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EAST ABERDEEN WATERFRONT DISTRICT STUDY

Circulation & Infrastructure Improvements

City of Aberdeen

Prepared by John M. Kliem,
Planning & Economic Development Director

July 1989

The preparation of this report was financially aided by a grant from the Washington State Department of Ecology with funds obtained from the National Oceanic and Atmospheric Administration, and appropriated for Section 306 of the Coastal Zone Management Act of 1972.

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ABSTRACT

1. Title:
   East Aberdeen Waterfront District Study: Circulation & Infrastructure Improvements.

2. Author:
   John M. Kliem, Planning & Economic Development Director

3. Subject:
   Waterfront infrastructure and circulation improvements program.

4. Date:
   July 1989

5. Name of Department and participating localities:
   This report was written by the City of Aberdeen with the assistance of the Washington State Department of Ecology.

6. Source of Copies:
   Department of Planning & Economic Development, Aberdeen City Hall, 200 E. Market, Aberdeen, WA 98520. Telephone number 533-4100.

7. Ecology Project Number:
   Coastal Zone Management Grant Number: G0089089

8. Series Number:
   Not applicable.

9. Number of pages:
   63 pages.

10. Abstract:

The focus of this study was to provide information on five areas of interest vital to the development of the East Aberdeen Waterfront District:

1. Evaluation of existing traffic and pedestrian data leading to the waterfront via Newell and Chehalis Streets.

2. Assessment of existing and proposed infrastructure needs.

3. Analysis of whether additional right-of-way would need to be acquired for street and other public improvements.

4. Preparation of cost estimates for identified public improvements.

10. Abstract (Continued)

5. Preparation of a preliminary financing plan for identified public improvements.

The study is accompanied by three technical reports produced by a private consultant, The ORB Organization, which details recommended actions that should be taken to facilitate development in the district.

INTRODUCTION

Within the last three years, Aberdeen has begun to recognize alternate uses for its waterfront areas for purposes other than industrial development and timber processing. As the local economy shifts away from its heavy reliance on these sectors, opportunities for tourism, recreation, and commercial/ retail related development have become more attractive to property and business owners on or near the waterfront. This trend has been particularly evident for the area known locally as the East Aberdeen Waterfront District.

In an effort to encourage this new direction, the City in conjunction with the financial assistance of the Coastal Zone Management Program has commissioned a number of plans and studies in the past focusing on waterfront development potential in East Aberdeen. The first of these studies completed in 1986 aimed at developing an overall conceptual design for the district that included:

- expansion of the Grays Harbor Historical Seaport;
- "Phase II" developments for Morrison Riverfront Park; and,
- the recruitment of a hotel/restaurant complex.

In addition, the study noted the need for the City to examine design guidelines and other innovative zoning tools to fully benefit from the uniqueness of the area.

The second study concentrated on four specific projects referenced in the previous plan. These were intended as small implementation steps by the City for the purpose of encouraging further private investment in the district.

The need for additional information related to circulation, infrastructure needs and signage were the impetus behind the City authorizing a third study for the district. With financial assistance from the Coastal Zone Management 306 Grant Program, the City and The ORB Organization has prepared the following study and documents to further assist the City and private and public property owners in making vital investment decisions for this district.

The findings in this report will eventually be utilized all or in part in the development of a comprehensive master plan of development for the East Aberdeen Waterfront District.

SCOPE OF STUDY

The focus of this study was directed to provide information on five key areas:

1) Evaluation of existing traffic and pedestrian data leading to the waterfront via Newell and Chehalis Streets.

2) Assessment of existing and proposed infrastructure needs.

3) Analysis of whether additional right-of-way would need to be acquired for street and other public improvements.

4) Preparation of cost estimates for identified public improvements.

5) Preparation of a preliminary financing plan for identified public improvements.

To assist the City in compiling information for this study, the architectural firm The ORB Organization was contracted to analyze technical data and to prepare recommendations for street and circulation design.

I. TRAFFIC AND PEDESTRIAN EVALUATION

While the East Aberdeen Waterfront District has excellent potential for development, problems surrounding circulation to, from and within the district could potentially impede future investment opportunities. Not only is ingress and egress itself a difficult problem, but compounding this situation is the question as to whether the streets within the district are adequate to serve many of the existing and proposed land uses. Since an earlier study concentrated on finding solutions to the former issue (the "fifth" or turn lane along Wishkah), this study specifically concentrated its efforts in developing alternatives

for two important access points south of Wishkah Boulevard: Newell and Chehalis Streets.

Existing Conditions

Both Newell and Chehalis Streets serve very important functions for the East Aberdeen Waterfront District. Newell Street is the only vehicle entrance and exit for both the Historical Seaport shipyard and the United Parcel Service depot. The street south of Heron is not only in poor condition, but has been vacated as well and is owned primarily by the Port of Grays Harbor. While there is highway access by way of Newell, a ban on left turns prohibits resumption of westbound traffic. To avoid this barrier, many vehicles will cut across private property at the Texaco Station and then cut across two lanes of traffic on Hornsby Way to reach a turn lane that leads to a westbound lane on Wishkah Boulevard. Washington Dept. of Transportation traffic counts reveal that over 1,000 vehicles per day regularly use this route. This situation often leads to a very hazardous traffic bottleneck at the gas station, on Hornsby Way and in the turn lane leading back to Wishkah. If development in the district were to occur, and/or if the Historical Seaport generates more traffic than the current flow, this number will likely rise much higher.

Similar problems are presented with Chehalis Street. South of Heron, the street has been vacated to the Port and the Wishkah Mall and remains in a relatively unimproved condition. It is anticipated that if the Port develops their property as a motel/hotel complex, Chehalis Street would serve as a major

arterial leading to the site. Although the intersection at Chehalis and Wishkah allows for turns either to the west or east, it is non-signalized and westbound traffic will find it extremely difficult to work its way across, rendering this path practically useless as an egress point from the district.

Outside of the Texaco cut-across on Newell and the impractical intersection on Chehalis, the only other alternative for westbound traffic leaving the district is through the Wishkah Mall property. The problem with this route is that it remains entirely within private property, requiring the use of the vacated portions of Heron and Tyler Streets that form narrow traffic lanes serving the Mall parking lot. This route is inconvenient and slow: several speed bumps reduce vehicle speed to less than ten m.p.h.; pedestrians walking to and from their vehicles often delay traffic; and vehicles are constantly turning in and out of the lane to access parking stalls on both sides. The only advantage to using this route is the signalized intersection it leads to at Wishkah and the former Tyler Street.

Alternatives

It is clear that if the East Aberdeen waterfront is to develop, vehicle and pedestrian access demands must be addressed. Property owners have verified this statement by repeatedly expressing their reluctance to place any investment into the district until some measure of circulation improvements are realized. Furthermore, not only it will continue to be difficult to market the Port property as a site for a motel/

convention complex, but the Historical Seaport will still have problems attracting westbound tourists.

The two-way left turn lane development will eventually ease most of these problems by creating much needed turn lanes; however, this is a long term project with completion not expected until at least the mid-1990's. Reflective of this circumstance, two probable scenarios are apparent. The first is that if the City elects to do no temporary improvements until the fifth lane is completed, development in the district will in all likelihood be delayed until that time. The second scenario revolves around the City investing in some short term measures to encourage some development within a much shorter time span.

The latter alternative has merit for several substantive reasons if not for one alone: there is no guarantee that the fifth lane will indeed happen. By all estimates, this is a very complex project that involves several key steps. The first important act is the acquisition of right-of-way from several property owners. This process alone could entail considerable effort and time if the action is opposed by any single property owner, making condemnation a necessity. The next vital piece of the puzzle is the moving of the railroad to the newly acquired right-of-way; while the railroad will likely assent to this action, on the other hand it is unlikely they will be willing to pay for it. Total project cost for acquiring the necessary right-of way relocating the railroad and constructing the turn lane has been estimated by WDOT to cost approximately $2.7 million. Even if DOT financial commitment is attained, it is

reasonable to assume that the City will still assume at least a healthy 25%, or $675,000, of the total project cost. As grants become less available, the issue of how the City will be able to assume such a large cost for this project presents a very unclear picture as to the assured time frame and probability of this project.

