting rooms and retiring rooms for men and women, a dining room, baggage check rooms and restrooms. To gain access to the platforms, passengers descended to the concourse level, which had concessionaires, restrooms and railroad offices, and passed through the concourse over the tracks. From here they descended to the platforms via stairs or elevators. At track level, the station building was reserved for parcels, baggage and mail rooms.

Total floor area of the building, not including the adjacent heating plant, is about 66,000 sq. ft. Roughly one third of this is on the same level as Pacific Avenue. The rest lies below on the concourse

and track levels. In effect one story fronts Pacific Avenue though it is a tall story indeed.

EXISTING CONDITIONS OF THE STATION AND ADJACENT LANDS

Today only a small portion of Union Station remains in active use. Most of the Pacific Avenue level including the main waiting room is inaccessible, and vacant. Amtrak is primarily confined to the north wing and would like to move elsewhere. Much of the concourse level is occupied by Burlington Northern's dispatching office for the Tacoma division. These offices will soon be removed to Seattle. The track level is virtually vacant. All concessionaires have long since disappeared.

To the east of the station are two platform tracks (of four original) used by Amtrak, cobblestone driveways providing access to the track level of the station, freight yards, two mainline tracks, and a spur for industry along City Waterway. According to a railroad representative only two mainline tracks will be required for operations even if Amtrak facilities were to remain on the site. Two antiquated and poorly aligned steel bridges provide grade separations over the tracks to Dock St. from South Fifteenth Street on the north boundary of the station yards and from South Twenty First Street on the south boundary.

The proposed Tacoma spur Freeway Interstate 705 would require a wide swath of land directly across the center of the station yards, between the mainline tracks and Union Station if built as suggested under the recommended option #7. According to the 1981 Washington Department of Highways Design Study on the Tacoma spur the proposed freeway would be on an elevated structure adjacent to the station high

enough above grade to allow parking beneath and low enough to prevent obstruction of view to the east from Pacific Avenue. If the freeway is built as proposed, development potential of the site will be severely constrained.

Industrial activity between Dock Street and City Waterway has been declining for a number of years. However, several firms remain adjacent to Union Station. An old plywood plant is still running. It no longer receives logs from the waterway and its operations are being relocated to a new plant in the Puyallup Valley. A bulk materials plant remains as does a fuel oil distributor and two or three trucking companies. One of the trucking companies occupies an old grain milling and warehousing complex with some potential for adaptive use. City policy for the last decade has been to generally encourage industry on City Waterway to relocate elsewhere. Public funds have been expended on improving streets and sewers around the waterway. Several marinas and a few restaurants have been built on City Waterway south of the 11th Street Bridge.

Adjacent to Union Station, on the west side of Pacific Avenue, is the virtually intact though mostly vacant wholesale jobber district. As mentioned previously this district has as a predominant building type attractive three to six story brick and heavy timber buildings. Most all of these old commercial structures are in reasonably sound condition and are prime candidates for new uses. The jobbers' buildings form a virtually uninterrupted wall along the west side of Pacific Avenue adjacent to Union Station.

South of Union Station and its yards is the light industrial district along "A" Street. Most structures

here are one or two stories and are as a whole rather unremarkable. A significant aspect of this area, though, is that "A" Street is now a major access way into downtown from Interstate Five. As a result Union Station is highly visible in the entry sequence to downtown from the freeway.



Downtown Tacoma and Union Station from the South c. 1980
(Courtesy of Glacier Park Company)



Union Station and City Waterway from the West c. 1980
(Courtesy of Glacier Park Company)

URBAN DESIGN GOALS

PHYSICAL FACTORS AFFECTING SITE DEVELOPMENT

There are a variety of separate conditions which will affect development of Union Station, its yards and adjacent waterfront lands. Continued use of a portion of the site as a transportation corridor is one of the major factors. Rail operations will require a minimum of one northbound and one southbound track. These mainline tracks should have not less than twenty four feet of vertical clearance. The Tacoma spur, I 705, will also have major impact regardless of its specific location or design. In a worst case situation, such as the option seven proposal previously mentioned, virtually all of the station yards would be required for either freeway right of way or railroad tracks leaving a narrow strip along Pacific Avenue for development and a potential for expensive air rights development over the two rights of way. If the air rights were not developed, a wide barrier would exist between Pacific Avenue and City Waterway. Another option would be to stack the proposed freeway over the tracks, resulting in a barrier narrower than in the previous case but much higher. In either scenario, air rights development over the transportation corridor would result in a high "cliff" along Dock Street, discouraging access to the waterfront.

Contextual qualities of the site should also affect its development. Much beloved, though somewhat elephantine in scale, Union Station is an important historic building and major civic image. New building on the site will hopefully respond to it and the substantial wall of jobbers' buildings on the west side of Pacific Avenue in a positive and harmonious

way. The old Albers Milling Complex and perhaps a few other waterfront structures (for example, two steel stationary cranes) might be retained as artifacts of the district's former life and be used for some contemporary function. A thirty five foot change in elevation between Dock Street and Pacific Avenue also represents a special challenge and opportunity. The current result of this slope is an unobstructed view of the Cascades and Mount Rainier to the east and southeast.

SOME URBAN DESIGN GOALS

The following list of urban design goals establishes a part of a personal agenda for the design documents included in this thesis project. These should serve as both guidelines for Union Station site development and as performance standards for analysis of the design drawings.

1) UNION STATION

The old depot should have a use which makes it highly accessible. It should continue to be a major Tacoma symbol visible on the entry sequence into downtown. Adaptive use of the building should be sensitive and demolition of the historic fabric kept to a minimum. If possible a visual connection should be maintained between the depot and the waterfront.

2) FIT IN HISTORIC CONTEXT

New building should respond in a positive way to the existing historic context. Where possible it should support and complete environments around existing historic resources. New building should reflect the current context without being imitative. An attempt should be made to recall forms, materials, massing, colors and textures where possible. Found materials such as brick and stone paving blocks (the cobblestones on the depot service roads) should be re-used.

3) NETWORKS

Pedestrian, automobile, service, and railroad systems should be non-conflicting and compatible. Several existing inadequacies should be repaired. Pedestrian movement to downtown and along the waterfront should be encouraged. The opportunity to develop a pedestrian connection between Pacific Avenue and City Waterway through Union Station should be pursued. A waterfront promenade/jogging path should be built from Union Station to the 11th Street Bridge. The highway connection from Shuster Parkway to Interstate Five past downtown and Union Station should be made in the least disruptive way possible. Interstate freeway design requirements are probably not justified either by projected traffic volumes or due to potentially destructive results of such a major barrier.

4) AMTRAK

An Amtrak station should remain somewhere on the site. Relocation to McCarver Street in Old Town would deny downtown easy access to Amtrak trains. If in the future commuter rail service between Olympia and Everett is established commuter trains could stop here as well.

