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ADDRESS REPLY TO
DISTRICT ENGINEER
(NOT TO INDIVIDUALS)

U. S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
1519 ALASKAN WAY SOUTH
SEATTLE, WASHINGTON 98134

REFER TO NPSEN-BP

16 DEC 1963

Mr. Scott Richards
Chairman, Board of Skagit County Commissioners
Mt. Vernon, Washington

Dear Mr. Richards:

This letter concerns local cooperation requirements of Skagit County for our forthcoming Survey Report to Congress on improvement of levees in the lower Skagit River and added purposes of Avon Bypass. These works are substantially as described in the recently issued "Information Bulletin" in connection with the Public Hearing. This hearing which was scheduled on 22 November and canceled because of the death of the President is being rescheduled to 10 January 1964. Mr. Lloyd Johnson, County Engineer, has worked closely with engineers of this office in development of the survey report project.

The local cooperation requirements are that Skagit County give assurance that they will:

- a. Provide without cost to the United States all lands, easements, and rights-of-way necessary for the construction of the project, except as otherwise provided herein.
- b. Hold and save the United States free from damages due to the construction works.
- c. Maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army.

Item a. includes all road modifications, surfacing, and relocations of structures and utilities as required. The inclosed drawing has been marked to show presently contemplated areas of land acquisition for channel widening. The drawing also indicates where levee modifications,

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Mr. Scott Richards

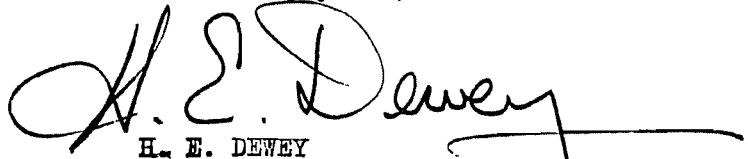
such as minor raising of low areas, increasing top widths, and slope modifications are planned. As nearly as can be determined at this time, all widening of the levees at the base, will be on the riverward side. The plan shown on the inclosed drawing should be considered as preliminary and is intended primarily as a basis for project authorization. At such time as funds become available for detailed engineering and final design, modifications of these plans can be made to conform with field conditions then existing and to allow for more detailed engineering studies.

We have estimated the total local cooperation cost to be \$180,000 for lands and relocations, \$25,000 for restoration of fence lines and \$15,000 for reconstruction of about one mile of county road, making the total cost of local cooperation \$220,000. This estimate is based on current fair market values of all lands and properties. Because the various diking districts customarily grant easements for improvement of levees on which work is performed, the actual local cooperation cost may be substantially less.

With respect to development of the fishery and recreation potential of the Bypass, we are seeking primarily an expression of the interest and intent of the County to join with the various State agencies, such as Departments of Game, Fisheries, and the Parks and Recreation Commission to develop, maintain and operate public facilities for recreation. As a minimum, we would expect the County to provide vehicle parking areas adjacent to boat launching ramps and to maintain and to operate the Bypass facilities so as to foster and enhance fisheries which may be developed in the Bypass. For your information, the State Parks and Recreation Commission at its 18 November meeting in Seattle went on record saying that, "they believed that the Avon Bypass area has a great recreational potential, and Congress should be so informed."

To satisfy the requirements of our report to Congress, we would like a resolution affirming the intent of the County to provide the local cooperation set forth herein. If there are any matters which require further clarification or discussion, please feel free to call upon me or members of my staff.

Sincerely yours,



H. E. DEWEY
Lt. Colonel, Corps of Engineers
Deputy District Engineer

1 Incl
Marked Dwg. E-6-6-197
ptd 10 Dec 63

AVON BYPASS

History and Project Description

The Avon Bypass was authorized by the Flood Control Act of 1936 as a structure that would divert flood waters from the Skagit River to Padilla Bay. Under this authorization, local participation included the costs of constructing or modifying all bridge crossings. At that time the local interests could not provide the necessary funds to meet the required local cooperation and therefore the Bypass was not constructed.

The Corps has recently made a restudy of the Bypass under the comprehensive studies that are presently being made for development of flood control and other water resources. Under this study the Bypass design has been revised to provide for a deep, narrow channel requiring less land and shorter bridges. This has been possible because the capacity of the Skagit River has been increased from levee and channel improvement work which has permitted the flow requirements in the Bypass to be reduced.

The Bypass channel as authorized in 1936 contemplated a shallow channel approximately 1,600 feet wide. The channel now proposed has been deepened and narrowed to a 360-foot bottom with 3 to 1 side slopes. The cost of the necessary modifications to the GNR bridges, which previously were a local cost, can be accomplished at Federal expense under authority of the 1946 Flood Control Act.