Thus, if it is the desire of the community to see the district begin development within the next five years, some interim, or "Phase I," measures need implementation to correct some of the circulation inadequacies of the district until the turn left, or "Phase II", project becomes a reality. The Planning Staff and the ORB Organization have attempted to address this need by developing several intermediate alternatives that are designed to improve traffic flow over the status quo until the fifth lane is completed. While the following may not be optimum solutions, they do fulfill the need for temporary stopgap measures with economy in mind.

1. Signalization of intersection at Chehalis Street and Wishkah Boulevard.

The placing of a signal at this intersection will greatly enhance the capacity of the only public right-of-way to handle departing westbound traffic from the district. The street will also provide more direct access for westbound traffic to the Historical Seaport's shipyard on Newell, an obvious improvement over the current downtown route required to reach the site.

While arguably Chehalis does not warrant a signal based upon current estimates of traffic flow, by restricting the use

of the Newell-Texaco cut across and the Mall's Tyler Street exit, public utilization of this intersection would probably increase substantially.

The signalization of the intersection has been estimated to cost in the vicinity of $80,000. It is improbable that any grant funds are available to assist in the financing of this project.

2. Conversion of Newell Street between Heron Street and Wishkah Boulevard into a public parking area.

By closing this section of Newell Street as a thoroughfare and converting it to a public parking area, several objectives are achieved. First is that this will effectively block public use of the Texaco cut across, thus reducing congestion and the potential for serious traffic accidents. This in turn would further encourage the use of Chehalis Street as an orderly exit from the district. The second benefit of this action would be to place the City in an advantageous position for providing adequate parking for the district as it grows and prospers. The East Aberdeen Waterfront District has been envisioned as an area with retail and tourist-related businesses, a maritime museum with a historical shipyard, a motel/convention center and a public waterfront linked by walkways. These are uses heavily depended upon pedestrian activities and correspondingly, requiring ample parking. The Newell Street closure, providing approximately 25 spaces, would help address the overflow created when private parking lots are unable to satisfy needs. It would also provide public parking for those pedestrians who come to the waterfront to simply enjoy the atmosphere without having

patronize businesses. In addition, the Newell Street parking would help compensate properties owners along Wishkah Boulevard who will lose on and off-street parking when the left turn lane is constructed.

The conversion of this section of Newell Street into a parking area will require the addition of new curbs, gutters, sidewalks, asphalt overlay and the striping of parking spaces. In addition, the relocation of several power poles and a fire hydrant will also be needed. A diagram of these improvements is illustrated on Page Eighteen of the ORB Study documents in Appendix A.

3. Permitting a secondary egress point from Heron Street unto Hornsby Way.

Although less preferable, one alternative for enhanced egress from the district would be to allow two way traffic on Heron Street to permit vehicles to resume travel on Hornsby Way. This would allow traffic to continue their travel in a east or westbound direction. This action would make it easier for traffic to do what is currently being done at the Texaco cut across. However, visibility remains poor around the radius and Hornsby Way is relatively short to allow mixing to the left lane for taking advantage of the island at its juncture with Wishkah. Some improvement could be had by creating separate right turn lanes unto Hornsby Way as demonstrated on Page Four of the ORB Organization study documents in Appendix A.

II. ASSESSMENT OF EXISTING AND PROPOSED INFRASTRUCTURE NEEDS

The description of the East Aberdeen Waterfront District as a "diamond in the rough" is more than simply reflective of the opportunities it presents for business development. In order for this area to develop, substantial public and private investment will be needed to bring existing infrastructure up to accepted standards. The study particularly focused on the Newell and Chehalis corridors to investigate needed improvements for expansion of the Historical Seaport and the proposed motel/convention complex.

Existing Conditions

With the exception of existing underground utilities, the typical condition of the basic infrastructure in the East Aberdeen Waterfront District is less than desirable for inviting new economic development opportunities.

The greatest need for infrastructure improvements in the district lies more above the surface than below. The streets within the district typically are in bad need of repair or replacement and widening. Heron Street, for example, is a patchwork of repairs with an abandoned, partially exposed rail track running down its center. In addition, only a few short sections have adequate curbing, gutters and sidewalks. No public landscaping or street amenities, such as benches, lighting and litter containers, are present. Parking is only available on the street or in small, private unimproved lots. The closest public rest rooms are located in the Mall, far removed from the district.

On the other hand, most of the underground utilities needed to serve the district is already in place and of sufficient capacity to meet any existing or future needs. A diagram of available sewer, water and gas lines and their location to both the Historical Shipyard and the proposed motel/convention complex is provided on Page Fourteen of the ORB Study documents in Appendix B.

Adequate storm drainage already exists on and north of Heron Street. While there is no storm drainage in place south of the street, because of the properties proximity to the river, it is not expected to be a problem. When Newell and Chehalis south of Heron Street is to develop, additional drainage should be considered at that time.

Alternatives

Public infrastructure improvements can have a profound affect on the development of an area. Not only do they improve the practical delivery of services and facilitate circulation, but they can also help create an ambience for developers and those that patronize the district. For this reason, infrastructure improvements often serve as a primer for economic development efforts.

In addition to the "Phase I" circulation improvements outlined earlier, this report recommends a series of physical improvements that would enhance parking availability, encourage greater pedestrian access to the waterfront, improve the visual quality of the area, provide directional signage and prepare for future relocation of aboveground utilities to underground. It

should be noted that the actions suggested entail a public/ private partnership with complementary improvements by both public and private property owners.

Summarized, "Phase I" improvements call for:

- Rebuilding, widening and repaving of Newell, Chehalis, and Heron Streets;
- Construction of approximately 11,200 LF of new sidewalks;
- Laying of conduit for future underground utility lines;
- Construction of nearly 8,000 LF of concrete curbs and gutters;
- Building of public rest rooms at the end of Newell Street adjacent to the waterfront;
- Expanding the existing network of storm drainage by another 1,900 LF;
- Providing landscaping on public property, including the addition of landscaped "islands" along Newell and Chehalis Streets;
- Adding street amenities such as period lighting, benches and directional signage.

A more complete description of the proposed improvements are covered in the Project Narrative (Appendix A) and the East Aberdeen Waterfront Study (Appendix B) by The ORB Organization. While no specific design standards for these improvements are advocated by this report, the improvements at the Grays Harbor Transit Mall in downtown Aberdeen were used as general parameters in finding prices for street amenities.

III. PROPERTY ACQUISITION NEEDS

An important issue that needed resolution early on in the study was whether it would prove necessary for the City to acquire additional right-of-way for improving the internal circulation of the district. With the exception of property required for the "Phase II" circulation improvements, which entails development of the left turn lane along Wishkah Boulevard and the expansion of Hornsby Way to three lanes, the study revealed that very little property acquisition would be required to permit the "Phase I" improvements. The only right-of-way that would prove absolutely necessary for acquisition would be portions of the Port of Grays Harbor property south of Heron to reestablish a new Chehalis/Newell waterfront approach. Those properties listed on the Acquisition Plan on Page Five of the study documents in Appendix B reflect opportunities for public or private parking lots. If cooperation among property owners is possible, it would be preferable to have these lots remain under private ownership.

IV. PREPARATION OF COST ESTIMATES

At the direction of the City, the consultant developed a cost estimate for the infrastructure and circulation improvements outlined for Phase I. The entire package, including public and private improvements but excluding any right-of-way or land purchases, has been estimated to cost $1,483,995. Further details regarding the development of the cost estimate are provided in Appendix C.

