



## STATE OF OREGON

## INTEROFFICE MEMO

TO: Fred Miller, Director  
Department of Transportation

DATE: June 14, 1984

SUBJECT: Echo Bridge crossing  
Gravel bar formation - Umatilla River

30-48

You recently handed me a copy of a letter from Senator Thorne concerning gravel bar formation in the Umatilla River near a bridge across that river at Echo.

This bridge is a 1926 vintage, 202 foot, four span structure with three piers in the river. The condition of the bridge is satisfactory and no major work is planned nor warranted.

Driftwood is a problem in the drainage. As a matter of routine maintenance policy, we remove driftwood from the piers of bridges of this river and others, as required, usually annually. This is done in order to protect the foundations from scour.

Mr. David Bryson, Hydraulics Engineer, was recently in the area and looked at this matter for me. He advises that the bridge is in no way responsible for the creation of the gravel bars in the river. He points out that the gravel bars are upstream of the bridge and that there are none below the bridge. A stream obstruction could cause deposits downstream, but not upstream. It is the overall configuration of the river that causes the deposits, not the bridge. Extensions or rounding of the pier foundations, as Senator Thorne suggests, is of doubtful value and does not affect the gravel bar accumulation either way.

In past years the gravel bars have been removed by U.S. Government agencies, and that is probably the correct method to deal with this matter in the future. These activities are not within the jurisdiction of responsibility of the Highway Division

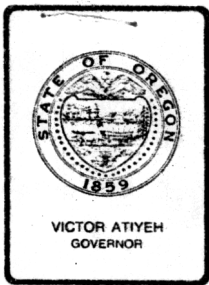
R. D. Hector  
Region Engineer

RDH/lm

cc; H. S. Coulter  
George Bell  
Harry Oswald  
David Bryson ✓



Contains  
Recycled  
Materials



## Department of Transportation

TRANSPORTATION BUILDING, SALEM, OREGON 97310

IN REPLY REFER TO  
FILE NO.:

June 25, 1984

MAI 14-1

The Honorable Mike Thorne  
State Senator  
Holdman Route, Box 505  
Pendleton, OR 97801

The bridge across the Umatilla River near Echo has been recently inspected and found to be in satisfactory condition. No major work on the structure is planned at this time.

The Highway Division's Hydraulics Engineer has studied the situation, and it is his professional opinion that floating debris--admittedly a problem--is not responsible for creation of the gravel bars in the river. He points out that the gravel bars are upstream of the bridge, and there are none downstream. In his judgment, it is the "overall configuration of the river" that causes the deposits, not the bridge.

He further advises that extensions or rounding of the pier foundations would be of "doubtful value", and would not affect the gravel bar accumulations either way.

Region Engineer R. D. Hector tells me that, in the past, U.S. government agencies removed the gravel bars, and he feels that is probably the correct way to deal with the present problem, since such an activity is not within the jurisdiction of the Highway Division.

If you were to get in touch with Mr. Hector, he would assist you in making contact with the appropriate federal agency to remove the gravel bars. His telephone number in La Grande is 963-3177.

Fred D. Miller  
Director

bc: George Bell  
H. S. Coulter  
E. S. Hunter  
Walt Hart  
David Bryson ✓  
R. D. Hector

GHB:bb kkr

JOINT APPLICATION FOR PERMIT

U.S. ARMY CORPS OF ENGINEERS  
STATE OF OREGON, DIVISION OF STATE LANDS

DIVISION OF  
STATE LANDS

10 9 23 14 '90

WHEREAS Department of the Army permits for proposed work in or affecting navigable waters of the United States, the discharge of dredged or fill material into those waters, and the transport of dredged material for the purpose of dumping it into ocean waters are authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of the Clean Water Act of 1977, and Section 103 of the Marine Protection Research and Sanctuaries Act of 1972, respectively, ---AND---permits for that part of those project activities which includes the removal or fill in the waterways of Oregon of rock, gravel, silt, and clay are authorized by the State of Oregon under O.R.S. 541.605 to 541.695---THIS APPLICATION WILL MEET THE REQUIREMENTS OF BOTH AGENCIES.

