

ORDINANCE NO. **10776**

AN ORDINANCE approving the comprehensive mitigation plan element of the 1987 Tacoma Comprehensive Water System Plan, and creating a new fund.

PREAMBLE:

On October 30, 1989, the King County council passed, and the executive subsequently approved, Ordinance No. 9193 conditionally approving the 1987 Tacoma Water System Plan.

One of the conditions set forth in Ordinance 9193 was the development by the executive of a comprehensive mitigation plan for Tacoma's Second Supply Pipeline (Pipeline No. 5) to be approved by the council prior to the issuance of certain King County permits and approvals for the project.

Ordinance 9193 further required:

1. The executive to assemble a technical review team, including, but not limited to, the department of development and environmental services, the property services division, the roads and engineering division, and the surface water management division to develop a comprehensive mitigation plan for the construction of Pipeline No. 5.

2. The technical review team to review the issues and concerns about the construction of Pipeline No. 5 raised by interested parties, including, but not limited to, the Muckleshoot Indian Tribe, the Sierra Club, Trout Unlimited, and the Enumclaw Preservation Society.

If relevant, these issues and concerns were to be addressed in the comprehensive mitigation plan.

Ordinance 9193 stated that no shoreline permits, grading permits, right-of-way construction permits nor franchises for the pipeline project shall be issued until the council has approved the comprehensive mitigation plan.

In April, 1990, the technical review team, staff from Tacoma Public Utilities, and Tacoma's consultants began a series of public meetings at which they presented reports on the pipeline's impacts and mitigation. Interested parties, as required by Ordinance 9193, expressed their concerns and submitted comments to the technical review team.

In January, 1991, the technical review team completed the draft comprehensive mitigation plan and presented it to Tacoma. The draft plan contained nearly 150 mitigations.

In May, 1991, Tacoma responded to the draft plan, in which they agreed to the majority of the mitigations, but found approximately 20 unacceptable. These unacceptable mitigations were primarily off-site mitigation to address cumulative project impacts and impacts from water diversion.

1 Some site-specific construction mitigations were
2 also considered unacceptable.

3 Since July, 1991, representatives from the
4 department of public works and the parks, planning
5 and resources department have been meeting with
6 officials from Tacoma Public Utilities and their
7 consultants to negotiate a resolution to the
8 remaining mitigations. Although Ordinance 9193 did
9 not require the executive to develop a comprehensive
10 mitigation plan that was agreed to by Tacoma, it was
11 decided that the region would be best served by a
12 negotiated plan that recognizes Tacoma and King
13 County's shared responsibility to balance
14 environmental protection with meeting the region's
15 water supply needs.

16 On February 17, 1993, the executive presented a
17 comprehensive mitigation plan for the pipeline
18 project to the council for approval.

19 BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

20 SECTION 1. The comprehensive mitigation plan for
21 Tacoma's Second Supply Pipeline (Pipeline No. 5), attached to
22 this ordinance as Exhibit 1 and incorporated herein by this
23 reference (the CMP), is hereby approved. The terms and
24 conditions of the CMP, including, but not limited to those set
25 forth in Exhibit 1, shall apply to each shoreline permit,
26 grading permit, right-of-way construction permit and franchise
27 issued by King County in association with Pipeline No. 5 or
28 the 1987 Tacoma Water System Plan.

29 SECTION 2. There is hereby created a new county fund
30 entitled Environmental Resource Fund. This fund shall be
31 financed and used as described in Section II, paragraph 4 of
32 Exhibit 1. This fund shall be a first tier fund as described
33 in Chapter 4.10.020 of the King County Code. The county
34 agency with primary responsibility for administering the fund
35 shall be the department of public works, surface water
36 management division. Monies deposited in the Environmental
37 Resource Fund shall be invested as permitted by law for the
38 sole benefit of the Environmental Resource Fund. Irrespective
39 of the general

1 provisions of Ordinance No. 7112 and K.C.C. 4.10, the county
2 current expense fund shall not receive any earnings
3 attributable to such monies.

4 INTRODUCED AND READ for the first time this 22nd day
5 of February, 1993.

6 PASSED this 29th day of March, 1993

7 KING COUNTY COUNCIL
8 KING COUNTY, WASHINGTON

9 Gregory J. Stiegel
10 chair

11 ATTEST:

12 Gerald A. Peterson
13 Clerk of the Council

14 APPROVED this 9th day of April, 1993.

15 [Signature]
16 King County Executive

17 Attachments:

- 18 A. Exhibit 1: Comprehensive Mitigation Plan
- 19 B. Exhibit 2: Pipeline Map
- 20 C. Exhibit 3: Summary of Agreement

EXHIBIT 1

COMPREHENSIVE MITIGATION PLAN

for

THE CITY OF TACOMA'S
SECOND SUPPLY PIPELINE

(PIPELINE NO. 5)

March 22, 1993

10776

TABLE OF CONTENTS

SECTION I - BACKGROUND 1

SECTION II - AGREEMENT 3

SECTION III. CONSTRUCTION MITIGATION REQUIREMENTS 9

 A. Construction Monitoring Mitigations 9

 B. Erosion & Sedimentation Control Mitigations 10

 C. Historical/Cultural Resources Mitigations 14

 D. Materials Handling & Air Quality Mitigations 15

 E. Public Information Mitigations 16

 F. Roadways & Parks Mitigations 17

 G. Soils Mitigations 18

 H. Waterway Crossings & Fisheries Mitigations 19

 I. Wetlands, Plants & Animals Mitigations 24

ATTACHMENT A: BIG SOOS CREEK CROSSING ALTERNATIVES A-1

10776

SECTION I - BACKGROUND

- A. The City of Tacoma, Department of Public Utilities, Water Division is proposing to construct the Second Supply Pipeline to provide municipal water to the City of Tacoma, South King County, and Federal Way. The proposed Pipeline will be approximately 33 miles long, sized to transmit water for which Tacoma has established water rights, extending westward from the headworks of the Green River, near Enumclaw and the Howard Hanson Dam, through Black Diamond, Auburn and Federal Way and terminating near the Portland Avenue Reservoir in Tacoma.
- B. On October 20, 1989, the King County Council passed, and the King County Executive subsequently signed, ordinance 9193 conditionally approving the City of Tacoma's 1987 Water System Plan. One of the conditions directed the Executive to develop a comprehensive mitigation program (CMP) for addressing environmental impacts resulting from the construction of Tacoma's proposed Pipeline.
- C. King County is responsible for administering the Sensitive Areas Ordinance (SAO), the Shorelines Management Act, King County Surface Water Design Manual, and clearing and grading ordinances. King County, in consultation with Tacoma, has developed a Comprehensive Mitigation Plan (CMP) that includes detailed construction mitigation requirements for Tacoma's Second Supply Pipeline, which are outlined in Section III. King County and Tacoma recognize that the CMP is a negotiated planning tool that will need to be interpreted and integrated with King County ordinances and regulations.
- D. King County is concerned about the potential impacts of the diversion of water for the Second Supply Pipeline on fisheries and recreation. Tacoma is working with the Muckleshoot Indian Tribe to establish agreed in-stream flows that protect fisheries resources. Tacoma proposes to meet those flow requirements by prudent utility management, cooperation with the Corps of Engineers on the operation of Howard Hanson, additional storage, conservation, ground water/aquifer recharge and conjunctive management of ground and surface water resources.
- Tacoma is also working with the Muckleshoot Indian Tribe to establish a fisheries restoration program for the Green River. The fisheries restoration program shall be based on sound biological principles and shall provide for maximum flexibility in enhancing and restoring salmon and steelhead spawning and rearing in the Green River.
- E. Tacoma and the Army Corps of Engineers are jointly evaluating the feasibility of additional storage for the Howard Hanson

10776

BACKGROUND

Dam, which involves studies of fish passage, effects on wildlife, and engineering feasibility. Based upon the results of the feasibility studies, funding availability, and congressional and legislative authority, the Additional Storage Project at Howard Hanson Dam may be undertaken by the Corps and Tacoma. Contingent mitigation for diversion impacts is outlined in Section II.