V. PRELIMINARY FINANCIAL PLAN

The financing of the Phase I infrastructure and circulation improvements will likely consist of a combination of both public and private monies. The important consideration in developing a financial plan is to determine an equitable share of the project costs between the benefiting property owners and the benefiting public at-large. This is an indefectible policy issue that eventually must be tackled by the community's political leadership.

While it may be premature to discuss an exact financial course for these improvements, it is appropriate to begin exploring the different options available to property owners and the community. One reasonable scenario for a project of this nature is to finance improvements through the issuance of general obligation (GO) or councilmanic bonds that would be redeemed through a combination of revenues generated through the formation of a Local Improvement District (LID) and from the City's general revenues. Another option to issuing GO or councilmanic bonds is to apply for low interest loans from the State of Washington. There is one program particularly well suited to meet project needs: the Public Works Trust Fund. This program will loan up to $1,500,000 with a ten percent local match to assist in the repair, replacement, reconstruction or improvements to existing infrastructure. A one to three percent loan from such a program could substantially reduce total project cost by reducing debt service. While there are other federal and state programs available that are similar in function to the Public Works Trust

Fund, because the project is tourist/retail related, those programs remain out of reach at the current time.

CONCLUSIONS

It is clear from the information generated from this report that the City of Aberdeen and the property and business owners of the East Aberdeen Waterfront District must work in conjunction with one another to make development occur. Several important policy issues must be addressed by all parties to ensure that not only does development occur, but that it be allowed to happen in such a fashion as to maximize the benefits it can provide to those with personal interest at stake and the community as a whole.

While the recommended actions above are not to be taken literally as a blueprint for development, they do lay a conceptual groundwork for considering several courses of action. First and foremost is the question as to whether the community should invest funding into enhancing ingress and egress options prior to construction of the left turn lane which could take anywhere from five to ten years before completion. If the answer to that important question is affirmative, then the above options will help to facilitate the selection of alternatives.

Another important issue that hopefully has been brought into greater focus by this report is the need to begin examining the internal development of the district in relation to infrastructure improvements. Improvements of this nature will play a key role in determining the overall direction of development for the

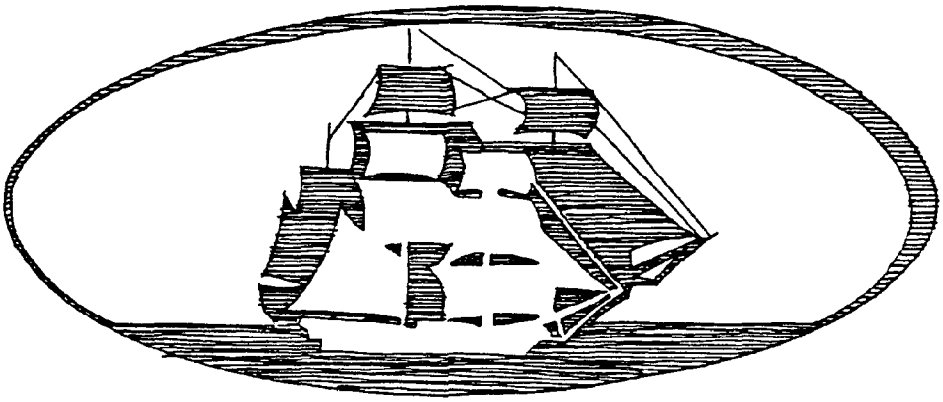
district. This is an issue that must be clearly defined early on in the development process to maximize the potential of the area.

Finally, the community now has a general idea as to what will be the financial costs for improving the district. The City and the property owners must be prepared to keep this issue in mind as community investment grows in East Aberdeen. There are often greater risks involved in tourism and retail development than in other areas of economic development and these must be evaluated against the financial costs.

In light of the current public and private interest in East Aberdeen, it is clear that development will occur eventually. Plans such this one will contribute to the on going efforts of the City Council and the newly formed East Aberdeen Development Task Force in determining the direction such development will follow. If successful, not only will it add to the economic base of the community, but it will enhance the quality of life for all the citizens of Aberdeen.

APPENDIX A

Program Narrative



PROJECT NAME: PROJECT NARRATIVE

DWG. NO.

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DATE 6-20-89

EAST ABERDEEN WATERFRONT STUDY

JOB NO. 8901

THE ORB ORGANIZATION

510 Evergreen Building, 15 South Grady Way/Renton, Washington 98055-4407/(206)226-3522

June 21, 1989

EAST ABERDEEN WATERFRONT STUDY #8901

SUMMARY STATEMENT

The plans contained herein assume a cooperative, mutually beneficial relationship between government and property owners in the subject area.

A bias of the plans is to protect and enhance the viability of existing businesses and land uses. The plans:

- Improve access to the shipyard and sites of major future activities
- Offer practical improvements for dangerous traffic conditions.
- Accommodate limited financial resources by phasing improvements and using existing paving, curbing and sidewalks where reasonable to do so.
- Do not require that overhead utilities be taken underground, although esthetically preferable to do so

PLAN 01 MAJOR FUTURE ACTIVITIES

Sites for the Hotel Complex and for the Historical Seaport & Festival Park are shown. Boundaries are in relation to platted streets, existing land uses, and proposed street rights-of-way.

PLAN 02 EXISTING CIRCULATION

Major travel patterns (both legal and illegal), uncontrolled on-street parking, and access points to various properties are shown. These factors contribute to the current unsatisfactory traffic conditions.

PLAN 03 PHASE I - CIRCULATION

The main features of Phase I include:

- Closure of Newell St. at Wishkah St.
- Closure of illegal westbound maneuver across Texaco site
- Elimination of dangerous parallel parking and truck access along Wishkah St at Foster Painting.
- Provision of two lanes IN, two lanes OUT at Chehalis & Wishkah Sts.
- Fewer dangerous access points along Wishkah and improved Chehalis Sts.
- Signal at Wishkah/Chehalis to ease exiting site and for pedestrian safety.
- A new street segment to link Chehalis with Newell Sts.
- Safe parking for RVs organized on Heron St.
- Organized and convenient parking areas for existing homes and businesses

Phase I does not require moving the railway track, nor does it require significant improvements to Wishkah St. Yet we believe Phase I will substantially improve the traffic situation when implemented.

PLAN 04 PHASE II - CIRCULATION

The main features of Phase II include:

- A turning lane in Wishkah St. from Fleet to Newell Sts is proposed which would require relocating the railway track to the south.

A mixing lane loops from Kansas St. around Hornsby Way and back to Kansas St. This lane would allow for westbound traffic to exit the site from second point (Heron St.)
New R.O.W. and pavement would be needed along the Texaco side of Hornsby Way.
Heron St. would be widened to the south for improved RV parking and to allow the secondary exiting from the site.
the traffic island at Wishkah/Hornsby would be enlarged to better direct traffic and to provide pedestrian refuge crossing Wishkah St.
a landscaped pedestrian path (with columnar street trees, decorative lighting, tall-ship banners, benches, safety railing and underground utilities) is proposed along Wishkah St. from Morrison Park to Newell St.

If funds and public sentiment permit, other overhead utilities in the area could be taken underground in Phase II.

PLAN 05 ACQUISITION PLAN
Priority acquisitions are for Phase I and for Phase II improvements such as streets, parking lots, landscape enhancements and railway relocation. Desirable acquisitions would be for esthetic improvements such as billboard removal. It may also be desirable to reduce the number of vehicle access points on Wishkah St. and to encourage redevelopment of transitional parcels.

PLAN 06 CROSS SECTION LOCATIONS
This drawing is an orientation map for pages 7, 8 and 9.