For Agency Use Only	Corps of Engineers # _____	For Agency Use Only	State of Oregon # <u>SP 3097</u>
	Date received _____		Date received _____

Name of Waterway <u>Umatilla River</u>	River Mile <u>26.6</u> <u>26.5</u>	Local Name _____
Section <u>See Attached</u>	Township <u>See Attached</u>	Range <u>See Attached</u>
Estimated Starting Date of Project <u>August 25, 1990</u>	Estimated Completion Date of Project <u>Sept. 10, 90</u>	

NAME OF APPLICANT <u>Umatilla Water Control Dist. #2</u>	AUTHORIZED AGENT <u>Umatilla Soil and Water Conservation District</u>
Address <u>P.O. Box 764</u>	Address <u>1229 SE 3rd</u>
City, State, Zip Code <u>Stanfield Ore. 97875</u>	City, State, Zip Code <u>Pendleton Ore. 97801</u>
Phone: Work <u>(503) 449-1334</u> Home <u>(503) 449-1334</u>	Phone: Work <u>(503) 276-3811</u> Home <u>( )</u>

PROJECT SUPERVISOR <u>John Mellott, Administrator (NRD)</u>	Phone: Work <u>(503) 378-3810</u> Home <u>( )</u>
PROPERTY OWNER IF OTHER THAN APPLICANT <u>City Of Echo - State Highway Division -</u>	PROJECT ADDRESS <u>Site 10 mile 26.6</u> <u>Site 8-9 mile 26.5</u> <u>Echo-Lexington Highway</u>
Address <u>Box 9 - P.O. Box 459 -</u>	City, County, State, Zip Code <u>Echo Umatilla Ore. 97826</u>
City, State, Zip Code <u>Echo Ore 97826 - Pendleton Ore. 97801 -</u>	Assessor's Records-- Shown on Map # _____ Tax Lot # _____
Phone: Work <u>(503) 276-1241</u> Home <u>( )</u>	Name of Subdivision _____ Lot _____ Block _____

In order to expedite the processing of this application, the following city and/or county department, which has local jurisdiction over the proposed project, has been contacted:

Name of Department: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

APPROVALS OR CERTIFICATIONS applied for or already obtained from other agencies (Federal, interstate, state, county, city, area) for any of the proposed projects described in this application:

<u>Issuing Agency</u>	<u>Type of Approval</u>	<u>Identification #</u>	<u>Date of Application</u>	<u>Date of Approval</u>
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Has any agency denied approval for the activity described herein or for any other activity directly related to it?  
 Yes  No If yes, please explain in Remarks.

ADJOINING PROPERTY ON THE WATERWAY: Give names, addresses, and phone numbers of owners and/or occupants  
Esther Fife-P.O. Box 114-Echo Ore. 97826 Detail #8  
Tim Smith-P.O. Box 4-Echo Ore 97826 Detail #8  
Dick Snow-Rt.1 Box 1-Echo Ore. 97826 Detail #8@9  
John Pedro (Care of Dick Snow) Detail #10

PLEASE EXPLAIN IN DETAIL your plans to restore the area to its natural condition.  
To reinforce the eroding bank by the City Park and Fort. This will reduce flooding and protect the bank from further eroding into the park area  
Excavating gravel from adjacent gravel bar.

INFORMATION FOR FILL OR REMOVAL: 950 cu. yd. Rock rip rap  
FILL WILL INVOLVE cubic yards annually, and 750 cu. yd cubic yards for the total project  
 Riprap  Rock  Gravel  Sand  Silt  Clay  Organic  
REMOVAL WILL INVOLVE \_\_\_\_\_ cubic yards annually, and 750 cu. yd cubic yards for the total project.  
 Rock  Gravel  Sand  Silt  Clay

DESCRIBE IN DETAIL THE PROPOSED ACTIVITY---its primary purpose and secondary purpose, if any,---intended use (private, public, commercial)---type of structures and use---type of vessels using facility---facilities for handling wastes---type of conveyance and manner of extraction of any fill or removal---the quantity and composition of, and the source and disposal sites for any fill or removal. (If additional space is needed, use plain sheet of paper.)

