



Northern Pacific Railway Company.
Engineering Department Records.

Copyright Notice:

This material may be protected by copyright law (U.S. Code, Title 17). Researchers are liable for any infringement. For more information, visit www.mnhs.org/copyright.

At Seattle, October 14, 1948

A i r m a i l

MR. W. W. JUDSON:

I am now transmitting to you plat and profile of line to serve MOSES LAKE, coming off of the Connell Northern line from a point east of WHEELER.

This is a modification of the B line which you saw in Mr. Derrig's office. It provides 1.2% grade with fairly light grading, and reasonable curvature for such a line.

The line Connell to Adrian is 1% grade; and the tonnage coming out of Moses Lake will not be such that it cannot be handled on a 1.2 grade. The B line had but 1.17% grade and has a long deep cut at the summit, involving heavy yardage; and this revised line, termed "Proposition D" provides a saving of approximately \$34,000. Furthermore, the B line crosses the township line at the summit in a cut, and it is expected that the township line road will soon become a heavy trunk highway, and it would be objectionable to have a dip at the railroad crossing, and it would suggest an overhead grade separation bridge. The D line will cross at grade.

Prints of this location are being furnished Mr. J. T. Moore, since he has been instructed to obtain options on right of way to the extent possible before the hearing, on October 21.

For your information I am attaching print of map dated September 22, 1948, which shows in red the original projected line; in yellow the B line, run out by Messrs. Tremaine and Maris; and in green the C line, which was projected by Mr. Derrig on the basis of the B line survey. I did not like the C line as it has 1.4% grade, the same as the A line. The revised D line will cost approximately the same as the B line; has better grade; and I believe better location at the Moses Lake end.

I am also attaching copy of estimate for the D line, total cost \$207,074, or approximately \$42000 per mile. This includes automatic crossing signal at the highway crossing, but I do not believe it necessary to provide it for the next few years.

The estimated cost for the B line was \$241,667, and for the C line \$208,989.

I believe that we have considerably improved the line by proposition D. The D line follows the B line for some distance off of the Connell Northern; and all propositions have the same alignment at Moses Lake.

I recommend approval of the D line.

bb/s
2x

att: map
estimate

BERNARD BLUM

At Seattle, October 14, 1948

A i r m a i l

MR. W. W. JUDSON:

I am now transmitting to you plat and profile of line to serve MOSES LAKE, coming off of the Connell Northern line from a point east of WHEELER.

This is a modification of the B line which you saw in Mr. Derrig's office. It provides 1.2% grade with fairly light grading, and reasonable curvature for such a line.

The line Connell to Adrian is 1% grade; and the tonnage coming out of Moses Lake will not be such that it cannot be handled on a 1.2 grade. The B line had but 1.17% grade and has a long deep cut at the summit, involving heavy yardage; and this revised line, termed "Proposition D" provides a saving of approximately \$34,000. Furthermore, the B line crosses the township line at the summit in a cut, and it is expected that the township line road will soon become a heavy trunk highway, and it would be objectionable to have a dip at the railroad crossing, and it would suggest an overhead grade separation bridge. The D line will cross at grade.

Prints of this location are being furnished Mr. J. T. Moore, since he has been instructed to obtain options on right of way to the extent possible before the hearing, on October 21.

For your information I am attaching print of map dated September 22, 1948, which shows in red the original projected line; in yellow the B line, run out by Messrs. Tremaine and Maris; and in green the C line, which was projected by Mr. Derrig on the basis of the B line survey. I did not like the C line as it has 1.4% grade, the same as the A line. The revised D line will cost approximately the same as the B line; has better grade; and I believe better location at the Moses Lake end.

I am also attaching copy of estimate for the D line, total cost \$207,074, or approximately \$42000 per mile. This includes automatic crossing signal at the highway crossing, but I do not believe it necessary to provide it for the next few years.

The estimated cost for the B Line was \$241,667; and for the C line \$208,989.

I believe that we have considerably improved the line by proposition D. The D line follows the B line for some distance off of the Connell Northern; and all propositions have the same alignment at Moses Lake.

I recommend approval of the D line.

bb/s
2x

att: map
estimate

Seattle, Wash.
Oct. 14, 1948

717-1

Seattle, Bus.Car #4

Moses Lake - Proposed spur

Mr. Bernard Blum:

In further reference to my letter of Sept. 27th submitting maps and estimates covering proposed spur track leading to Moses Lake and confirming my discussion with you in respect to the revision of alignment "C" as shown on that map with a view of reducing the curvature and at the same time eliminate the long cut as shown on the located line designated Proposition "B".

I am now attaching three prints of this revision designated line "D" dated this office, Oct. 14, 1948, together with three prints of the profile over this alignment using a 1.2 grade. There is also attached three copies of detail estimates for the cost of constructing lines "B", "C" and "D". A summary of this cost is as follows:

Proposition "B", located line, 1.17 grade.....	\$241,667
Proposition "C", 1.4 grade	\$208,989
Proposition "D", 1.2 grade	\$207,074

There is included in the estimate for line "B" an overhead bridge, as there is a cut of about 12 ft. involved on this highway crossing and in view of the future importance of the highway, a grade separation should be provided. On lines "C" and "D" the highway crossing will be at grade and signals are included in the estimate, although, it will not be necessary to install these signals until the highway is improved.

I have shown on the map in pencil our right-of-way requirements. I have shown a uniform width of 100 ft. from the connection leading towards Wheeler and across the borrow area in order that we will have sufficient room to obtain the borrow and provide a good berm along the grade. I have also shown 100 ft. of right of way on either side of the track in the fill, Sta. 190, in order that borrow material can be obtained in a similar manner.

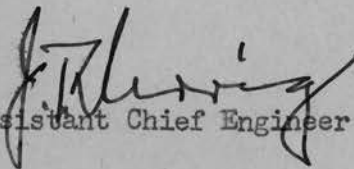
It is my recommendation that we accept the alignment shown for line "D" which is also along the lines of your suggestion and I will thank

Mr. Blum

-2-

Oct. 14, 1948

you to confirm if you approve with the least delay possible as it is Mr. Moore's desire to obtain option and incorporate the information on the map so that it will be available for the hearing at Spokane October 21st.


Assistant Chief Engineer

JTD:c

cc JFA
JTM
DHE
HMT

Seattle, Wash.
Oct. 14, 1948

717-1

Seattle, Bus.Car #4

Moses Lake - Proposed spur

Mr. Bernard Elum:

In further reference to my letter of Sept. 27th submitting maps and estimates covering proposed spur track leading to Moses Lake and confirming my discussion with you in respect to the revision of alignment "C" as shown on that map with a view of reducing the curvature and at the same time eliminate the long cut as shown on the located line designated Proposition "B".

I am now attaching three prints of this revision designated line "D" dated this office, Oct. 14, 1948, together with three prints of the profile over this alignment using a 1.2 grade. There is also attached three copies of detail estimates for the cost of constructing lines "B", "C" and "D". A summary of this cost is as follows:

Proposition "B", located line, 1.17 grade.....	\$241,667
Proposition "C", 1.4 grade	\$208,989
Proposition "D", 1.2 grade	\$237,074

There is included in the estimate for line "D" an overhead bridge, as there is a cut of about 12 ft. involved on this highway crossing and in view of the future importance of the highway, a grade separation should be provided. On lines "C" and "D" the highway crossing will be at grade and signals are included in the estimate, although, it will not be necessary to install these signals until the highway is improved.

I have shown on the map in pencil our right-of-way requirements. I have shown a uniform width of 100 ft. from the connection leading towards Wheeler and across the borrow area in order that we will have sufficient room to obtain the borrow and provide a good berm along the grade. I have also shown 100 ft. of right of way on either side of the track in the fill, Sta. 190, in order that borrow material can be obtained in a similar manner.

It is my recommendation that we accept the alignment shown for line "D" which is also along the lines of your suggestion and I will thank

Mr. Blum

-2-

Oct. 14, 1948

you to confirm if you approve with the least delay possible as it is Mr. Moore's desire to obtain option and incorporate the information on the map so that it will be available for the hearing at Spokane October 21st.

J. T. DERRIG

Assistant Chief Engineer

JTD:ro

cc JPA
JTH
DME
HMT

MOSES LAKE

ESTIMATE OF COST OF PROPOSED SPUR & TRACKAGE TO MOSES LAKE

				<u>B. LINE</u>			<u>G. LINE</u>		
				<u>QUANTITIES</u>	<u>LABOR</u>	<u>MATERIALS</u>	<u>QUANTITIES</u>	<u>LABOR</u>	<u>MATERIALS</u>
Right of Way inc. Acquisition						\$ 10,000			\$ 10,000
Grading	S.R.	@	1.25	1,500	\$ 1,875		500	\$ 625	
	L.R.	@	0.40	4,600	1,840		1,200	480	
	Com.	@	0.30	88,800	26,640		22,110	6,633	
Borrow	Com.	@	0.20	35,900	7,180		42,040	8,408	
	O.H.	@	0.01	900,000	9,000		200,000	2,000	
B. T. & C.	36" R.C.P.	@	3.50/5.50	338	1,183	1,859	352	1,232	1,936
	48" "	@	4/9.00	112	448	1,008	112	448	1,008
	Cu.Yd.Exc.Culverts		2.00	350	700		350	700	
Track Work-Main line spur comp. with ballast			\$ 2/3	21,813 L.F.	43,626	65,439	21,730 L.F.	43,460	65,190
Moses Lake Service Track " "			1.75/2.70	4,000	7,000	10,800	4,000	7,000	10,800
4 Switches Comp.	90#		250/920	2 switches	500	1,840		500	1,840
Fencing			12/ 05	38,000 L.F.	4,560	1,900	38,000 L.F.	4,560	1,900
Cattle Guards					500	500		500	500
Station Facilities					3,500	2,500		3,500	2,500
Tel. Line					1,500	1,500		1,500	1,500
Overhead Hy. Brg.Timber Complete									
	Treated Material	60,000			5,570	7,800		5,570	7,800
	Iron	2,400 lbs. @ .06				144			144
	Other Materials					350			350
Other Kings.					1,650	220		1,650	220
Contingencies						10,000			10,000
Engr. 7%					535			535	
					\$125,807	\$115,860		\$95,301	\$115,688
						125,807			95,301
						\$241,667			\$208,989

MAIN LINE
MOSES LAKE SERVICE TRACK

B
21,813 L.F.
4,000
25,813 = 4 Mi. 4693 L.F.