5) SLOPE AND VIEW

The sloping aspect of the site should be reflected in site development as should view opportunities from both private and public domains.

6) URBAN IMAGE

Pacific Avenue in the downtown area is perhaps the most urban of Tacoma's streetscapes. With the exception of the Union Station site there are few breaks in the wall of buildings lining both sides of Pacific Avenue from South 21st Street to old City Hall. Development of the Union Station site should reflect this pattern to reaffirm the urban vs. suburban aspect of downtown Tacoma. In addition to the general pattern of meeting the edge of the street with building, open space should be enclosed and articulated by building mass. The suburban characteristic of building in a field of space should not be a desired image for this project.

7) DEFINITION OF PUBLIC, SEMI-PUBLIC, AND PRIVATE TERRITORIES

Distinction of public, semi-public, and private realms should be supported by design of the environment. This would result in more useful and secure settings for a variety of activities.

8) MIXTURE OF USES

The notion of people living near where they work may well be a bit naive in a society as mobile as ours. However, an environment which combines living, entertainment, employment, recreation, and shopping tends to be active for a greater number of hours in a day than a single use environment. Peopled places are more inviting, more profitable and more secure. Downtown Tacoma is currently about as enticing as a ghost town during the evening and on weekends due to its limited range of functions.

PROGRAM AND SOME ASSUMPTIONS

BOUNDARIES OF THESIS STUDY AREA

In this thesis project nearly 40 acres of land area are studied in varying degrees of intensity. The "site" as defined for study is Union Station, its rail yards, and the adjacent lands between Dock Street and City Waterway. Boundaries include Pacific Avenue to the west, City Waterway to the east, South Fifteenth Street and downtown to the north, and South Twenty First Street to the south. Union Station and its associated yards is the largest undivided parcel and has approximately 22 acres of area. Adjacent waterfront lands (15 acres) are divided, and continue to be occupied by a variety of industrial activities. However, area along the waterway was included due to a city policy of replacement of industry in this area by more "attractive" land uses such as waterfront restaurants, offices, marinas and perhaps housing. Inclusion of the waterfront makes possible a cohesive development encompassing a sloping portion of the city from Pacific Avenue to the water's edge. An opportunity exists here to reverse a history of barriers between Tacoma and its waterfront. Displacement of industry along City Waterway to allow more intensive public activity and greater access has begun this process. Development on the Union Station yards can respond to the opportunity.

ASSUMPTIONS ABOUT SITE DEVELOPMENT AND USE

A series of major factors remain unresolved at this writing regarding development of the Union Station site. Several assumptions about the resolution of these unknowns had to be made in order to get underway

on the design phase of this thesis project. A list of these assumptions along with some basis for each are included as follows:

1) The Expressway Interstate 705 and State Route 509 will not be built as proposed. State Route 509 and its high level bridge over City Waterway will be dropped completely. In place of the Interstate will be two major surface streets. Pacific Avenue will remain essentially as it is at present at Union Station, but will have an improved interchange at Interstate Five. The second street connecting Shuster Parkway, downtown, and Interstate Five will be designed to standards similar to those for Shuster Parkway. It will be relatively high speed (45 mph), and will have a limited number of signalized intersections with projected stacking lanes for left turns. Directions of traffic will be separated by a divider and there will be grade separations over the railroad tracks. Adjacent to Union Station, South Fifteenth Street and South Twenty First Street will be signalized where they intersect the new street. Each of these intersections will be on structures above grade to clear the tracks; the old steel grade separation structures will be replaced. Between South Fifteenth and South Twenty First Streets, and adjacent to Union Station, the new street will descend to the existing level of Dock Street. Here, at grade, there will be another signalized intersection for pedestrians and vehicles. A grade separated off ramp passing over the roadway could be provided for downtown north of Fifteenth Street so that traffic from Interstate Five need not make a 90° turn across opposing traffic.

The position taken here is that a pair of high capacity streets would eliminate a need for an expressway designed to Interstate standards. Access to the new street would be limited but not as limited as to a freeway. It would be less of a barrier between the city and the waterfront, particularly adjacent to Union Station.

San Francisco exists more happily without a freeway connecting the financial district and Golden Gate Bridge. Lombard Street and Marina Boulevard tend to be quite crowded at rush hour but the demands placed on them are much greater than can be anticipated here.

2) Air rights development over the two main line tracks is a viable option. Area required for rail right of way will be considerably reduced from current conditions. As a result, cost of a structure covering the tracks will be relatively low per unit of total site area. The benefit resulting from coverage will be a reduction of noise dust and hazard, increasing the value and usefulness of the land.

3) Amtrak will remain on the site in a new facility separate from the old depot. By providing Amtrak (and possible future Washington state rail service) with its own facilities the old depot could be freed up for another use. Amtrak would have facilities more suited to its needs and downtown would still have an active rail station at its doorstep. Amtrak trains will stop directly on the main line tracks rather than on special terminal sidings. Public funds for station construction will be located.

4) A major mixed use development will occur on the Union Station site and on adjacent waterfront lands. This will include retail commercial, restaurants, a hotel, offices and other employment, a railroad station, open space, commercial recreation, housing, and automobile parking. Greatest density will occur along the Pacific Avenue edge of the site and Union Station will remain the focus of activity.

Mixed use is justified by both urban design considerations and economics. Conditions in the Tacoma market place would make occupancy of such a major development of singular use unlikely. It is assumed here that the office/employment components of the projects could be effectively leased to companies requiring regional offices in the south Puget Sound area or to out of state "high tech" industry choosing to locate here or in near by vacant jobbers' buildings. "high tech" is selected as a market target due to social and economic advantages of expansion in the Puget Sound region vs. in traditional "high tech" areas such as California's Santa Clara Valley. Housing in the project is expected to be affordable to the employees of office tenants on site as a further market incentive.

5) Union Station will become the centerpiece of a major new specialty shopping and entertainment complex, its primary use will be for food and beverage establishments as is the central market building in Boston's Quincy Market.

Failure of the shopping center conversion of Old City Hall should not be reported if its errors are not repeated. The physical characteristics of Old City Hall were not particularly well suited for a specialty center. There is no exterior open space and the vertical organization of the building is not conducive to foot traffic. These factors may have combined with poor exposure, and inadequate merchandising and publicity in the project's failure. Union Station has a much more visible location, a large and memorable interior space, a lower floor area ratio than Old City Hall, and potential for adjacent open space. These physical factors and the synergistic effect of other associated development can result in a more positive outcome. Good design, sophistication in the merchandising marketing and management concept (as in James Rouse "Festival Centers") and a favorable market are also required for success.