10776

SECTION II - AGREEMENT

1. As part of protecting the natural environment which all parties to this agreement share, Tacoma is responsible for and shall provide for the successful implementation of construction mitigation as outlined in Section III. Included in such mitigation are:
 - A. Construction Monitoring Mitigations;
 - B. Erosion and Sedimentation Control Mitigations;
 - C. Historical/Cultural Resources Mitigations;
 - D. Materials Handling and Air Quality Mitigations;
 - E. Public Information Mitigations;
 - F. Roadways and Parks Mitigations;
 - G. Soils Mitigations;
 - H. Waterway Crossings and Fisheries Mitigations;
 - I. Wetlands, Plants and Animals Mitigations.
2. King County agrees to accept the environmental documents submitted to date, and Tacoma's agreed commitment to the CMP, as sufficient to satisfy the requirements of the State Environmental Policy Act (SEPA). The CMP shall be included as an addendum to Tacoma's 1988 Environmental Impact Statement.
3. Tacoma shall mitigate direct impacts of construction for disturbed portions of Class 1, 2 and 3 Wetlands as provided in Section III. In addition to restoration, Tacoma shall replace or enhance altered Wetlands at a 2:1 ratio for Class 1 and 2 Wetlands, and 1:1 ratio for Class 3 Wetlands according to the following formula:

(Acres of Class 1 Wetlands + Acres of Class 2 Wetlands) * 2)
+ Acres of Class 3 Wetlands = Total Acres Replaced or Enhanced

Wherever possible, Tacoma shall attempt to enhance or replace Wetlands within the existing right of way consistent with the "on-site and in-kind" principle of KCC 21.54.592 (2)(c)(1). However, King County and Tacoma may consider wetland replacement or enhancement outside of the right-of-way provided there is equal or greater environmental benefits to replacement in the right-of-way. Wetland replacement and enhancement shall be included in Tacoma's Wetland Restoration

10776

AGREEMENT

- Plans as described in Section III, and must be approved by King County prior to issuance of any permits. Tacoma may elect to pay King County \$100,000 per acre in lieu of replacement of Class 1, 2 and 3 Wetlands.
4. In addition to performing the construction mitigation outlined in Section III, and in consideration of the benefits to Tacoma provided by King County herein, and as compensation for the cumulative and recreational impacts of the Pipeline Project, Tacoma shall contribute \$2.5 million to an Environmental Resource Fund to be administered by King County as follows:
- (a) Fisheries Habitat - - A dedicated portion of the fund shall be used for providing and improving fish habitat protection/enhancement projects along the Green River Corridor consistent with the fisheries restoration program for the Green River. King County shall consult with Tacoma and the Muckleshoot Indian Tribe, if the Tribe elects to participate, to determine priorities and to develop a plan for use of the fund.
 - (b) Off-Site Mitigation - - The balance of the fund shall be used for the acquisition of property or construction of projects to support water resources protection and enhancement, fisheries and wildlife protection, and/or recreation within the Green River Basin. King County shall consult with Tacoma prior to commencing acquisition of any properties or construction of projects.
 - (c) Payment Schedule.
 - (i) Initial payment of \$750,000 due upon issuance of a notice to proceed for construction of pipeline within King County .
 - a. \$250,000 of initial payment dedicated to fisheries habitat.
 - b. \$500,000 of initial payment to be used for off-site mitigation.
 - (ii) Payment of \$500,000 upon commencement of operations of the completed pipeline to be divided equally between fisheries habitat and off-site mitigation.
 - (iii) The remaining balance of \$1,250,000 shall be paid by Tacoma in ten equal payments of \$125,000 plus interest on the anniversary date of commencement of the completed pipeline operation

10776

AGREEMENT

for ten years, with the remaining principal earning interest at 4% per annum, with interest commencing upon operation of the completed pipeline. These payments shall be divided equally between fisheries habitat and off-site mitigation.

(d) Contingent Payments.

- (i) If Tacoma and the Muckleshoot Tribe reach agreement, the agreement shall provide for additional flows during critical periods to provide increased habitat utilization, and for a fisheries restoration program for the Green River. Tacoma and the Tribe will work cooperatively with the other resource agencies on the proposed flow regime for the Green River and the fisheries restoration program.

In the event that Tacoma and the Muckleshoot Indian Tribe do not reach an agreement on in-stream flows and fisheries restoration, Tacoma shall pay an additional amount of One Million Six Hundred Thousand Dollars (\$1,600,000) into the Environmental Resource Fund upon commencing operation of the pipeline. This payment shall be used for fisheries habitat enhancement/protection purposes.

- (ii) In the event that the proposed Howard Hanson additional storage project (as described in Section I, paragraph E) is not completed, Tacoma shall pay an additional 2.4 Million Dollars (\$2,400,000) into the Environmental Resource Fund, less any amounts paid by Tacoma for the Howard Hanson Feasibility Study beginning January 1, 1992 until a decision not to proceed is made. This payment shall be made at the time a decision not to proceed is made by the Corps of Engineers and will be used for off-site mitigation.

- (e) King County shall create and administer the Environmental Resource Fund in trust for the environmental mitigation purposes set forth above. Interest on unused principal shall accrue for the benefit of the fund. King County shall provide Tacoma with an annual report for expenditures from the fund.

5. King County and Tacoma recognize the importance of the Second Supply Pipeline and the benefit of working together to assure

10776

AGREEMENT

the maximum possible benefit to the environment through implementation of a successful mitigation plan. The Comprehensive Mitigation Plan establishes both specific construction mitigation requirements and guidelines for development of erosion/sediment control, restoration, and revegetation plans during construction. During the pre-application and permitting process, King County and Tacoma desire to streamline the review process to avoid delays and minimize administrative costs. In order to facilitate effective and timely implementation of the CMP, the parties agree to the following steps:

- (a) The CMP negotiating team will meet with permit staff from King County. and design staff and consultants from King County and Tacoma to brief them on the content of the CMP;
- (b) King County will designate a permit staff team with a designated leader;
- (c) Tacoma will designate a parallel design and permit compliance team with a designated leader;
- (d) King County and Tacoma shall mutually develop a schedule and framework for the permitting process within 45 days after execution of this agreement;
- (e) Tacoma will develop and submit a project design and construction schedule, and King County will work with Tacoma to achieve permitting deadlines that will facilitate project completion within the proposed schedule;
- (f) Given the complexity of the project, disputes may occur. The designated leaders of King County's permit staff team and Tacoma's permit compliance team, respectively, shall attempt to resolve those disputes on a mutually acceptable basis. Should the team leaders be unable to resolve a dispute, they will request the Director of the Department of Development and Environmental Services (DDES) and Program Manager of Tacoma to facilitate an agreement.
- (g) The grading/clearing permit, the Substantial Shoreline Development Permit (SSDP), and the Public Agency Utility Exception (PAUE) to the SAO shall be processed simultaneously and the processing of the SSDP and the PAUE shall be consolidated. DDES has reviewed Tacoma's alternative routing recommendation for #1 rated wetlands.

10776

AGREEMENT

DDES agrees with the recommendation and will recommend approval by the Hearings Examiner during the PAUE process. Only one hearing examiner/shoreline officer shall be required to review the SSDP and the PAUE.

6. King County and Tacoma further recognize the importance of the proposed Tacoma - Seattle Intertie proposed to connect the Tacoma and Seattle water supply systems. Tacoma, in accordance with the Memorandum of Agreement between Tacoma and Seattle executed March 11, 1993, commits to pursuing said intertie in cooperation with Seattle. In conjunction with development of the permit process for Tacoma's Second Supply Pipeline which in accordance with paragraph 5(d) of this section is due to be developed mutually by King County and Tacoma within 45 days after execution of this agreement, Tacoma and King County shall mutually develop a schedule, budget and funding proposal for the planning and environmental review of the intertie proposed to connect the Tacoma and Seattle water supply systems. The schedule shall provide for, the expedited review of the proposed intertie, the development if needed, of a comprehensive mitigation plan for the impacts to its construction similar to that developed for the Second Supply Pipeline, and a permit process such that design and construction of the intertie could be completed in coordination with the Second Supply Pipeline construction. The King County Director of DDES shall coordinate the efforts of such other County departments as may be appropriate, specifically including DPW and DPPR.

7. Indemnity

Tacoma shall protect, defend, indemnify, and save harmless the County, its officers, employees, and agents from any and all costs, claims, judgements, and/or awards of damages, arising out of or in any way resulting from the negligent acts or omissions of Tacoma, its officers, employees, and/or agents related to performing this contract. Tacoma agrees that the obligation to indemnify, defend, and hold harmless the County and its agents and employees under this subparagraph extends to any claim, demand or cause of action brought by or on behalf of any employee of Tacoma against the County, its officers, agents, or employees and includes any judgement, award, and cost arising therefrom, including attorney's fees.