The intake to the channel has been moved about three miles upstream from the previous location at Avon to above the Great Northern Railroad crossing. This location will provide increased protection for the area in the vicinity of Burlington. The channel has been relocated to utilize Gages Slough and follow the hillside north of the valley as shown on the attached drawing, thereby keeping to a minimum the amount of valuable farmland required.

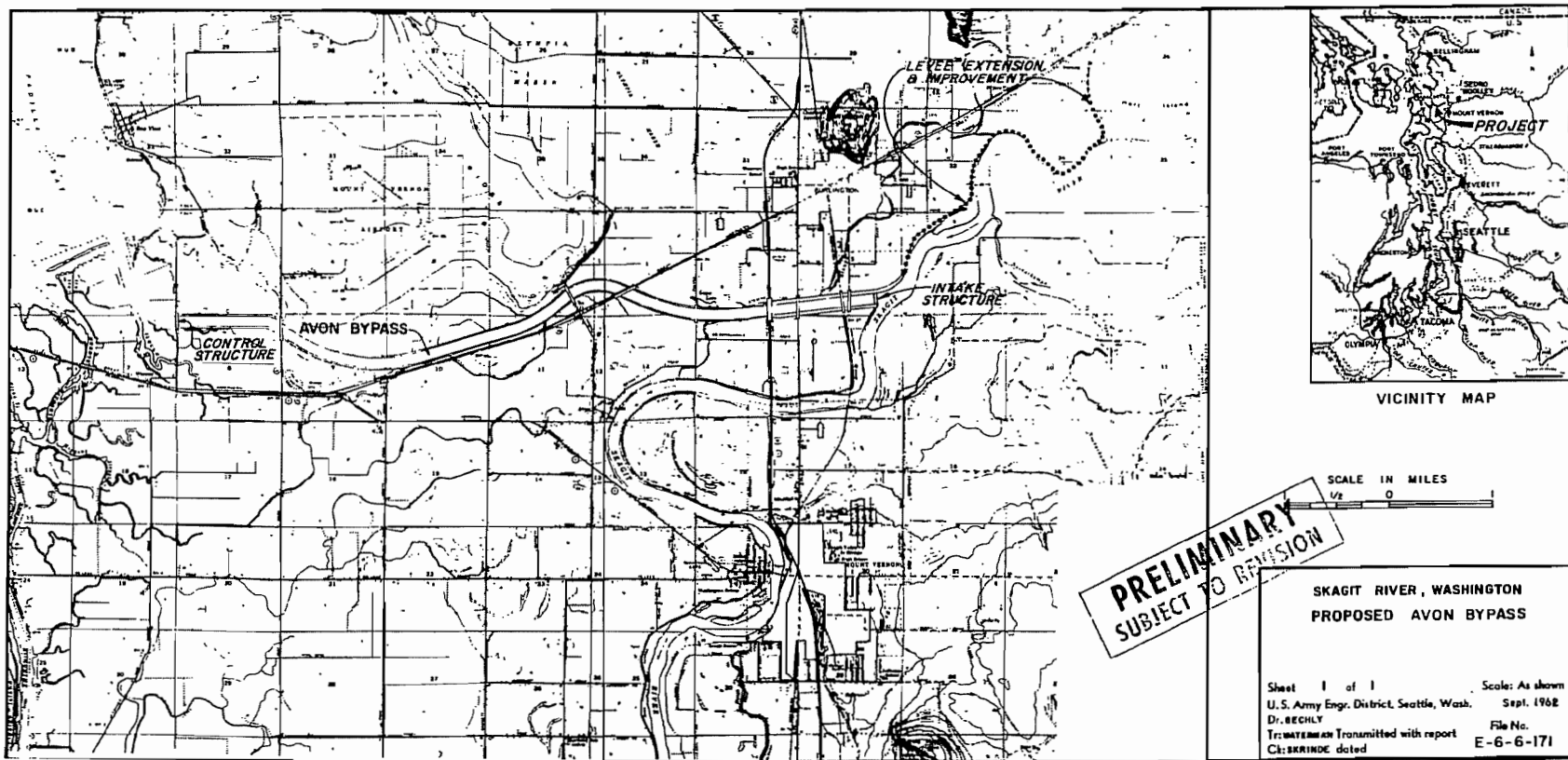
The structure would have a gated concrete intake approximately 350 feet long. A concrete control structure is being considered for the lower end of the channel to keep tidal waters from backing into the structure and to minimize channel erosion during periods of ebb tides. Total cost of the Bypass would be approximately \$23,000,000, of which the Federal cost would be approximately \$19,000,000. Average annual benefits from the project would be over \$2,000,000 a year.

The Avon Bypass project includes improvement of about 2 miles of levee on the right bank of Skagit River immediately upstream of the bypass intake and extension of this levee an additional 2 miles to high ground near Sedro Wooley.