The primary purpose is to prevent further erosion of the park bank also resultant of flooding of the City of Echo. The work involves about 100 Feet upstream from the highway bridge. The bank would be shaped for 225 Ft. using gravel from the adjacent gravel bar and install rock riprap for the full bank height, about 10 Ft. For the next 160 Ft. install rock riprap at the toe of the slope to a height of 3-4 feet. Work on this upper portion must be done from the stream channel to avoid damaging streambank vegetation. The rock riprap should have toe protection excavated 3 Ft. into the streambed and back filled with rock riprap material. Also on site 10 there will be 50 cu. yd. of rock riprap place at a few places at the toe of the slope to repair damage. sites 8 and 10 will have extensive gravel removal to be used in site 9 but also to enhance channel flow and decrease probability of Flooding Echo. Donated equipment and some possible rented equipment will be used along with the Highway Dept. Gravel trucks.

Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that, to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.

  
Signature of Applicant or Authorized Agent

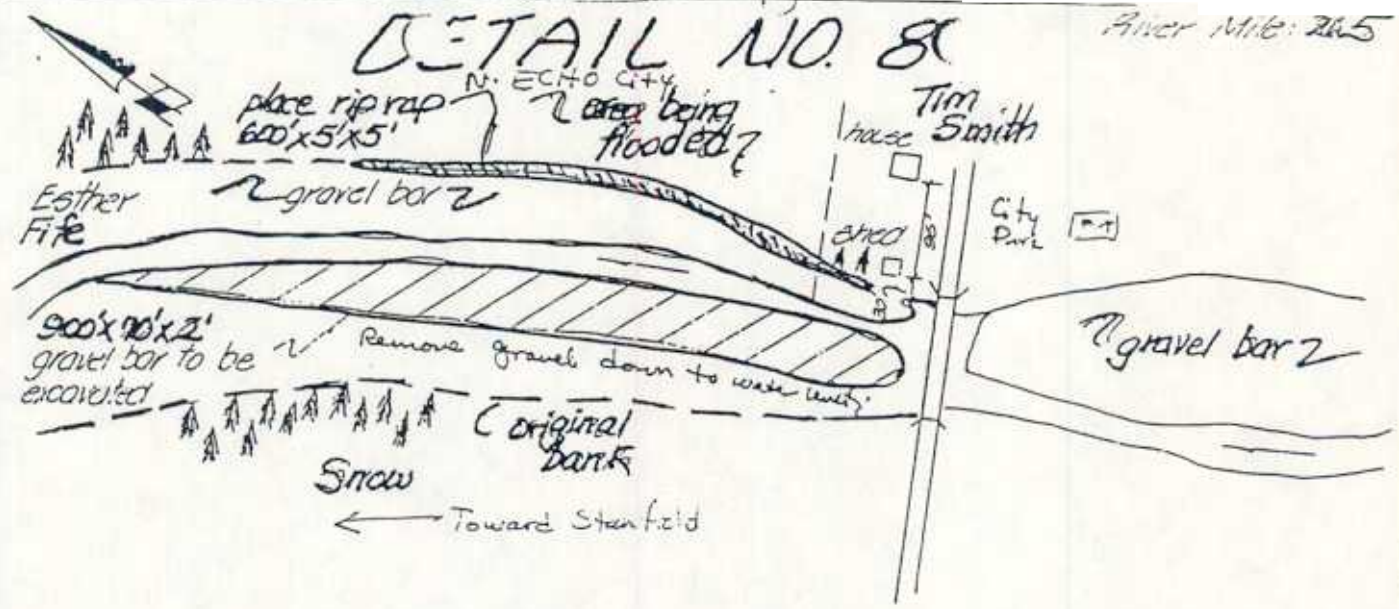
18 USC 1001 provides in part: "Whoever, in any manner within the jurisdiction of any department . . . of the United States knowingly and willfully falsifies . . . a material fact or makes any false . . . statement or . . . any false . . . document . . . shall be fined not more than \$10,000 or imprisoned not more than five years, or both."