King County shall protect, defend, indemnify, and save harmless Tacoma, its officers, employees, and agents from any and all costs, claims, judgements, and/or awards of damages, arising out of or in any way resulting from the negligent acts or omissions of the County, its officers, employees, and/or

10776

AGREEMENT

agents related to performing this contract. The County agrees that the obligation to indemnify, defend, and hold harmless Tacoma and its agents and employees under this subparagraph extends to any claim, demand or cause of action brought by or on behalf of any employee of the County against Tacoma, its officers, agents, or employees and includes any judgement, award, and cost arising therefrom, including attorney's fees.

8. Changes

Either party may request changes to this Agreement. Proposed changes which are mutually agreed upon shall be incorporated by written amendments to this Agreement.

9. Entire Agreement/Waiver of Default

The parties agree that this Agreement is the complete expression of the terms hereto and any oral representations or understandings not incorporated herein are excluded. Both parties recognize that time is of the essence in the performance of the provisions of this Agreement. Waiver of any default shall not be deemed to be a waiver of any subsequent default. Waiver or breach of any provision of the Agreement shall not be deemed to be a waiver of any other or subsequent breach and shall not be construed to be a modification of the terms of the Agreement unless stated to be such through written approval by both parties, which shall be attached to the original Agreement.

10776

SECTION III. CONSTRUCTION MITIGATION REQUIREMENTS

A. Construction Monitoring Mitigations

1. Tacoma shall fund an environmental monitor who shall be accountable to King County. King County staff shall be on call to inspect construction sites at the request of the environmental monitor. Tacoma shall fully reimburse King County for staff time for site review and inspection, including direct and indirect expenses.
2. Tacoma shall provide a coordinating monitor/resident engineer to supervise the overall mitigation program. Prior to working in sensitive areas, such as wetlands and wetland buffers, riparian zones and their buffers, landslide, seismic, and erosion zones, and drainage areas, Tacoma's resident engineer and King County's environmental monitor shall meet with the general contractor to review the contractor's approach to the work and the environmental mitigation plan and mutually decide on the level and frequency of on-site inspections. Tacoma and King County shall mutually determine whether additional inspectors are required.
3. The monitor selection committee shall include a representative of King County, Tacoma Water Division, and the Muckleshoot Indian Tribe.
4. King County shall have the authority to replace monitors as necessary.
5. Tacoma retains the responsibility of advising King County at all times of any problems associated with the construction of this project.
6. In case of excessive erosion and siltation which adversely affects the fisheries and wetland resources during the course of pipeline construction, King County requests immediate consultation between Tacoma and the agencies responsible for managing the fisheries and wetland resources. This consultation shall result in immediate correction of the problem or if necessary a shutdown in that portion of the project.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

B. Erosion & Sedimentation Control Mitigations

1. In consultation with the appropriate King County agencies, Tacoma shall establish a prequalification process for any contractors bidding on the pipeline construction in sensitive areas.
2. A construction mitigation performance bond shall be required as described in "Wetlands, Plants, and Animals" (#6) to assure that revegetation, stabilizations, and drainage patterns are established as intended. This bond shall remain in effect for the five-year post construction monitoring period, and shall be extended in the event that post-construction stabilization is not completed within the three-year time frame.
3. The Erosion Sedimentation Control (ESC) Plan shall be the coordinated effort of civil and geotechnical engineers as well as construction management specialists with particular expertise in erosion and sedimentation control.
4. Tacoma shall develop site-specific erosion control plans as part of the overall master ESC Plan which shall be approved by King County prior to construction.
5. The ESC Plan shall focus particular attention on stream improvement measures which will make the shoreline area more suitable to fish and wildlife habitat. Consultation measures to improve fish and wildlife habitat quality is recommended.
6. Tacoma shall provide a description of all erosion control measures to be implemented, along with a list of the number, and technical specifications of each item.
7. A detailed monitoring plan shall be included in the ESC Plan, and shall include monitoring of local drainage patterns and evaluation of the restored habitat conditions.
8. The ESC Plan shall include a description of construction practices if underground springs are encountered.
9. All sediment control measures (e.g., siltation fencing) shall be maintained until the vegetation is sufficiently re-established to control all potential erosion which could result from surface water run-off.
10. Special ESC measures shall be planned, implemented and maintained for stockpiled and/or spoiled materials.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

Erosion & Sedimentation Control

11. The duff/organic layer of the soil removed during clearing and grubbing most likely will include the root mat of herbaceous and young woody plants and is not suitable for backfilling. This material shall be disposed of in an approved/permitted manner. King County reserves the right to salvage native plants from this material for use in stream/wetland enhancement projects.
12. The contractor(s) shall have an on-site stockpile of extra ESC material (straw bales, filter fence, gravel, crushed rock, etc.) as well as extra equipment (bulldozers, backhoes, pumps, etc.) as back-ups in case emergency situations arise.
13. Soils temporarily stockpiled shall be covered with waterproof material and perimeter drainage shall be controlled when the stockpiles are located near or in sensitive areas or left exposed for longer than 12 hours.
14. A full-time evactor truck shall be present during construction in and near all wet areas to remove mud and silty water.
15. Adequate quantities of oil absorbent pads and booms shall be on hand at all times to absorb inadvertent spills of oil and other deleterious chemicals from construction equipment.
16. Prior to construction, all wet areas within the construction zones shall be isolated by silt fencing or equivalent or better methods and diversion of flows around the construction zone.
17. Prior to construction, all sensitive areas off-limits to heavy equipment shall be fenced off with silt fencing or equivalent or better methods.
18. Tacoma shall use small heavy equipment (i.e., bobcat sized bulldozers) for finish grading to restore impacted wetlands to their original contour elevations.
19. Construction access points shall be rocked or otherwise surfaced to reduce tracking of mud or dust onto public or private roadways.
20. The temporary construction road shall have the rock or other surfacing material removed from it and shall be graded and/or scarified prior to revegetation.
21. Straw bales shall NOT be used in check dams. Crushed rock shall be used instead, possibly in various sizes to meet ditch velocity and sediment trapping requirements, and shall be

10776

CONSTRUCTION MITIGATION REQUIREMENTS

Erosion & Sedimentation Control

- replaced BEFORE the pore spaces are filled with sediment.
22. Wells are the preferred method of dewatering trenches during construction. Water from these wells shall be piped to the nearest defined drainage channel. To reduce sediment in water pumped directly from the trenches, the following measures shall be applied (when site conditions allow):
 - a. place crushed rock in the bottom of trenches immediately after excavation. If possible, excavate a depression in the down-gradient portion of the trench to collect water before removal;
 - b. depending on the site, sediment-laden water from trenches shall be dispersed over vegetated areas outside of sensitive area buffers or the sediment shall be settled in temporary storage facilities, and only clean water discharged to drainage channels.
 23. Sedimentation ponds shall NOT be viewed as the final treatment of sediment-laden water. Additional treatment shall be considered where fine-textured soils are expected.
 24. Special consideration shall be given to minimizing disturbance of soils high in silt/clay content, and controlling turbidity in those areas where disturbance is necessary.
 25. Bare ground resulting from pipeline construction shall be replanted or covered from October 15th to July 1st of each Water Year.
 26. All disturbed areas shall be vegetated with appropriate native plant species which will not interfere with the existing plant communities adjacent to the pipeline corridor.
 27. All cleared areas (exclusive of BPA ROW) shall be hydroseeded and revegetated with appropriate native plant species in sufficient planting densities to recreate the original plant community prior to construction, or, in areas cleared prior to 1977, according to the requirements of a revegetation plan to be approved by King County.
 28. Tacoma shall prepare a revegetation plan to be approved by King County prior to construction. Revegetated areas shall be maintained as required to achieve the targeted vegetation survival goal in the revegetation plan. Revegetation shall occur during fall and spring planting seasons to assure the optimum plant survival.