PROGRAM AND REFERENCES

The program elements are listed and described here along with their references. This program is based upon previously stated urban design goals and assumptions. As with each of the fore mentioned, the program serves as part of an agenda for the thesis design study and as a standard for its evaluation. It is necessarily non-specific in view of the numerous unknowns, scale of the site, and scope of this work. The following components are included in the thesis design:

1) SPECIALTY SHOPPING CENTER

This is perhaps the most suitable commercial use for Union Station. It encourages public access to this major civic symbol and is the kind of use that can exist happily in its peculiar spaces. The depot is smallish (66,000 sq. ft.) as a self-contained specialty center so additional building would be required to achieve sufficient size. The depot building would be primarily for food and beverage establishments and new construction would provide

space for sales of more durable goods.

A good reference for the specialty center is Quincy Market in Boston (James Rouse Co., Developer; Benjamin Thompson, Architect). This project is an adaptive use of an early 19th century public market. It is a superior example of successful architectural design, particularly in its pedestrian circulation system, design of its open space, and incorporation of new greenhouse sheds on the exterior of the central market building. Quincy Market is also a landmark in specialty center merchandising techniques (which can easily be adapted to Tacoma) and its activity generating effect on the Government Center area of downtown Boston has been dramatic.

2) WALK-UP HOUSING, RETAIL AND/OR OFFICE SPACE,
AUTOMOBILE PARKING

This is a mixed use building type which incorporates offices and or retail space, and housing. Parking is provided for residents and the retail office tenants and customers. The first two stories above grade are for commercial tenants and parking. This becomes a podium for a more private residential precinct of walk-up condominium housing. Dwellings are situated along the street edge or in clusters in the center of the block. Access to housing is from the open space in the interior of the blocks. Commercial space is also on the street edge. The interior of the block below the podium is used for automobile parking since the area lacks adequate daylighting. The model for this building type is Fisher Friedman and Associates' Golden Gateway Commons in San Francisco.

3) HOTEL

This is to be an urban first class hotel with about four hundred guest rooms, banquet facilities, meeting rooms, restaurants, shops, automobile parking, gym facilities, and a delightful though perhaps ubiquitous atrium space. Mount Rainier and the Union Station dome could be visible from the atrium. The hotel should also be close to the new Amtrak station for the convenience of its guests who arrive by train (the vast majority will probably arrive by car or by shuttle from the airport). The atrium space of the hotel should also be connected with the specialty center to encourage pedestrian movement between each. The references for the hotel are John Portman's numerous atrium hotels for Hyatt and

others throughout the United States. In some of Portman's more successful examples, such as the Hyatt Regency in San Francisco, the atrium is a very public space that is enjoyed by many more people than just the hotel guests.

4) AMTRAK STATION

The Amtrak station is to be the successor to Union Station as Tacoma's rail terminal. It will reflect the reduced importance of the role of rail passenger transportation in its reduced scale and presence. The references are modern rapid transit stations and nineteenth century train sheds. Unlike the turn of the century urban rail terminal, which demonstrates an outpouring of architectural energy on an ediface for waiting rooms, the concourse, and ancilliary activities that become part of the station; attention is turned (or rather returned) to the platform. Like contemporary rapid transit stations the platform is the station with some interest being focused on the entry so that one can find it and remember what it looks like. The new station should be near the old one so that there is at least a visual association between old and new and so that the delights of the specialty shopping center can be shared with arriving and departing passengers. It should be separate from the old station, however, so that hurried travelers may go directly to their trains and so that the old station may have a completely different use. The platform level should have a view out to make it a more pleasant space.

5) OFFICE TOWER/TOWERS

This component of the program is included for reasons of pragmatism as well as my desire to experiment with this building type. A developer for the site would probably seek to include an office tower or towers for economic reasons. A concentration of employment that a skyscraper represents could help to support other activities on the site. The primary concern is how to make a building or buildings of great height and bulk coexist in a positive way with a smaller (but monomental) Union Station and other smaller neighbors.

Copley Square in Boston is a graphic example of this conflict. Both Trinity Church by H.H. Richardson and Hancock Tower by I.M. Pei and Partners are (in my opinion) exceptional works of architecture. But the Hancock, in all of its seventy story reflective

glass monolithic splendor is only one hundred feet from the 19th century Richardson masterpiece. The unfortunate result is that Trinity, which was a monumental and a visual climax in its pre-Hancock context, is now made diminutive by its huge neighbor. This conflict should be avoided on the Union Station site.

References for the skyscraper(s) includes S.O.M.--Portland's Puget Sound National Bank in Tacoma (300,000 sq. ft., 20 stories) for height and floor area. Infinitely more promise for massing and surface treatment is held in 1930 or post 1970 skyscrapers than in the Miesian tradition, however, Works that I admire are Tacoma's own Medical Dental Building by John Graham Sr., Rockefeller Center by Raymond Hood, Eliel Saarinen's Chicago Tribune competition entry, Philip Johnson's Post Oak Central in Houston, and 444 Market Street by S.O.M. in San Francisco.

6) PUBLIC OPEN SPACE

Two large public open spaces are anticipated. One in the vicinity of Union Station, is to be actively used in a variety of ways which support the specialty center. Its perimeter is to be predominantly commercial and it is to be automobile free. There will be areas for sitting, people watching and performances. The reference for this open space is Quincy Market in Boston. The second large open space is to be next to the waterfront. Its function will be much more passive and it will be fronted by residences. It is to provide pedestrian and automobile access to City Waterway. The reference for the second open space is Marina Green in San Francisco.

7) STREET NETWORKS

The Union Station site is large enough to require the introduction of new streets. It seems most prudent to look to the existing street system for clues for both dimensions and layout. A separate truck service-way would be desirable so that pedestrian and automobile streets are not cluttered with delivery vehicles.

PROJECT DESCRIPTION

WORKING METHOD

The design documents in this thesis project were developed in a more or less sequential fashion described here. First, the topographic conditions on and adjacent to the site were identified as were the locations of existing streets, buildings, and railroad tracks. Next, an assumption was made as to what existing structures on the site were likely to remain. The location of major network elements such as streets, railroad tracks, truckways and major pedestrian paths was then established. Study sections were cut at various points to test the network decisions and study the potential organization of buildings, uses, and view. Thematic aspects of the project were then identified. Next, major program components were located relative to the system of networks and Union Station. A cursory form study including sections and elevations was made of certain program components. However, these studies were not included in the thesis documentation as it was felt that they were overly specific and therefore misleading. Some aspects of the program were changed to reflect discoveries made in analysis of the components. The final stage was a more detailed look at a part of the site. This included a strip of land 600 feet wide, centered on the railroad station, extending from the west side of Pacific Avenue to the center of City Waterway.

NETWORKS

The first stage of the design was the development of networks. Perhaps the most important early decision was locating the main line railroad tracks. These were centered between Union Station and Dock Street. This was done so that buildings could descend to Dock Street rather than stand high above on a structure over the tracks. Union Station was far enough from the new location of the tracks so that a sunken plaza, at about the old concourse level, could be built behind it.