G
21,730 L.F.
4,000
25,730 = 4 Mi. 4610 L.F.

Off. Asst. Ch. Engr.
Seattle, Wash.
October 11, 1948

MOSES LAKE

ESTIMATE OF COST OF PROPOSED SPUR & TRackage TO MOSES LAKE

A LINE					B LINE					C LINE				
		QUANTITIES	LABOR	MATERIALS			QUANTITIES	LABOR	MATERIALS			QUANTITIES	LABOR	MATERIALS
Right of Way Inc. Acquisition				\$ 10,000					\$ 10,000					\$10,000
Grading	24,000 S.R.	@ 1.25	\$ 3,000		1,500	\$ 1,875				500	\$ 625			
	48,000 L.R.	@ 0.40	19,200		4,600	1,840				1,200	480			
	203,400 Com.	@ 0.30	61,020		88,800	26,640				22,110	6,633			
Borrow	100,000 Com.	@ 0.20	20,000		35,900	7,180				42,040	8,408			
	5 million O.H.	@ 0.01	50,000		900,000	9,000				200,000	2,000			
B.T. & C.	100 lin. ft. 36" R.O.P.	3.50/5.50	350	550	338	1,183	1,899			352	1,232	1,936		
	188 " " 48" "	4/9.00	752	1,692	112	448	1,008			112	448	1,008		
	300 cu. yd. Exc. Culverts	2.00	600		350	700				350	700			
Track Work - Main Line spur														
comp. with ballast	19,530 L.Ft.	\$ 2/3	39,060	58,590	21,813 L.F.	43,626	65,439			21,730 L.F.	43,460	65,190		
Connell Har. Siding " "	2,300	1.75/2.70	4,025	6,210										
Moses Lake Service Track " "	4,000 ft.	1.75/2.70	7,000	10,800	4,000	7,000	10,800			4,000	7,000	10,800		
4 Switches Comp. 90%		250/920	1,000	3,680	2 switches	500	1,840				500	1,840		
Fencing	39,000 L.Ft.	12/05	4,680	1,950	38,000 L.F.	4,560	1,900			38,000 L.F.	4,560	1,900		
Cattle Guards			500	500		500	50				500	500		
Station Facilities			3,500	2,500		3,500	2,500				3,500	2,500		
Tel. Line			1,500	1,500		1,500	1,500				1,500	1,500		
Overhead timber Hy. Brg. Complete														
Treated Material 60,000		\$70/130	4,200	7,800	Hy. Gr. King	1,370	30				1,370	350		
Brg. Iron 2,400 lbs.		.06		144	Rd. King Signal	1,170	2,330				1,170	2,330		
Changing 1500' of County Rd. Comp.			2,500		Other Kings	1,650	20				1,650	220		
Contingencies				10,000			10,40					10,000		
Engr. % of \$222,837			15,600			8,000					6,000			
			\$238,487	\$115,916		\$122,242	\$110,46				\$91,736	\$110,074		
				238,487			122,42					91,736		
				TOTAL - \$354,403			\$232.48					\$201,810		
MAIN LINE	19,530 Lin.Ft.				21,813 L.Ft.					21,730 L.Ft.				
MOSES LAKE SERVICE TRACK	4,000				4,000					4,000				
SIDING AT MITCHELL	2,300													
	25,830 = 4 Mi. 4710 L.Ft.				25,813 = 4 Mi. 4693 L.Ft.					25,730 = 4 Mi. 4610 L.Ft.				

NOTE:

O.H. Brg. on A = Labor \$ 4,200
 Material 7,800
 Iron 144
 \$12,144
 - Rd. King Signal Labor & Mat. 4,500
 \$ 7,644
 + Engineering % 535
 \$ 8,179
 Hy. Gr. King left as is to cover cost of additional fill required for O.H. King.

Office Asst. Chief Engineer
 Seattle, Washington
 October 11, 1948

MOSES LAKE

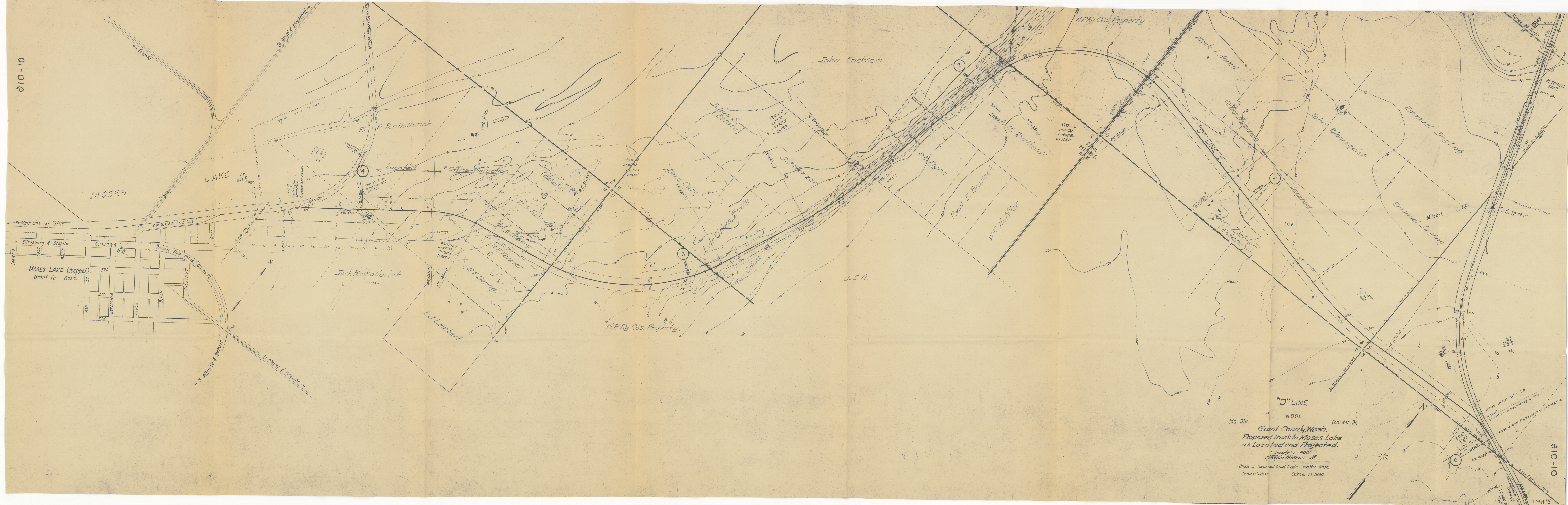
Comparison of Costs on A, B, or C Lines

Total Cost A = \$354,403 \$354,403
 B = 232,488 O.H. Brg. King = 8179 240,667
 C = 201,810 O.H. Brg. King = 8179 209,989

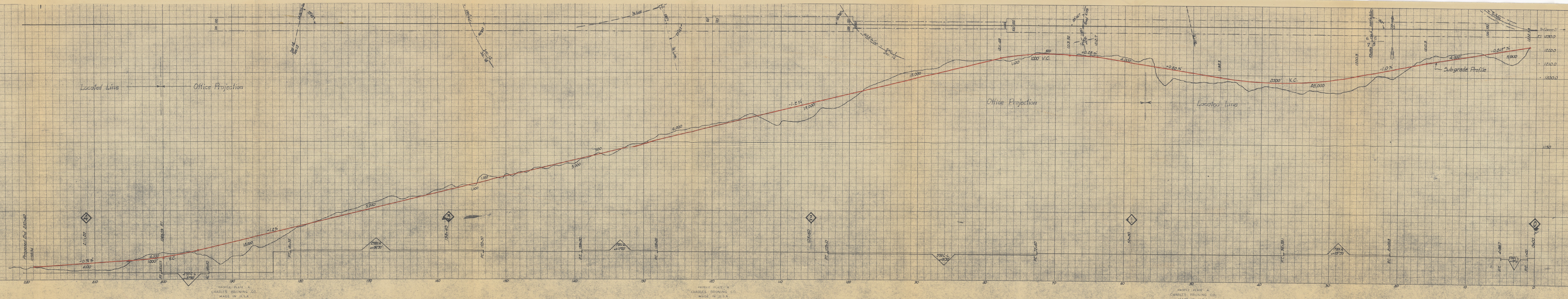
ESTIMATE OF COST OF PROPOSED SPUR & TRACKAGE TO NOSES LAKE

MOSE LAKE
Comparison of Cost on A, B, or C. Idnes

C = 201,810 + H. H. Brg. Xing = 8179 209,989



"D" LINE
 NDRY
 Ida. Div. Con. Nor. Br.
 Grant County, Wash.
 Proposed Track to Moses Lake
 as Located and Projected.
 Scale: 1"=400'
 Contour Interval: 10'
 Office of Assistant Chief Engineer—Seattle, Wash.
 Scale: 1"=400' October 14, 1943.



N.P. Ry.
 Idaho Div. Connell Northern Branch
 Proposed Track from M.P. 1.3900 to
 MODES LAKE, WASH.
 PROPOSITION "D" (Office Projection) & Field Location
 Scale: Vert. 1"=20'
 Hor. 1"=200'
 Office of Assistant Chief Eng'r, Seattle, Wash.
 October 14, 1948.

Idaho Div. - Connell Northern Branch
MITCHELL SPUR
Val. Sec. - Wash. #12

Estimate of cost proposed spur and trackage to Moses Lake, as per sketch marked "D", dated Office of Assistant Chief Engineer, Seattle, Washington, October 12, 1948.

"D" Line - Main Line - 22,040 track feet
Moses Lake service track - 4,000 track feet
Total - 26,040 = 4 miles and 4920 ft.