10776

Erosion & Sedimentation Control

CONSTRUCTION MITIGATION REQUIREMENTS

29.. Tacoma shall provide a map that shows:

- a. cleared areas (including areas cleared in 1977);
- b. all impervious surfaces, including access roads, compacted earth areas, and graveled areas;
- c. existing erosion problem areas, including areas currently subjected to RV use.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

C. Historical/Cultural Resources Mitigations

1. King County's Historic Preservation Program shall be included as a contact for resource information and notified in the event of a discovery of cultural resources.
2. Native American cultural resources are significant and shall be protected. The Muckleshoot, Puyallup and Duwamish Indian Tribes shall be notified whenever cultural resources are discovered and construction shall be halted at the site of discovery until the Office of Archaeology and Historic Preservation authorizes resumption. The federal Native American Religious Freedom Act must be taken into account. "Sacred sites" shall not be culturally modified, and artifacts shall not, at least physically, be modified.
3. King County understands that under Section 106 of the National Historic Preservation Act (NHPA) the Muckleshoot Indian Tribe qualifies only as an "interested party". However, because of the sensitivity of this topic, King County recommends to the Corps of Engineers, the State Historic Preservation Officer, and the federal Advisory Council on Historic Preservation that the Muckleshoot Tribe be granted "consulting party" status with signatory involvement within the framework of Section 106 of the NHPA.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

D. Materials Handling & Air Quality Mitigations

1. Tacoma shall provide a memorandum of understanding stating that they will pay for cleanup and restoration of roadways performed by King County Public Works maintenance crews when their contractor(s) leaves them in a hazardous condition and does not have manpower or equipment available to do the cleanup in a timely manner. These costs shall include all labor, equipment, overtime as necessary and a 28% overhead cost for billing and tracking as required by King County Ordinance No. 89-943.
2. Tacoma shall reimburse King County Public Works for the actual cost of labor and equipment for administration of the Haul Road Agreement.
3. Any stream enhancement plan shall include the method of cleaning root wads, etc.
4. All imported backfill shall be clean (free of deleterious material). Native material returned to the trench shall be free of contaminants.
5. Tacoma's project specifications shall require that the contractor notify Tacoma and/or King County of the source of backfill materials. Inspection during construction will monitor source and quality.
6. The Hazardous Waste Plan for the pipeline project shall include the methodology to replace contaminated stream bed material in case of a spill.
7. A fisheries biologist must be on-site to supervise replacement of any contaminated stream bed materials.
8. Tacoma shall provide documentation to King County which identifies the disposal sites for excess material and organic debris and the borrow sites or extraction pits for the specified materials. This documentation shall be submitted prior to issuance of the King County Grading Permit.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

E. Public Information Mitigations

1. Tacoma shall hold a public workshop(s) for the citizens of King County on the final project design and mitigation plans before King County approval of the master grading permit.
2. Information specific to the overall plan and the phases of construction impacting the various communities shall be readily accessible to the affected community.
3. Tacoma shall provide a Hot Line, (preferably an "800" phone number), to be staffed 24 hours a day. This Hot Line shall have a direct link with the monitors at the site and King County inspectors, and response to trouble calls shall be immediate if conditions dictate. Records of trouble calls shall be kept, and be available to agencies with jurisdiction.

The Hot Line phone number shall be conspicuously posted at each construction site and provided to King County Departments.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

F. Roadways & Parks Mitigations

1. Tacoma shall develop a mitigation plan that addresses trail restoration for trails that may be impacted by the pipeline project to restore the trails crossed by the pipeline to as good or better condition when their work is completed. These include the Green River Trail (#18), Interurban Trail (#20), and the trail on the Bonneville Power Line within West Campus (#21). Such plans shall be approved by the King County Parks Division prior to issuance of a permit to cross the trails. In the event trail restoration is determined to be unfeasible in King County's reasonable judgement, then Tacoma shall replace the trail as necessary.
2. Tacoma shall develop a trail bridge in conjunction with the planned crossing of the Green River near the Auburn Golf Course.
3. Tacoma shall convey to King County trail easements over all property in the Second Supply Pipeline Right-of-Way that Tacoma now owns in fee or in the future may acquire in fee. Tacoma shall consent to public trail use over all other land in the second diversion right-of-way; however, King County may need to acquire additional rights from underlying fee title owners.
4. Additional efforts will be made, as necessary, to keep all terrain vehicles off the ROW.

Gates shall be required on all access roads that are not revegetated temporary roads and at intervals on the ROW.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

G. Soils Mitigations

1. A PAUE shall not be required for exploratory geotechnical work or field investigations for the pipeline project, provided that administrative review and approval is granted by King County prior to the exploratory geotechnical work/investigations being done.
2. Geotechnical investigation and evaluation shall be conducted during winter months in order to monitor water table maximums.
3. Mulching, netting, matting and other measures shall be used in conjunction with hydro-seeding to protect exposed soils as field conditions dictate.

Straw mulching shall NOT occur in wetlands.

4. Surface drainage shall be controlled in a non-erosive manner, and in such a way that existing vegetated areas are not adversely impacted.
5. In Sections 10 and 11 (T21N, R63) of the pipeline, the pipeline design shall provide for modifications such as expansion joints, flexible couplings, short pipe sections, etc. to accommodate possible future surficial effects of subsidence.
6. Avoid soil compaction along the entire route to prevent impairing small mammals from re-establishing their burrows, and inhibiting growth of revegetation measures. Where compaction is unavoidable, rototilling to a depth of 8 inches shall be performed prior to replanting. No rototilling shall be done in wet areas however.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

H. Waterway Crossings & Fisheries Mitigations

1. Tacoma shall establish a construction mitigation performance bond as provided in Wetlands, Plants, and Animals, (#6) for the replacement of any failed mitigation or mitigation of unanticipated impacts.
2. Compliance with all King County Requirements for no obstruction of flows within the 100-year "zero-rise" floodway shall be required for all crossings. Provide information on hydraulic analyses necessary to this end.
3. Tacoma shall provide maps and site-specific drawings of the crossing locations listed in Table I of Tacoma's Fisheries and Waterway Crossings Report.
4. For each stream or river crossing, provide a map that shows drainage basins and sub-basins partially or entirely on-site.
5. Tacoma shall provide, prior to issuance of the shoreline permit, a King County Level I stream survey for all class 1 and 2 stream crossings. Survey must include two reaches equal to 20 times the average stream width both up and downstream of the crossing. Total survey length will be equal to 40 times the stream width.
6. Tacoma shall provide, prior to issuance of the shoreline permit, the following elements of the King County Level II survey for all class 1 and 2 stream crossings:
 - a. List all fishes that are known to inhabit the stream. Describe their life history characteristics, spawning and rearing seasons.
 - b. Provide spawner counts for all anadromous salmonids that use the particular stream system where the crossing occurs. This may include one or all of the following: Chinook, chum, coho, steelhead, and searun cutthroat. Use WDF format, but add male and female nos.
 - c. Provide redd surveys for all anadromous salmonids that use the particular stream system where the crossing occurs. This may include one or all of the following: Chinook, chum, coho, steelhead, and searun cutthroat. The surveys should be conducted as soon as possible for chum and coho. Steelhead and searun cutthroat redd

10776

CONSTRUCTION MITIGATION REQUIREMENTS

Waterway Crossings & Fisheries

surveys should be done in mid- to late-winter as appropriate. Coordinate with WDF and WDW surveys if available.

- d. Electrofish the crossing sites during April and May to determine juvenile rearing use. Use one pass only for qualitative information: 2 X 100-foot long representative sections within 500 feet downstream of the crossing and 1 X 100-foot long section within 250 feet upstream of the crossings. Include species, nos., and standard lengths of all salmonids.
7. For each class 1 or 2 stream or river crossing, provide a set of plan view diagrams that show:
 - a. all adjacent wetlands within 500 feet upstream and downstream of each crossing;
 - b. all flood hazard areas, as defined by the SAO, partially or entirely on-site;
 - c. the crossing, all limits of excavation and clearing.
8. Provide pre-project and post-project time zero (i.e. "as built") color print photographs of each stream or river crossing depicting the crossing at both stream or river banks, and from 50 feet away from each bank looking toward the stream or river.

