Biological Assessment for 1999-2-00029, Tacoma Public Works
Nationwide Permit 38

1. Project Description: The applicant is proposing to remove contaminated materials from an upland area and from an industrial shoreline and develop an intertidal estuarine marsh restoration project on a 1.86 acre site on the southwesterly side of the Middle Waterway. This site restoration is being conducted under the terms of a consent decree between the city of Tacoma and the Natural Resource Trustees (National Oceanic and Atmospheric Administration, the United States Fish and Wildlife Service, the Bureau of Indian Affairs, the Washington State Department of Natural Resources, the Washington State Department of Fish and Wildlife, and the Washington State Department of Ecology). Restoration will require the excavation of 13,000 cubic yards of contaminated material, backfill with up to 2,000 cubic yards of clean material where necessary to meet intertidal elevations or cleanup standards, and the planting of marsh and riparian vegetation. This is a public project whose primary purpose is to improve fish or wildlife habitat. When the work is completed, the site will contain 1.06 acres of saltmarsh, 0.20 acres of mudflat, and 0.60 acres of riparian area. The project is located in the Middle Waterway, in the northeast quadrant of Section 4, Township 20 North, Range 3 East, at Tacoma, Washington.

The project has been conceived and designed to remove contaminated sediments from uplands and from the intertidal area and for habitat restoration and creation. The project will be constructed in a manner that will not result in significant adverse impacts to salmon or their critical habitat. The long-term result of this project will be an expansion of ecologically important saltmarsh habitat in an area of Commencement Bay that has historically lost the majority of this habitat type. The Trustees' Commencement Bay Restoration Plan substantiates the need for and endorses the initiation of this type of project.

2. Description of Project Area: The project site is a combination of vacant uplands, non-vegetated shoreline, and saltmarsh. One parcel of the project site consists of an undeveloped, flat upland area near elevation 18 feet Mean Lower Low Water (MLLW), with a steep embankment along the northeast margin descending to the mudflat at elevation 8 feet MLLW. A second parcel includes an undeveloped, flat upland area near elevation 17 feet MLLW, and a steep embankment descending to the mudflat along the northern boundary. The total size of the restoration site is 1.86 acres. The current intertidal areas support pickleweed and other saltmarsh plants.

The upland area has been contaminated by past industrial uses. The upper-most 1-2 feet of material is composed of a gravely-sand fill. Portions of the site are underlain with concrete and other construction debris placed here when the site was filled in the past. Slag and foundry waste, concrete, asphalt and other debris are

currently visible in the banks above the intertidal areas. The chemical and physical sampling and analysis results from the site testing show that, for the most part, the native sediments underlying overburden are clean and suitable for habitat restoration. A small area of over-excavation of native sediments may be necessary in certain areas to insure removal of all contaminates.

3. List of Species: The following listed species are thought to be found in the project area: Puget Sound chinook (*Oncorhynchus tshawytscha)*. listed threatened under the Endangered Species Act of 1977, as amended (ESA), and the Coastal/Puget Sound bull trout (*Salvelinus confluentus)*, proposed as threatened. Critical habitat has also been proposed for the Chinook.

4. Description of the Species and Habitat:

Habitat: The habitat to be impacted by this project includes the existing intertidal saltmarsh area located waterward of the Mean High Water line (MHW) at this site. This habitat is vegetated with pickleweed. The upland area is non-vegetated, and was filled in the past with sand, gravel and various construction debris.

Chinook: This site is utilized by juveniles of the Puget Sound Evolutionarily Significant Unit (ESU) of the Chinook Salmon. This species was listed as threatened on 24 March 1999. The ESU includes all naturally spawned populations of chinook salmon from the rivers and streams flowing into Puget Sound. Critical habitat was proposed for the chinook on 9 March 1998. Critical habitat is proposed to include all marine, estuarine and river reaches accessible to chinook salmon in Puget Sound.