Maximum grade - 1.2 grade

ADD & BETTS

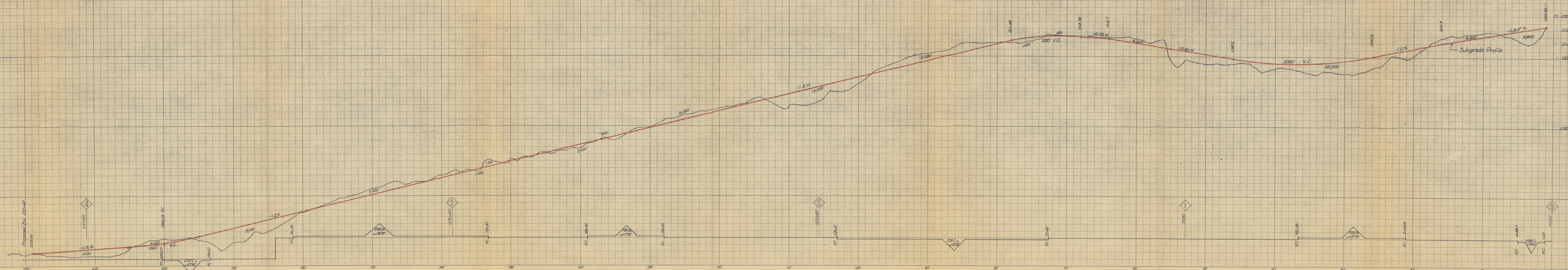
ADDITIONS

		Labor	Mat'l.
Right of way, including acquisition			10000
Grading - 400 C.Y. solid rock	1.25	500	
2000 C.Y. loose rock	.40	800	
37600 C.Y. com. excavation	.30	11280	
40100 C.Y. com. borrow	.20	8020	
200000 C.Y. overhaul	.01	2000	
352 Lin. ft. 36" RCP	3.50/5.50	1232	1936
112 Lin. ft. 48" RCP	4.00/9.00	448	1008
350 C.Y. excavation for culverts	\$2	700	
Track work - 22040 ft. track main spur			
complete with ballast	\$2/\$3	44080	66120
4000 ft. track service Moses Lake			
complete with ballast	\$1.75/2.70	7000	10800
2 switches complete 90#		500	1840
Fencing - 38000 lin. ft.	0.12/0.05	4560	1900
Cattle Guards, etc.		500	500
Station facilities		3500	2500
Telegraph line		1500	1500
Grade crossings		2200	350
Road crossing signal		1170	2330
Contingencies			10000
Engineering - 7%		6300	
		96290	110784
			96290

Total Est. Cost - - - - - \$207074

Office of District Engineer
Spokane, Washington
October 7, 1948

Revised Office of Asst. Chief Engineer
Seattle, Washington
October 14, 1948



N.P. Ry.
 Idaho Div. Connell Northern Branch
 Proposed Track from M.P. 41+300 to
 MOSES LAKE, WASH.
 PROPOSITION "D" (Paper Projection)
 Scale: Vert. 1"=20'
 Horz. 1"=400'
 Office of Assistant Chief Engr.-Seattle, Wash.
 October 14, 1913.

PROFILE PLATE A
 CHARLES BRUNING CO.
 MADE IN U.S.A.

PROFILE PLATE A
 CHARLES BRUNING CO.
 MADE IN U.S.A.

PROFILE PLATE A
 CHARLES BRUNING CO.
 MADE IN U.S.A.

PROFILE PLATE A
 CHARLES BRUNING CO.
 MADE IN U.S.A.

"D" LINE
NPRY
Proposed Track to Moses Lake
Grant Co. Washington.
Scale: 1"=400'

Office of Assistant Chief Engr.-Seattle, Wash.
October 14, 1943.

Scale: 1"=400'

01-10

01-10

MOSES LAKE

MOSES LAKE (Neppel)
Grant Co., Wash.

Primary State Hwy. 10 - US-10

CHERRY

ALDER

BIRCH

CHESTNUT

DATE ST.

4TH

5TH

6TH

7TH

8TH

9TH

10TH

11TH

12TH

13TH

14TH

15TH

16TH

17TH

18TH

19TH

20TH

21ST

22ND

23RD

24TH

25TH

26TH

27TH

28TH

29TH

30TH

31ST

32ND

33RD

34TH

35TH

36TH

37TH

38TH

39TH

40TH

41ST

42ND

43RD

44TH

45TH

46TH

47TH

48TH

49TH

50TH

51ST

52ND

53RD

54TH

55TH

56TH

57TH

58TH

59TH

60TH

61ST

62ND

63RD

64TH

65TH

66TH

67TH

68TH

69TH

70TH

71ST

72ND

73RD

74TH

75TH

76TH

77TH

78TH

79TH

80TH

81ST

82ND

83RD

84TH

85TH

86TH

87TH

88TH

89TH

90TH

91ST

92ND

93RD

94TH

95TH

96TH

97TH

98TH

99TH

100TH

101ST

102ND

103RD

104TH

105TH

106TH

107TH

108TH

109TH

110TH

111ST

112ND

113RD

114TH

115TH

116TH

117TH

118TH

119TH

120TH

121ST

122ND

123RD

124TH

125TH

126TH

127TH

128TH

129TH

130TH

131ST

132ND

133RD

134TH

135TH

136TH

137TH

138TH

139TH

140TH

141ST

142ND

143RD

144TH

145TH

146TH

147TH

148TH

149TH

150TH

151ST

152ND

153RD

154TH

155TH

156TH

157TH

158TH

159TH

160TH

161ST

162ND

163RD

164TH

165TH

166TH

167TH

168TH

169TH

170TH

171ST

172ND

173RD

174TH

175TH

176TH

177TH

178TH

179TH

180TH

181ST

182ND

183RD

184TH

185TH

186TH

187TH

188TH

189TH

190TH

191ST

192ND

193RD

194TH

195TH

196TH

197TH

198TH

199TH

200TH

201ST

202ND

203RD

204TH

205TH

206TH

207TH

208TH

209TH

210TH

211ST

212ND

213RD

214TH

215TH

216TH

217TH

218TH

219TH

220TH

221ST

222ND

223RD

224TH

225TH

226TH

227TH

228TH

229TH

230TH

231ST

232ND

233RD

234TH

235TH

236TH

237TH

238TH

239TH

240TH

241ST

242ND

243RD

244TH

245TH

246TH

247TH

248TH

249TH

250TH

251ST

252ND

253RD

254TH

255TH

256TH

257TH

258TH

259TH

260TH

261ST

262ND

263RD

264TH

265TH

266TH

267TH

268TH

269TH

270TH

271ST

272ND

273RD

274TH

275TH

276TH

277TH

278TH

279TH

280TH

281ST

282ND

283RD

284TH

285TH

286TH

287TH

288TH

289TH

290TH

291ST

292ND

293RD

294TH

295TH

296TH

297TH

298TH

299TH

300TH

301ST

302ND

303RD

304TH

305TH

306TH

307TH

308TH

309TH

310TH

311ST

312ND

313RD

314TH

315TH

316TH

317TH

318TH

319TH

320TH

321ST

322ND

323RD

324TH

325TH

326TH

327TH

328TH

329TH

330TH

331ST

332ND

333RD

334TH

335TH

336TH

337TH

338TH

339TH

340TH

341ST

342ND

343RD

344TH

345TH

346TH

347TH

348TH

349TH

350TH

351ST

352ND

353RD

354TH

355TH

356TH

357TH

358TH

359TH

360TH

361ST

362ND

363RD

364TH

365TH

366TH

367TH

368TH

369TH

370TH

371ST

372ND

373RD

374TH

375TH

376TH

377TH

378TH

379TH

380TH

381ST

382ND

383RD

384TH

385TH

386TH

387TH

388TH

389TH

390TH

391ST

392ND

393RD

394TH

395TH

396TH

397TH

398TH

399TH

400TH

401ST

402ND

403RD

404TH

405TH

406TH

407TH

At Seattle, October 13, 1948

A i r m a i l

MR. W. W. JUDSON:

Your J-111 concerning location for the proposed spur for MOSES LAKE:

The original projected line Mitchell spur to Moses Lake, prepared in Mr. Derrig's office and dated April 19, did not strike me as the best line, on account of the heavy cut involved and the grade of 1.4%. Subsequently, Mr. Maris, under Mr. Tremaine's direction, ran out an alternate line, which Mr. Derrig has termed line B and it has a grade of 1.17% compensated for curvature. That line comes off the Connell Northern from the south, rather than from the north at Mitchell Spur. In my opinion it is better to have the line come off from the south near Heeler, because future traffic will most likely move largely toward the main line at Connell or move directly east from Bassett Jct. through Schrag to Ritzville when and as we construct the Ritzville cutoff.

I understand that you saw the alternate location when you were on the Coast recently, and also the so-called C line which Mr. Derrig had projected in green on the location map. The green location is based on a 1.4% grade and of course the grading quantities for a 1.4% line are likely to be less than for a 1.17% line.

On the way west I discussed some of the features with Mr. Derrig with the idea that we can modify the B line to reduce the curvature and move it slightly downhill and get a 1.1% grade. We are now laying out that line on the location map and will recommend it to you as the definite location. Of course when it comes to constructing the line there can undoubtedly be improvements by a slight shifting, but that is something that almost always occurs.

Mr. Macfarlane called me the first thing this morning to discuss with him the proposed line, as a definite location map is required for the hearing on October 21. Mr. Derrig and I told him what we are doing, which appeared to satisfy him, and I stated that I would send the map on to you for approval. In the mean time Mr. Macfarlane desires Mr. Moore to obtain options as far as he can on the proposed line, as he wishes to have such testimony to present at the hearing, i.e. that the right of way, or a large part of it, has been acquired. We did ^{not} change the location of the proposed

line in the industrial area of Moses Lake.

I think we can get a $2^{\circ}30'$ curve where the line starts down the hill, in lieu of the 5° curve shown in proposition B.