Tacoma shall use a 28mm lens for these photos.
9. The floodplain areas associated with riparian habitat shall be preserved to the maximum extent possible to enhance and protect the fish and wildlife.
10. A Riparian Enhancement/Restoration Plan incorporating native ground cover, shrubs, and trees shall be developed for the stream crossings. This shall include that area beginning at the OHWM, continuing upland for the entire extent of Shorelines jurisdiction or 200 feet upland of the OHWM. For that area along the OHWM, the plan shall incorporate plantings appropriate for the riverine environment. An important element to the enhancement plan should include tree and shrub plantings adjacent to the river to provide shade and habitat.
11. Enhancement/Restoration plans shall be prepared by a qualified aquatic ecologist. Analysis of upstream and downstream characteristics is required. The analysis shall include, at a minimum, existing fisheries habitat, geomorphology and

10776

CONSTRUCTION MITIGATION REQUIREMENTS

Waterway Crossings & Fisheries

- hydraulics. The plan shall specify use of indigenous riparian vegetation, and shall specify size distribution and depth of placement of all gravels used instream. Gravel characteristics shall be justified based on criteria including maximum potential scour depth, and fish species use at each location. A minimum 5-year monitoring schedule with reports on the first, third and fifth years after installation shall be required.
12. Tacoma has agreed to provide overhead or bored crossings at all Class 1 streams, and where practical, at all other streams to avoid construction impacts on fisheries. Where overhead or bored crossings are not used, Tacoma shall comply with the SAO and will enhance fish habitat as provided in the Revegetation Plan(s) to be provided to King County. (see Waterways & Fisheries #10 and #11).
 13. Any disturbed areas within stream buffers, including access roads and staging areas, shall be shall be hydroseeded by Tacoma within 48 hours of completion of construction. Revegetation with an appropriate mix of native trees, shrubs, and forbs shall occur during fall and spring planting seasons to assure the optimum survival ratio. The revegetation plan for stream buffers shall be approved by King County prior to construction.
 14. Disturbed upland areas adjacent to stream or wetland habitats shall be revegetated by Tacoma to create habitats of comparable or better quality than existing adjacent upland habitats.
 15. Casings or directional drilling shall be used for all bored waterway crossings.
 16. Storm water retention facilities shall be designed with a primary focus on protecting the groundwater from contamination. The design shall guard against pollutants settling out and seeping into high ground water tables along the pipeline route.
 17. Retention and detention ponds and other drainage control facilities shall be designed with silt and grease traps. These traps shall be installed prior to any grading activities to mitigate stream sedimentation and possible water contamination with oil products and other contaminants. The silt and grease traps shall be frequently maintained.
 18. An in-stream Habitat Enhancement/Restoration Plan shall be developed for the Shorelines crossing areas.

CONSTRUCTION MITIGATION REQUIREMENTS

Waterway Crossings & Fisheries

19. An Equipment Staging Plan shall be prepared that identifies storage locations and delineate the required equipment setbacks from the OHWM.
20. Active construction equipment and staging areas shall be setback a minimum distance from the OHWM as approved in the Equipment Staging Plan, or out of the floodway which ever provides the greater setback.
21. Prior to construction, absorbency booms and silt fences and other best management techniques shall be placed in stream and along the OHWM as a precaution in case of spills or debris.
22. No construction or grading materials shall be stockpiled within the floodway or SAO stream and wetland buffers.
23. The upper Green River crossing shall be bridged, and it is strongly recommended that the lower Green River crossing also be bridged.
24. Tacoma has completed an alternative routing analysis of the Big Soos Creek crossing to determine the lowest impact alignment. King County and Tacoma have agreed upon Alternative 3 as specified in Attachment A to this document.
25. The Rock Creek crossing shall be placed at the downstream end of the existing 6-foot concrete culvert. The pipeline installation and any required site restoration shall conform to provisions of the SAO.
26. Soil bio-engineering shall be incorporated into all rock placement at stream crossings and steep slopes, subject to a specific plan approval by King County.
27. Upper Green River:
 - a. prior to bridge construction, nets, or some other approved containment device, shall be placed below the bridge to prevent debris from entering the river;
 - b. bridge abutment armoring shall be limited to below the ordinary high water mark (OHWM);
 - c. only the minimum amount of armoring necessary to provide structural integrity shall be employed;
 - d. armoring shall be placed in stream by hand, or by an approved mechanical means, such that disturbance to the river is minimal;

10776

CONSTRUCTION MITIGATION REQUIREMENTS

Waterway Crossings & Fisheries

- e. construction of the bridge shall be completed within a 24-48 hour period, or as quickly as technology allows; working on a continuous basis is recommended;
 - f. any new abutments that may be necessary in the construction of the bridge shall span the 100-year floodplain;
 - g. the bridge and abutment armoring shall be designed so as to not create the need for future shoreline protection.
28. Bored Shoreline crossings shall begin at a point above the OHWM. All borings shall be done so as to limit the amount of excavation and to minimize impacts on stream habitat and buffers.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

I. Wetlands, Plants & Animals Mitigations

1. Consideration of alternative pipeline routes outside of the current right-of-way boundaries shall not be required for Class 2 and Class 3 wetlands nor for stream crossings except for Big Soos Creek (Waterway Crossings and Fisheries #24).
2. Special studies shall be required as necessary to develop the Wetland Restoration/Enhancement Plan(s) for the wetlands and buffers disturbed by the Pipeline No. 5 project. Additional special studies for wetland mitigation plans shall not be required, since the wetland mitigation will be provided through other requirements of the CMP.
3. A technical team of King County staff shall be notified by Tacoma of the initiation of each key construction phase and of any problems or any alterations in mitigation encountered during construction.
4. Pursuant to King County Shoreline Code 25.24.140(C), disturbance to a wetland within conservancy shorelines jurisdiction is prohibited. The definition of a wetland applies to above, as well as below, the Ordinary High Water Mark (OHWM).
5. A Final Wetland Restoration/Enhancement Plan shall be required in association with review of the engineering plans. The Plan shall include proposed final grades and hydrology, with a detailed planting plan showing plant species, sizes, and locations. A construction sequence, planting schedule, and implementation notes must be included.

Tacoma shall provide detailed site-specific restoration plans for each stream and wetland crossing to King County for approval.

6. Tacoma shall provide a construction mitigation performance bond to:
 - a. assure that revegetation, stabilizations, and drainage patterns are established as intended;
 - b. cover the cost of planting and construction management and monitoring by the Environmental Monitor as part of the Wetland Restoration/Enhancement Plan;

10776

CONSTRUCTION MITIGATION REQUIREMENTS

Wetlands, Plants & Animals

- c. cover the cost of replacing any failed mitigation measures during the five year monitoring period for the wetland and revegetation restoration monitoring program;
- d. assure compliance with the Revegetation Plan.

This bond shall remain in effect for the five-year post construction monitoring period to assure that restoration and revegetation measures meet their performance standards.

- 7. Tacoma shall prepare a five year wetland and revegetation restoration monitoring program subject to approval by King County staff to assure that the project meets its performance standards. A written annual report shall be submitted to DDES for review.
- 8. The final restoration plan shall include a small-scale map that sequentially identifies each wetland impact/restoration site with a number or a letter. Text for each site shall be headed with the same identifier. A large-scale map for each site shall follow the text and likewise be identified with the appropriate identifier.
- 9. Wetland areas shall be surveyed onto the engineering plans prior to permit approval.
- 10. Tacoma shall evaluate impacts of pipeline installation (including addition of native soil and gravel backfill) on the wetland hydrology (i.e., surface and ground water flow patterns and hydroperiod.)
- 11. Tacoma shall monitor any impacts of the pipeline dewatering wells and mitigate for any impacts that occur.
- 12. A sequential timeline for segment construction and subsequent restoration completion shall be presented to King County for review.
- 13. Tacoma shall provide large-scale aerial photographs prior to impacts and at target dates after the construction impacts as part of the monitoring requirement. Also, ground photos taken from field-marked, and mapped points shall be taken before the project, immediately after the project restoration and at target dates specified by the monitoring schedule. Specific contingency strategies must be identified.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

Wetlands, Plants & Animals

- 14.. Provide a map that shows:
 - a. all seepage zones, swales, and wetlands along with their King County classifications as defined by the SAO. These areas shall be identified by number or letter and pipeline mile, as described in the City's Wetlands, Plants and Animals Report; the map shall depict both on-site and offsite exterior wetland boundaries, wetland inlets and outlets, and topography to the two foot contour interval.;
 - b. drainage basins and sub-basins partially or entirely on-site;
 - c. all flood hazard areas, as defined by the SAO, partially or entirely on-site.
15. Classify each wetland in accordance with the King County wetland classification system set forth in the SAO. Wetland habitat types shall be classified in accordance with the USFWS classification system (Cowardin, 1979).
16. For Class 1 wetlands, Tacoma shall comply with the Sensitive Areas Ordinance and apply for a Public Agency and Utility Exception (PAUE). Tacoma has submitted a special study of alternative routes for No. 1 rated wetlands and wetland buffers to King County for review. King County's Department of Development and Environmental Services (DDES) has reviewed Tacoma's alternative routing recommendation for #1 rated wetlands. DDES agrees with the recommendation and will recommend approval by the Hearings Examiner during the PAUE process.
17. Signs shall be placed along the pipeline right-of-way identifying to the public those areas of special concern for resource protection.
18. Construction shall be performed from June 15th to September 30th in wetland areas.
19. The construction corridor shall be reduced to the narrowest possible width through wetland areas.
20. Locate the pipeline within the right-of-way where it will least impact the wetland and other sensitive natural resources.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