PLANS 07, 08, 09 CROSS SECTIONS "A" THROUGH "F"
These pages generally show how design proposal fits existing conditions to minimize disruption and to maximize the cost-effectiveness of public monies. The most significant idea is presented in "F", where the landscape pedestrian path is shown.
The idea assumes removal of existing sidewalk on the north side of Wishkah St. If that assumption is acceptable to concerned parties, no additional R.O.W. would be necessary along the north side.

PLAN 10 PHASE I - MINIMUM IMPROVEMENTS
This drawing is a 100-scale summary drawing showing the extent and location of the overall improvements recommended, except for the entrance sign.

PLANS 11, 12, 13 (VARIOUS TITLES)
These are 50-scale enlargements showing the basic ideas for Phase I improvements. The greater detail allows evaluation of issues, property by property, as discussed below by tax parcel reference number:

#18 Brower, C. Ted Jr. & Foster, Don (Foster Painting, Antique Coop)
Eliminate parallel parking and truck access from Wishkah St. Close Newell St. at Wishkah, remove unnecessary pavement and plant a landscape screen. Provide a 9-car parking lot, install a sidewalk to the Antique Coop entrance, and landscape the adjacent building foundation. Install business-directional signs at Heron St. Place new curb and guardrail along Wishkah per Cross Section "F". Provide new doors in the south face of the building

to replace delivery truck access. Provide an adequate rail crossing for truck access and move utility poles as required. Phase II would include pedestrian path linkages and more landscaping along the north side of the building. Vehicle access in rear can be paved after moving railway tracks and undergrounding the utilities.

#09 Houghton Distributing, Inc. (Texaco Mini Mart)
Eliminate access from Newell St. by placing curbing north of the railway tracks. Paving requirements in Newell St. may require relocation of utility poles, the fire hydrant and phone booth, etc. Remove unnecessary pavement between parking and Texaco property line and plant a screening hedge. Some head-in parking serving the Mini Mart is OK, if desired by owner, but is not shown. If the proposed Phase II mixing lane on Hornsby Way is approved, needed R.O.W. should be taken entirely from this property. In addition, Phase II revisions to Heron St. would involve the south end of this parcel and probably require moving existing signage and installing landscape improvements (due to the high visibility as a project entrance, eastbound.)

#24 Furford, David R. (Eastside Plaza Offices)
The proposed railway relocation will wipe out much of the existing parking lot and its north access. This access is also unsafe, as it is too close to the Wishkah/Chehalis intersection. Relocate the business sign, provide a 25 car parking lot, install sidewalks to office entrys, and upgrade the landscaping (particularly on the north and west sides due to high visibility from Wishkah St.) Provide for joint-access rights for adjacent property owners, as well as for public parking during non-business hours.

#15 Simpson, Michael & Kathleen (Twin City Feed, homes)
Provide 11-car parking along Newell St when needed (probably Phase II or upon redevelopment of feedstore) along with continuation of the pedestrian path. Same access/parking issues as above. Encourage substantial upgrade of feedstore facade or site redevelopment. No landscape improvements justified by current architectural conditions, even though parking may be upgraded. Existing rail-spur access and vehicle access is retained.

#16 Townsend, Henry C. & Beatrice (homes)
Parking in rear yard replaces spaces lost to the controlled on-street parking shown on the plan. Homes have potential for specialty retail shops and/or small restaurants in a unique, village-like setting similar to Gillman Village in Issaquah. Unified ownership of these homes is suggested to accomplish a cohesive plan for architectural refurbishing and landscape improvements. R.O.W. for a potential, additional in-bound lane on Chehalis St. should be reserved.

#19 Garrett Freight Lines
The additional street width required here can be had without disturbing the building. Curbing as shown would restrict access to Chehalis St, although one-way in and one-way out northbound is OK, but not shown. The strip of land north of the warehouse buildings is needed for an access to joint parking lots serving the animal hospital and King Arthurs.

#08 Savidge, James & Jean (J&J Service)
Provide curbing to define a 3-car parking lot and an access to the shop's maintenance area from Newell St. Purchase existing billboard and remove it. This property may be involved

with additional Phase II R.O.W. for curvature needed to relocate railway tracks and to define proposed exiting traffic patterns.

#22 Hoiland, Roger W. & Arlene (Cooke Cable Vision)
Refine and organize an 8-car parking lot to control access point on improved Newell St. Remove unneeded pavement and install landscape improvements.

#01 State of Washington, Department of Wildlife
Eliminate on-street parking on Newell St. and replace it with an 8-car visitor parking lot at the east end of the office building. This property must be acquired from the Seaport Authority. Add a sidewalk toward the building entrance and continue sidewalk along Newell St.and the proposed Chehalis-Newell link. Landscape the strips along the curb and the existing fence. The internal parking in the compound appears less than efficient...a suggested redesign is shown.

#21 Uhler Veterinary Hospital (Aberdeen Animal Hospital)
Acquire additional 10 feet R.O.W. for Chehalis St from this site. Phase I would provide a paved access from Chehalis St. and a 9-car parking lot on the east side of the hospital. Sidewalks to entrances would be placed, unneeded pavement removed, and landscaping installed due to this building's high visibility from Wishkah St. at the project entrance. R.O.W. for the relocated railway should be acquired, as well as rights for a potential project sign at the Chehalis/Wishkah intersection. Architectural upgrading should be encouraged.

#20 Vanderbeek, John B. &Dorothy C. (King Arthurs Restaurant)
This site affords the opportunity to eliminate two access points on Wishkah St., assuming joint access can be worked out with McDonalds as shown. Phase I would require removing part of the existing drive-in structure to accommodate parking needed for the animal hospital. The plan shown would provide parking for 34 cars and a building pad of 4,900 square feet. Logical uses would be for a quality restaurant or for an office building or retailer. R.O.W. for the relocated railway should be acquired.

#? McDonalds
R.O.W. for the relocated railway should be acquired, and a joint access agreement reached. This agreement should permit shared traffic through tMcDonalds west entrance, behind Garrett Freight Lines, to Chehalis St. The railway relocation will disrupt McDonalds parking lot and reduce its capacity. Nine car spaces can be recovered at the northwest corner of this site, as shown on the plan.

#? Wishkah Mall
Improvements on mall property have not been depicted. However, the railway relocation will also disrupt their parking lot and reduce its capacity. In addition, the design of the intersection of Chehalis and Heron Sts at the west mall entry are esthetically very critical. This intersection is highly visible as a part of the project entry and as an introduction to the future Hotel complex. Both Phase I and Phase II design and landscape buffering issues need further study at this intersection.

#? Northern Pacific Railway

Mentioned only as an affected party to the track relocation process, and for necessary engineering requirements and coordination of issues such as curvature, undergrounding of utilities, and signal/switching equipment near Wishkah/Chehalis and Hornsby/Heron intersections.

#23 Grays Harbor Historical Seaport Authority
Land should be acquired for the Chehalis-Newell link, which requires a 50 wide R.O.W. Also needed is a small parcel for the parking lot and rest facilities proposed adjacent to the shipyard. In addition, a pie-shaped parcel is needed for the visitor parking lot at the Wildlife Department.

PLAN 14 EXISTING UTILITIES
Self explanatory.

PLAN 15 PROPOSED UTILITIES
Evaluation of water and sewer demand indicate that the existing lines have adequate capacity to serve the major future activities. ORB proposes that adequately sized taps be made and adequately sized lines be stubbed out to the properties where shown. This should preserve Phase I pavements, sidewalks and landscaping from being disturbed at time of actual site development.

PLAN 16 EXISTING STORM DRAIN
City-furnished data is suitable for locational purposes only.