While a 1.4% grade would not be too serious on such a spur, in view of the 1% grades on the Connell Northern I think it quite desirable to get a lower grade for various operating reasons, and feel reasonably certain that we can get a 1.2% line without excessive grading costs.

bb/s
2x

BERNARD BLUM

At Seattle, October 13, 1948

A i r m a i l

MR. W. W. JUDSON:

Your J-111 concerning location for the proposed spur for MOSES LAKE:

The original projected line Mitchell spur to Moses Lake, prepared in Mr. Derrig's office and dated April 19, did not strike me as the best line, on account of the heavy cut involved and the grade of 1.4%. Subsequently, Mr. Paris, under Mr. Tremaine's direction, ran out an alternate line, which Mr. Derrig has termed line B and it has a grade of 1.17% compensated for curvature. That line comes off the Connell Northern from the south, rather than from the north at Mitchell Spur. In my opinion it is better to have the line come off from the south near Heeler, because future traffic will most likely move largely toward the main line at Connell or move directly east from Bassett Jct. through Schrag to Ritzville when and as we construct the Ritzville cutoff.

I understand that you saw the alternate location when you were on the Coast recently, and also the so-called C line which Mr. Derrig had projected in green on the location map. The green location is based on a 1.4% grade and of course the grading quantities for a 1.4% line are likely to be less than for a 1.17% line.

On the way west I discussed some of the features with Mr. Derrig with the idea that we can modify the B line to reduce the curvature and move it slightly downhill and get a 1.17% grade. We are now laying out that line on the location map and will recommend it to you as the definite location. Of course when it comes to constructing the line there can undoubtedly be improvements by a slight shifting, but that is something that almost always occurs.

Mr. Macfarlane called me the first thing this morning to discuss with him the proposed line, as a definite location map is required for the hearing on October 21. Mr. Derrig and I told him what we are doing, which appeared to satisfy him, and I stated that I would send the map on to you for approval. In the mean time Mr. Macfarlane desires Mr. Moore to obtain options as far as he can on the proposed line, as he wishes to have such testimony to present at the hearing, i.e. that the right of way, or a large part of it, has been acquired. We did not change the location of the proposed

line in the industrial area of Moses Lake.

I think we can get a $2^{\circ}30'$ curve where the line starts down the hill, in lieu of the 5° curve shown in proposition B.

While a 1.4% grade would not be too serious on such a spur, in view of the 1% grades on the Connell Northern I think it quite desirable to get a lower grade for various operating reasons, and feel reasonably certain that we can get a 1.2% line without excessive grading costs.

bb/s
2x

BERNARD BLUM

A

At Seattle, October 13, 1948

A i r m a i l

MR. W. W. JUDSON:

Your J-111 concerning location for the proposed spur for MOSES LAKE:

The original projected line Mitchell spur to Moses Lake, prepared in Mr. Derrig's office and dated April 19, did not strike me as the best line, on account of the heavy cut involved and the grade of 1.4%. Subsequently, Mr. Maris, under Mr. Tremaine's direction, ran out an alternate line, which Mr. Derrig has termed line B and it has a grade of 1.17% compensated for curvature. That line comes off the Connell Northern from the south, rather than from the north at Mitchell Spur. In my opinion it is better to have the line come off from the south near "healer, because future traffic will most likely move largely toward the main line at Connell or move directly east from Bassett Jct. through Schrag to Ritzville when and as we construct the Ritzville cutoff.

I understand that you saw the alternate location when you were on the Coast recently, and also the so-called C line which Mr. Derrig had projected in green on the location map. The green location is based on a 1.4% grade and of course the grading quantities for a 1.4% line are likely to be less than for a 1.17% line.

On the way west I discussed some of the features with Mr. Derrig with the idea that we can modify the B line to reduce the curvature and move it slightly downhill and get a 1.1% grade. We are now laying out that line on the location map and will recommend it to you as the definite location. Of course when it comes to constructing the line there can undoubtedly be improvements by a slight shifting, but that is something that almost always occurs.

Mr. Macfarlane called me the first thing this morning to discuss with him the proposed line, as a definite location map is required for the hearing on October 21. Mr. Derrig and I told him what we are doing, which appeared to satisfy him, and I stated that I would send the map on to you for approval. In the mean time Mr. Macfarlane desires Mr. Moore to obtain options as far as he can on the proposed line, as he wishes to have such testimony to present at the hearing, i.e. that the right of way, or a large part of it, has been acquired. We did ^{not} change the location of the proposed

line in the industrial area of Moses Lake.

I think we can get a $2^{\circ}30'$ curve where the line starts down the hill, in lieu of the 5° curve shown in proposition B.

While a 1.4% grade would not be too serious on such a spur, in view of the 1% grades on the Connell Northern I think it quite desirable to get a lower grade for various operating reasons, and feel reasonably certain that we can get a 1.2% line without excessive grading costs.

bb/s
2x

St. Paul, Minn., Oct. 11, 1948.

Subject: Moses Lake Extension (2899 ICC)

Mr. Dean H. Eastman
Western Counsel
Seattle, Washington

Dear Sir:

Confirming our 'phone conversation last Saturday, I will leave Monday morning, arriving at Spokane Tuesday night the 19th, and you and the railroad people will meet me at Spokane on Wednesday to go over the testimony. It is understood that Ivers would decide whether to be in Spokane Wednesday or Thursday with the Moses Lake people. I believe you said also, that you would ask McKevitt to make a reservation at the Davenport for Edna and me Tuesday night the 19th.

Yours truly,

L B DAVENPORT

General Counsel

daPtb

cc-Mr. P. J. McKevitt
Mr. J. W. Haw
Mr. R. E. Smith
Mr. W. W. Judson
Mr. Bernard Blum

OFFICE OF
CHIEF ENGINEER
OCT
11
1948
DR. PAUL RY



N. P. 1386
12-24

TELEGRAM—BE BRIEF

TIME FILED

M.

Seattle, Oct. 11, 1948

W W Judson - St Paul

J-111 I had intended going over this with Derrig tomorrow. Macfarlane has just told me of I.C.C. hearing to be held October 21 and stated location should be decided on before that date. Have in mind sending you airmail my recommendations at once as Moore is holding up completion of options pending decision. B-115

Blum

TELEGRAM



TELEGRAM



CF251NP KN STPAUL 11 455P

B BLUM CAR 4 SEA

CAN YOU HAVE FINAL LOCATION OF MOSES LAKE LINE READY FOR CONSIDERATION
UPON YOUR RETURN SO THAT IT MAY BE DECIDED UPON BEFORE THE HEARING J-111

W W JUDSON.

SEATTLE
TELEGRAM OFFICE

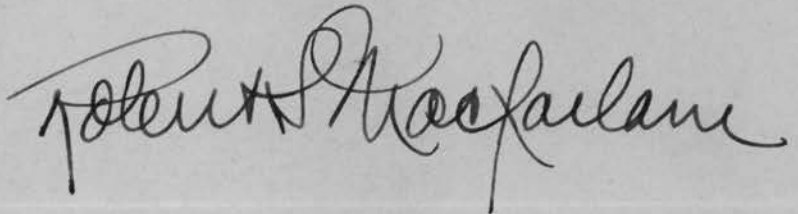
1948 OCT 11 PM 3 11

Seattle, Washington
October 9, 1948.

Mr. Bernard Blum:

The I.C.C. hearing on the Moses Lake extension is to be held on October 21st. I have seen a copy of Mr. Derrig's report to you, dated September 29th, showing two alternate routes.

I would like to discuss with you while you are in Seattle as a decision must be promptly reached as to which location we expect to follow. Mr. Moore, of the Industrial Department, is holding up the completion of the options pending a decision.

A handwritten signature in dark ink, appearing to read "Robert H. Hoofnagle". The signature is fluid and cursive, with a large, stylized "H" and "A".

cc-Mr. C. E. Denney
Mr. J. F. Alsip

Seattle, Wash.
Oct. 6, 1948

717-1

Moses Lake - Proposed spur

Mr. Bernard Blum:

In my report of September 29th covering proposed spur to Moses Lake I mentioned the fact that the Government had survey for proposed spillway passing under our track in the vicinity of Mitchell spur and that I would get detail plans from the Government to ascertain if this spillway, as located, would interfere with our location for the Moses Lake spur.

I am now attaching print of map, scale 1"=1 mile, which is shown in color brown the location of this spillway. You will note that it will not interfere with any of the three locations as run out on the ground or projected.

The spillway would, however, interfere with a long siding when and if constructed at Mitchell spur. This siding, when and if constructed, can be moved west to eliminate spanning the spillway.

I have forwarded the Government detail plans for this spillway and the location thereof to Mr. Ekberg for his information in checking the final plans for the spillway opening.


Assistant Chief Engineer

JTD:c

cc CEE

B

See 10774 taken on trip.

100-100000-100000

100-100000-100000

100-100000-100000

100-100000-100000

100-100000-100000

100-100000-100000

100-100000-100000

100-100000-100000

100-100000-100000

100-100000-100000

100-100000-100000
OCT 9 1940
100-100000-100000

Seattle, Wash.
Oct. 6, 1948

717-1

Moses Lake - Proposed spur

Mr. Bernard Blum:

In my report of September 29th covering proposed spur to Moses Lake I mentioned the fact that the Government had survey for proposed spillway passing under our track in the vicinity of Mitchell spur and that I would get detail plans from the Government to ascertain if this spillway, as located, would interfere with our location for the Moses Lake spur.

I am now attaching print of map, scale 1"-1 mile, which is shown in color brown the location of this spillway. You will note that it will not interfere with any of the three locations as run out on the ground or projected.

The spillway would, however, interfere with a long siding when and if constructed at Mitchell spur. This siding, when and if constructed, can be moved west to eliminate spanning the spillway.

I have forwarded the Government detail plans for this spillway and the location thereof to Mr. Ekberg for his information in checking the final plans for the spillway opening.

J. T. DERRIG

Assistant Chief Engineer

JTD:c

cc CES



H

Train 3, Yellowstone division,
October 4, 1948

MR. J. T. DERRIG:

Your letter of September 29 about proposed spur serving MOSES LAKE:

The location of the D, or yellow, line on the map of September 22 and the estimate of grading quantities show that the projection shown in red and termed the "A" location is too far north, where it involves a big cut.