Wetlands, Plants & Animals

21. Boring and construction under Covington Creek, Big Soos Creek, Wetland No. 13, and Waterway Crossing 14.4 and associated Wetland No. 23 shall occur from June 15th to September 30th.
22. Investigate the relocation of the ROW on the steep slope immediately east of the Auburn golf course onto the BPA ROW to avoid the wetlands, a creek and unstable soils in the proposed pipeline ROW area.
23. Relocate the proposed pipeline centerline within the existing ROW, if feasible, between the following PM locations:
 - ✓ PM 5.4 to PM 6.8, relocate the pipe to the south ROW edge to reduce direct impact to the wetlands of the Lake No. 12 wetland complex (LCR 92 and 93), Wetland Sequences 1, 2 and 3;
 - ✓ PM 13.5 to PM 14.2, relocate this segment 25 - 35 feet north of the existing centerline location to reduce direct wetland impacts for Wetlands 20 - 21;
 - ✓ PM 21.9 to PM 22.1, relocate this segment 25 - 30 feet to the east of the existing centerline to reduce impacts to drainage areas and surface water areas for Wetlands 52 and 53;
 - ✓ Tacoma shall attempt to renegotiate with the BPA the pipeline location for PM 22.1 to 22.9, to relocate the centerline 30 feet north of existing centerline to reduce wetland impacts and avoid open water habitat at Wetlands 53 through 55 and Wetland L.
24. Tacoma shall contract with one or more local nurseries for Puget Sound lowland adapted stock to be used in wetlands at least one year in advance.
25. Hydroseeding and/or manual seeding shall include hardy, fast germinating and growing grasses and legumes. Fertilizers and other chemicals shall NOT be used within the riparian/wetland areas or their buffers, and native riparian/wetland plant seed shall be used in those areas.
26. Any plantings, for slope stabilization or otherwise, must be native species typically found in the area of impact. Under no circumstances shall reed canary grass be planted, even if that was the original predominant species.
27. When appropriate, measures shall be taken to save the plant materials from the construction corridor for replanting after

10776

CONSTRUCTION MITIGATION REQUIREMENTS

Wetlands, Plants & Animals

- construction, especially within the waterway and wetland crossing areas.
28. Plant materials for temporary and permanent erosion-sedimentation control in wetland and riparian areas and buffers shall be chosen so that they do not compete with the native plant materials existing or proposed in these areas.
 29. No straw shall be placed in wetlands.

Jute or coconut (coir) fabric matting shall be used instead of straw until seeds germinate. Coir shall be used on stream banks and slopes greater than or equal to 40%.
 30. Access roads and staging areas created for pipeline installation within stream and wetland buffers shall be revegetated with appropriate native species immediately after completion of the pipeline segment.
 31. There shall be no plant height limitations along the pipeline ROW, except where overlap occurs with the BPA ROW and 10 feet either side of the pipeline centerline.
 32. Clearing in wetlands shall be accomplished by using small, articulated machines, or by hand clearing.
 33. No maintenance of vegetation shall occur in wetlands or wetland buffers unless for emergency access for use or maintenance of valves, or where maintenance is already being done with respect to BPA power lines.
 34. Snags shall be created, where possible, in the forested habitat within the ROW not impacted by construction to replace snags lost during clearing and enhance habitat for cavity dwelling species.
 35. Move large downed woody debris, (greater than 12 inches in diameter), from the construction corridor into adjacent areas that will not be impacted by construction, and returned following construction.
 36. Either herbivore guards shall be established at first planting of woody plants or a contingency plan should be developed for replanting with herbivore guards if plants are destroyed.
 37. The areas where additional habitat enhancement for wildlife shall be concentrated are the forested areas from Black Diamond to the Headworks, with the exception of PM 1.7 to 4.6, and the forested areas between Covington Creek and Jenkins

10776

CONSTRUCTION MITIGATION REQUIREMENTS

Wetlands, Plants & Animals

- Creek. Special plantings shall consist of native species which provide wildlife forage and cover, subject to approval of the Revegetation Plan by King County.
38. All sedimentation ponds and biofiltration swales shall be located outside the wetlands.
 39. In consultation with King County Surface Water Management Division staff a detention/retention system shall be created within the pipeline route up-slope of the wetlands (King County Wetlands Hylebos 27, 28 and 29) that feed Hylebos Creek.
 40. Retention/detention facilities shall be required for all blow-off valve locations, unless a downstream analysis indicates that Tacoma can control the discharge. This analysis shall be completed before the issuance of the grading permit and shall address the locations of the valves, the rate and timing of discharge, and the methods for controlling discharge. Based upon Tacoma's ability to control the discharge, retention/detention facilities will be required if discharge cannot be controlled.
 41. No construction or grading materials shall be stockpiled within the floodplain or SAO stream and wetland buffers.
 42. Steel mats, log rafts, water coffer, or other methods used to reduce construction equipment impact in wetland areas shall be removed upon completion of pipeline installation in each wetland area.

Water coffer shall be used in wetland construction areas where appropriate to contain erosion and to prevent sedimentation in streams and wetlands.
 43. Valves and associated access roads shall be located in Class 2 and 3 wetlands only when it is not feasible to locate them elsewhere.
 44. If surface water is present because of an unusually wet summer/fall, a survey of the area by the project environmental monitor shall be conducted to assure that western pond turtles, if present, will not be harmed by the construction.
 45. After construction in and near shallow, open water bodies, any barriers to western pond turtle movement such as mounded soils and deep trenches shall be eliminated.

10776

CONSTRUCTION MITIGATION REQUIREMENTS

Wetlands, Plants & Animals

- 46.. The environmental monitor(s), (specializing in wetland biology), shall be on-site during construction in suspected western pond turtle habitat to insure that it is protected and preserved.

10776

ATTACHMENT A
BIG SOOS CREEK CROSSING ALTERNATIVES

SECOND SUPPLY PIPELINE (PIPELINE NO. 5) PROJECT

BACKGROUND

The proposed crossing of Big Soos Creek is approximately 4.1 miles upstream of its confluence with the Green River at RM 33.7. The creek lies in a narrow incised valley. The west bank is nearly 100 feet above the creek. The waterway crossing will be accomplished approximately 100 feet downstream of the confluence of Big Soos Creek with Jenkins Creek. A stream flow of 10 to 15 cfs is anticipated during construction.

At the pipeline crossing, the creek substrate is composed of hardpan, boulder and cobble. Big Soos Creek supports spawning runs of fall chinook, coho, steelhead and cutthroat trout, Dolly Varden char as well as resident trout. At the pipeline crossing, the creek provides passage for adult and juvenile migrants. Spawning and rearing habitat is lacking due to high stream velocities and inappropriate substrate. Improved fish habitat for spawning and rearing lies 300 feet downstream from the pipeline crossing. The state operates the Green River hatchery on Big Soos Creek 0.7 miles above its confluence with the Green River. The hatchery has produced salmon and steelhead for dispersed and local plantings since 1901.

ALTERNATIVE NO. 1

The original design for the Big Soos Creek crossing involved a bridged crossing. The design called for the adjacent railroad tracks to be pulled and the pipeline to be installed by the open trench method. The pipe would then be placed on concrete piers on each side of the creek and laid up the steep west slope by the open trench method.

Access roads and staging areas for equipment and materials would disturb both sides of the stream. Access from the east side would be across a grass pasture and railroad right-of-way. Access from the west would be down an old, steep road just south of the crossing.

Several interest groups including King County had significant concerns with the proposed design. Although the stream would not be directly disturbed, the installation of concrete piers and open excavation up the immediate, steep west slope could potentially cause major impacts on the stream. Possibly having an unstable disturbed steep slope immediately adjacent to the stream was of major concern.

The concerns were sufficient enough to convince Tacoma that Alternative No. 2 should be proposed.

The cost estimate for Alternative No. 1 is approximately \$300,000.