Juvenile salmonids, including chinook salmon, are known to utilize the intertidal habitats in the project vicinity during their early marine life stages following outmigration from the Puyallup River. The juveniles would use the project site for feeding during the outmigration. Adult salmon are not known to enter the Middle Waterway in significant numbers and would not be expected in the project vicinity at any time.

Bull trout: On 10 June 1998, the U.S. Fish and Wildlife Service proposed to list the Coastal/Puget Sound Distinct Population Segment (DPS) of the Bull Trout as a threatened species. This DPS is significant because it is thought to contain the only anadromous forms of bull trout in the coterminous United States. In the Puget Sound area sixteen subpopulations of bull trout occur in eight river basins, including the Puyallup River, where this species is occasionally caught by anglers.

5. Management Actions Related to the Species (Construction techniques): The project work below MHW will occur between June 15th and March 14th, a period when few juvenile salmonids are expected to be present. Construction in areas exposed to the

marine environment below MHW will be accomplished totally in the dry during periods when tidal elevations are at least one foot below the work elevation. Construction areas that have been exposed during a low tide will be rolled and partially compacted before contact with rising tides to minimize suspension and export of sediments. Hay bales will be secured along the shoreline project boundary to minimize tidal dispersion of sediments during construction. The hay bales will remain in place over the first winter until the saltmarsh is planted the following spring. Riparian slopes will be stabilized with biodegradable matting and vegetative plantings to minimize erosion of finished slopes. A monitoring and adaptive management plan has been prepared and reviewed by the Trustees. This plan specifies chemical, physical, and biological performance criteria for the site and describes post-construction monitoring that will be conducted to ensure project success.

6. Analysis of Effects: This project will remove contaminated materials from the waterway and adjacent uplands, and convert these areas to clean, productive saltmarsh habitat. The long-term effects of the project on chinook salmon and other salmonid species and on the bull trout will be beneficial as the project will provide over an acre of new high intertidal saltmarsh habitat for chinook and other species, and 0.60 of an acre of adjacent riparian habitat. Potentially adverse effects on juvenile salmonids will be avoided or reduced by constructing the project in the dry and during times of the year when outmigrants are not expected to be in the waterway. The earth moving portion of the project will be constructed in the fall. The site will be planted in the following spring. By the time of that first post-project outmigration, the site will offer a greater extent of uncontaminated upper intertidal habitat than that which currently exists. Although the existing tideflats do provide some food values, and those food values will be lost during construction of this project, the total production of food items over the 1.26 acres of the created and restored tideflats and saltmarsh will be greater than that currently provided. The effect on juvenile salmonids in the first year following construction will be positive and the quality of ecological functions provided by the project will improve with time as the saltmarsh plantings become established and productivity increases.

This project will complement the positive effects of the Simpson-Trustee project on the east side of the Middle Waterway. It will also have a cumulative positive effect with other restoration projects completed or underway throughout Commencement Bay, e.g. the Simpson Cap, the Milwaukee fill, Slip 3 mitigation, the Rhone Poulene mitigation, and the Fairliner mitigation. All of these projects, as well as other restoration and remediation projects being developed by the city of Tacoma (Olympic View, Thea Foss remediation), and by others in Middle and Hylebos waterways, will continue the trend of improving habitat conditions for juvenile salmonids in the Bay.

7. Conclusion: The Corps has determined that this project may affect, but is not likely to adversely affect, the species listed above. The project will, over the long term,

provide a beneficial effect to the listed and proposed species, and a beneficial increase in chinook critical habitat.