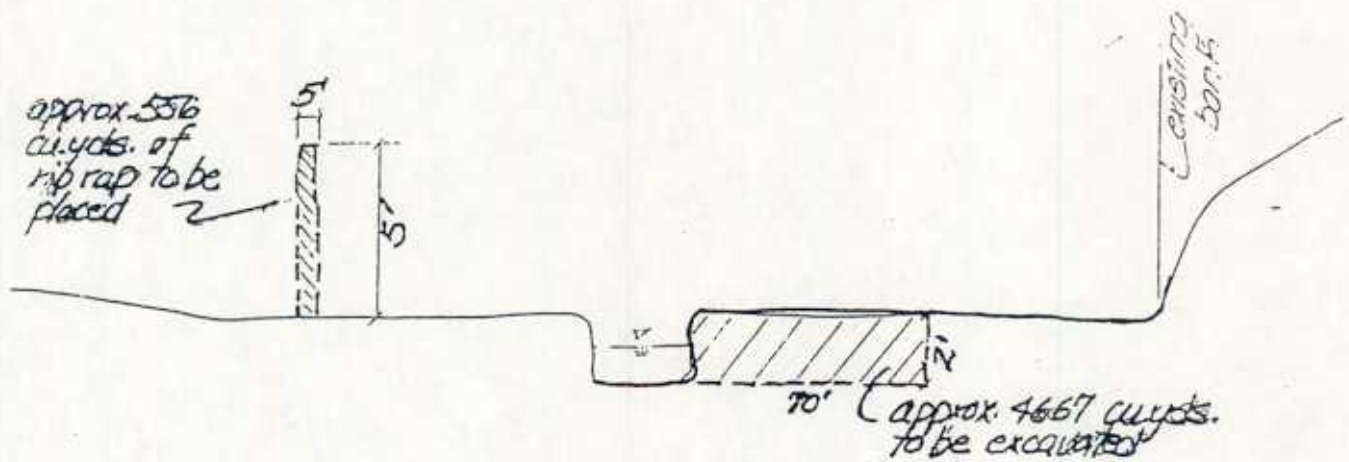


# DETAIL NO. 8

River Mile: 26.5



will allow concentration of flow rather than shallow flow over a wider area.