Construction of the Bypass with some minor levee improvement appears to provide the most practical approach to flood control in the basin. The present levee system provides protection for a flood with recurrence interval

varying from once in 3 years to once in 10 years. The Avon Bypass, together with minor levee improvement downstream of the Bypass, would increase flood protection in the area below Burlington for a flood with recurrence of once in 30 years. For the 1951 flood the Bypass would have lowered flood stages 3 to 5 feet in the Skagit River and 2 to 4 feet in the North and South Forks of the Skagit River. Some minor levee improvements of raising low areas of the levees would be required to realize maximum benefits from the Bypass. Flood protection from levee construction alone would require extensive raising of the entire levee system. Consideration is being given to additional flood protection by upstream storage. Complete protection from storage alone is not feasible because suitable storage sites are limited. The best sites for multiple purpose storage have been developed for single purpose uses.

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PRELIMINARY
SUBJECT TO REVISION

SKAGIT RIVER, WASHINGTON
PROPOSED AVON BYPASS

Sheet 1 of 1 Scale: As shown
U.S. Army Engr. District Seattle, Wash. Sept. 1968
Dr. BECHLY
Transmitted with report File No.
Cl: SKRINDE dated E-6-6-171

33704
PUBLICATION FOR ~~WEDNESDAY~~ ^{Thursday,} AUGUST ~~22~~ ²³, 1962.

The Avon By-Pass has again been proposed to Skagit County by the Corps of Army Engineers as the most practical means of additional flood control.

Many miscellaneous other uses of this By-Pass other than flood control are under study, such as fish farming, recreation, drainage, irrigation and water transportation. The U.S. Fish & Wild Life consider fish farming conditions in the upper part of the By-Pass as very good, and they are enthusiastic about the prospects. The Skagit River water temperatures are near ideal for fish farming. Plans for swimming, boating and other recreations will be utilized to everyones advantage.

The Avon By-Pass will give much greater flood protection to the area West of Sedro Woolley. Many indirect benefits will occur to areas outside the flood plain, such as the protection of the Anacortes Water Supply which is used by Shell Oil Refinery, Texaco Refinery, Whidby Island Navy Base and the City of La Conner. Businesses on Fidalgo Island, Bayview Hill and most other parts of Skagit County would be brought to a near standstill by a large flood.

Local interests consisting of Skagit County, the State of Washington, Diking Districts and possible flood control zones, as authorized by the 1961 Legislatures, must furnish the rightof way costs and pay for the construction of the highway bridges made necessary by this project.

Mr. Earl Hanson, President of the Skagit County Flood Control Council, has appointed a By-Pass Committee, consisting of Mr. George Dynes, Dike District No. 20 Commissioner, Chairman, Mr Tom Shane, Dike District No. 1 Commissioner, Mr. Noble Lee, Dike District No. 2 Commissioner, and as Secretary, Mr. Lloyd Johnson, Skagit County Flood Control Co-ordinator.

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This Committee will work with the Board of Skagit County Commissioners in the furthering of the project.

Flood damages for a flood larger than that of 1951 have been estimated at over six million dollars at today's prices and with our present development.

The residents of Skagit County may now have this By-Pass with it's recreation possibilities for about one-half the damage costs of one large flood.

.(Enclosure: Copy of Corps of Army Engineers History and Project Description)

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AVON BYPASS

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The Corps has recently made a restudy of the Bypass under the comprehensive studies that are presently being made for development of flood control and other water resources. Under this study the Bypass design has been revised to provide for a deep, narrow channel requiring less land and shorter bridges. This has been possible because the capacity of the Skagit River has been increased from levee and channel improvement work which has permitted the flow requirements in the Bypass to be reduced.

The Bypass channel as authorized in 1936 contemplated a shallow channel approximately 1,600 feet wide. The channel now proposed has been deepened and narrowed to a 340 foot bottom with 3 to 1 side slopes. The cost of the necessary modifications to the GNRR bridges, which previously were a local cost, can be accomplished at Federal expense under authority of the 1946 Flood Control Act.