The existing street system was extended onto the Union Station site but with some variation. "A" Street was continued through on a structure directly above the tracks but interrupted adjacent to Union Station. This break provided a place for an exclusively pedestrian precinct and a new rail terminal. The Dock Street right of way was widened on the west side to accommodate a new arterial, previously described, connecting downtown to Interstate Five. The west side was chosen as it is under single ownership and so that the old Albers Milling Complex on the east line of Dock Street could remain for possible conversion to new use. South Seventeenth and South Nineteenth Streets were shown extended onto the site but only as far as "A" Street. These two cross streets were not extended all the way to Dock Street for two reasons. First, there would be a thirty-five foot difference in elevation between "A" Street and Dock Street and second, it was assumed that not more than one street intersection could be accommodated on the new arterial between the proposed intersections at South Fifteenth and South Twenty-First Streets. Later, the alignment of South Seventeenth Street was changed so that Union Station would be situated symmetrically between two

side streets.

The most significant aspect of this proposed network system was an apparent change in the site's topography. By extending "A" Street through the site on a structure over the tracks and at the same elevation as Pacific Avenue, the existing slope on the east side of Pacific Avenue had shifted to the east side of the "A" Street/railroad structure. In effect, the new "A" Street extension formed a "dam" and the new blocks created between this "dam" and Pacific Avenue would appear level when built upon. These blocks would not be filled with earth to the Pacific Avenue/"A" Street elevation. The depression between the two streets would accommodate service access, automobile parking and a truck way on the existing depot service road--all beneath proposed new buildings.

With the objective of making much of the space below the Pacific Avenue/"A" Street elevation more accessible and pleasant, sunken plazas were proposed between Pacific Avenue and "A" Street. These sunken plazas would assure usefulness of Union Station's two lowest levels, and provide a quiet, protected and exclusively pedestrian environment.

An abrupt thirty-five foot drop on the east line of "A" Street and the railroad tracks would be made more gradual by terracing new building down to Dock Street. A terraced parking structure would provide the base for residences cascading down to Dock Street. As with the sunken plazas, access would be limited to pedestrians only in the center of the blocks. Pedestrian access to the waterfront from Pacific Avenue would occur on a major pedestrian street between Union Station and the waterfront or indirectly through the terraced residences down to Dock Street. Pedestrian

movement would also be allowed beneath South Seventeenth and South Nineteenth Streets so that movement between the sunken plaza spaces would be encouraged.

THEMES

Several themes were developed in the design project. Most were based on or in response to existing Tacoma urban form patterns. Some others were introduced. The most important organizing theme was based on Union Station's Baroque design and a desire to establish a direct visual and pedestrian connection between it and the waterfront. Certain aspects of Baroque planning were introduced for the occasion. It was felt that the station was a sufficiently important civic symbol for an axis between it and a new public dock to be established. At each end of the one hundred foot wide axis shaft a large open space was proposed. Communication between the upper space at the station and the large space at the waterfront was up a set of grand stairs. The character of each major open space was intended to be different. The upper most space to the rear and sides of the station would be a contained, paved, and intensively used urban plaza in the Italian pattern. The lower space was intended as a public green--larger, less intensively used and more open but still edged by building mass on three sides. The old Albers Milling Complex would form one edge and new housing would form the other two. Like the Marina Green in San Francisco it would be ringed by a street and the waterfront edge would be part of a promenade.

Other themes in the project included use of materials indigenous to downtown Tacoma or the Union Station district such as brick and copper roofing. Forms

such as arches, arcades, and arched vaults, gables and dormers were used to reinforce existing patterns both inside and outside of the central district. An attempt was made to reflect existing building sizes and recall typical lot dimensions in downtown through divisions in facade and building masses, and in use of fire walls. Fire wall divisions of proposed residential and commercial buildings reflect a pattern in old Tacoma wharf buildings such as the Northern Pacific grain terminal shed north of Eleventh Street.

COMPONENT LOCATION AND DESCRIPTION

As designed, the greatest density in the project would occur along Pacific Avenue and proximate to the old railroad station. Density would decrease in proportion to distance from either the railroad station or Pacific Avenue. Much of the site was shown undeveloped as a reserve for future expansion. A brief description of each of the program components and their location is included here.

SPECIALTY SHOPPING CENTER

The largest concentration of restaurants, shops, and taverns would be in the specialty center. This would be comprised of Union Station and two new buildings. The main level of the specialty center would be at the sunken plaza. This is shown about five feet below the old concourse level. Like Quincy Market, greenhouse sheds would be attached to the old station building at the plaza level to encourage movement along its perimeter. Access to establishments on the old baggage floor of the station would be from the

plaza level greenhouses. The encourage greater freedom of movement ramps up into the building from the greenhouses could also be provided. The greenhouses would also have glass doors on the plaza which could be opened up. Two new buildings, one north and one south of Union Station, would have shops on the plaza and offices above. In order to make the plaza a festive place these new buildings would have balconies with planters and fabric awnings. At plaza level glass awnings would be provided for protection from the northwest's famous drizzle. Banners, trees, lights and flags would be liberally used for effect. Push carts would be rented to enterprising merchants also for effect and to generate income from common areas.

AMTRAK STATION

East of the plaza, beneath "A" Street, would be the Amtrak station. An entry pavillion providing space for ticket sales, baggage check, offices, and restrooms would be situated on the side of the plaza with an entrance at South Nineteenth Street. As schematically designed for this project, the pavillion would be a small copper-roofed pyramid with a free standing clock tower/exhaust stack. From the pavillion entry one would gain access to trains by descending to the platform level. The roof of the platform enclosure would be at the level of "A" Street and pedestrians would walk over it virtually unaware of the trains below. It would be supported by ring shaped bents spaced ten feet on center. The side facing Union Station would be glazed so that arriving and departing passengers could look up through terraced gardens at the old station building.

HOUSING/MIXED USE

Two different building types were investigated which included housing. The first was a mixed use building and, as noted earlier, was based upon Fisher Friedman's Golden Gateway Commons. This type, with parking and either offices or retail on the first two floors and walk-up housing above, was for the "level" blocks between Pacific Avenue and "A" Street. Study did not include development of plans but did include some investigation of section and elevations. The prototypical units would be set on a commercial/parking podium with arcaded sidewalks. Arcades were two bays per twenty five feet--to reflect the basic lot width in downtown. Housing would be set on the perimeter above the arcades and in clusters in the center of the block. Access to the podium would be from either internal parking or breaks in housing on the perimeter. These breaks would provide access for cars to parking and stairs up to the podium. The podium would be set on two levels, with the highest above the arcades for housing at twenty four feet over the sidewalk. The second level would be three feet lower and would be over internal parking. This second podium level would be common access space and would be set lower relative to the housing so that one is too low to see into the windows. The housing would be arranged in clusters of eight units around private entry courts which are also higher than the common area level. This is to connote a more private zone. The approximate residential density achieved would be about 35 D.U.s per acre.