It seemed rather obvious to me that it is not necessary to have a 5000' cut 30' deep. Your letter of June 14 showed an alternate location in green which of course is entirely too far south and not strictly in accordance with the suggestion that the line be located a little farther south or downhill between stations 75 and 140. Be that as it may, the field work that has been done shows that the original projection can be materially improved.

I am inclined to the view that it is better to come off of the Connell Northern from the south, rather than from Mitchell spur, assuming that there is no insurmountable right of way problem, for the reason that I can envision a continuation of the Schrag Branch westerly to the Columbia in the vicinity of Priest Rapids.

Will you let me know the results of Mr. Moore's investigation of the right of way costs as soon as you obtain it.

Mr. Tremaine has made somewhat detailed estimates, comparing the costs of lines A and B. I would like the same set-up for proposition C, which is a projected revision of line B. Of course following the contours closely results in decreased grading expense, but we must weigh all factors, including distance, alignment, and grading quantities, as well as the rate of grade. If the over-all costs of a 1.17% line are not substantially more than for a 1.4% line, then there are a number of advantages in having the flatter grade. I appreciate your argument that with a 1% grade on the Connell Northern a 1.4% grade on an industry spur is not serious; but operation on a lighter grade does have certain advantages.

I am not sending copy of this letter to the Operating or Executive departments, for we should first work out the best line before rendering our report to cover.

cc-Mr. H. M. Tremaine

2x

Seattle, Wash.
Sept. 29, 1948

717-1

A I R M A I L

Moses Lake - Proposed spur

Mr. Bernard Blum:

In compliance with Mr. Moore's request, I arranged to have Mr. Tremaine run out the location for Moses Lake spur, loaning him Mr. Maris for handling the field work utilizing part of Mr. Young's crew.

For your information I am now attaching copy of Mr. Tremaine's letter of September 18th together with copy of his estimates covering the two alternate locations which he ran out on the ground. It was my thought that in handling this location, Mr. Tremaine would adjust the alignment for the preliminary projection, obtaining the necessary support for the 1.4 grade incorporated on the original projection. This was not done and the comparison as between the two alternate locations does not reflect the best possible line for the 1.4 grade. I accordingly arranged to have Mr. Maris run out a projection showing the cheapest possible grade line for the 1.4 profile indicated on the original projection, adjusting the alignment to balance the quantities. This projected location is shown on map designated Proposition "C".

I am also attaching the following data covering each of the three locations:

- 1 print of map, scale 1"=1 mile, showing the three locations in question.
- 1 print of field survey showing lines "A" and "B" as actually ran out on the ground together with the alternate projected location designated line "C".
- 1 One print each of profiles, Lines "A", "B" and "C" respectively.

In respect to the merits of the three locations I advise as follows:

The alignment "A", as you know, was a projected location showing the possible shortest line to reach Moses Lake from our Connell Branch without taking into consideration the adjustment in alignment that might be accomplished in locating the line in the field; in other words, it is contemplated to run line "A" out as a preliminary line and locate a line from this base line as

Mr. Blum

-2-

Sept. 29, 1948

Mr. Williams did not desire to have any field engineering parties on the ground before options were obtained for the right of way, particularly in the Moses Lake area. There is no change in the location of the alignment in the townsite of Moses Lake on either of the three propositions.

Mr. Tremaine's location is obviously a betterment of the projected line and this location has certain advantages in that it reduces the grade line but does not get away from the objections of the long cut. It is possible that this location may encounter some right of way complications as it will require obtaining property including two small buildings near MP 3, one of which is known as the Eagles Hall, although the building is of little value.

The projected location line "C" will provide a very cheap profile and permit the handling of all the grading with caterpillar equipment at a very nominal cost. I do not think that a 1.4 grade should be objectionable for this spur as we have 1% grades on the Connell Branch and up to 10° curves on the Adrian Branch.

Mr. Judson looked over the maps in my office the other day and stated that he would like to have a comparison of cost of the 1.4 grade and also a comparison of the cost of providing a 1% grade. It will not be feasible to provide a 1% grade unless additional distance is developed and in order to run out such a survey on the ground would involve a considerable amount of work. Mr. Mariu ran out the projection for 1% grade and I am quoting herewith his comments:

"It is possible to develop a 1% grade along the side hill east of Moses Lake, but by using the terminal as proposed for lines A, B and C, sufficient distance cannot be developed to make a practical connection at Mitchell Spur unless a heavy 30 foot cut is made at the summit, which is not recommended. where is it?

"To overcome this it will be necessary to develop distance along the hill north toward Gloyd, which will allow a connection to be made between Nagel and Gloyd making a line about $7\frac{1}{2}$ miles long as against 4 miles for A, B or C."

If we are to further consider providing a 1% grade, this can also be accomplished by developing distance incorporating the alignment of projection "C" between MP 2 and 3 but that arrangement would require introducing

Mr. Blum

-3-

Sept. 29, 1948

excessive curvature. It is my recommendation that we consider the final location as projection "C" using 1.4 grade which arrangement would practically eliminate all heavy grading work as you will note from the profile attached.

I am forwarding copy of this letter to Mr. Alsip and also to Mr. Moore in order that I may obtain comments as to the desired location from an operating standpoint and also obtain preliminary estimate of the right of way cost as between Propositions "B" and "C".

For your ready information I am summarizing below the grading quantities involved for each of the three locations:

		Line "A" 1.4% First Line	Line "B" 1.17	Line "C" 1.4% supported line
Right of Way				
Excavation	cubic yards	253,800	94,900	23,810
Embankment	"	351,100	89,300	65,850
Borrow		100,000	35,900	42,040
Waste	cubic yards	2,700	41,500	
Overhaul		5,000,000	900,000	200,000
R. C. P.	Lin. Ft.	288	450	464
Curvature		179°19'	207°06'	260°16'
Length Main Spur		19,530'	21,813'	21,730'

Physical quantities shown for line "A" can, of course, be disregarded as no attempt was made to balance the quantities on 1.4 grade. The above quantities shown for Proposition "B" are determined from actual location on the ground. The quantities for Proposition "C" is a projection but I think the grading quantities are substantially correct. You will note from the above statement that the pay quantities for grading on Proposition "B" is 131,000 cu.yds. and for Proposition "C" 66,000 cu.yds.

Mr. Tremaine in his estimate used \$5 per lineal foot for track work; whereas, I have used a figure of \$7 per lineal foot. Detail for each basic estimate for 1000 ft. of track based on using 90# rail is also attached. In my basic estimate dated Sept. 21st I used Mesa gravel. If the gravel is eliminated the track structure will cost about \$6 per lin. ft.

note J.T.D. basis est - not used,

H.M.T. says
gravel is obtained
locally

Mr. Blum

Sept. 29, 1948

? on what alignment?
For your further information I had a short section of profile run out showing the alternate connection for the first mile leading from Mitchell spur as against the proposed connection leading towards Wheeler. This projection shows the grading quantities increased by 42,000 cu.yds. or an additional cost for grading including overhaul of \$9200. The additional length of track is 1300 ft. at \$7 per lin. ft. the cost would be \$9100; in other words the cost is substantially the same for either location. I think the connection developed by Mr. Tremaine, alignment "B", would be preferable as the business would move south towards Connell. This connection is also applicable to alignment "C".

Another factor has come up since the original projection was made in that the Government propose to place a spillway just east of Mitchell spur and there might be a possibility of that spillway interfering with the location. I have requested Mr. Tremaine to get a map from the Reclamation Dept. showing the location of the spillway as now surveyed on the ground in order to make certain that there will be no interference with the proposed location.

How about 1.4%
on location B. In conclusion it is my recommendation that we revise the location substantially along the alignment shown as Proposition "C" using 1.4 grade as proposed in my original proposition in order to minimize the amount of grading involved. If we follow out the projected alignment "C" I think the grading including haul complete in place can be handled for a price of somewhere between 20¢ and 25¢ per cubic yard. - same for anytime.

If we follow out the location designated alignment "B" as located using the 1.17 grade it might be possible to save a little money in grading cost by hauling the excavation beyond the ordinary limits of 1¢ overhaul and, on the other hand, this material is of a very sandy nature and the contractor will encounter difficulty in hauling on the sand embankment. The haul question is entirely eliminated using alignment "C" with a 1.4 grade as above indicated.

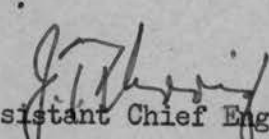
If you approve revising the alignment as recommended, I suggest that Mr. Maris be assigned to the work, giving him 3 or 4 men, say, for two weeks time as Mr. Tremaine's crew is very busy with current work. It is my thought, however, that final location might be delayed until after the hearing before the ICC as it would seem the details in connection with final location might well be delayed until after the hearing unless

Mr. Blum

-5-

Sept. 29, 1948

the right of way question makes it necessary that the location be completed at this time. If so, I should have your decision as to whether the 1.4 grade, alignment "C", should be run out or accept the location, alignment "B" as now submitted. As soon as I have comments from Mr. Moore in respect to the right of way question, I will advise you further.


Assistant Chief Engineer

JTD:c

cc RSM
JFA
JTM
HMT

SEP 30 1948
NY

12 8 13

Seattle, Wash.
Sept. 29, 1948

717-1

AIR MAIL

Moses Lake - Proposed spur

Mr. Bernard Blum:

In compliance with Mr. Moore's request, I arranged to have Mr. Tremaine run out the location for Moses Lake spur, loaning him Mr. Maris for handling the field work utilizing part of Mr. Young's crew.

For your information I am now attaching copy of Mr. Tremaine's letter of September 18th together with copy of his estimates covering the two alternate locations which he ran out on the ground. It was my thought that in handling this location, Mr. Tremaine would adjust the alignment for the preliminary projection, obtaining the necessary support for the 1.4 grade incorporated on the original projection. This was not done and the comparison as between the two alternate locations does not reflect the best possible line for the 1.4 grade. I accordingly arranged to have Mr. Maris run out a projection showing the cheapest possible grade line for the 1.4 profile indicated on the original projection, adjusting the alignment to balance the quantities. This projected location is shown on map designated Proposition "C".