PLAN 17 PROPOSED STORM DRAIN
This preliminary design proposes several improvements that tie into existing catch basins and manholes. Feasibility of this assumption must be determined at a more detailed design level. Adequate capacity of existing lines and facilities is assumed, as is that the proposed hotel complex will handle its own storm drainage improvements.

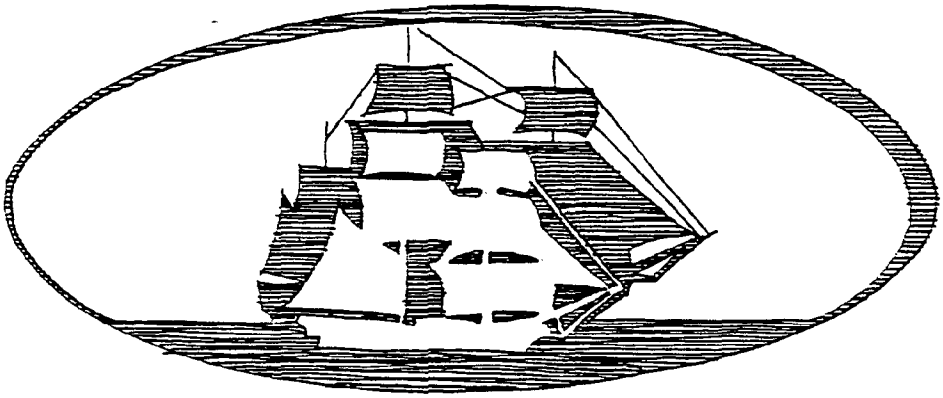
PLANS 18, 19, 20 LANDSCAPE - PHASE I
Drawings show the minimum basic areas of landscape improvement anticipated. It is assumed that some redoing of landscapes on private lots is justified as part of the parking improvements. Plans take into account Phase II landscape improvements, with only modest waste on the south side of Heron St, should Heron St. be widened and revised.

21, 22 ENTRANCE SIGN
Sketches cover the location site plan, elevations, materials required, the structural design and the foundation design.

APPENDIX B

East Aberdeen Waterfront Study
(See 11 x 17 Attachment)

Specifications-Entrance Sign



PROJECT NAME: SPECIFICATIONS- ENTRANCE SIGN

DWG. NO.

DRAWN BCK

CHECKED

DATE 6-10-89

EAST ABERDEEN WATERFRONT STUDY

JOB NO. 8901

THE ORB ORGANIZATION

510 Evergreen Building, 15 South Grady Way/Renton, Washington 98055-4407/(206)226-3522

SECTION 10440

ENTRANCE SIGN

PART 1 - GENERAL

1.01 DESCRIPTION:

A. Work includes the fabrication and installation of a double-sided, steel-supported, city entrance sign. Work includes but is not limited to:

1. Site clearing and grubbing
2. Excavation and backfill for spread footing
3. Concrete work
4. Metal fabrication and erection
5. Custom wood and metal signs

1.02 QUALITY ASSURANCE:

A. Working this section shall conform to the applicable provisions of the following:

1. AISC - (American Institute of Steel Construction):
   * "Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings"
   * "Specifications for Architecturally Exposed Structural Steel"
   * "Code of Standard Practice"

2. AWS - (American Welding Society):
   * "Code for Welding in Building Construction"

3. ACI - (American Concrete Institute):
   * "Standard Specification for Structural Concrete"

4. ASTM - (American Society of Testing Materials):
   * C-94 (ready-mixed concrete)
   * A-27, 36, 48, 82, 153, 307, 325, 615 (steel)

5. AITC - (American Institute of Timber Construction)

6. WWPA - (Western Wood Products Association)

7. WSDPT - (Washington State Department of Transportation):
   * "1988 Standard Specifications for Road, Bridge, and Municipal Construction."

8. WISHA - (Washington Industrial Safety & Health Act):
   * Applicable standards

9. OSHA - (Occupational Safety & Health Act):
   * Applicable standards

10. CRSI - (Concrete Reinforcing Steel Institute)
    * "Manual of Standard Practice"

11. NEC - (National Electrical Code):
    * Current edition

B. Qualifications of Welders:

1. All welding shall be performed by operators who have been qualified as prescribed in "Qualification Procedure" of the American Welding Society, certified and licensed under state and/or local law as required.

1.03 SUBMITTALS:

A. Submit shop drawings of complete sign assembly including foundation, steel support frame, and electrical work for review before fabrication.

1. Show all materials, dimensions, sizes, and shapes, and indicate all methods of connecting, anchoring, fastening, bracing, and attaching to work of other trades.

2. Describe grinding of welds, shop finish treatments, lettering style, wood treatments, light mounting and wiring, finish painting, and other appearance items for owner review.

3. Describe concrete mix, strength, footing dimensions, and anchor bolt details.

1.04 MATERIALS, EQUIPMENT, & JOB CONDITIONS

A. Provide all necessary materials, equipment, plant, and tools as required for the proper completion of the work. Provide temporary barricades if required for the protection of the public.

PART II

PRODUCTS

2.01 CONCRETE REINFORCEMENT

A. Bars are to be grade 60 (Fy = 60,000 psi) deformed steel bars per ASTM A-615 in diameters and spacings indicated.

B. Tie wires are to be No. 16 double annealed steel wire per ASTM A-82.

C. Bar supports: Provide 3" high precast concrete blocks or rebar chairs with sand plates.

2.01 CONCRETE

A. Provide ready-mix concrete with 28-day comprssive strength of 3,000 psi minimum per ASTM C94. Submit two copies of laboratory trial mix, designs proposed, in accordance with ACI 301 Method One.

1. Portland Cement: Type 1, ASTM C150, gray.
2. Fire aggregate: Washed sand, per ACI 301.
3. Course aggregate: Crushed stone or gravel, 3/4" maximum per APWA 2.02.
4. Water: Potable.
5. Air-entraining admixtures: Per ASTM C260-74.
6. Accelerating/retarding admixtures: As approved.

2.03 GROUT

A. Provide pre-mixed, non-shrink grout (mortar) with 28-day compressive strength of 8,000 psi minimum; Master Builders "EMBECO" or approved.

2.04 ANCHOR BOLTS

A. Provide anchor bolts conforming with ASTM A-325, galvanized per ASTM A-153, in configurations and locations per plans.

B. Provide anchor bolt nuts and washers conforming to ASTM A-325 and galvanized per ASTM A-153.

2.05 SIGN STRUCTURE

A. Steel tubing: Conform to ASTM A-36.

B. Structural steel: Conform to ASTM A-36.

C. Steel plate: Conform to ASTM A-36.

D. Welding rod: ASTM A-233, E-70 series.

E. Shop primer: Tnemec Company, Inc.; local representative: TNW (206) 762-5755.

1. Over galvanized steel: "Tneme-Zinc" series 90-93.

F. Templates: Fabricator shall provide base plate templates for anchor bolt installation.

G. Shop treatment after fabrication: Cleaned, hot-dipped - galvanized and shop primed and shop finish painted.

1. Cleaning: Conform to SSPC-SP8: Completely remove all rust, mill scale, and other foreign material by chemical reaction or electrolysis in acid solution, after fabrication.

2. Galvanizing: Galvanize assemblies after fabrication and cleaning in accord with ASTM 123, ASTM 153.

a. Zinc retained: 2.0 oz. per sq. ft. of steel surface.

3. Shop prime: Wash galvanized metal thoroughly with solvent and treat with phosphoric acid etching solution immediately prior to priming. Apply primer with airless sprayer to 3.0 mm minimum dry film thickness.

4. Finish part: Apply two coats semi-gloss enamel with airless sprayer to 4.0 mm to total dry film thickness. Submit colors for owner's approval.

2.06 CUSTOM WOOD AND METAL SIGNS

A. Wood and metal signs shall be fabricated for field bolting to both sides of the steel sign structure. Mounting points are to be coordinated with the sign structure fabricator. All sign mounting hardware to be hot-dipped galvanized or stainless steel.

