



Construction progress report prepared by William Rea Holway of Holway and Neuffer Consulting Engineers of Tulsa, OK, to the board members of the Grand River Dam Authority in Vinita, OK, dated February 3, 1939

**Museum of Tulsa History
Catalog Number: 1969.001.047**

Notice of Copyright:

Published and unpublished materials may be protected by Copyright Law (Title 17, U.S. Code). Any copies of published and unpublished materials provided by the Museum of Tulsa History are for research, scholarship, and study purposes only. Use of certain published materials and manuscripts is restricted by law, by reason of their origin, or by donor agreement. For the protection of its holdings, the Museum of Tulsa History also reserves the right to restrict the use of unprocessed materials, or books and documents of exceptional value and fragility. Use of any material is subject to the approval of the Curator.

Citing this Resource:

The preferred citation for this manuscript resource is the following:
Construction progress report prepared by William Rea Holway of Holway and Neuffer Consulting Engineers of Tulsa, OK, to the board members of the Grand River Dam Authority in Vinita, OK, dated February 3, 1939, [1969.001.047], William Rea Holway Collection, Museum of Tulsa History, Tulsa, OK.

Vinita, Oklahoma
February 3, 1939

RE: Grand River Project - Pensacola Dam
PWA Docket Okla 1097 - P - DS

ENGINEERS' PROGRESS REPORT #12

Board of Directors
Grand River Dam Authority
Vinita, Oklahoma

Gentlemen:

We herewith submit a report on the engineering and construction work on the Grand River Dam Project, reporting progress since our report of January 3, 1939:

(Contracts 1, 2, 3, and 4 completed.)

Contract 5. Hydraulic Turbines. Allis-Chalmers Mfg. Co., Contractor
The manufacture of the turbines is proceeding according to schedule. The manufacturing plant is being visited and progress inspected this week by A.S. Holway of Chicago, Ill. The payment schedule on this contract was approved by you on January 10, according to the terms of the contract. On January 17 you approved a Change Order Request which revised the shipping schedule and made some changes in the specifications, making a small saving in the cost.

Contract 6. Electric Generators. Westinghouse Mfg. Co., Contractor
Our last report from Westinghouse Company is dated January 6, although we requested a later one about ten days ago. At that date they report manufacture progress according to schedule. On January 19 the house unit was received on the site of the work and was unloaded and stored in the yards.

Contract 7. Dam and Power House. Massman Construction Co., Contractor
Excavation. The excavation in the switchyard is complete, except for the earth refill. The entire overhang on the west bluff has been shot off and work is well advanced on the rock excavation for the #1 Buttress which seats into the bluff. The Contractor is making rapid progress on pushing the cable tunnel into the west bluff. Rapid progress is also being made on the excavation of the pilot channels on both sides of the spillway channel and the placing of rip-rap on the west side opposite the convergence of the main and the east spillway channels. Rock excavation in the gravity spillway section is nearly completed and the trench rock drilling is well advanced. The #52 Buttress foundation is well advanced. Most of this section should be ready for concreting in ten days' time. The work on the highway at the east end of the dam and east of Disney has been resumed. In the arch section drilling is being carried on and the rock excavated as far east as Buttress #17. Good rock close to the surface has been found under Buttresses #14-#16. The rock excavation in the cofferdam is practically complete. Present progress on all excavation is satisfactory. Breaching methods used wherever required are very successful.

Aggregate. The aggregate storage plant is complete and the connection with the mixing plant has been made in the last few days. The Contractor has been using stone from the Anderson Quarry in the concreting and at the same time deliveries are being made from the Whitebird Quarry to the storage piles at the rate of five or six cars per day.

The rock plant is still not able to deliver anything like its rated capacity due to breakdowns of machinery. The Diesel engine driving the big crusher blew up completely. Two new engines are on their way to take its place. The first cars of rock arrived at the dam on January 21st and have been arriving intermittently ever since. We wrote to the Contractor on January 25th, informing him that the Authority would no longer pay the additional cost of producing aggregate and that the "early concreting" was at an end; but that we would require him to ship in aggregate from other sources in order that concreting might continue at an accelerated rate.