I am also attaching the following data covering each of the three locations:

- 1 print of map, scale 1"=1 mile, showing the three locations in question.
- 1 print of field survey showing lines "A" and "B" as actually ran out on the ground together with the alternate projected location designated line "C".
- 1 One print each of profiles, Lines "A", "B" and "C" respectively.

In respect to the merits of the three locations I advise as follows:

The alignment "A", as you know, was a projected location showing the possible shortest line to reach Moses Lake from our Connell Branch without taking into consideration the adjustment in alignment that might be accomplished in locating the line in the field; in other words, it is contemplated to run line "A" out as a preliminary line and locate a line from this base line as

Mr. Williams did not desire to have any field engineering parties on the ground before options were obtained for the right of way, particularly in the Moses Lake area. There is no change in the location of the alignment in the townsite of Moses Lake on either of the three propositions.

Mr. Tremaine's location is obviously a betterment of the projected line and this location has certain advantages in that it reduces the grade line but does not get away from the objections of the long cut. It is possible that this location may encounter some right of way complications as it will require obtaining property including two small buildings near NP 3, one of which is known as the Eagles Hall, although the building is of little value.

The projected location line "C" will provide a very cheap profile and permit the handling of all the grading with caterpillar equipment at a very nominal cost. I do not think that a 1.4 grade should be objectionable for this spur as we have 15 grades on the Connell Branch and up to 10% curves on the Adrian Branch.

Mr. Judson looked over the maps in my office the other day and stated that he would like to have a comparison of cost of the 1.4 grade and also a comparison of the cost of providing a 1% grade. It will not be feasible to provide a 1% grade unless additional distance is developed and in order to run out such a survey on the ground would involve a considerable amount of work. Mr. Harris ran out the projection for 1% grade and I am quoting herewith his comments:

"It is possible to develop a 1% grade along the side hill east of Moses Lake, but by using the terminal as proposed for lines A, B and C, sufficient distance cannot be developed to make a practical connection at Mitchell Spur unless a heavy 30 foot cut is made at the summit, which is not recommended.

"To overcome this it will be necessary to develop distance along the hill north toward Gloyd, which will allow a connection to be made between Bagel and Gloyd making a line about 7½ miles long as against 4 miles for A, B or C."

If we are to further consider providing a 1% grade, this can also be accomplished by developing distance incorporating the alignment of projection "C" between NP 2 and 3 but that arrangement would require introducing

Mr. Blum

-3-

Sept. 29, 1948

excessive curvature. It is my recommendation that we consider the final location as projection "C" using 1.4 grade which arrangement would practically eliminate all heavy grading work as you will note from the profile attached.

I am forwarding copy of this letter to Mr. Alsip and also to Mr. Moore in order that I may obtain comments as to the desired location from an operating standpoint and also obtain preliminary estimate of the right of way cost as between Propositions "B" and "C".

For your ready information I am summarizing below the grading quantities involved for each of the three locations:

		Line "A" 1.4% First Line	Line "B" 1.17	Line "C" 1.4% supported line
Right of Way				
Excavation	cubic yards	253,800	94,900	23,810
Embankment	"	351,100	89,300	65,830
Borrow		100,000	35,900	42,040
Waste	cubic yards	2,700	41,500	
Overhaul		5,000,000	900,000	200,000
R. C. P.	Lin. Ft.	288	450	464
Curvature		179°19'	207°06'	260°16'
Length Main Spur		19,530'	21,813'	21,730'

Physical quantities shown for line "A" can, of course, be disregarded as no attempt was made to balance the quantities on 1.4 grade. The above quantities shown for Proposition "B" are determined from actual location on the ground. The quantities for Proposition "C" is a projection but I think the grading quantities are substantially correct. You will note from the above statement that the pay quantities for grading on Proposition "B" is 131,000 cu.yds. and for Proposition "C" 66,000 cu.yds.

Mr. Tremaine in his estimate used \$5 per lineal foot for track work; whereas, I have used a figure of \$7 per lineal foot. Detail for each basic estimate for 1000 ft. of track based on using 90# rail is also attached. In my basic estimate dated Sept. 21st I used Mesa gravel. If the gravel is eliminated the track structure will cost about \$6 per lin. ft.

Mr. Blum

-4-

Sept. 29, 1948

For your further information I had a short section of profile run out showing the alternate connection for the first mile leading from Mitchell spur as against the proposed connection leading towards Wheeler. This projection shows the grading quantities increased by 42,000 cu.yds. or an additional cost for grading including overhaul of \$9200. The additional length of track is 1300 ft. at \$7 per lin. ft. the cost would be \$9100; in other words the cost is substantially the same for either location. I think the connection developed by Mr. Tremaine, alignment "B", would be preferable as the business would move south towards Connell. This connection is also applicable to alignment "C".

Another factor has come up since the original projection was made in that the Government propose to place a spillway just east of Mitchell spur and there might be a possibility of that spillway interfering with the location. I have requested Mr. Tremaine to get a map from the Reclamation Dept. showing the location of the spillway as now surveyed on the ground in order to make certain that there will be no interference with the proposed location.

In conclusion it is my recommendation that we revise the location substantially along the alignment shown as Proposition "C" using 1.4 grade as proposed in my original proposition in order to minimize the amount of grading involved. If we follow out the projected alignment "C" I think the grading including haul complete in place can be handled for a price of somewhere between 20¢ and 25¢ per cubic yard.

If we follow out the location designated alignment "B" as located using the 1.17 grade it might be possible to save a little money in grading cost by hauling the excavation beyond the ordinary limits of 1½ over-haul and, on the other hand, this material is of a very sandy nature and the contractor will encounter difficulty in hauling on the sand embankment. The haul question is entirely eliminated using alignment "C" with a 1.4 grade as above indicated.

If you approve revising the alignment as recommended, I suggest that Mr. Maris be assigned to the work, giving him 3 or 4 men, say, for two weeks time as Mr. Tremaine's crew is very busy with current work. It is my thought, however, that final location might be delayed until after the hearing before the ICC as it would seem the details in connection with final location might well be delayed until after the hearing unless

Mr. Blum

-5-

Sept. 29, 1948

the right of way question makes it necessary that the location be completed at this time. If so, I should have your decision as to whether the 1.4 grade, alignment "C", should be run out or accept the location, alignment "B" as now submitted. As soon as I have comments from Mr. Moore in respect to the right of way question, I will advise you further.

J. T. DERRIG

Assistant Chief Engineer

JTD:c

cc RSE
JPA
JTM
HNT

MOSES LAKE SPUR

Lay, line, surface, ballast and dress 1000 ft. 90// track using 3rd class rail and 6 inches of gravel ballast -

On basis of Contract work - Ry. Co. furnish metal and ties

Rail - 3/90// - 2000 LF	26.93 G T	a 20.00	539
Angle bars - 62 pr. SH	a 1.94		120
Track bolts and nutlocks	248		52
Tie plates 7-1/2 x 10-3/4	1090	a .41	447
Track spikes 8 kegs	a \$10.88		87
Rail anchors SH 400	a .20		80
Store expense			55
Gravel ballast - delivered at site	475 cu.yds. (2230 per mile)		
a 2.00			950
Lay, surface, line and dress 1000 ft.	a 2.50		2500
Cross ties #4 treated-basis 18 ties to 33 ft. rail	454	a 2.60	1420
10% for miscellaneous expense			<u>625</u>
Estimated cost per 1000 ft.			6875

Office of District Engineer
Seattle, Washington
September 21, 1948

OFFICE OF
ASST. CHIEF ENGR.
SEP 20 1948
N. P. RY. CO.
SEATTLE, WASH.

Spokane, Washington
September 18, 1948

Mr. J. T. Derrig:

Moses Lake - Proposed Spur

Please be referred to yours of August 7th handing me prints of projected survey, being maps and profiles, dated your office April 19, 1948, with the request that this location be run out and at the same time see what can be done in the way of bettering that conception.

We have run out this projection on the ground and, because of the inequalities between the exact location and the projection, have platted the actual location on map attached, dated this office September 18th and shown as "First Line - Red". Also attached hereto, in quadruplicate, is the actual profile, dated this office September 1st.

To build this line will cost an estimated \$354,403. This compares with the estimated \$223,300 given in your letter of November 12, 1945 to Mr. Blum. The difference is due to the fact that the grading on the 1945 estimate was greatly underestimated, as well as the provision for highway crossings and changes, drainage and also because the grade line of the fill between these Stations 0 and 40 was laid too low, overlooking the fact that the high water record for the Connell Northern at Bridge 42 was 2-1/2 feet over the top of tie.

The yardage for this estimate is, as you have requested, based on 40-foot width for cuts with 1:1 slopes and 1-3/4:1 slopes for the embankments. With the depth of the large cut running around 30-feet, it is quite probable that free formations in the sand and gravel encountered will ultimately dictate the 1-1/2:1 slope for at least a large portion of its length, with the consequent substantial overrun in the yardage estimated. This line has the maximum gradient of 1.4%, which we have adjusted for curvature.

A review of the ground disclosed that this line could be very substantially bettered both as to costs and gradient.

This alternate line is also shown on the map attached hereto as the "A" line, or in yellow, and profile is attached hereto in quadruplicate, dated this office September 18th.

Mr. J. T. Derrig - 2

September 18, 1948

You will note this line has a maximum gradient of 1.17%, compensated for curvature.

To build this "A" line will cost an estimated \$232,488, using the same prices and standards as employed in the first location quoted.

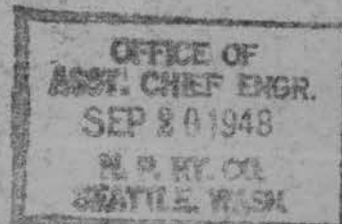
You will note that the "A" line, while it has 2,283-feet longer main track than the original projection, actually requires 17 less feet of all track because this "A" line will not require the construction of the siding originally suggested because it is figured a more advantageous service can be rendered directly from Wheeler.