The second building type studies was to be exclusively housing for the "sloping" sites between "A" Street and Dock Street. Again just elevations

and sections were studied. Parking structures would provide a terraced base for this modified row house. Each single unit would be twenty five feet in width between center lines of common walls and thirty feet in depth. The units would be placed so that the top two floors have at least partial view toward the Cascades to the east. Most units would have some private terrace space. Variation would be achieved by alternating zero set back and front gardens or changing the number of units in section from two to three. As in the mixed use housing type a center block common area is preposed but many units would gain access directly from the street. There are approximately 35 D.U.s per acre in this prototype.

HOTEL

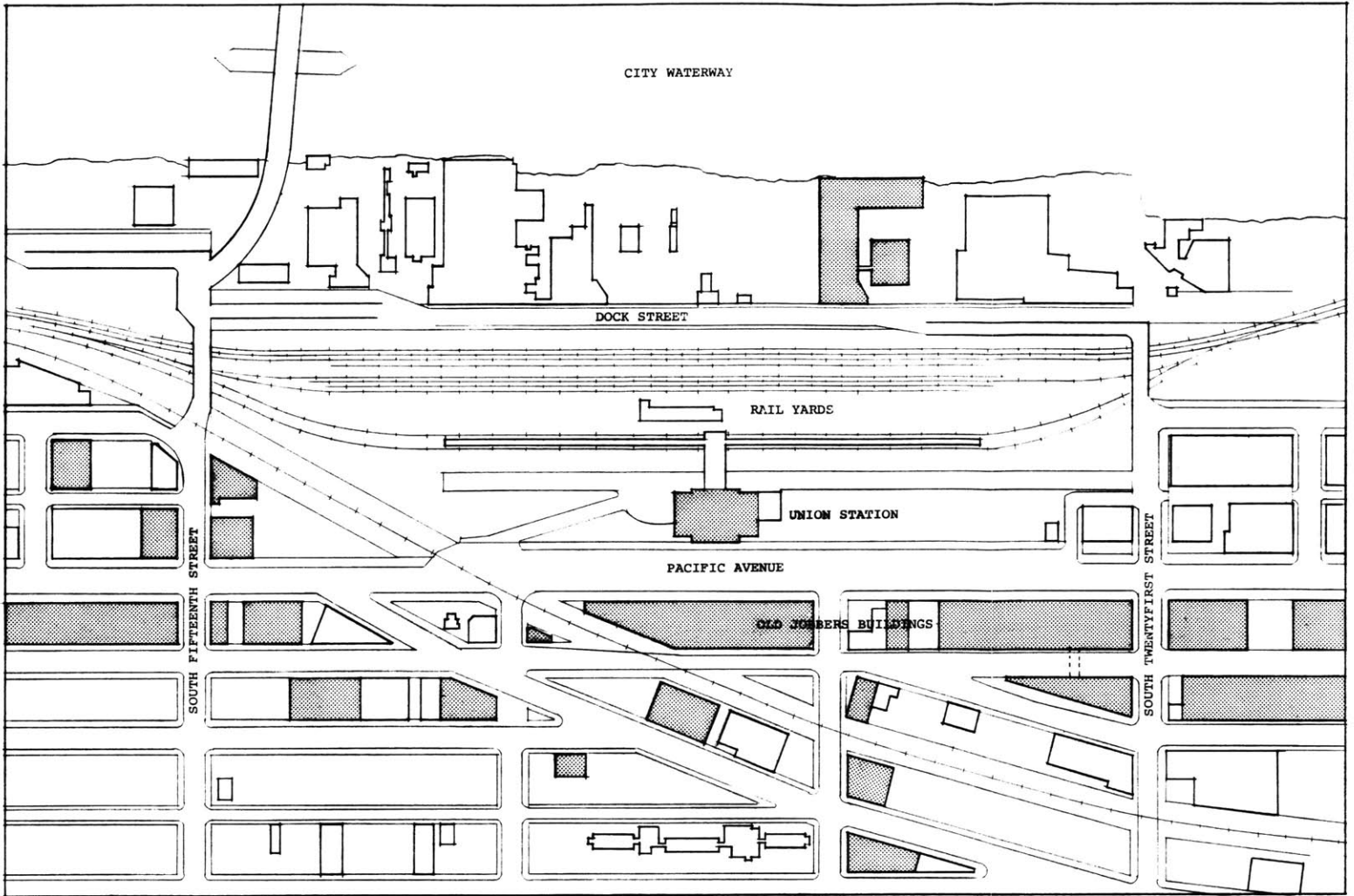
The location selected for the hotel was to be on Pacific Avenue and Nineteenth Street adjacent to Union Station and the new Amtrak Station. A direct link between the atrium and the specialty center plaza was proposed. A series of elevation and section studies and an investigation of the relationship between the large atrium hotel and existing and proposed building around it was made. It was found that such a large bulky hotel was incongruous with its neighbors. By arranging a thin shell of rooms around a large atrium volume the building became both high and bulky. Reflecting these findings the program was changed to a low rise courtyard hotel with a more modest atrium space connected to the specialty center plaza. A schematic elevation was prepared for the study sections included in the thesis. By reducing the size of the atrium a similar density

could be achieved.

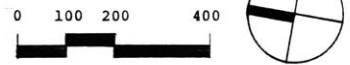
OFFICE TOWERS

As in the case of the hotel, studies of the office towers revealed that buildings of great height and bulk did not seem good neighbors to the existing and proposed context. A concept was prepared for twin office towers situated on a two hundred fifty foot square site north of Union Station on Pacific Avenue and Seventeenth Street. This was rejected due to its incompatibility with the the rest of the project. As with the hotel the program was changed. Similar density could be achieved by covering a greater portion of the site with low rise building recalling the scale, materials and form of the near-by jobbers' buildings. A schematic elevation was included in the study sections.