The sand plant has been operated and demonstrated that it can produce adequate quantities of sand but so far it has been unable to produce sand meeting our specifications. The Contractor has been ordered to install a classifier and in the meantime he must ship in sand and pay for the extra cement necessary to produce concrete of equal strength. This would amount to about \$50,000 on the whole job. We therefore expect quick action on the classifier.

Concreting. About 6,000 cubic yards total has been poured in the buttress and arch foundations in the cofferdam and the #8 Buttress walls have been started. The carpenter gangs are now working in three shifts. The drilling is progressing at a much more satisfactory rate and the excavation of the arch trenches is being successfully done by breaching methods.

Equipment. The Contractor has brought considerable new equipment in, including a steam locomotive and thirty 70-ton rock cars, a new Northwest crane, and other miscellaneous equipment.

General. Several conferences have been held and several letters written relative to speeding up the work under this contract. We are hoping that this will result in an acceleration of the whole program.

Contract 8. Grove Highway Bridge. S. E. Evans, Contractor

The Contractor's plant on this contract is complete for present requirements. The quarry is producing rock for Contracts 7, 8, and 10. The excavation for piers 5, 6, 7, 9, and 10 on the north side of the river has been completed. Footings for piers 5, 6, 7, 9, and 10 have been poured and the shafts of Pier 7 have been poured to a height of twenty-four and one-half (24½) feet and of Pier 9 to six (6) feet. Reinforcing steel and the steel-lined forms, also the girders for the north spans of the bridge, are on the site. Progress on this contract is very satisfactory. The Contractor has started excavation on pier #4, which is in the river. With adequate equipment and satisfactory organization on the job, the Contractor apparently will better his schedule.

Contract 9. Frisco Railroad Track Elevation. Leo Sanders, Contractor

The contract for this work was awarded on January 3rd to Leo Sanders at a contract price of \$496,228.50. The work order was issued on January 6th. Mr. W. D. Harkins was appointed Resident Engineer under Mr. Chandler. The Contractor has been erecting plant and has started excavation on Wyandotte Bridge, Piers #6 and #9.

Contract 10. K.O. & G. R.R. Relocation. M. E. Gilliox, Contractor

Work began on this contract on January 16th, clearing right-of-way. Grading work has also been progressing rapidly. Moran and Buckner of Muskogee, Oklahoma, were approved as subcontractors for the bridge and culvert work and the first concrete on the culverts was poured on January 25th. You approved on January 24th a Change Order Request for certain grade revisions, agreed to by the K.O. & G. R.R., which provide a saving in this contract of approximately \$6,000. Progress on this contract is satisfactory. Mr. R.W. Fox has been appointed Resident Engineer, under Mr. Chandler.

We attach hereto certain progress charts for Contracts 8, 10, and 7.

Contract 11-A. Clearing Lake Area. Dewey T. Ross, Contractor

Work on this contract began January 9th and approximately 300 acres of timber have been felled. The Contractor has been trying out different kinds of equipment and is progressing at a good rate of speed.

At your next meeting we propose to submit to you the contract documents on Contract 11-B.

Contract 12. Power House Auxiliaries and Switchyard, Brooker Engineering Company, Contractor

The work order for this contract was issued January 16th and the Contractor has thirty days in which to begin work. Representatives of this company have been on the site of the work and our engineering staff has held several conferences on equipment and erection problems. A list of equipment proposed to furnish was submitted on January 24th, according to schedule, and a request to let the concrete work, piping, etc., to the E. R. Brenner Company of Kalamazoo, Michigan, was approved by you. Mr. Brenner has been working on preliminaries for his work and has started the railroad siding.

Contract 13-A. Pensacola-Fort Gibson Transmission Line.