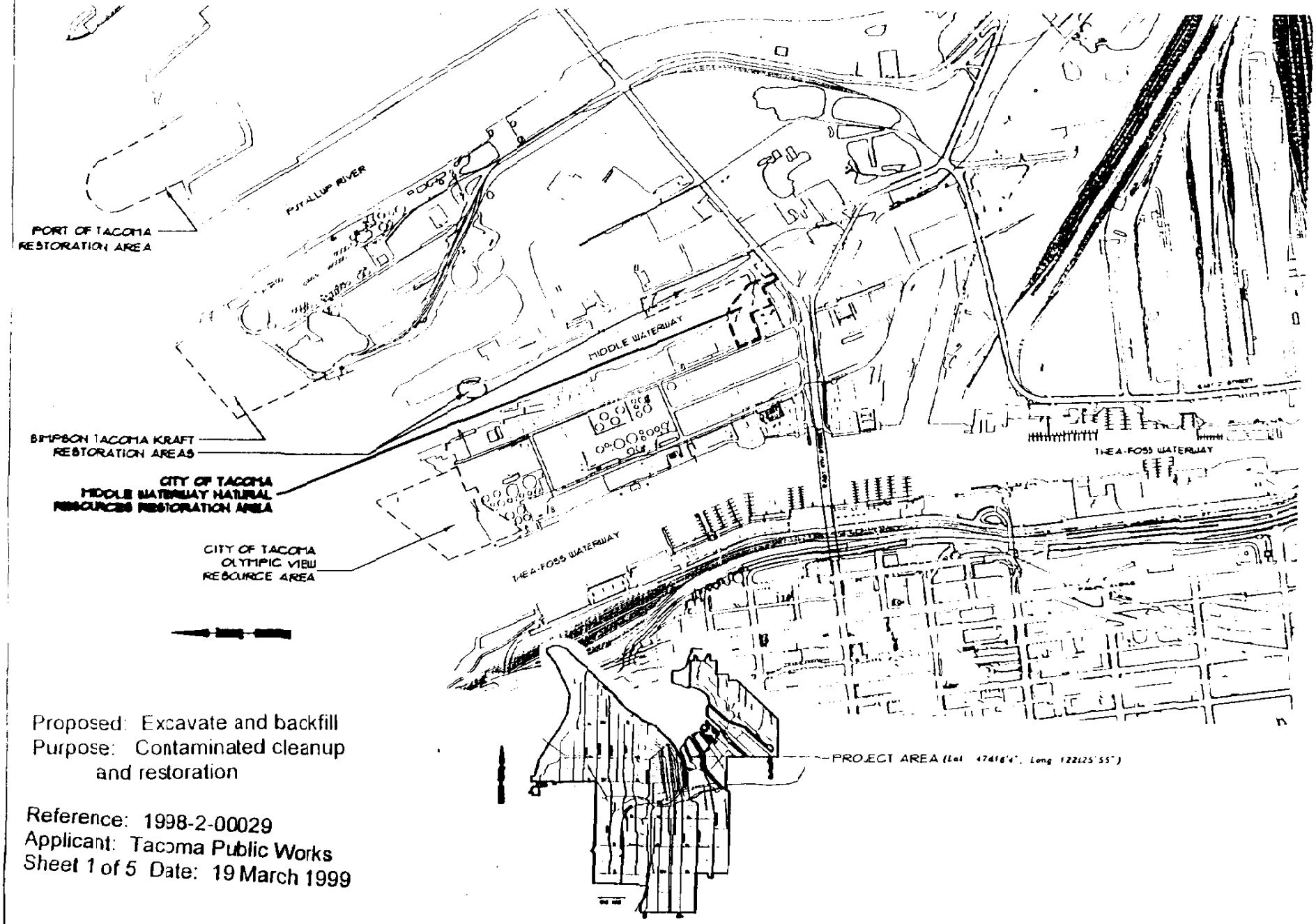
9. References:

Federal Register, Vol. 63. No. 111, Wednesday, June 10, 1998.

Federal Register, Vol. 64, No. 56, Wednesday, March 24, 1999.