B. Signs and steel plate medallion anchors and fasteners shall be designed to withstand a continuous 40 psf lateral wind pressure from any direction without failure.

C. Provide positive dielectric separation via nylon spacers or bituminous paint to prevent galvanic corrosion between dissimilar metals in direct contact.

D. Exposed wood trim and light baffles for sign to be Clear Cedar No. 1. Pressure treated Hem-Fir No. 1 may be used for concealed conditions. Submit stain colors for owner approval.

E. Wood and metal signs shall be fabricated by manufacturer approved by owner. Manufacturer to submit drawings showing proposed size, shape, configuration, graphics, lettering, colors, wood trim configuration, and protective coating.

F. "Current Events Sign" shall measure approximately 84" x 84" and shall have horizontal runners for holding 6" removable printed letters (retail reader-board type). Sign to have removable 1/4" clear polycarbonate cover, and be lockable to prevent tampering with messages.

2.07 SIGN ILLUMINATION

A. Light fixtures are to be exterior type, U-L listed, weatherproof, and vandal-resistant, and capable of supplying 25 plus or minus 5 foot candles at sign surfaces; illuminate both sides of sign.

B. Provide hot-dipped galvanized brackets for securing fixtures to steel sign structure. Mounting hardware to be hot-dipped galvanized or stainless steel.

C. All wiring to be in approved weather resistant condition.

D. Provide weatherproof, lockable, fused disconnect switch above meter.

E. Submit shop drawings for owner's approval.

PART III

EXECUTION

3.01 CLEARING AND GRUBBING:

A. Clear area of all vegetation for a distance of 8' out from edges of spread footing.

B. Remove stumps and roots larger than 1 1/2" in diameter to not less than 18" below finish grade in side of cleared area.

C. Remove and dispose of all cleared and grubbed materials per requirements of local authorities.

3.02 EXCAVATION BACKFILL AND COMPACTION:

A. Excavate to depths as required to accomodate footing installations and soil conditions. Bearing surface is to be flat and level. Dewater excavation if ground water is encountered. Side walls of excavation shall be sloped to less than the soil's angle of repose to prevent collapse. Provide shoring and bracing if required by OSHA or WISHA.

B. Backfill excavation after form removal, compact backfill in 8" maximum lifts with gas powered vibratory tamper ("jumping jack"). Compact soil to 95% of original soil density to elevation of top of spread footing. Soil placed over the top of the spread footing shall be compacted to 85% of original density. Backfill to height of original ground level.

C. Remove excess excavated soils and dispose per requirements of local authorities.

3.03 CONCRETE FORMING:

A. Construct and brace forms in accordance with ACI 347, to the dimensions indicated.

B. Install reinforcing steel in spacings and locations per plan.

C. Provide accurate forming for all plinths and anchor bolts.

D. Coat forms with compatible form-release agent before concrete placement.

E. Remove and dispose of all form work after concrete has reached sufficient strength to safely support its own weight plus imposed loads.

3.04 CONCRETE PLACEMENT:

A. Conform to ACI standard "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete" ACI 304. Hot weather concreting shall follow procedures of ACI 305. Cold weather concreting shall conform to ACI 306. Aluminum pipes or chutes are not permitted for placement of concrete. Vibrate concrete to insure proper consolidation and uniform distribution of ingredients.

B. Protect and cure concrete per ACI specifications.

3.05 SIGN STRUCTURE FABRICATION AND ERECTION:

A. Fabricate steel sign structure per provisions of AISC "Specifications for Architecturally Exposed Structural Steel." Grind all welds smooth. Remove all weld spatter.

B. Install brackets and clips for mounting of signs and sign lighting.

C. Clean, galvanize, and shop prime per Paragraph 2.05 (G.).

D. Erect fabricated sign in accordance with shop drawings, aligned straight, plumb and true to line within a tolerance of one in 200. Solid grout base plates to required elevation.

E. Touch up all damaged galvanizing and shop finish coats using "Galvicon" or approved zinc-rich organic coating and two coats of semi-gloss enamel.

F. Install two-piece escutcheon cover over anchor bolts and nuts. Secure to base plate. Seal joints exposed to weather with clear silicone sealant.

3.06 CUSTOM WOOD AND METAL SIGN INSTALLATIONS

A. Signs shall be secured to sign support structure per shop drawings to withstand a continuous 40 psf lateral wind pressure loading without failure.

B. Install positive dielectric insulation/separation to prevent galvanic corrosion between adjoining dissimilar metals.

C. Signs to be installed plumb, square, and level.

3.07 SIGN ILLUMINATION

A. Secure mounting brackets to sign structure and mount fixtures square and level with corrosion-resistant fasteners.

B. Aim fixtures to provide a uniform illumination of approximately 25 feet candles at the surface of the sign.

C. All wiring from fixtures to meter to be in approved weathertight condition.

D. Owner will contract with local electric utililty to install electric meter and power to meter. Meter shall be mounted on back side of sign support structure.

3.08 CLEAN UP

A. Remove all construction debris from site.

B. Slope subgrade in cleared area to provide 2% slope away from sign base.

END OF DOCUMENT

ABERDEEN ENTRANCE SIGN

Regarding wooden 8x8 supports for entrance sign:

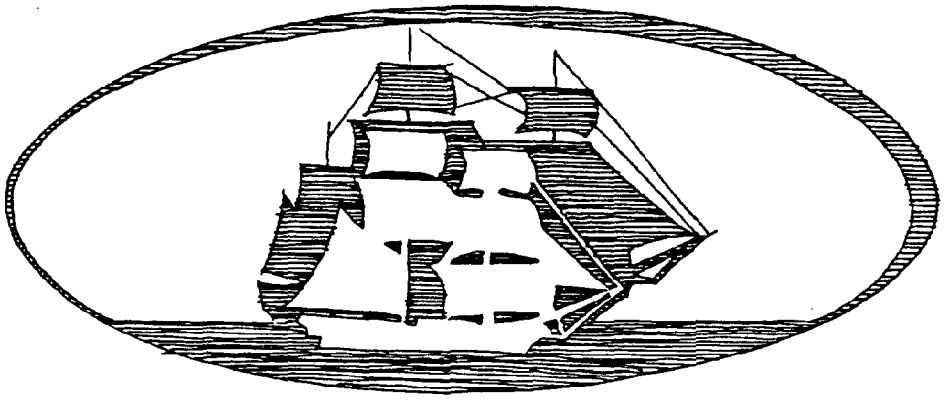
Supports will be subject to rotation (torsion) due to wind action on the offset sign above. The method of preventing this twisting was not apparent from the sketch, but will require diagonal bracing or shear panels to provide stability.

Over time, if the connections are not properly designed, they will be worked loose by the wind loading. Connections must be detailed with split rings or other fasteners which will distribute stresses to well below the crushing strength of the wood fibers.

The problem with this is that the engineering fees would add tremendously to the cost. A simpler solution may be to use a fabricated steel frame (fully welded, moment-resisting) and trim it out in wood.

APPENDIX C

Cost Estimate-Phase I



PROJECT NAME: COST ESTIMATE - PHASE I

DWG. NO.