The contract documents for this 110,000-volt line were approved by you on January 17th and the bids are to be received on February 14th. Plans and specifications are going out to interested contractors. This line is to run down the Grand River valley toward Fort Gibson, a distance of fifty-six miles. The engineers' estimate of cost is \$301,510.00.

Future Contracts. We have been actively engaged in preparing future contracts, - other clearing work, other transmission lines, removal of ceme-teries, and the relocation of the Vinita and the Grove waterworks systems. Negotiations are still under way with the companies who own pipelines and other utilities which will have to be removed or reconditioned.

Surveying and Mapping. The work of staking the severance line around the lake has been completed from the dam to Wyandotte and is now progressing in the valleys of the Spring and the Neosho Rivers. Several surveys have been made for the Land Department to determine feasibility of constructing access roads.

Power Sales. We have assigned our Mr. Fell to full time work assisting in the matter of marketing power.

Miscellaneous. A revised schedule of contracts was submitted to the General Manager as of February 1, 1939.

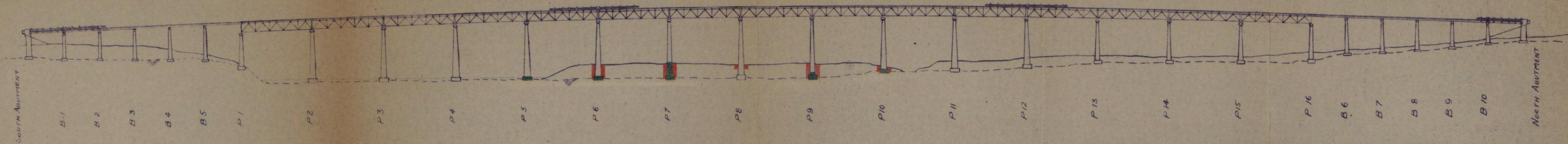
Final location was determined for a gauging station below the dam at a conference with Mr. Alexander of the U.S.G.S. this month, and plans are being prepared for the installation of this station.