DESIGN DOCUMENTS



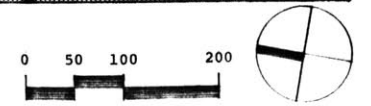
EXISTING CONDITIONS



PRE-1920 BUILDINGS OF POSSIBLE ARCHITECTURAL
 OR HISTORIC SIGNIFICANCE



CONTOUR PLAN

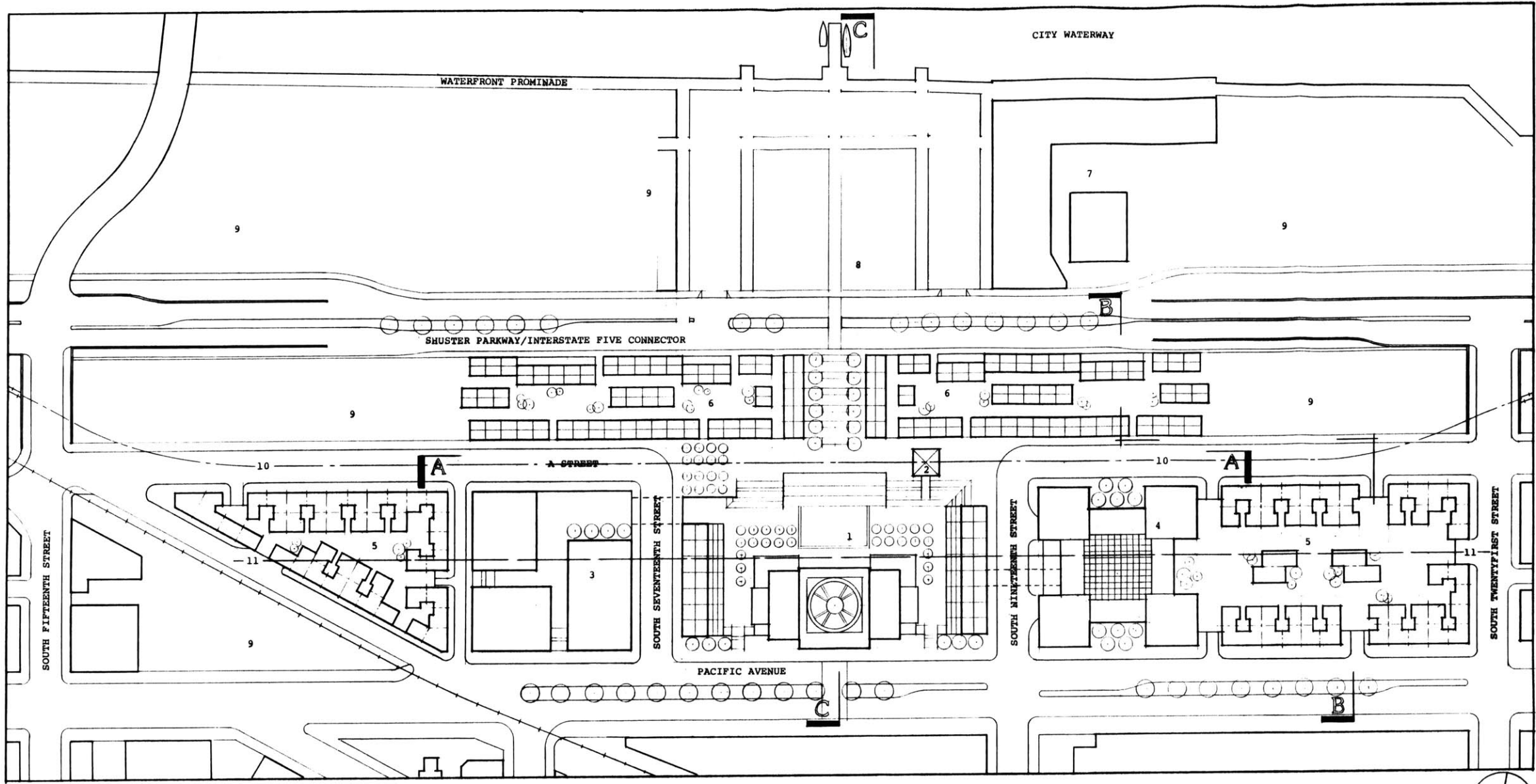




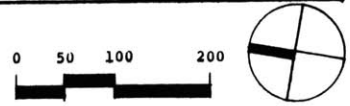
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There is no text material missing here.
Pages have been incorrectly numbered.



SITE PLAN - NETWORKS



- 1. UNION STATION/SPECIALTY SHOPPING CENTER
- 2. ANTRAK STATION ENTRY PAVILLION
- 3. OFFICES
- 4. HOTEL
- 5. MIXED USE - HOUSING/COMMERCIAL/PARKING
- 6. HOUSING/PARKING
- 7. OLD ALBERS MILLING COMPLEX
- 8. PUBLIC GREEN
- 9. FUTURE EXPANSION
- 10. MAIN LINE TRACKS (BELOW)
- 11. SERVICE ROAD (BELOW)

