

NPSEN-PL-TE
MEMO FOR RECORD
SUBJECT: Field Trip - Avon Bypass

7 February 1966

DECKER

2 February - 11-12 a.m. - Talked to Lloyd Johnson, Skagit County Engineer. He personally has no objections to levee alternate to Avon Bypass if blowout problem can be solved, but indicated that sandy foundation is deep and includes a considerable reach of the river above and below Mt. Vernon. He stated that the State has plans and has acquired right-of-way for a highway extending from Interstate No. 5 directly west to intersection of Memorial Highway with Burlington-Anacortes Highway. This will cross revised location of Avon Bypass at a flat angle requiring an expensive bridge unless it is modified to make use of the right bank of the bypass instead of crossing it.

Original bypass location at west end is best due to right-of-way and drainage problems. Any location at east end which restricts expansion of Burlington southward will be objected to by that community. Mr. Johnson referred me to County Planning Director for information on plans for development of Padilla Bay. He offered to arrange meeting with diking district directors and others interested in the bypass if desirable. He pointed out reaches of the North Fork and main stem which will need widening if levees are raised for 180,000 c.f.s., and indicated need for floodwall in Mt. Vernon.

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1-3 p.m., 2 Feb. - I discussed storm and sanitary sewer problems with Mt. Vernon City Engineer, Gwynne D. LeGro, and during the discussion Mayor Hanson came in. We discussed levees v.s. Avon Bypass. The engineer and Mayor have been long-time supporters of the bypass but are open-minded on raised levees as an alternative. About \$400,000 has been spent in the last 10 years on revetments and a riverside parking ramp. The ramp which extends for about one-fourth mile south of the bridge is at elevation 27.5. The first street parallel to the river is at elevation 30 and carries the tracks for the local railroad. The west bank of the river has been left unimproved in anticipation of possible widening requirements for floods. Improvements are underway on the west bank near the City Park between the existing levee and the river but this is a slow, low-cost development using City dump material.

Storm and sanitary sewers are partially combined at present but separate systems are being worked out gradually. A number of separate outfalls are used into the river and one into Britt Slough for storm runoff. All outfalls are equipped with tide gates, so-called, which operate satisfactorily. No interior drainage problems for Mt. Vernon are anticipated if levees are raised. Pumps have been installed where necessary and have served satisfactorily during floods. More powerful pumps might be needed for higher water surface in the river. Infiltration into the sewer systems

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would be increased with higher water table if levees are raised. Infiltration has been neutralized in previous floods by permitting normal flow in the sewers to backup even with the water table. Pumping is used as the sewer flow increases and gravity drawdown is possible as soon as the river recedes. About 2 days have been the maximum period the river has been above the outfalls.

The nature of the soil makes an exceptional sewer maintenance problem for Mt. Vernon. The fine grains are carried through the tiniest cracks at joints and washed away. The resulting void around the joint grows and settlement enlarges the joint package. Voids become big enough to cave under heavy traffic.

Obtained drawings of existing and proposed sanitary and storm sewer systems.

3:30-4 p.m. - Got bridge pictures of highway and railroad south of Burlington. Bridges have been ramped up to clear shipping and would have adequate clearance with raised levees.

4:30-5:30 p.m. - Discussed effects of high levees on Burlington storm and sanitary system with City Engineer Rader and assistants. Effluent from treatment plant goes to river (may require tide gate and pump). Storm sewer goes to Gages slough. Outlet from Gages Slough to river may require tide gate. Obtained city map showing storm and sanitary systems and ground elevations. Learned at Sedro Woolley that LeGrow is part time City Engineer. City Supervisor was not in.

Feb. 3 - 8:30-9:30. - Discussion with County Planning Director Wayne Kite on proposed developments in Padilla Bay. Showed him proposed Avon Bypass alternate locations. The County is advocating a fill of part of the western portion of the bay as space for industrial development. Mentioned that if Avon Bypass is built as a dredging operation it might be a source of fill material or conversely the proposed fill would serve as a disposal area for excess material from the bypass if any.

A private firm is working up plans for a large fill in the north end of the bay for residential purposes, each home having a private boat moorage. Planned developments are remote enough from proposed bypass entrance to Padilla Bay that no problems result.

9:30-10:30 a.m. - Discussed Sedro Woolley problems with LeGrow who called City Supervisor there and discussed the problems at length with him. Sedro Woolley has separate systems both emptying into the Skagit. Both have tide gates but no pumps. City has a sanitary sewage treatment plant. The City is at about elevation 50 and considers a flood of 180,000 c.f.s. an emergency condition which it would take no precautions against. Talked with local contractor Irwin Eerkes about cutoff problems to make raised levees effective. He thinks excavation to any depth beneath the water table would be extremely difficult and expensive because caving begins at a depth of 3 feet in water and extends sideways as the trench

is deepened. Local practice is to backfill with gravel and then reexcavate to get any stability for working in deep installations. Gravel seems to be available at no great expense.

~~one~~ ^{one} 10:30-12 M - Took pictures of both sides of river at Mt. Vernon, ~~one~~ of which is the highway and and railroad bridges north of the town.

1-5 p.m. - Examined Avon Bypass alternate routes and took pictures.

4 Feb.

Continued examination of Avon Bypass and pictures. Sketched changes in location due to Olympia Pipe Line pumping station installed in 1964. There appears to be space between the station and the south end of Bayview ridge for the bypass. A pipeline crossing will be necessary. One pipeline parallels the railroad on the north side requiring bypass location further north. Location adjacent to the ridge may be preferable. Improvements there appear to be about depreciated out and it would have some recreation advantages.

About 3:30 p.m. took pictures of existing interior drainage facilities near Conway.

Most farm improvements and residences affected by Avon Bypass ^{have} ~~are~~ passed their period of useful life. Did not talk to any farm people but was made aware by others of some opposition to loss of farmland. However, two of the County Commissioners are farmers.

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