Respectfully submitted,

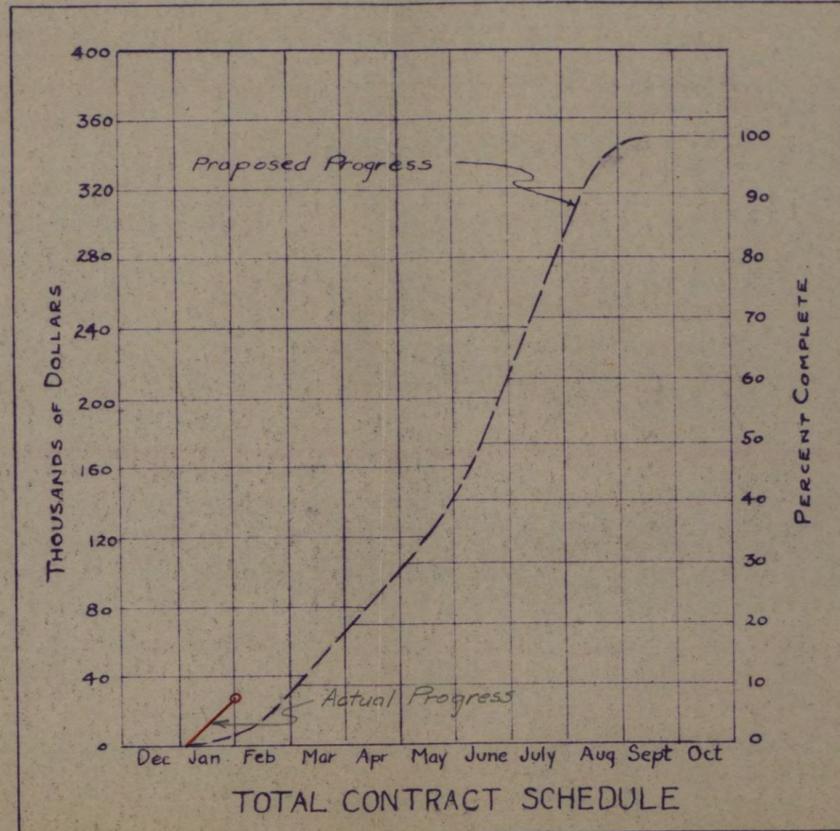
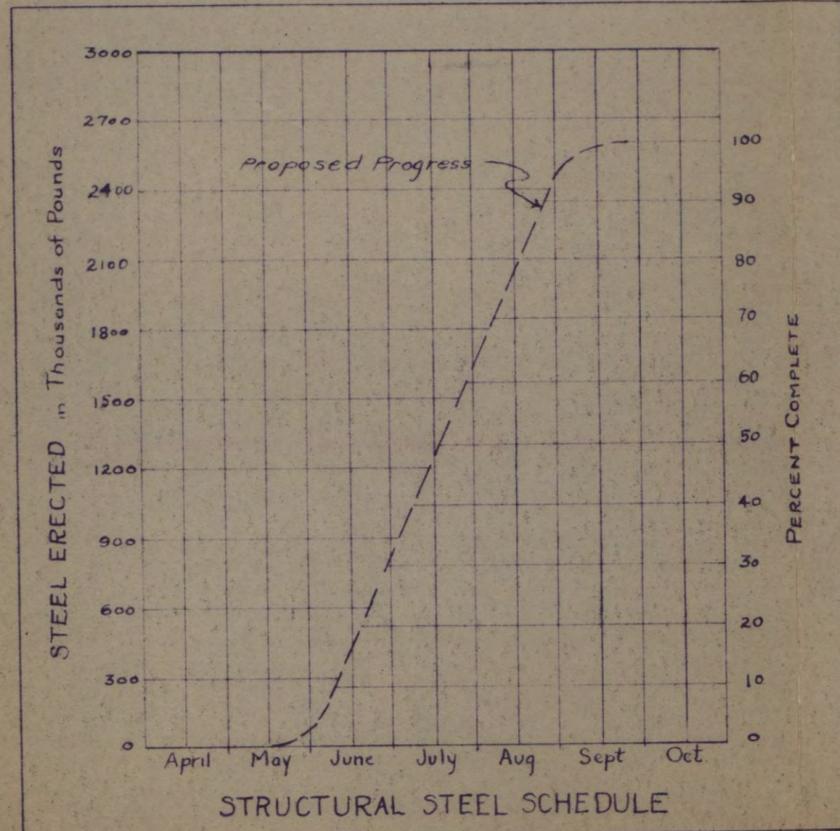