DRAWN SKK

CHECKED

DATE 6-10-89

EAST ABERDEEN WATERFRONT STUDY

JOB NO. 8901

THE ORB ORGANIZATION

510 Evergreen Building, 15 South Grady Way/Renton, Washington 98055-4407/(206)226-3522

COST ES 1ATE FOR:
EAST ABERDEEN WATERFRONT STUDY
ABERDEEN, WASHINGTON
THE ORB ORGANIZATION
510 EVERGREEN BUILDING
RENTON, WASHINGTON

6/20/89

C.S.I. SECTION	DESCRIPTION	TOTAL DIRECT COST	SUBCONTRACTOR MARK UP		ESTIMATED COSTS
01000	GENERAL CONDITIONS (LUMP SUM)	$40,000	-		$40,000
02050	DEMOLITION	$43,055	-		$43,055
02100	CLEARING	$1,120	-		$1,120
02210	EARTHWORK	$101,060	-		$101,060
02241	GRAVEL BASE COURSE	$44,250	-		$44,250
02450	CONCRETE CURBS AND WALKS	$92,160	-		$92,160
02485	LANDSCAPING	$41,725	20.00%		$50,070
02550	ASPHALT PAVING	$53,640	20.00%		$64,368
02577	PAVEMENT MARKINGS	$3,120	20.00%		$3,744
02711	GAS DISTRIBUTION	$2,444	20.00%		$2,933
02713	WATER SERVICE	$6,582	20.00%		$7,898
02715	STORM DRAINAGE	$51,875	20.00%		$62,250
02722	SANITARY SEWER	$3,075	20.00%		$3,690
02840	SIGNAGE	$17,985	-		$17,985
02870	FURNISHINGS	$6,150	-		$6,150
13120	PREFABRICATED RESTROOM BUILDING	$60,000	25.00%		$75,000
16402	ELECTRICAL DISTRIBUTION & LIGHTING	$174,100	25.00%		$217,625
SUBTOTAL DIRECT CONSTRUCTION COST					$833,358
HOME OFFICE OVERHEAD		5.00%		$833,358	$41,668
LIABILITY & BUILDERS RISK		1.20%		$875,026	$10,500
BOND		1.00%		$885,526	$8,855
PROFIT		10.00%		$894,382	$89,438
STATE AND LOCAL SALES TAX		7.50%		$983,820	$73,786
TOTAL ESTIMATED CONSTRUCTION COST					**$1,057,606**
ASSOCIATED PROJECT COSTS					
RIGHT OF WAY / LAND PURCHASES		UNKNOWN			**$0**
SITE SURVEY					$10,000
SOILS INVESTIGATION AND REPORT					$8,000
LABORATORY INSPECTION AND TESTING					$15,000
PERMITS					$1,000
LEGAL ADVERTISING					$500
PRINT PLANS AND SPECIFICATIONS FOR BID					$6,000
"AS-BUILT" RECORD DRAWINGS					$1,000
PRELIMINARY ENGINEERING		10.00%			$105,761
CONSTRUCTION ENGINEERING		15.00%			$158,641
PRELIMINARY DESIGN CONTINGENCY		10.00%			$120,487
TOTAL ESTIMATED PROJECT COST	(NOT INCLUDING RIGHT OF WAY / LAND PURCHASES)				**$1,483,995**

COST ESTIMA FOR: EAST ABERDEEN WATERFRONT STUDY 6/20/89
ABERDEEN, WASHINGTON

02050	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	REMOVE RESTAURANT STRUCTURE (W/ DISPOSAL)	75,000	CF	$0.07	$5,250	$0.00	$0	$5,250
	REMOVE RESTAURANT EQUIPMENT COST	75,000	CF	$0.00	$0	$0.09	$6,750	$6,750
	REMOVE CONCRETE CURBS	1,500	LF	$1.35	$2,025	$0.00	$0	$2,025
	REMOVE CONCRETE CURBS EQUIPMENT COST	1,500	LF	$0.00	$0	$0.55	$825	$825
	REMOVE CONCRETE WALKS	4,800	SF	$0.35	$1,680	$0.00	$0	$1,680
	REMOVE CONCRETE WALKS EQUIPMENT COST	4,800	SF	$0.00	$0	$0.45	$2,160	$2,160
	SAWCUT ASPHALT PAVING	3,500	LF	$0.40	$1,400	$0.20	$700	$2,100
	SAWCUT ASPHALT PAVING EQUIPMENT COST	3,500	LF	$0.00	$0	$0.25	$875	$875
	REMOVE ASPHALT PAVING	5,400	SY	$1.10	$5,940	$0.00	$0	$5,940
	REMOVE ASPHALT PAVING EQUIPMENT COST	5,400	SY	$0.00	$0	$1.50	$8,100	$8,100
	HAUL REMOVAL TO DISPOSAL	700	CY	$7.50	$5,250	$0.00	$0	$5,250
	HAULING EQUIPMENT COST	700	CY	$0.00	$0	$3.00	$2,100	$2,100
02050	SUBTOTAL				$21,545		$21,510	$43,055

02100	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	CLEARING AT NEW DEVELOPMENT AREAS	2	ACRE	$160.00	$320	$0.00	$0	$320
	CLEARING EQUIPMENT COST	2	ACRE	$0.00	$0	$400.00	$800	$800
02100	SUBTOTAL				$320		$800	$1,120

02210	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	CUT	8,600	CY	$0.45	$3,870	$0.00	$0	$3,870
	CUT EQUIPMENT COST	8,600	CY	$0.00	$0	$0.55	$4,730	$4,730
	FILL	6,900	CY	$0.50	$3,450	$9.50	$65,550	$69,000
	FILL EQUIPMENT COST	6,900	CY	$0.00	$0	$1.60	$11,040	$11,040
	FINISH GRADE	10,350	SY	$0.50	$5,175	$0.00	$0	$5,175
	FINISH GRADE EQUIPMENT COST	10,350	SY	$0.00	$0	$0.70	$7,245	$7,245
02210	SUBTOTAL				$12,495		$88,565	$101,060

02241	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	4" GRAVEL BASE COURSE AT AC PAVING	8,000	SY	$0.50	$4,000	$2.40	$19,200	$23,200
	BASE COURSE AT AC PAVING EQUIPMENT COST	8,000	SY	$0.00	$0	$0.80	$6,400	$6,400
	ENGINEERING FABRIC ON SUB BASE	8,000	SY	$0.30	$2,400	$1.00	$8,000	$10,400
	4" GRAVEL BASE COURSE AT CONC WALKS	1,250	SY	$0.80	$1,000	$2.40	$3,000	$4,000
	BASE COURSE AT CONC WALKS EQUIPMENT COST	1,250	SY	$0.00	$0	$0.20	$250	$250
02241	SUBTOTAL				$7,400		$36,850	$44,250

COST ESTIMA FOR: EAST ABERDEEN WATERFRONT STUDY
ABERDEEN, WASHINGTON

6/20/89

02450	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	CONCRETE CURB AND GUTTER	8,000	LF	$4.00	$32,000	$5.00	$40,000	$72,000
	4" CONCRETE WALK	11,200	SF	$0.80	$8,960	$1.00	$11,200	$20,160
02450	SUBTOTAL				$40,960		$51,200	$92,160

02485	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	TREES	60	EA	$40.00	$2,400	$120.00	$7,200	$9,600
	TOPSOIL, GROUND COVER AND BARK	11,500	SF	$1.00	$11,500	$1.50	$17,250	$28,750
	SOD	1,500	SY	$0.75	$1,125	$1.50	$2,250	$3,375
02485	SUBTOTAL				$15,025		$26,700	$41,725

02550	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	4" ASPHALT PAVING AT ROADS	1,900	SY	$0.40	$760	$6.40	$12,160	$12,920
	2" ASPHALT PAVING AT PARKING LOTS	6,000	SY	$0.30	$1,800	$3.20	$19,200	$21,000
	PAVING EQUIPMENT COST	7,900	SY	$0.00	$0	$0.25	$1,975	$1,975
	1 1/2" ASPHALT PAVING OVERLAY	3,900	SY	$0.25	$975	$2.50	$9,750	$10,725
	PAVING OVERLAY EQUIPMENT COST	3,900	SY	$0.00	$0	$0.20	$780	$780
	ENGINEERING UNDERLAY FABRIC & ASPHALT FLOOD	3,900	SY	$0.35	$1,365	$1.25	$4,875	$6,240
02550	SUBTOTAL				$4,900		$48,740	$53,640