This "A" line also, with its maximum 15-foot cut, will permit the use of 1:1 slopes with the 40-foot base because its depth will probably not encounter the ground formations whose final attainment of a 1-1/2:1 slope would prove objectionable.

You will note the estimate of cost of the "A" line, being \$232,488, is only \$9,188 estimated cost larger than the original estimate you gave Mr. Blum in your letter of November 12, 1945. The "A" line is the result of my personal review of the ground, and I recommend its adoption as being the better proposition.

District Engineer

HMT:lcb
Encs.



Proposition A.

Idaho Div. - Connell Northern Branch
MITCHELL SPUR
Val. Sec. - Wash. #12

Estimate of cost proposed spur and trackage to Moses Lake, as
per sketch dated Office of District Engineer, Spokane, Washington,
September 18, 1948.

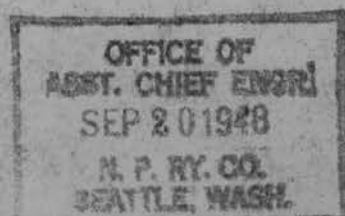
Main Line	19530 L.F.
Moses Lake Service Track	4000 "
Siding at Mitchell	2300 "
	25830 = 4 Miles, 4710 L.F.

ADD & DEDUCTIONS ADDITIONS

		Labor	Mat'l.
Right of Way, incl. acquisition			10000
Grading - 2,400 c.y. solid rock	1.25	3000	
48,000 c.y. loose rock	.40	19200	
203,400 c.y. com. excav.	.30	61020	
100,000 c.y. com. borrow	.20	20000	
5 million c.y. overhaul	.01	50000	
BT&C - 100 lin. ft. 36" RCP @3.50/5.50		350	550
188 lin. ft. 48" RCP @4/9		752	1692
500 c.y. excavation for pipes @2		600	
Track work - 19530 ft. track main spur, complete with ballast @2/3		39060	58530
2300 ft. siding CN line, complete with ballast @1.75/2.70		4025	6210
4000 ft. service track Moses Lake, complete with ballast		7000	10800
4 switches complete - 90#, complete @250/920		1000	3680
Fencing - 59,000 ft. fencing	.12/.05	4680	1950
Cattle guards, etc.		500	500
Station Facilities		3500	2500
Telegraph line		1500	1500
Overhead timber highway bridge, complete in place, 60,000 treated material, @70/130		4200	7800
Bridge iron 2400 lbs.	.06		144
Changing 1500' of County road complete		2500	
Contingencies			10000
Engineering, 7% of \$222,887		15600	
		238487	115916
			238487

Total Est. Cost - - - - - \$354,403

Office of District Engineer
Spokane, Washington
September 18, 1948



Proposition B

Idaho Div. - Connell Northern Branch
MITCHELL SPUR
Val. Sec. - Wash. #12

Estimate of cost of proposed spur and trackage to Moses Lake, as per sketch marked "A", dated Office of District Engineer, Spokane, Washington, September 18, 1948

"B" "A" Line - Main Line 21813 L.F.
Moses Lake Service Track 4000 "
Total 25813 = 4 Mi. - 4693 L.F.

ADD & BETTS ADDITIONS

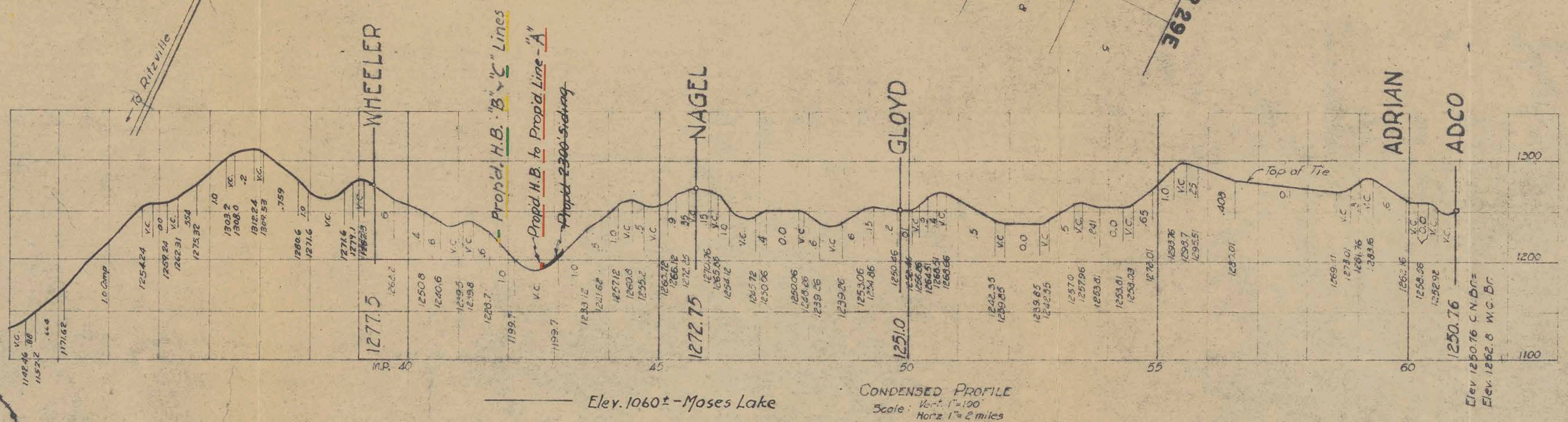
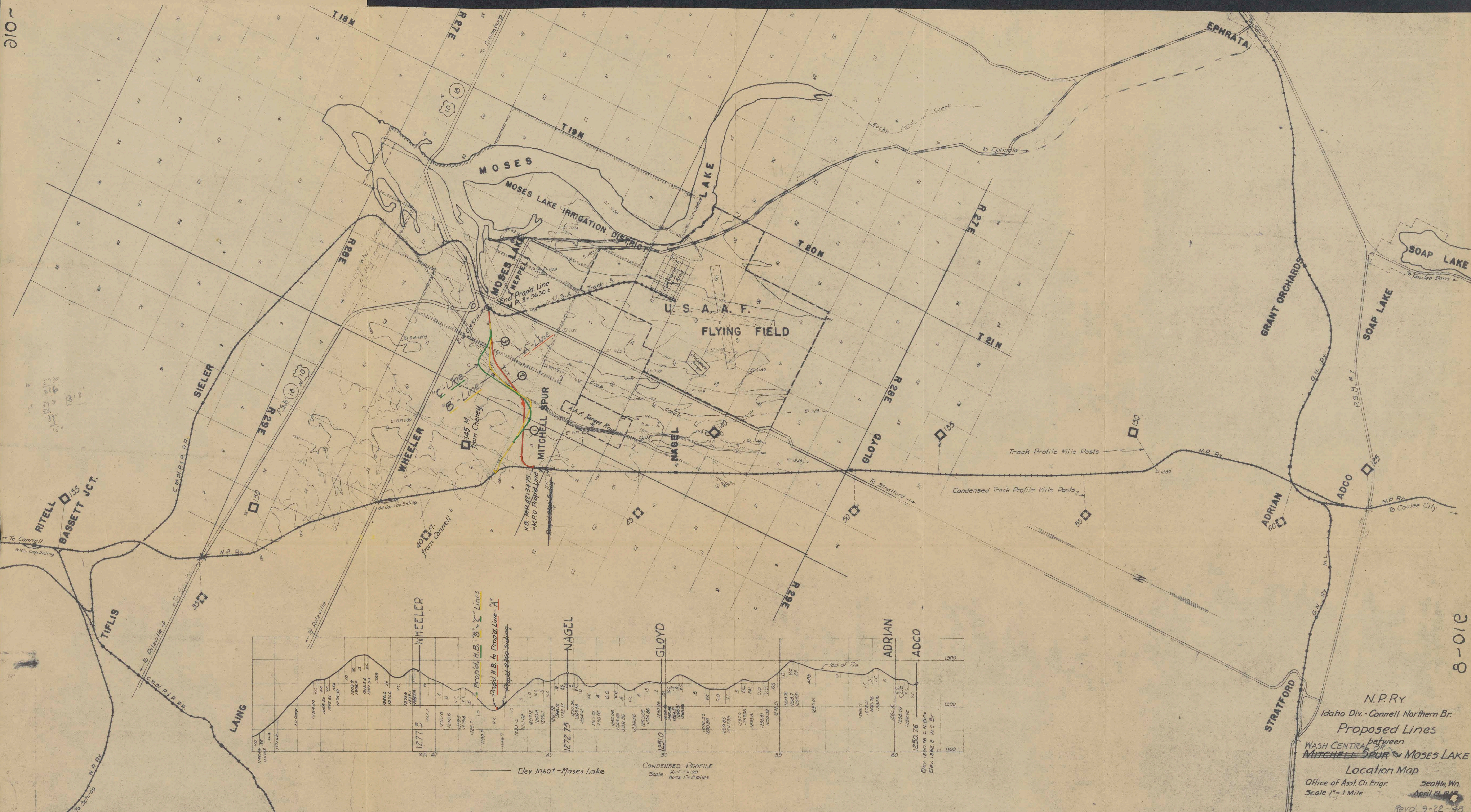
	Labor	Mat'l.
Right of way, including acquisition		10000
Grading - 1500 c.y. solid rock at \$1.25	1875	
4800 c.y. loose rock .40	1940	
88800 c.y. com. excav. .30	26640	
35900 c.y. com. borrow .20	7180	
900000 c.y. overhaul .01	9000	
338 l.f. 36" RCP 3.50/5.50	1183	1859
112 l.f. 48" RCP 4.00/9.00	448	1008
350 c.y. excav. for culvert 2.00	700	
Track Work - 21813 ft. track main spur complete with ballast 2.00/3.00	43626	65439
4000 ft. service track Moses Lake, complete with ballast 1.75/2.70	7000	10300
2 switches complete 90' @250/950	500	1840
Fencing 38000 l.f. 0.12/0.5	4560	1900
Cattle guards, etc.	500	500
Station facilities	3500	2500
Telegraph line	1500	1500
Grade crossing Station 77	1370	350
Road crossing Signal Sta. 77	1170	2330
Three other crossings	1650	220
Contingencies		10000
Engineering, 7%	8000	
	122242	110246
		122242