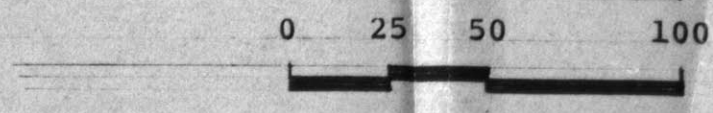


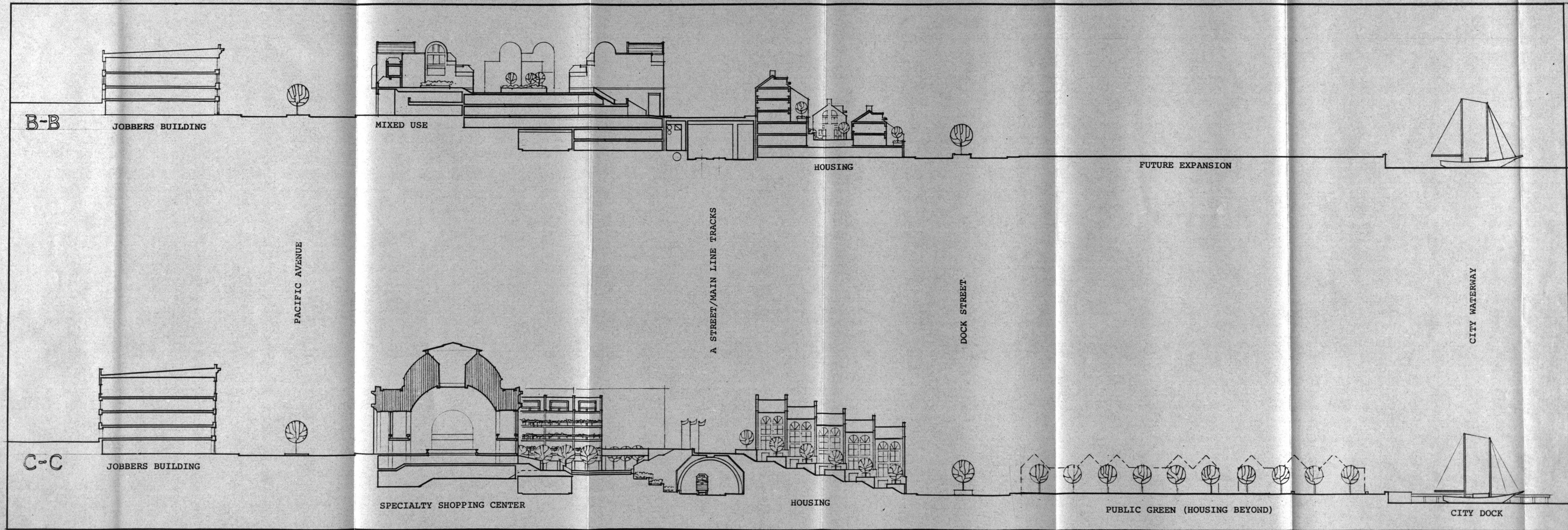
HOTEL

SPECIALTY SHOPPING CENTER

OFFICES

LONGITUDINAL SECTION A-A





B-B

JOBBERS BUILDING

MIXED USE

HOUSING

FUTURE EXPANSION

PACIFIC AVENUE

A STREET/MAIN LINE TRACKS

DOCK STREET

CITY WATERWAY

C-C

JOBBERS BUILDING

SPECIALTY SHOPPING CENTER

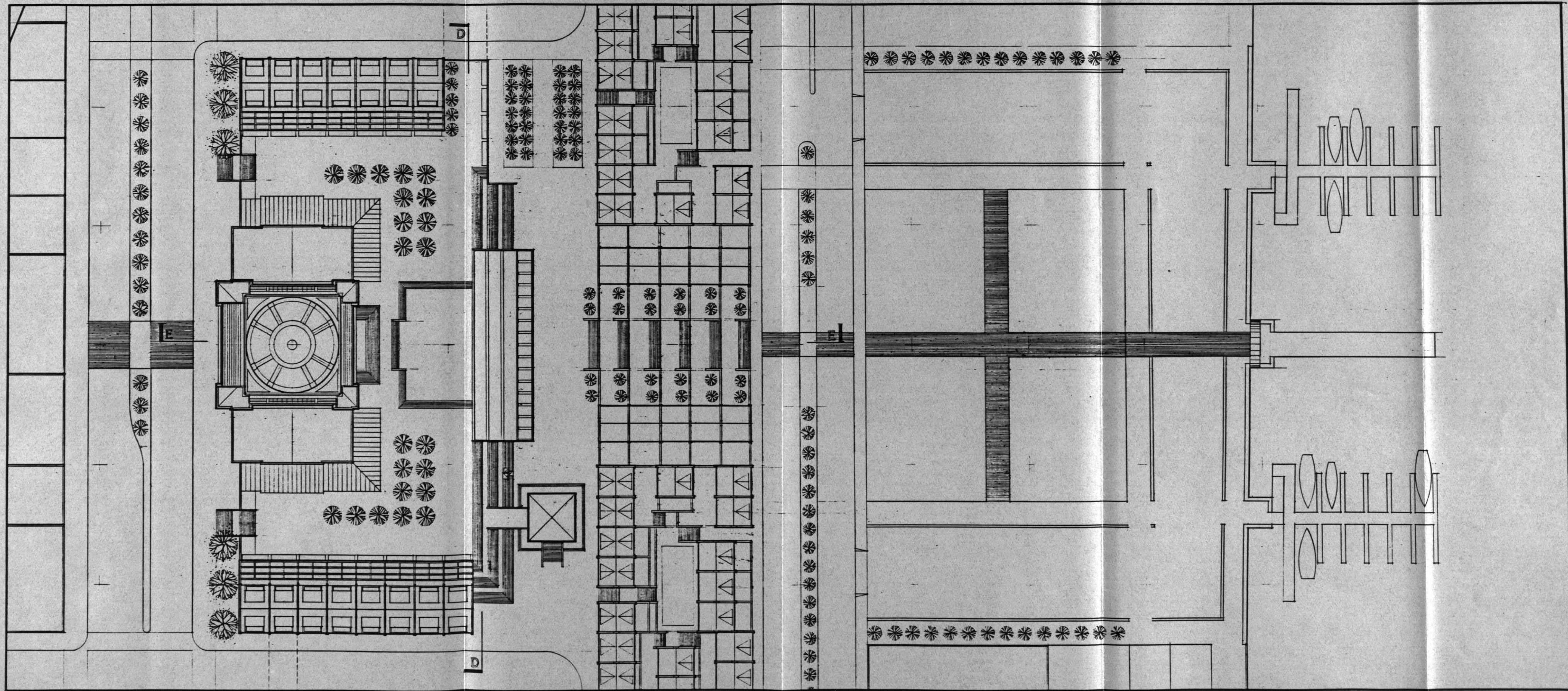
HOUSING

PUBLIC GREEN (HOUSING BEYOND)