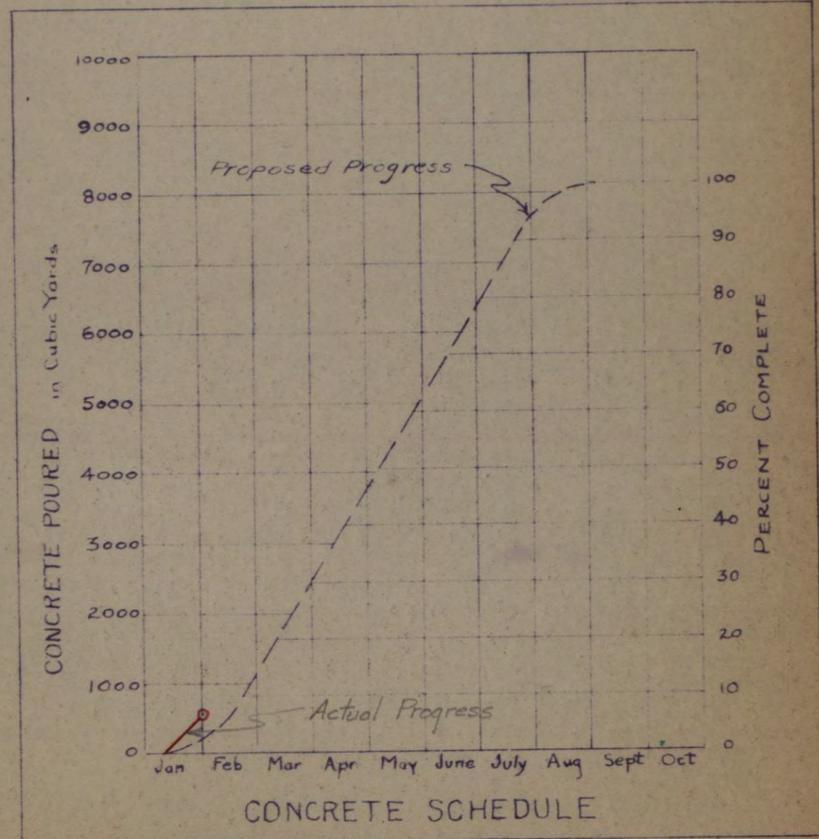
HOLWAY and NEUFFER, Engineers