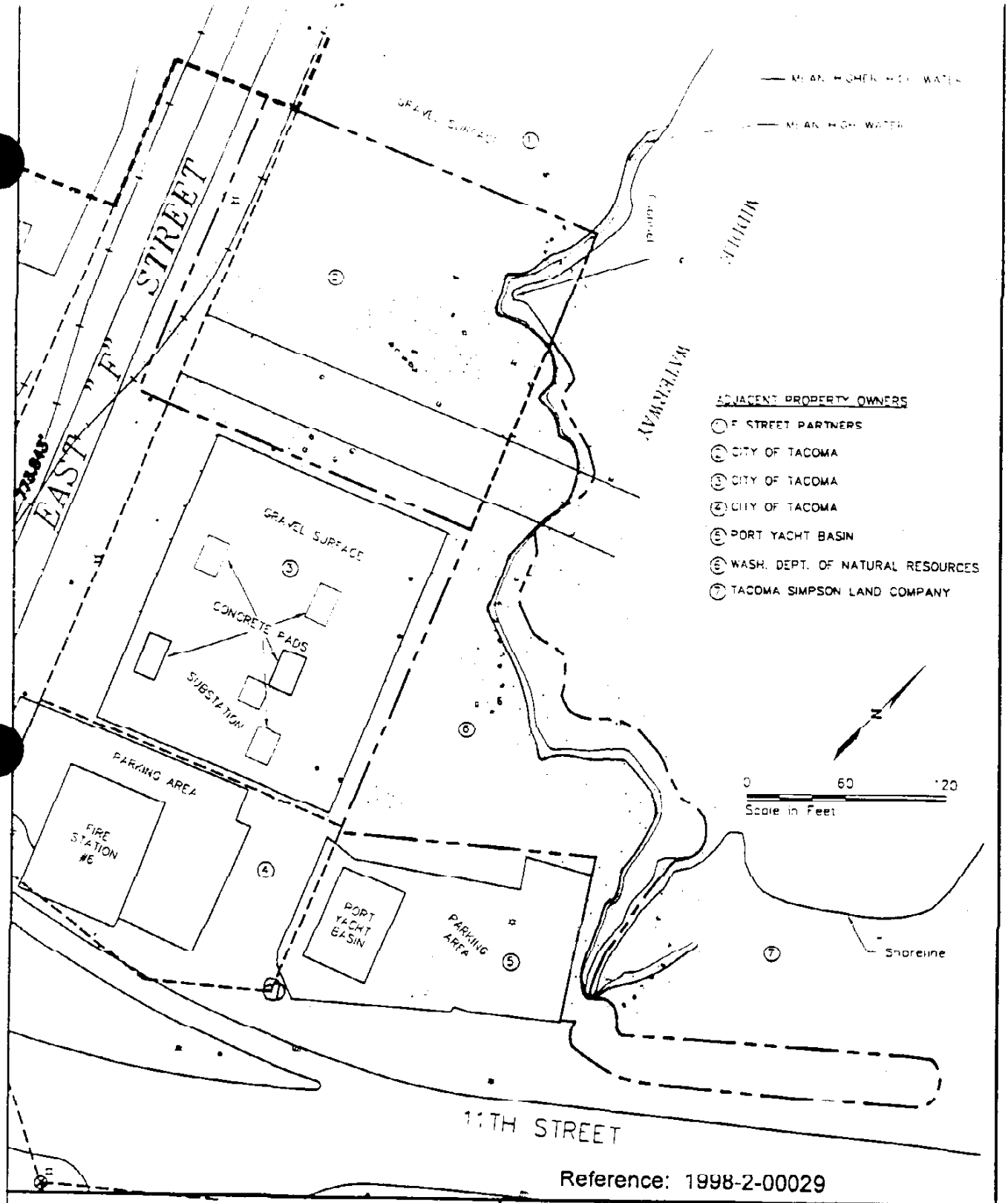
Jack Gossett Senior Project Manager — 6/8/99 Date

T.J. Stetz Environmental Analyst — 6/8/99



Proposed: Excavate and backfill
Purpose: Contaminated cleanup and restoration

Reference: 1998-2-00029
Applicant: Tacoma Public Works
Sheet 1 of 5 Date: 19 March 1999