10776

ALTERNATIVE NO. 2

The modified design for the crossing involved boring a horizontal casing pipe under the railroad tracks and Big Soos Creek to a small, nearly level beach on the west side of the creek. Then another bored casing pipe would be installed down the steep west slope to meet the other bored casing at a receiving pit. The only disturbed area near the creek would be the receiving pit, storage area for excavated material from the pit, and the temporary access road, required also with Alternative No. 1, to get equipment and materials to the receiving pit.

King County staff felt the activity at the base of the steep slope very near the creek was still unacceptable. Therefore Alternative No. 3 is currently proposed.

This alternative would cost approximately \$200,000 more than Alternative No. 1.

ALTERNATIVE NO. 3

Alternative No. 3 is similar to Alternative No. 2. the bored casing pipe would be directed under the railroad tracks and creek to a receiving pit set back over 75 feet from the creek. The pit would be further downstream from the other alternatives where the ground is slightly sloping and the steep west slope is set back over 100 feet from the creek. The pipe would be placed by open trench method up the west slope.

The old existing access road mentioned in the other alternatives down the steep west slope terminates near where the receiving pit would be. This alternative not only disturbs less vegetated area but keeps construction activity much further from the stream than the other alternatives.

Access to the jacking pit on the east side of the railroad tracks is provided through a grass pasture. Excavated material from the jacking pit would be temporarily placed well back from Jenkins Creek.

This alternative would cost about \$150,000 more than Alternative No. 1.

ALTERNATIVE NO. 4

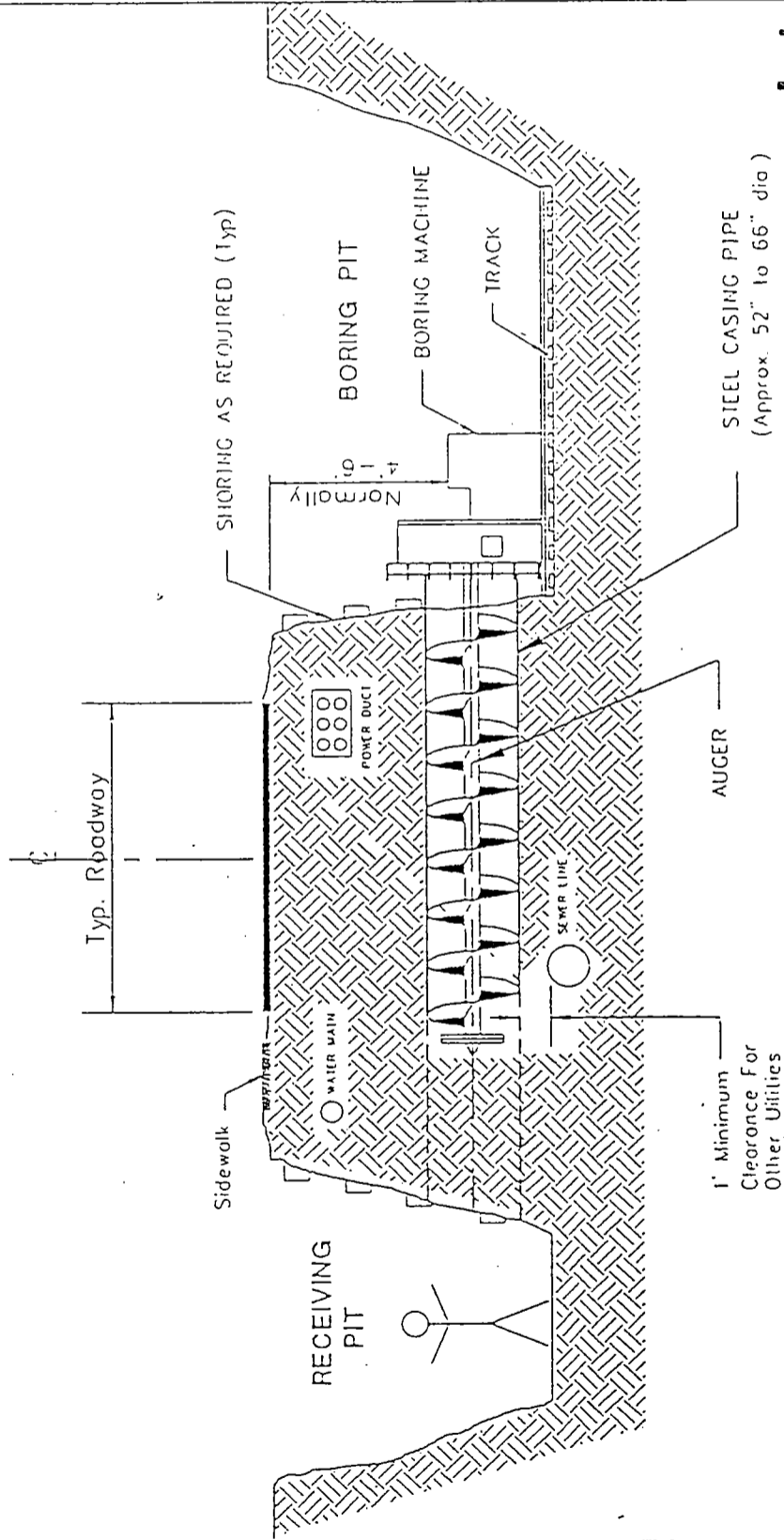
Alternative No. 4 involves a major relocation of the pipe alignment in the Big Soos Creek area. The alternative calls for realigning the pipe northwesterly along the Kent-Black Diamond Road from SE 296th to the BPA right-of-way and then southwesterly along the BPA power lines until it intersects with the current pipe alignment at about 133rd Avenue SE.

10776

This alternative would be approximately 2000 feet longer than the other alternatives. Additionally both Jenkins and Big Soos Creeks must be crossed and many mature trees would have to be removed. A new right-of-way would have to be acquired for the pipeline and significant traffic disruption during pipe installation is anticipated. King County Public Works has expressed concern about this alignment because of the road and traffic impacts.

This alternative would cost approximately \$800,000 more than Alternative No. 1.

10776



HORIZONTAL EARTH-BORING
(Typical Section)

CITY OF TACOMA - DEPARTMENT OF PUBLIC UTILITIES - WATER DIVISION

Date Jun-09
 Design _____
 Drawn _____
 Digitize _____
 Check _____

Craig Gibson
 SECTION CHIEF
 SUPT. OF WATER DIV.

HORIZONTAL
 EARTH-BORING
 (Typical Section)