02577	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	REMOVE 4" WIDE PAINT STRIPING	2,000	LF	$0.40	$800	$0.35	$700	$1,500
	REMOVAL EQUIPMENT COST	2,000	LF	$0.00	$0	$0.15	$300	$300
	4" WIDE PAINT STRIPING	2,700	LF	$0.05	$135	$0.05	$135	$270
	CROSSWALK STRIPING AND DIRECTIONAL ARROWS	1,500	SF	$0.35	$525	$0.35	$525	$1,050
02577	SUBTOTAL				$1,460		$1,660	$3,120

02711	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	TIE NEW 1 1/2" TO EXIST 6" GAS MAIN	2	EA	$80.00	$160	$150.00	$300	$460
	1 1/2" VALVE AND BOX	2	EA	$120.00	$240	$250.00	$500	$740
	STUB OUT 1 1/2" SERVICE AND CAP	100	LF	$4.00	$400	$6.00	$600	$1,000
	TRENCH EXCAVATION AND BACKFILL	40	CY	$3.60	$144	$0.00	$0	$144
	TRENCH AND BACKFILL EQUIPMENT COSTS	40	CY	$0.00	$0	$2.50	$100	$100
02711	SUBTOTAL				$944		$1,500	$2,444

COST ESTIMA FOR: EAST ABERDEEN WATERFRONT STUDY 6/20/89
ABERDEEN, WASHINGTON

02713	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	RELOCATE FIRE HYDRANT	1	EA	$500.00	$500	$200.00	$200	$700
	TIE NEW 6" TO EXIST 6" WATER MAIN	3	EA	$80.00	$240	$450.00	$1,350	$1,590
	6" GATE VALVE AND BOX	3	EA	$120.00	$360	$400.00	$1,200	$1,560
	STUB OUT 6" SERVICE AND CAP	100	LF	$4.00	$400	$6.00	$600	$1,000
	1 1/2" SERVICE TO RESTROOMS	200	LF	$1.50	$300	$3.50	$700	$1,000
	TRENCH EXCAVATION AND BACKFILL	120	CY	$3.60	$432	$0.00	$0	$432
	TRENCH AND BACKFILL EQUIPMENT COSTS	120	CY	$0.00	$0	$2.50	$300	$300
02713	SUBTOTAL				$2,232		$4,350	$6,582

02715	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	CATCH BASIN TYPE 1 / CURB INLET	24	EA	$80.00	$1,920	$400.00	$9,600	$11,520
	CATCH BASIN TYPE 2 / MANHOLE	2	EA	$200.00	$400	$900.00	$1,800	$2,200
	CATCHBASIN / MANHOLE EQUIPMENT COST	26	EA	$0.00	$0	$25.00	$650	$650
	CONNECT TO EXIST CB / MH	10	EA	$60.00	$600	$15.00	$150	$750
	12" CONCRETE PIPE	1,900	LF	$3.00	$5,700	$6.00	$11,400	$17,100
	48" RETENTION PIPE	250	LF	$12.00	$3,000	$35.00	$8,750	$11,750
	RESTRICTOR / SEPARATOR ASSEMBLY	1	EA	$45.00	$45	$120.00	$120	$165
	PIPE EQUIPMENT COST	2,150	LF	$0.00	$0	$0.55	$1,183	$1,183
	TRENCH EXCAVATION AND BACKFILL	1,075	CY	$3.60	$3,870	$0.00	$0	$3,870
	TRENCH AND BACKFILL EQUIPMENT COSTS	1,075	CY	$0.00	$0	$2.50	$2,688	$2,688
02715	SUBTOTAL				$15,535		$36,340	$51,875

02722	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	CONNECT TO EXIST SANITARY MANHOLE	3	EA	$60.00	$180	$60.00	$180	$360
	6" SEWER LINE	300	LF	$2.75	$825	$3.25	$975	$1,800
	TRENCH EXCAVATION AND BACKFILL	150	CY	$3.60	$540	$0.00	$0	$540
	TRENCH AND BACKFILL EQUIPMENT COSTS	150	CY	$0.00	$0	$2.50	$375	$375
02722	SUBTOTAL				$1,545		$1,530	$3,075

02840	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	TEMPORARY CONSTRUCTION SIGN	1	EA	$100.00	$100	$500.00	$500	$600
	PERMANENT ENTRANCE SIGN (SEE BACK UP)	1	LS	$3,000.00	$3,000	$9,500.00	$9,500	$12,500
	TRAFFIC CONTROL SIGNS	25	EA	$15.00	$375	$50.00	$1,250	$1,625
	PEDESTRIAN INFORMATION SIGNS	6	EA	$10.00	$60	$25.00	$150	$210
	HANDICAP PARKING SIGNS	15	EA	$10.00	$150	$40.00	$600	$750
	SIGN POST AND FOOTING	46	EA	$20.00	$920	$30.00	$1,380	$2,300
02840	SUBTOTAL				$4,605		$13,380	$17,985

COST ESTIMA FOR: EAST ABERDEEN WATERFRONT STUDY 6/20/89
ABERDEEN, WASHINGTON

02870	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	GUARD RAIL	250	LF	$1.00	$250	$10.00	$2,500	$2,750
	8' BENCHES	5	EA	$80.00	$400	$600.00	$3,000	$3,400
02870	SUBTOTAL				$650		$5,500	$6,150

13120	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	PREFABRICATED RESTROOM BUILDING	1	EA	$25,000.00	$25,000	$35,000.00	$35,000	$60,000
13120	SUBTOTAL				$25,000		$35,000	$60,000

16402	ITEM DESCRIPTION	QUANTITY	UNIT	LABOR PER UNIT	LABOR COST	MATERIAL PER UNIT	MATERIAL COST	SUBTOTAL
	RELOCATE POWER POLE AND HARDWARE	1	EA	$800.00	$800	$800.00	$800	$1,600
	RELOCATE POWER POLE EQUIPMENT COST	1	EA	$0.00	$0	$500.00	$500	$500
	RELOCATE BUSINESS SIGN	1	EA	$400.00	$400	$200.00	$200	$600
	RELOCATE TELEPHONE BOOTH	1	EA	$250.00	$250	$100.00	$100	$350
	EXTEND POWER UNDERGROUND TO RESTROOMS	300	LF	$3.00	$900	$7.00	$2,100	$3,000
	TRANSFORMER FOR RESTROOM & STREET LIGHTS	2	EA	$500.00	$1,000	$10,000.00	$20,000	$21,000
	5 GLOBE LIGHTING FIXTURES INCLUDING WIRING	7	EA	$300.00	$2,100	$5,000.00	$35,000	$37,100
	1 GLOBE LIGHTING FIXTURES INCLUDING WIRING	7	EA	$300.00	$2,100	$2,000.00	$14,000	$16,100
	LIGHT FIXTURES EQUIPMENT COST	14	EA	$0.00	$0	$125.00	$1,750	$1,750
	TRAFFIC SIGNAL AT WISHKAH AND CHEHALIS ST	1	EA	$20,000.00	$20,000	$60,000.00	$60,000	$80,000
	CONDUITS FOR FUTURE UNDERGROUND UTILITIES	1	LS	$2,000.00	$2,000	$4,000.00	$4,000	$6,000
	TRENCH EXCAVATION AND BACKFILL	1,000	CY	$3.60	$3,600	$0.00	$0	$3,600
	TRENCH AND BACKFILL EQUIPMENT COSTS	1,000	CY	$0.00	$0	$2.50	$2,500	$2,500
16402	SUBTOTAL				$33,150		$140,950	$174,100

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