Reference: 1998-2-00029

PURPOSE: Estuarine Natural Resources Restoration/Cleanup
DATUM: 83NGVD

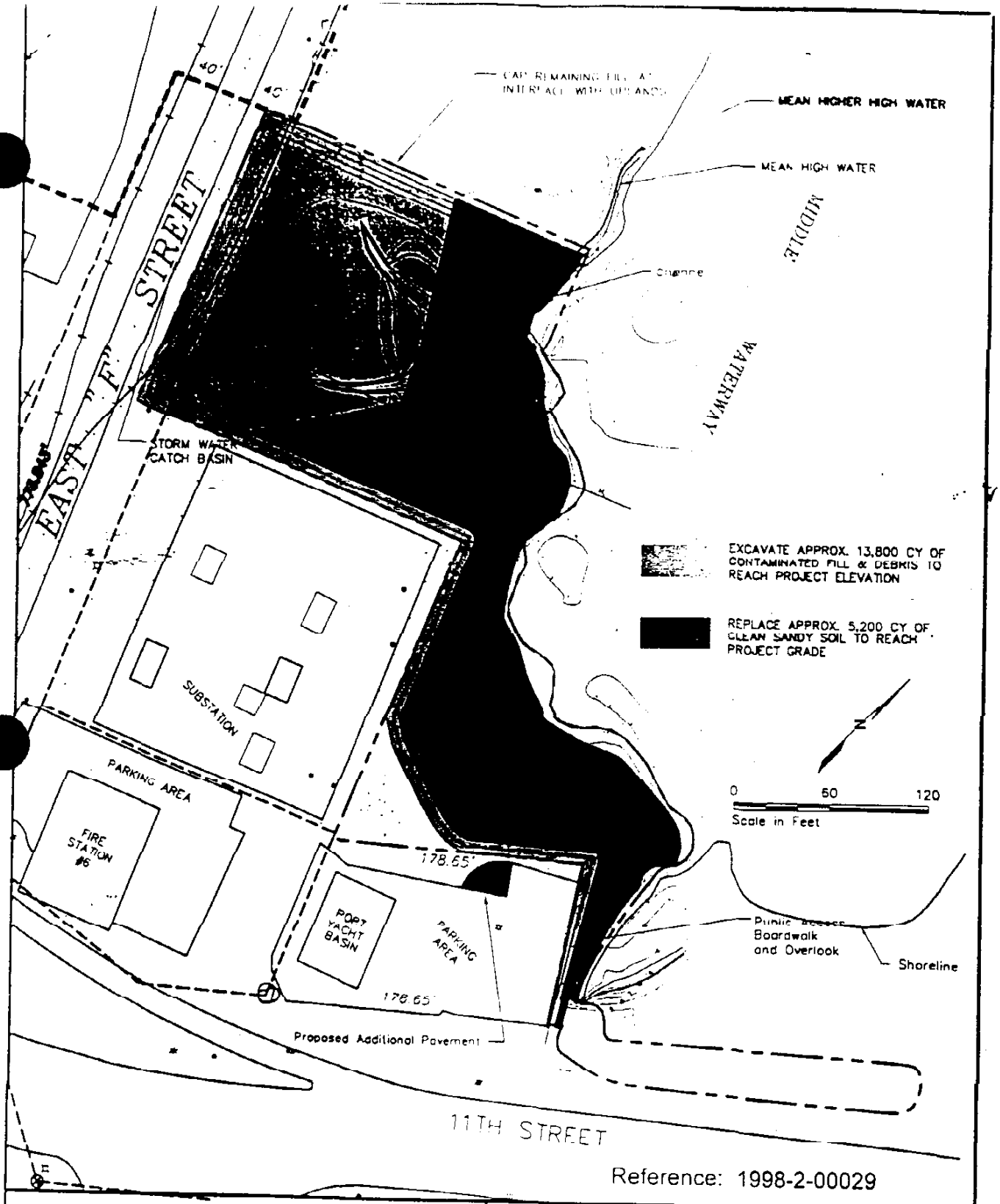
PLAN VIEW 1 – EXISTING

Existing Elevation Contour in Feet (NGVD)