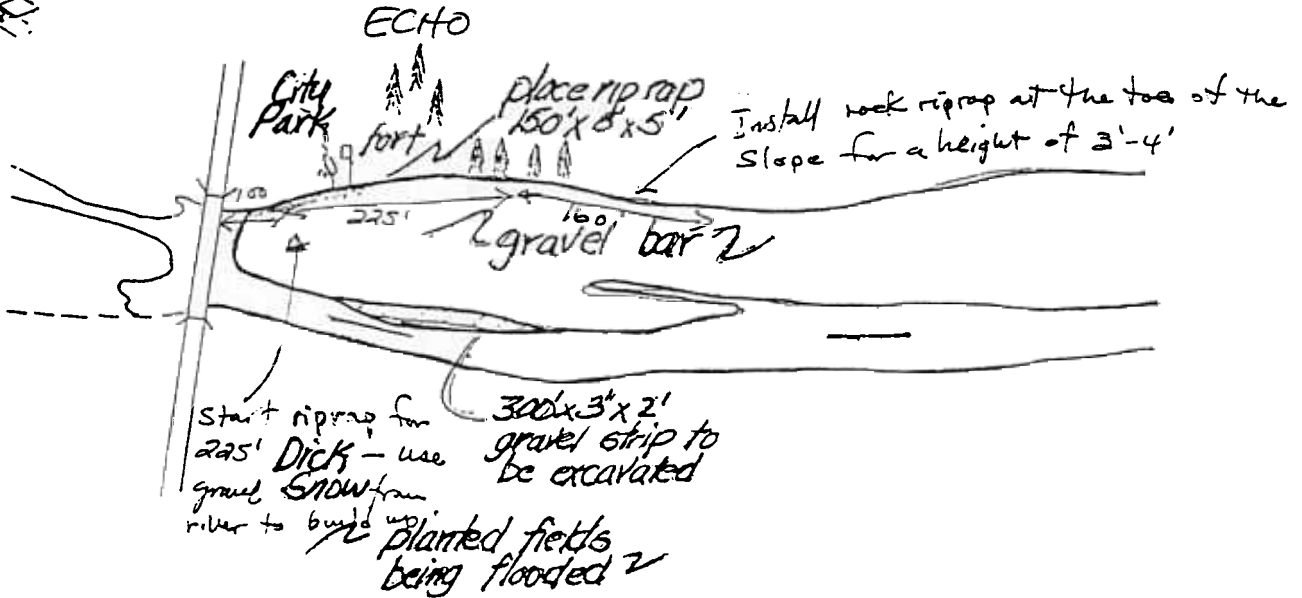
CROSS SECTION  
 horizontal: 1"=50'  
 vertical: 1"=5'

extensive gravel removal needed.

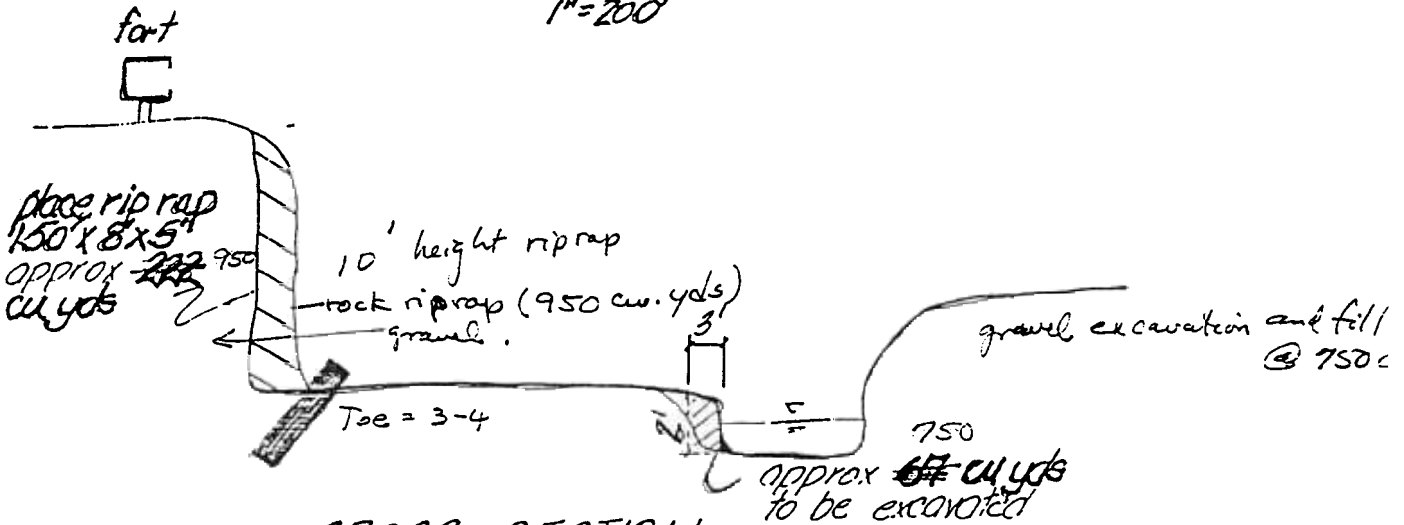
1. Purpose: Reduce flooding and bare shed
2. Datum Point:
  - a. High Water: No
  - b. Low Water: Yes
3. Name & Address of Adjacent Property Owner: see Attached List
4. Commercial: No  
 Noncommercial: Yes

# \*DETAIL-NO. 9

River Mile: 26.5



PLAN VIEW  
1" = 200'



CROSS SECTION  
horizontal: 1" = 50'  
vertical: 1" = 5'

\* Permit from Unadilla County Planning Department is needed.