SCALE
 No Scale
 DRAWING
 224 - A

HDR



Proposed Water Line	ROK
Overhead	ROK

CITY OF DUCOMA - WATER DIVISION
PIPELINE NO. 5

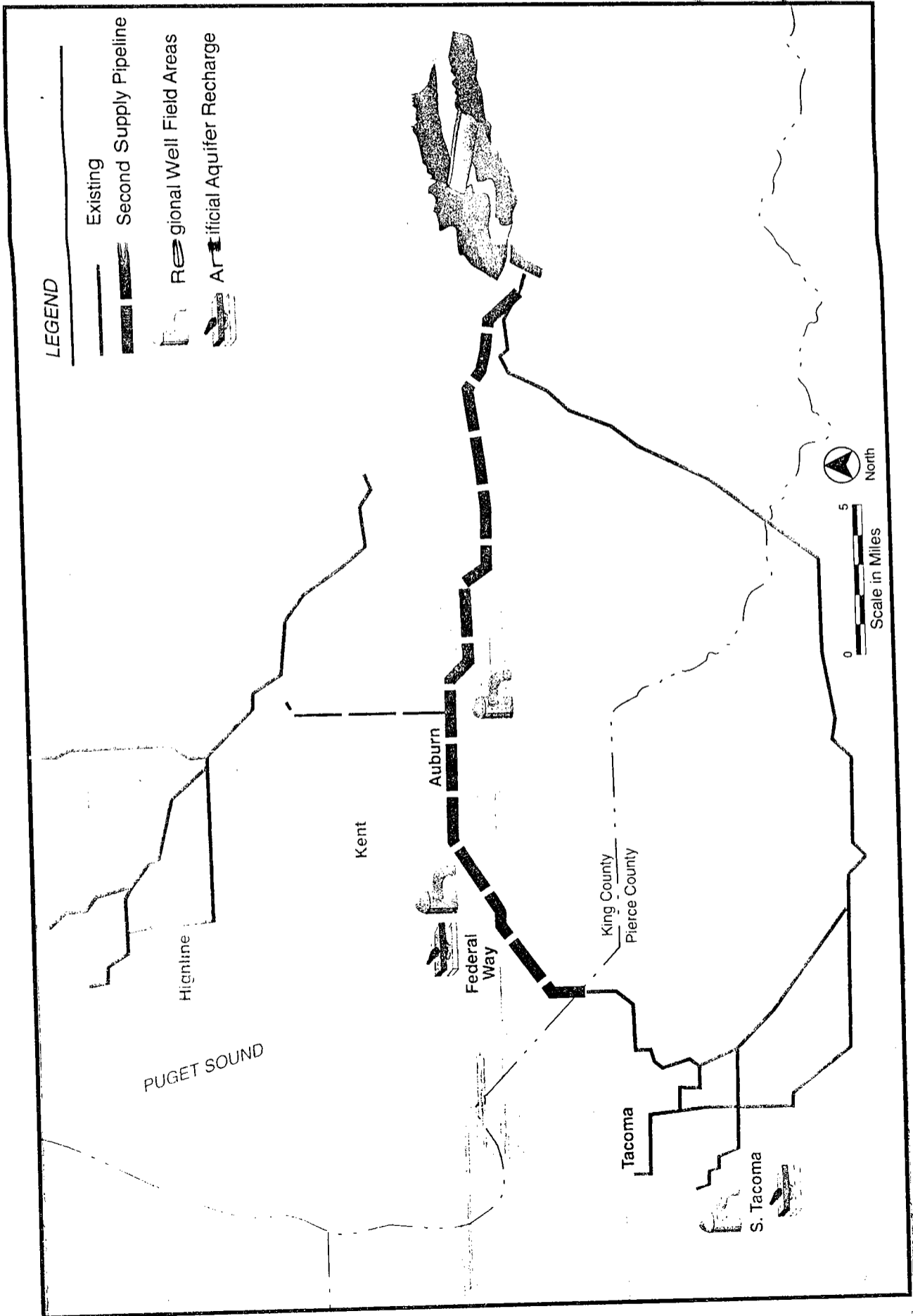
THIS LINE IS ONE FOOT
WIDER THAN THE
SCALE INDICATED

11-2-92

PIPELINE NO. 5

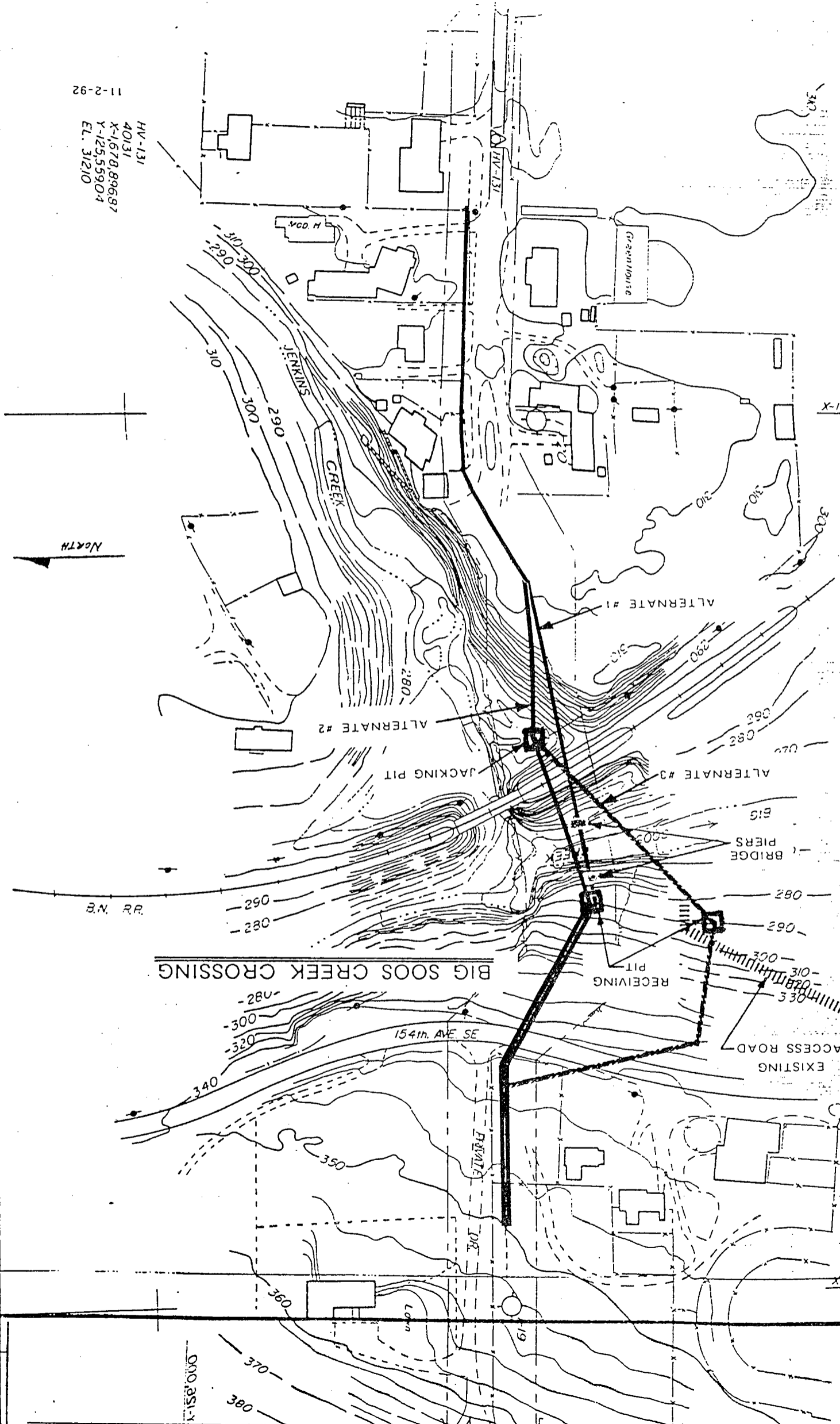
Exhibit 2: Pipeline Map

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11-2-92

HV-131
40131
X-1678,89697
Y-125,55904
EL. 31210



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EXHIBIT 3

SUMMARY OF COMPREHENSIVE MITIGATION PLAN AGREEMENT
February 17, 1993

I. King County Commitments:

- A. Accepts current environmental documents and Tacoma's commitment to CMP as satisfying SEPA. The CMP will be an addendum to the 1988 EIS.
- B. No alternative routes nor special studies for alternative routes outside of current ROW shall be required for Class 2 and 3 wetlands and stream crossings.
- C. No special studies for wetland mitigation, other than what is needed to develop a Wetland Restoration/Enhancement Plan shall be required.
- D. King County's Department of Development and Environmental Services (DDES) has reviewed Tacoma's alternative routing recommendation for #1 rated wetlands. DDES agrees with the recommendation and will recommend approval by the Hearings Examiner during the PAUE process.
- E. Accepts Tacoma's recommended routing alternative for Big Soos Creek crossing.
- F. Consolidate certain aspects of environmental monitoring requirements.
- G. Coordinate the permit process through:
 - 1. Establishing a permit staff team within DDES.
 - 2. Consolidating all permits and PAUE.
 - 3. Requiring only one hearings examiner/shoreline officer.
 - 4. Not requiring a PAUE for geotechnical investigations

II. Tacoma Commitments

- A. Successfully implement all construction mitigations outlined in Section III of the CMP.
- B. Mitigate the direct impact of Class 1, 2, and 3 wetlands through restoration, plus replacement or enhancement at a 2:1 ratio for class 1 and 2 wetlands and 1:1 ratio for class 3 wetlands or pay \$100,000 per acre for replacement of directly disturbed wetlands based on the same ratios.
- C. Contribute \$2.5 million to Environmental Resource Fund (ERF) based on the following payment schedule:

10776

Summary of Agreement
February 17, 1993
Page 2

1. \$750,000 upon issuance of notice to proceed, of which:
 - a. \$250,000 for fisheries habitat
 - b. \$500,000 for off-site mitigation
 2. \$500,000 upon operation of the pipeline to be divided equally between off-site mitigation and fisheries habitat.
 3. \$1.25 million paid in ten equal payments of \$125,000 plus interest upon operation of pipeline. Payments shall be used equally for fisheries habitat and off-site mitigation.
- D. If no agreement with Muckleshoot Indian Tribe, pay \$1.6 million to ERF upon operation of the pipeline to be used for fisheries habitat.
- E. If no Howard Hansen Dam Expansion, pay \$2.4 million into ERF for off-site mitigation.