Project Boundary

Property Line

IN: Middle Waterway
AT: Southwestern edge
COUNTY OF: Pierce STATE: Washington
APPLICATION BY: City of Tacoma
SHEET: 2 OF 5 DATE: Mar. 15, 1999



Reference: 1998-2-00029

PURPOSE: Estuarine Natural Resources Restoration/Cleanup
DATUM: 83NGVD

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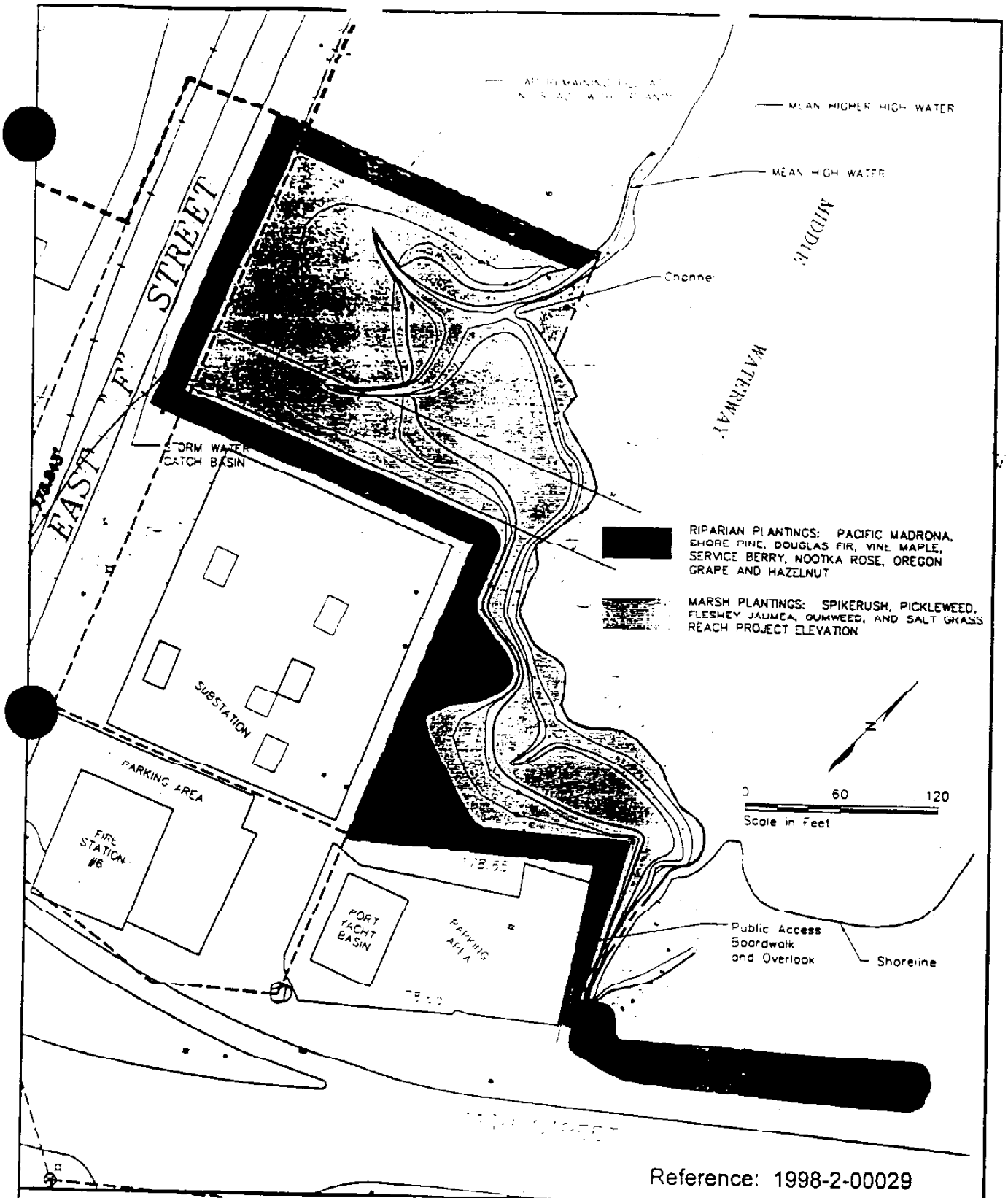
Existing Elevation Contour in Feet (NGVD)