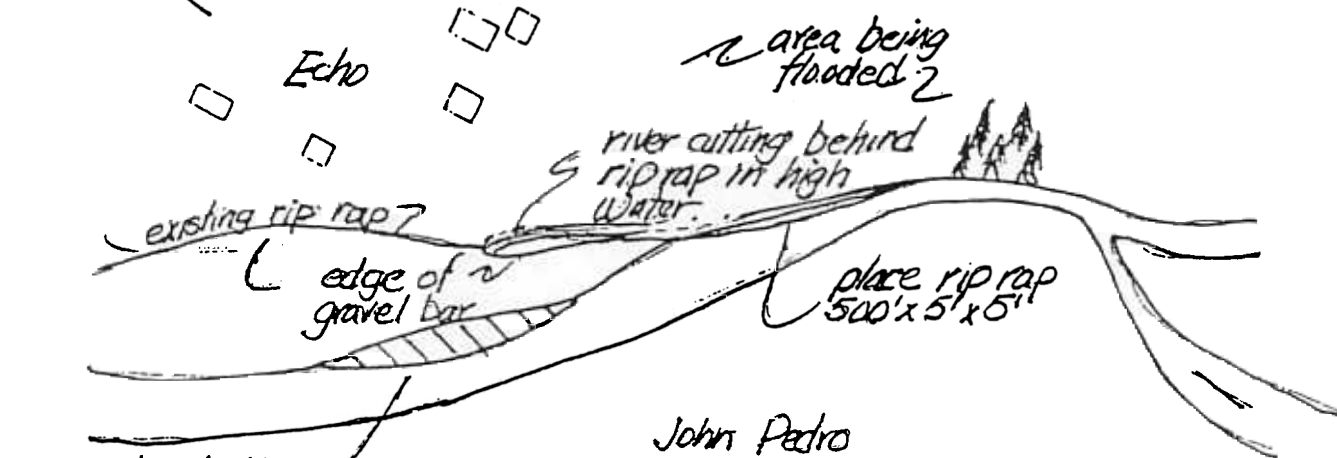
Extensive gravel removal needed

1. Purpose: Reduce flooding of Park and planted fields
2. Datum Plain:
  - a. High Water: No
  - b. Low Water: Yes
3. Name & Address of Adjacent Property Owner:  
See Attached List
4. Commercial: No  
Noncommercial: Yes



# DETAIL NO. 10

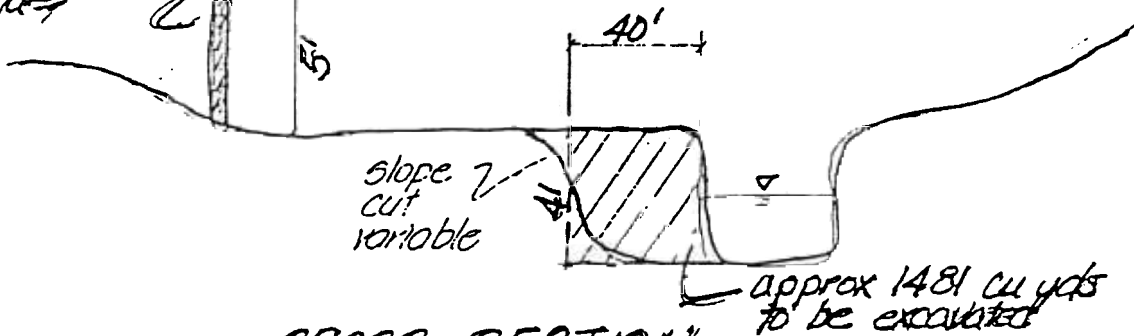
River Mile: 266



John Pedro  
PLAN VIEW  
1"=200'