By

W. R. Holway



UPSTREAM ELEVATION OF GROVE HIGHWAY BRIDGE
SCALE: 1 INCH = 100 FEET



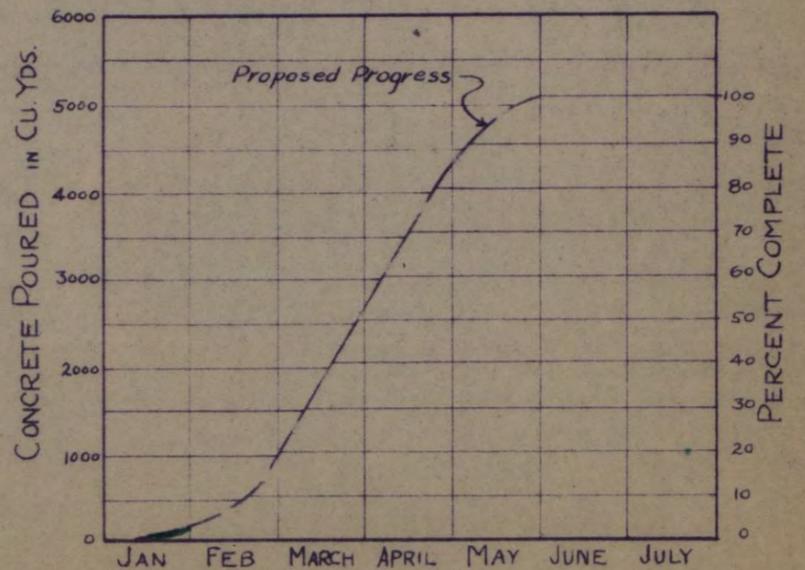
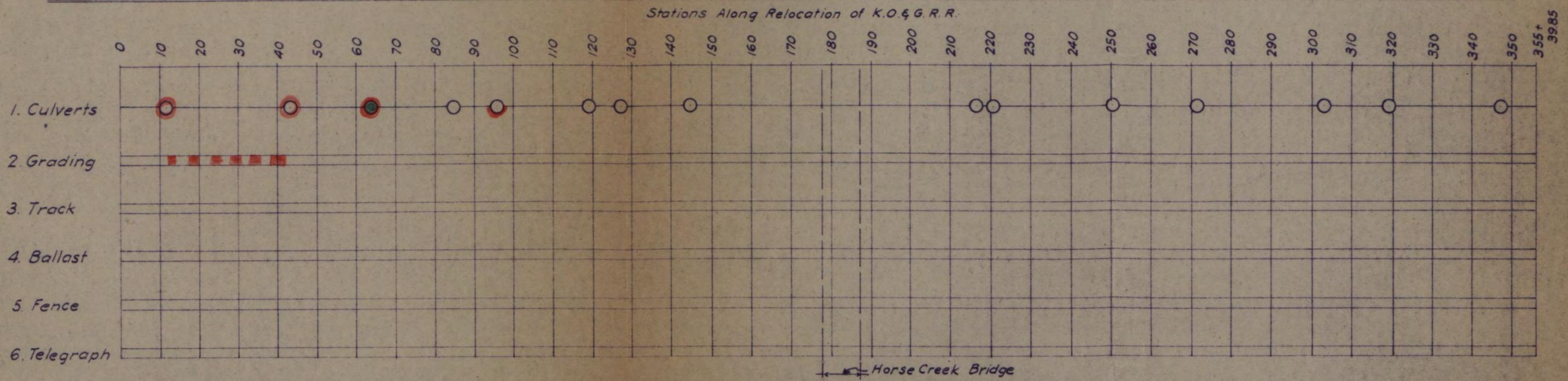
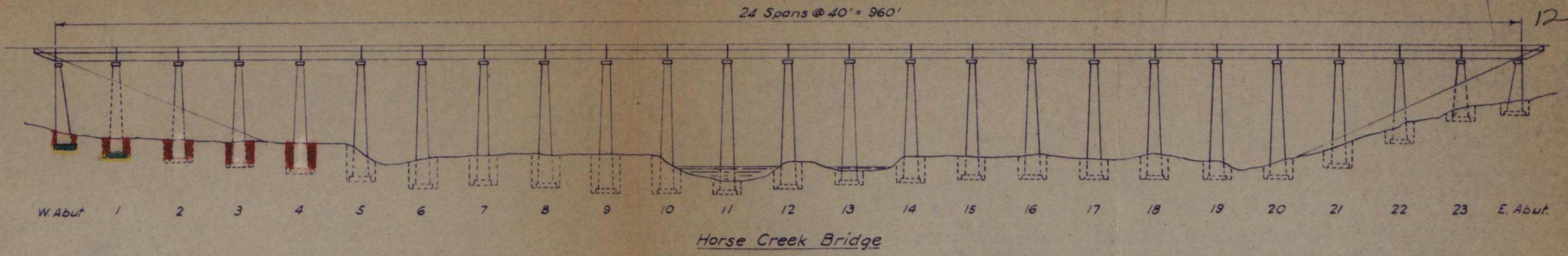
— LEGEND —