Total Est. Cost - - - - - \$232488

Office of District Engineer
Spokane, Washington
September 18, 1948

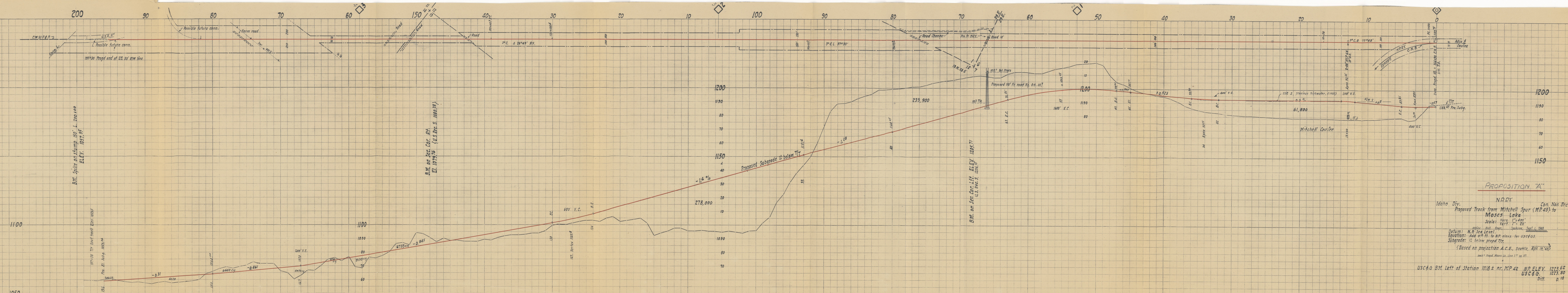


8-010



N.P.R.R.
Idaho Div. - Connell Northern Br.
Proposed Lines
between
WASH. CENTRAL & MOSES LAKE
MITCHELL SPUR
Location Map
Office of Asst. Ch. Engr. Seattle, Wn.
Scale 1" = 1 mile April 19, 1946
Rev'd. 9-22-48

8-010



PROPOSITION "A"

NDR

Idaho Div. Con. Nor. Brcl
Proposed Track from Mitchell Spur (MP. 43) to

Moses Lake

Scale: Horz. 1" = 400'

Loc	Dist	Elev	Spokane
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
29	29	29	29
30	30	30	30
31	31	31	31
32	32	32	32
33	33	33	33
34	34	34	34
35	35	35	35
36	36	36	36
37	37	37	37
38	38	38	38
39	39	39	39
40	40	40	40
41	41	41	41
42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45
46	46	46	46
47	47	47	47
48	48	48	48
49	49	49	49
50	50	50	50
51	51	51	51
52	52	52	52
53	53	53	53
54	54	54	54
55	55	55	55
56	56	56	56
57	57	57	57
58	58	58	58
59	59	59	59
60	60	60	60
61	61	61	61
62	62	62	62
63	63	63	63
64	64	64	64
65	65	65	65
66	66	66	66
67	67	67	67
68	68	68	68
69	69	69	69
70	70	70	70
71	71	71	71
72	72	72	72
73	73	73	73
74	74	74	74
75	75	75	75
76	76	76	76
77	77	77	77
78	78	78	78
79	79	79	79
80	80	80	80
81	81	81	81
82	82	82	82
83	83	83	83
84	84	84	84
85	85	85	85
86	86	86	86
87	87	87	87
88	88	88	88
89	89	89	89
90	90	90	90
91	91	91	91
92	92	92	92
93	93	93	93
94	94	94	94
95	95	95	95
96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

Datum: N.P. Sea Level.

Equation: Add 0.18 ft. to NP elevs. for USCGS.

Subgrade: 12" below prop'd $\frac{1}{4}$ ".

{ Based on projection A.C.E., Seattle, Apr. 19

Book "Grand Masses 1/4 Line 1" pg 27

1891. 1892. 1893. 1894. 1895. 1896. 1897. 1898. 1899. 1900. 1901. 1902. 1903. 1904. 1905. 1906. 1907. 1908. 1909. 1910. 1911. 1912. 1913. 1914. 1915. 1916. 1917. 1918. 1919. 1920. 1921. 1922. 1923. 1924. 1925. 1926. 1927. 1928. 1929. 1930. 1931. 1932. 1933. 1934. 1935. 1936. 1937. 1938. 1939. 1940. 1941. 1942. 1943. 1944. 1945. 1946. 1947. 1948. 1949. 1950. 1951. 1952. 1953. 1954. 1955. 1956. 1957. 1958. 1959. 1960. 1961. 1962. 1963. 1964. 1965. 1966. 1967. 1968. 1969. 1970. 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1994. 1995. 1996. 1997. 1998. 1999. 2000. 2001. 2002. 2003. 2004. 2005. 2006. 2007. 2008. 2009. 2010. 2011. 2012. 2013. 2014. 2015. 2016. 2017. 2018. 2019. 2020. 2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030. 2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040. 2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050. 2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060. 2061. 2062. 2063. 2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073. 2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083. 2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093. 2094. 2095. 2096. 2097. 2098. 2099. 2100. 2101. 2102. 2103. 2104. 2105. 2106. 2107. 2108. 2109. 2110. 2111. 2112. 2113. 2114. 2115. 2116. 2117. 2118. 2119. 2120. 2121. 2122. 2123. 2124. 2125. 2126. 2127. 2128. 2129. 2130. 2131. 2132. 2133. 2134. 2135. 2136. 2137. 2138. 2139. 2140. 2141. 2142. 2143. 2144. 2145. 2146. 2147. 2148. 2149. 2150. 2151. 2152. 2153. 2154. 2155. 2156. 2157. 2158. 2159. 2160. 2161. 2162. 2163. 2164. 2165. 2166. 2167. 2168. 2169. 2170. 2171. 2172. 2173. 2174. 2175. 2176. 2177. 2178. 2179. 2180. 2181. 2182. 2183. 2184. 2185. 2186. 2187. 2188. 2189. 2190. 2191. 2192. 2193. 2194. 2195. 2196. 2197. 2198. 2199. 2200. 2201. 2202. 2203. 2204. 2205. 2206. 2207. 2208. 2209. 2210. 2211. 2212. 2213. 2214. 2215. 2216. 2217. 2218. 2219. 2220. 2221. 2222. 2223. 2224. 2225. 2226. 2227. 2228. 2229. 2230. 2231. 2232. 2233. 2234. 2235. 2236. 2237. 2238. 2239. 2240. 2241. 2242. 2243. 2244. 2245. 2246. 2247. 2248. 2249. 2250. 2251. 2252. 2253. 2254. 2255. 2256. 2257. 2258. 2259. 2260. 2261. 2262. 2263. 2264. 2265. 2266. 2267. 2268. 2269. 2270. 2271. 2272. 2273. 2274. 2275. 2276. 2277. 2278. 2279. 2280. 2281. 2282. 2283. 2284. 2285. 2286. 2287. 2288. 2289. 2290. 2291. 2292. 2293. 2294. 2295. 2296. 2297. 2298. 2299. 2300. 2301. 2302. 2303. 2304. 2305. 2306. 2307. 2308. 2309. 2310. 2311. 2312. 2313. 2314. 2315. 2316. 2317. 2318. 2319. 2320. 2321. 2322. 2323. 2324. 2325. 2326. 2327. 2328. 2329. 2330. 2331. 2332. 2333. 2334. 2335. 2336. 2337. 2338. 2339. 2340. 2341. 2342. 2343. 2344. 2345. 2346. 2347. 2348. 2349. 2350. 2351. 2352. 2353. 2354. 2355. 2356. 2357. 2358. 2359. 2360. 2361. 2362. 2363. 2364. 2365. 2366. 2367. 2368. 2369. 2370. 2371. 2372. 2373. 2374. 2375. 2376. 2377. 2378. 2379. 2380. 2381. 2382. 2383. 2384. 2385. 2386. 2387. 2388. 2389. 2390. 2391. 2392. 2393. 2394. 2395. 2396. 2397. 2398. 2399. 2400. 2401. 2402. 2403. 2404. 2405. 2406. 2407. 2408. 2409. 2410. 2411. 2412. 2413. 2414. 2415. 2416. 2417. 2418. 2419. 2420. 2421. 2422. 2423. 2424. 2425. 2426. 2427. 2428. 2429. 2430. 2431. 2432. 2433. 2434. 2435. 2436. 2437. 2438. 2439. 2440. 2441. 2442. 2443. 2444. 2445. 2446. 2447. 2448. 2449. 2450. 2451. 2452. 2453. 2454. 2455. 2456. 2457. 2458. 2459. 2460. 2461. 2462. 2463. 2464. 2465. 2466. 2467. 2468. 2469. 2470. 2471. 2472. 2473. 2474. 2475. 2476. 2477. 2478. 2479. 2480. 2481. 2482. 2483. 2484. 2485. 2486. 2487. 2488. 2489. 2490. 2491. 2492. 2493. 2494. 2495. 2496. 2497. 2498. 2499. 2500. 2501. 2502. 2503. 2504. 2505. 2506. 2507. 2508. 2509. 2510. 2511. 2512. 2513. 2514. 2515. 2516. 2517. 2518. 2519. 2520. 2521. 2522. 2523. 2524. 2525. 2526. 2527. 2528. 2529. 2530. 2531. 2532. 2533. 2534. 2535. 2536. 2537. 2538. 2539. 2540. 2541. 2542. 2543. 2544. 2545. 2546. 2547. 2548. 2549. 2550. 2551. 2552. 2553. 2554. 2555. 2556. 2557. 2558. 2559. 2560. 2561. 2562. 2563. 2564. 2565. 2566. 2567. 2568. 2569. 2570. 2571. 2572. 25

1410 1 - MB - 110 1 - 1

7 1018 ± AF. MP 42 NP ELE

USC & G.