250'x40'x4'  
gravel strip  
to be excavated

place rip rap  
500'x5'x5'  
approx 463  
cu yds



CROSS SECTION  
horizontal: 1"=50'  
vertical: 1"=5'

\* Proposed work in Syn. plan has been completed.  
Minor maintenance needed - 50 cu. yds. or less  
rock rip rap should be placed at a few places  
at the toe of the slope to repair damage

Extensive gravel removal proposed.

1. Purpose: Reduce flooding towards town
2. Return Plain:
  - a. High Water: No
  - b. Low Water: Yes
3. Name & Address of Adjacent Property Owner:  
See Attached List
4. Commercial: No  
Non-commercial: Yes

~~MIKE THORNE~~  
- UMATILLA, UNION AND WALLOWA COUNTIES

REPLY TO ADDRESS INDICATED:

- Senate Chamber  
Salem, Oregon 97310
- Holdman Route, Box 505  
Pendleton, Oregon 97801



OREGON STATE SENATE  
SALEM, OREGON  
97310

RE     RCE     RME     RCE

REA    JUN 11 1984

RECEIVED  
REGION 5 OFFICE

304

June 4, 1984

Mr. Fred Miller  
Director, Department of Transportation  
Transportation Building  
Salem, Oregon 97310

*64 Oswald Falls / Do you have any comment? EDH*

Dear Fred:

A few weeks ago, I met with individuals in Echo concerning the constant flood problem in the lower Umatilla. I plan to draft legislation which will bring about closer cooperation between the State of Oregon and various local and federal agencies in trying to provide funding and assistance for streambank control, especially on rivers such as the Umatilla.

The Highway Division has a role, I believe, that it can play which would provide assistance in this project also. The bridge at Echo crossing the Umatilla River could certainly use extensions of the center support sections in order to turn floating debris which lodges on the center supports. This creates gravel bars in the middle of the river and ultimately diverts the streamflow.

I would appreciate your investigation of this matter and any help you could provide in an effort to help the people along the Umatilla who are trying to maintain some integrity of the river's streambanks.

If you have questions, please don't hesitate to contact me. Thank you for your help.

Sincerely

*Mike Thorne*  
Mike Thorne  
State Senator

June 6, 1984 cys. to:

George Bell  
Scott Coulter  
R. D. Hector - Please follow-up and provide any wisdom to Scott and me. Perhaps George has contacted you already.

MT:kr

cc: Mr. Joe Ramos, Echo

Fred

RECEIVED DOT DIRECTOR						
JUN 5 '84						
REFER TO <i>Bell</i>						
FOR						
Info	Invtl	R/D	D/R	Supr	Act	File
		X				