The intake to the channel has been moved about three miles upstream from the previous location at Avon to above the Great Northern Railroad crossing. This location will provide increased protection for the area in

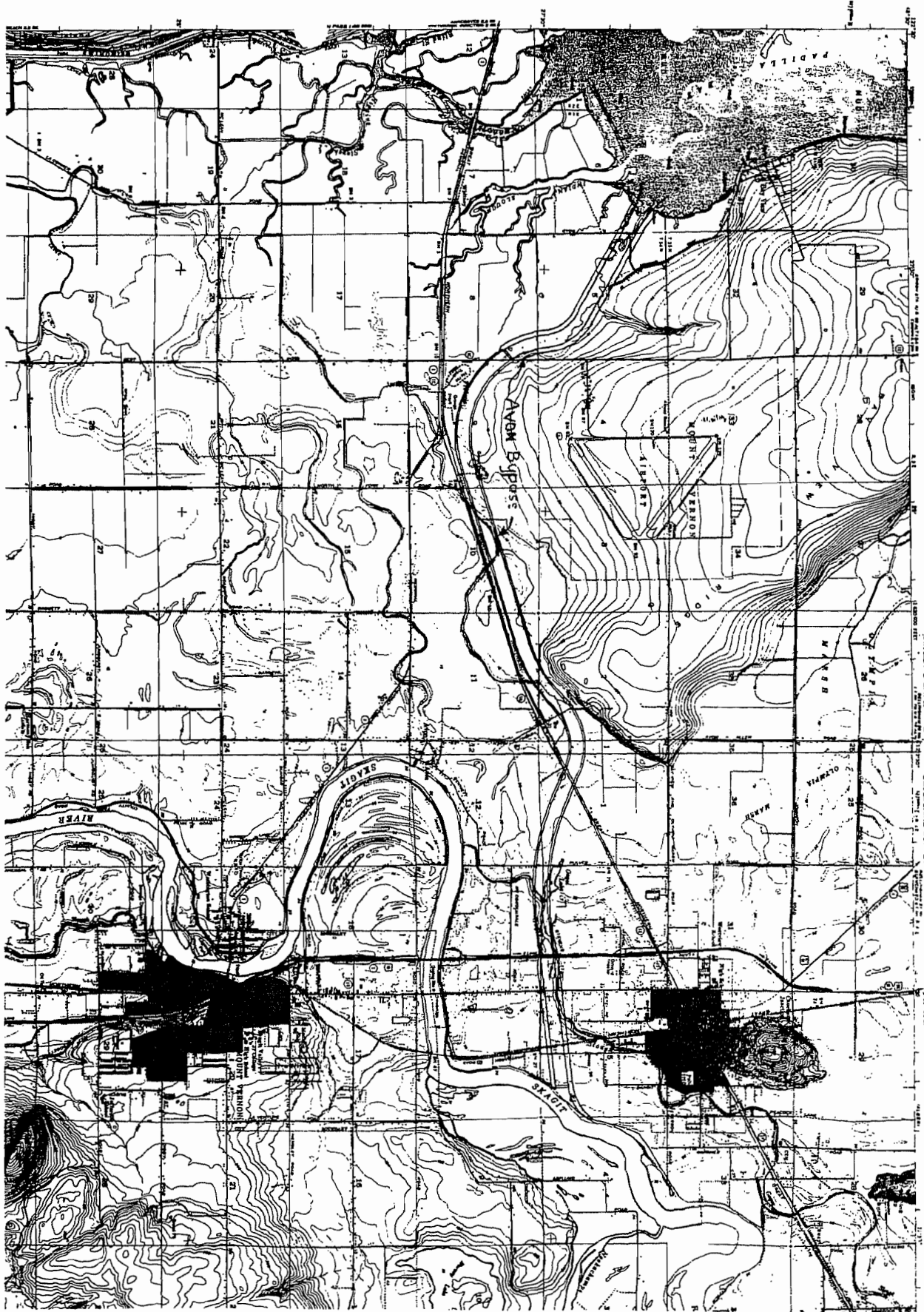
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the vicinity of Burlington. The channel has been relocated to utilize Gages Slough and follow the hillside north of the valley as shown on the attached drawing, thereby keeping to a minimum the amount of valuable farmland required.

The structure would have a gated concrete intake approximately 350 feet long. A concrete control structure is being considered for the lower end of the channel to keep tidal waters from backing into the structure and to minimize channel erosion during periods of ebb tides. Total cost of the Bypass would be approximately \$19,000,000, of which the Federal cost would be approximately \$15,000,000. Average annual benefits from the project would be over \$1,000,000 a year.

Construction of the Bypass with some minor levee improvement appears to provide the most practical approach to flood control in the basin. Protection for about a 10-year flood is provided by the present levee system. With the Bypass constructed the area below the intake would have protection for about a 30-year flood. For the 1951 flood the Bypass would have lowered flood stages 3 to 5 feet in the Skagit River and 2 to 4 feet in the North and South Forks of the Skagit River. Some minor levee improvements of raising low areas of the levees would be required to realize maximum benefits from the Bypass. Flood protection from levee construction alone would require extensive raising of the entire levee system. Consideration is being given to additional flood protection by upstream storage. Complete protection from storage alone is not feasible because suitable storage sites are limited. The best sites for multiple purpose storage have been developed for single purpose uses.

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