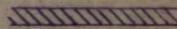
- Concrete poured during previous months
- Steel erected " " "
- Concrete poured during current month in Green
- Steel erected " " " in Brown

F. H. OAKLEY, RES. ENGR.

GRAND RIVER PROJECT
 PENSACOLA DAM
CONTRACT 8 - GROVE HIGHWAY BRIDGE
PROGRESS DIAGRAMS
 up to FEB. 1, 1937
 SCALE AS SHOWN DWG. NO. F1-10R0
 GRAND RIVER DAM AUTHORITY
 HOLWAY & NEUFFER - ENGINEERS

Drawn by *E. F. Bibble* DATE *12-26-36*
 Approved by *E. Ellender* *2-26-38*



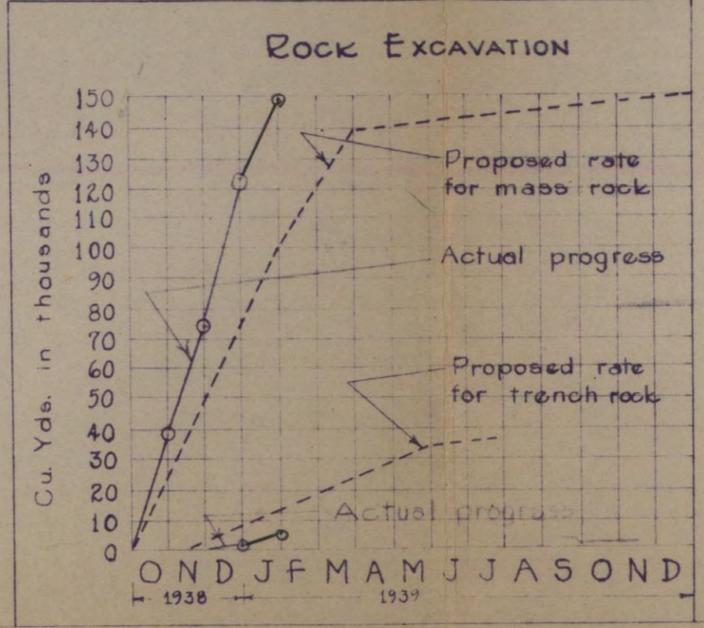
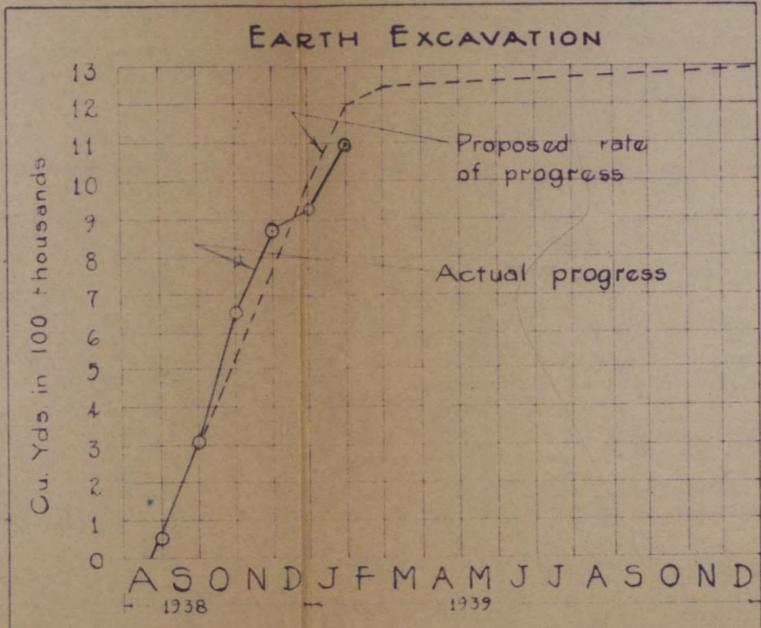
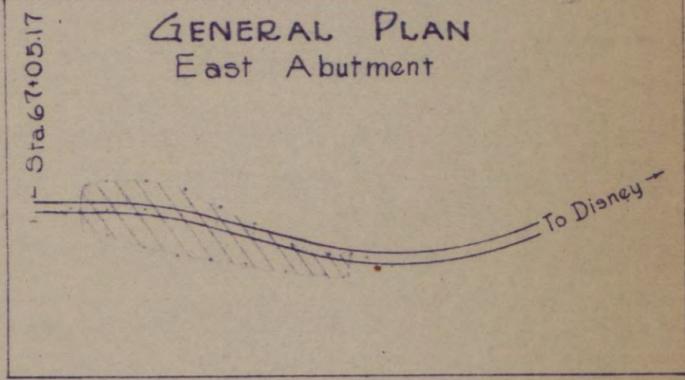
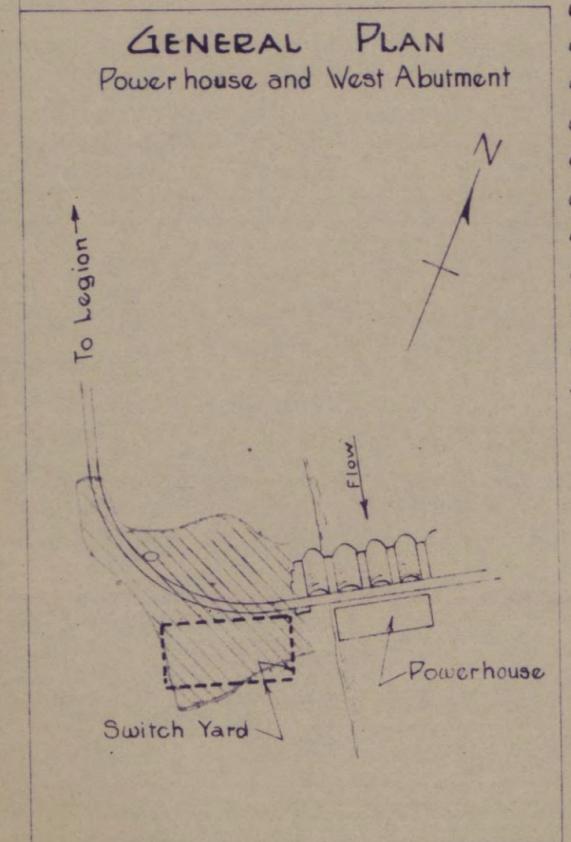
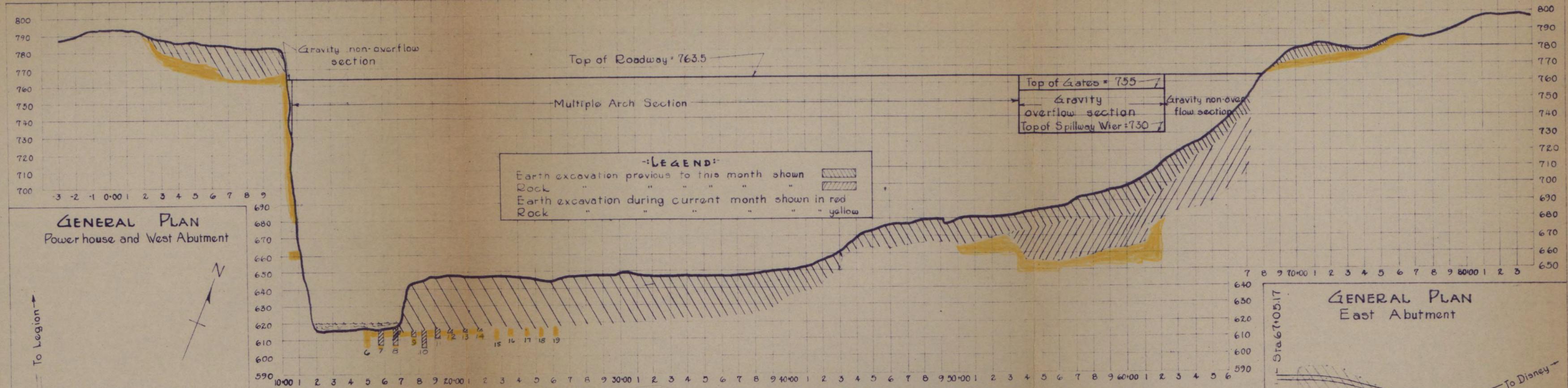
Note:
Work completed previously shown: 
Work completed this month shown by extent of color in chart.

R.W. Fox, Res. Engr.

GRAND RIVER PROJECT
PENSACOLA DAM
CONTRACT 10-KO&G. R.R. RELOCATION
PROGRESS DIAGRAMS
UP TO JAN. 31, 1939

SCALE: AS SHOWN DWG. NO. F1-17 R O
GRAND RIVER DAM AUTHORITY
HOLWAY & NEUFFER - ENGINEERS

DRAWN BY: WE HARRIS 1-10-39
APPROVED BY: *[Signature]* 1-23-39



Drawn by: *Chas. J. Nichols*
 Approved by: *F. L. Chandler*

GRAND RIVER PROJECT
 PENSACOLA DAM
 CONTRACT 7-DAM & POWER HOUSE
EXCAVATION - PROGRESS DIAGRAMS
 up to *JANUARY 31, 1939*

SCALE: As Shown DWG NO. F1-420
 GRAND RIVER DAM AUTHORITY
 HOLWAY & NEUFFER - ENGINEERS