*3ef*

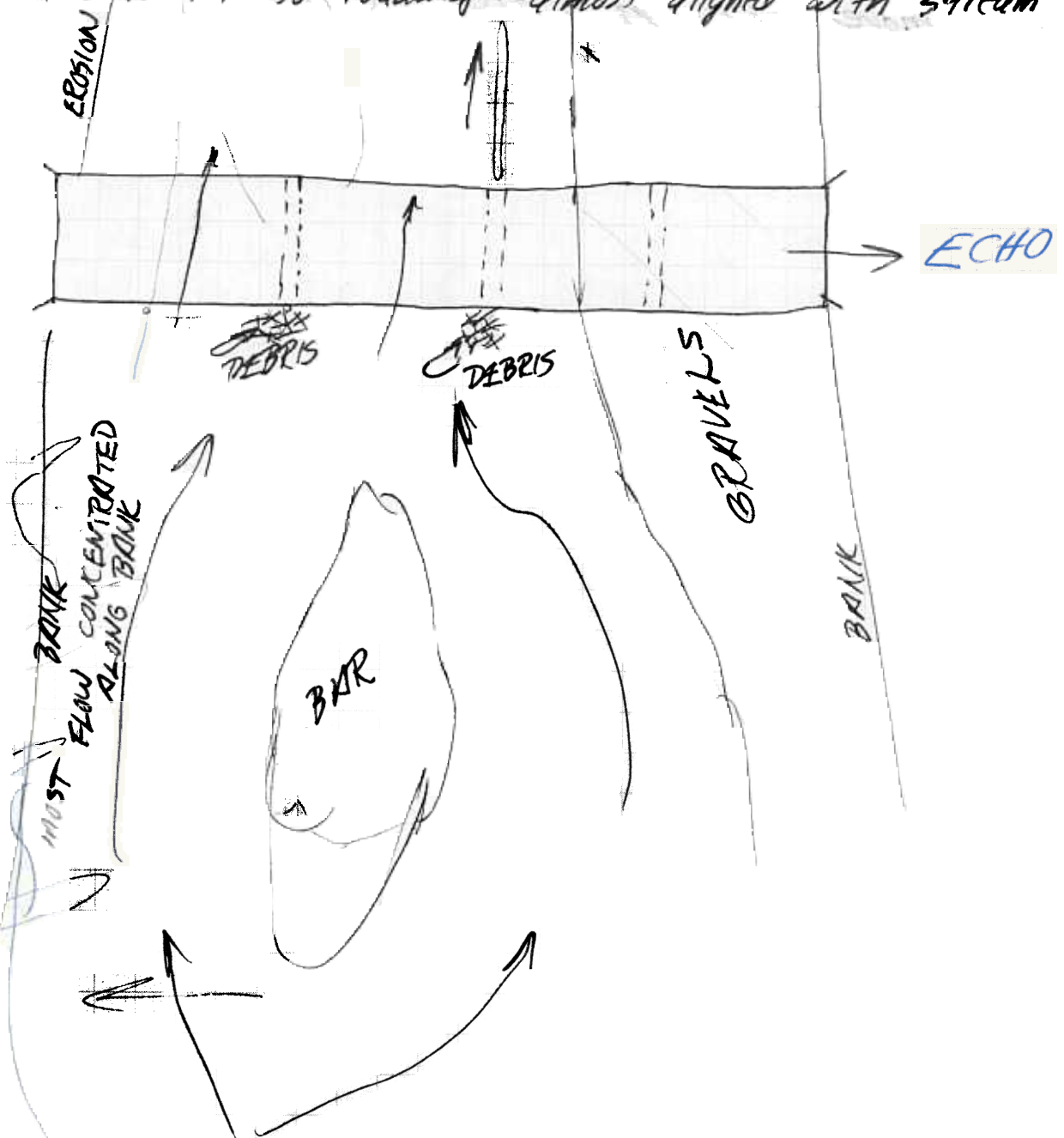
OREGON STATE HIGHWAY DIVISION

Calculations for Umatilla R. (Echo) Bridge

Made by DWB, 19... Checked by... Backchecked by...

6-12-84:

4-span w/3 river piers - wall type piers with square nose; no gravel bar build-up downstream of piers as might be expected; channel is a braided channel with lots of gravel always will have gravel bars pier are normal to roadway - almost aligned with stream



could round noses of piers - this is the only extension which will reduce but will not eliminate drift accumulation.

Any gravel bar build-up which can be contributed by the bridge will occur downstream - this was not observed at the bridge site. ~~the gravel bars upstream~~ Gravel bars tend to form in the downstream shadow of bridge piers. The gravel bars upstream are caused by channel geometry (alignment).

About the only way to contain the Guadalupe River would be to riprap both banks. This way the gravel bars could change and move with no effect on the bankline.