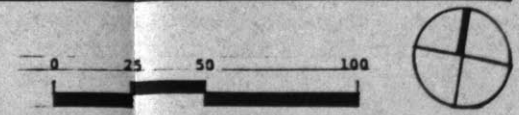
CITY DOCK

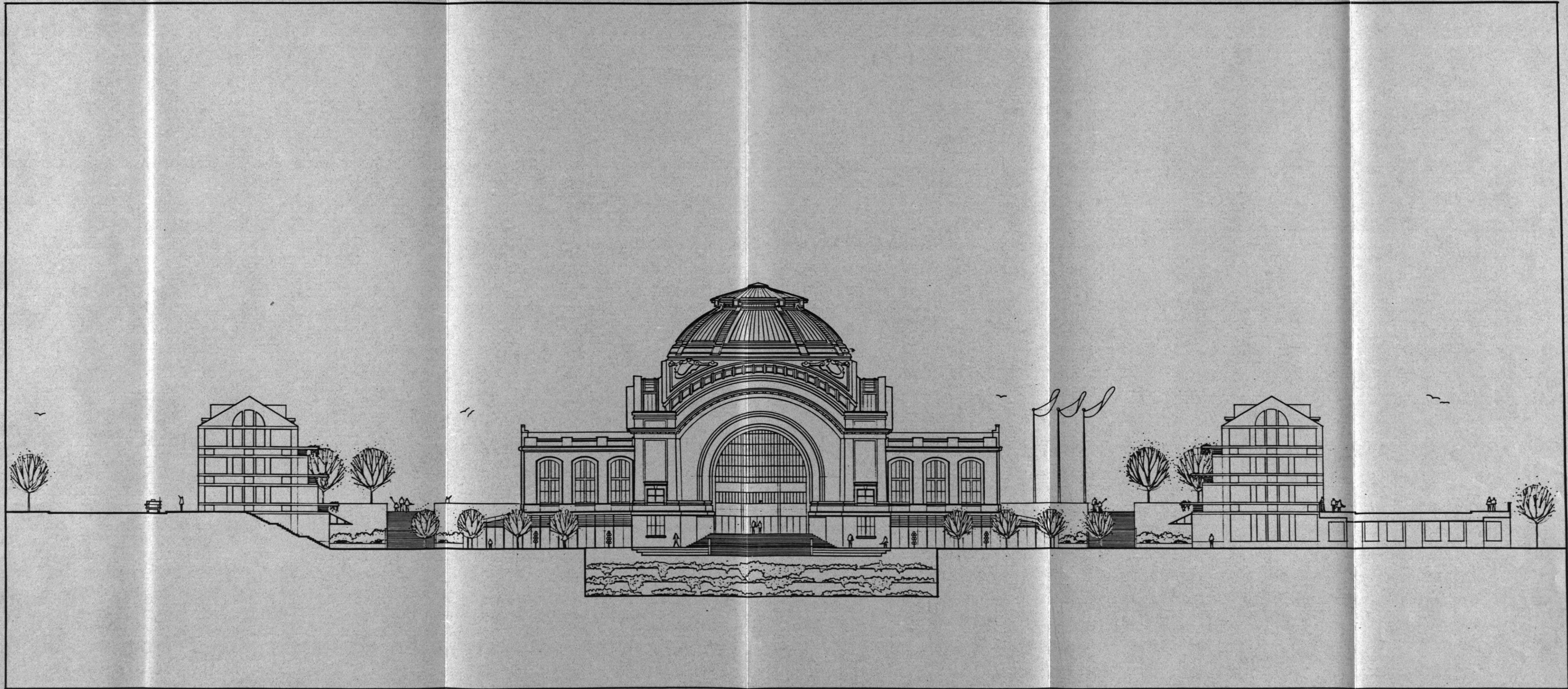
TRANSVERSE SECTIONS



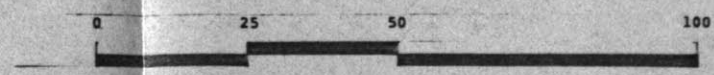


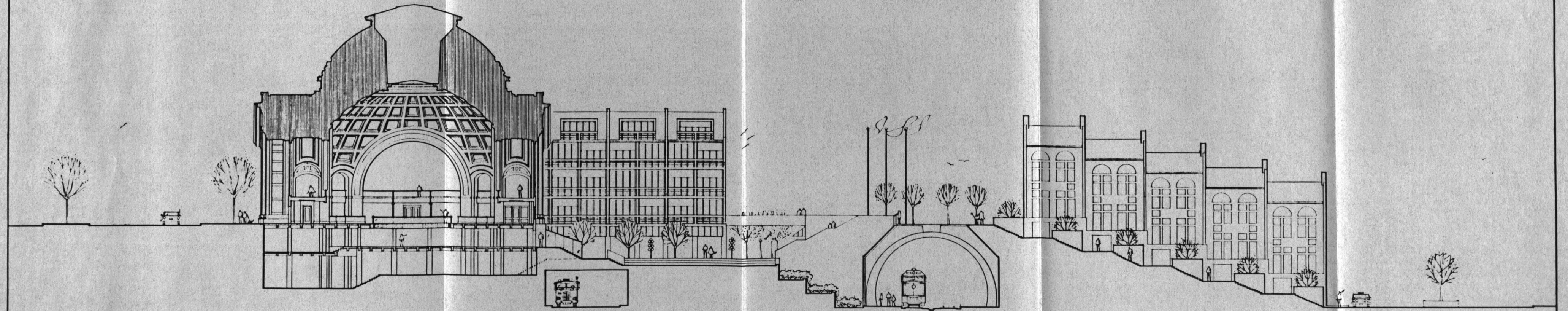
SITE PLAN DETAIL



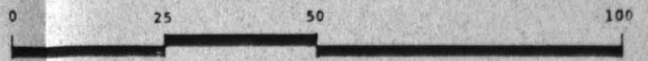


LONGITUDINAL SECTION D-D





TRANSVERSE SECTION E-E



CONCLUSIONS

The process of preparing a thesis is in many respects one of reduction and crystalization of numerous related and unrelated thoughts and pieces of information. As one's collection of ideas and data grows the topic of study seems to broaden and the deadline for submittal grows ever closer. It is perhaps natural for enthusiastic and equally inexperienced masters candidates to assume that they can singlehandedly choose and solve some great problem for mankind's benefit. Only in the act of doing can the true magnitude of a problem be brought to light. In this process the problem itself must be constantly redefined and narrowed so that at least some aspect can be dealt with in a substantive manner.

I had thought that it wouldn't be difficult to prepare some concise urban design and architectural sketches for a forty acre site in Tacoma. The issues, it seemed, were identified and needed only to be stated before the design process began. Preparing the agenda proved not such a simple matter, however. Trying to reconcile one's own convictions, conditions in a distant community and region, and a desire to make a series of urban design and architectural gestures was difficult. Size of the site proved to be tremendous, particularly when reduced to a scale of architectural statements. Certain parts of the agenda were questioned when their physical implications became apparent. Three and one half months for the thesis project set severe limits on the depth of investigation and variety of alternatives that could be pursued. No claim is made here that this work has no flaws or that it is complete and exhaustive. It is merely a start at a difficult and complex problem.

Design documents represented here reflect some clear biases and are not based on a market analysis of conditions in Tacoma. Assumptions made for this project were, in retrospect, based on a notion of maximizing density. My objectives were equally founded on a desire to reinforce the urban character of downtown Tacoma and to study a relatively high density mixed use development. Each of these objectives may in fact be counter to current market conditions in Tacoma. Whether the market could support a major new specialty shopping center, hotel, offices, and housing of more urban density than is typical for Tacoma is open to question. A detailed market analysis might help establish probability of success or failure but this was decidedly not an objective of the thesis.

At the completion of this work a variety of unresolved issues remain. I found that juxtaposition of tall and bulky forms such as office towers and an atrium hotel with much more modest scaled buildings to be a difficult problem that I was not yet able to resolve in the thesis design. A similar density was achieved by reducing height and increasing ground coverage. The resulting low rise buildings might not appeal to corporate vanity, however. If presence in the city skyline is required, achieving density alone might not be enough in the eyes of the developer. I am not willing to state that skyscrapers are out of place on the Union Station site. I simply did not find a satisfactory solution in this fourteen week project.

Architectural and urban design objectives also tended to be conflicting. As an architect I found

myself preoccupied with designing individual buildings rather than giving enough attention to total continuity and cohesiveness. Lack of a specific program made architectural design less relevant. Another problem was associated with assumptions made about a new high speed street in place of the Tacoma spur. This street was intended as an alternative to the freeway but it also had serious adverse effect. Parts of the site adjacent to the intersections of the proposed street and South Fifteenth and South Twenty First Streets are shown as a land reserve because of the unpleasant implications of these elevated intersections. This is not to say that the impact of the street would be as negative as the proposed spur.

Baroque axis and symmetry are also open to question. Is such a grand processional space to this waterfront appropriate in our times? I chose this device in response to the station building. I felt that the spaces it generated would be memorable and enjoyable. I am sure that similar results could be achieved in other ways and would relish opportunities to find them.

Several worthwhile decisions were made in this project. I believe that the most notable of these were the proposed network system and an effective system of sunken pedestrian space. By setting the railroad tracks in the center of the site rather than adjacent to Dock Street a more gradual descent to the street is possible and buildings can meet the street in a more favorable way. By developing a system of interconnected sunken pedestrian spaces between "A" Street and Pacific Avenue intensive use is made of floors below the street level and a contained pedestrian precinct results.

In closing I wish to express hope that people in the city of Tacoma and the Glacier Park Company find this work thought provoking. This has been an exciting and challenging project and I would enjoy participating in future efforts in Tacoma and in the Puget Sound Region.

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