Project Boundary

PLAN VIEW 2 - PROPOSED

IN Middle Waterway
AT Southwestern edge
COUNTY OF Pierce STATE Washington
APPLICATION BY City of Tacoma
SHEET 3 OF 5 DATE Mar. 15, 1999



Reference: 1998-2-00029

PURPOSE: Estuarine Natural Resources Restoration/Cleanup
DATUM: 83NCVD

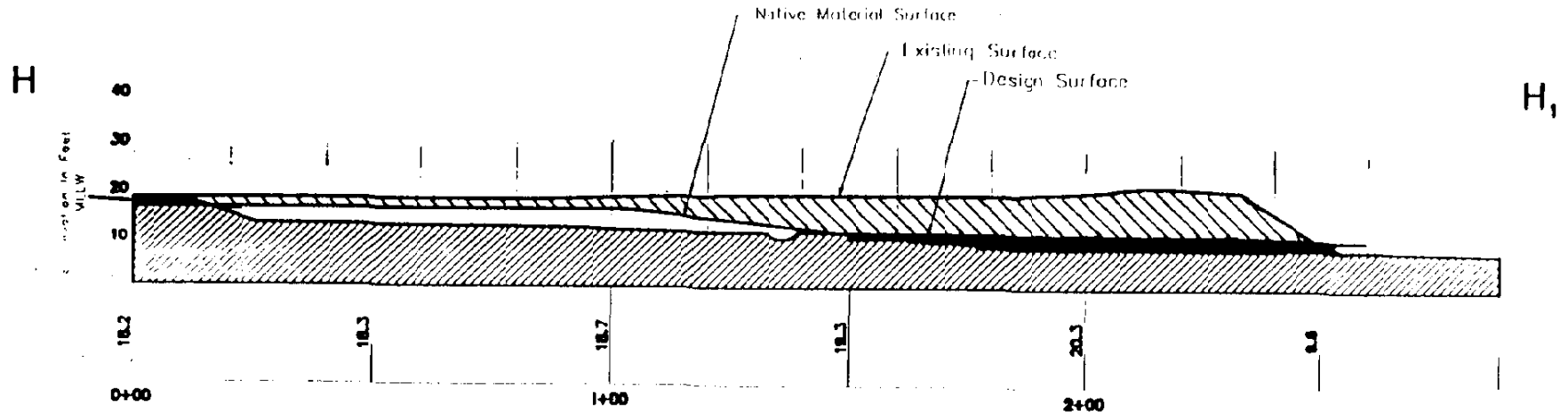
PLAN VIEW 3 - PROPOSED PLANTINGS

Existing Elevation Contour in Feet (NCVD)

Project Boundary

N. Middle Waterway
AT Southwestern edge
COUNTY OF Pierce STATE: Washington
APPLICATION BY City of Tacoma
SHEET 4 OF 5 DATE: Mar. 15, 1999

Typical Cross Section and Fill Plan



Fill Material Excavated and Replaced with Clean Fill

Fill Material Excavated and Disposed of

Fill Material Left In-Place and Capped with 2 Feet Clean Fill

Native Sediment Excavated and Reused on Site

Native Sediment Left In-Place

0 30 60

Scale in Feet

Reference: 1998-2-00029

PURPOSE: Estuarine Natural Resources Restoration/Cleanup DATUM: MLLW	CROSS SECTIONAL VIEW NE Middle Waterway At Southwestern edge COUNTY OF: Pierce STATE: Washington APPLICATION BY: City of Tacoma SHEET 5 OF 5 DATE: May 15, 1998