1933 ?

REPORT NO 1

MEMORANDUM OF STUDY CONTEMPLATING USE OF
WINTON MULTIPLE UNIT PASSENGER EQUIPMENT
SAN FRANCISCO - SAN JOSE COMMUTE SERVICE

- - - - - -

Engineering study of San Francisco - San Jose commute service by Winton Engine Corporation proposes use of 9 multiple units to handle 30 suburban trains, representing 62% of the total suburban mileage. They have selected trains operating during off-peak periods which, generally speaking, now consist of two coaches and, in a few cases, head end car.

With the use of 9 multiple units at a purchase price of $1,170,000, they estimate an annual saving over our present operation of $271,103.91, or 23.17% on the investment.

Their proposal contemplates lengthening from 8 to 19 minutes schedules of Trains 108, 112, 114, 124, 105, 141, 149, 155, which handle mail and express; also Trains 106, 180, 184, 156, 159, which make maximum number station stops. They also propose shortening a number of our trains from 5 to 10 minutes.

Their report contemplates 55,987 miles per unit per annum, which is an average of 153 miles per unit per day.

Proposal No 1

The need for change on the Peninsula is two-fold:

(1) to improve the service by shortening schedules (without regard to change of service or adding mileage), and

(2) to reduce operating expenses.

The Committee has studied all phases of the matter and by careful pooling of the equipment finds that 32 trains can be operated with 9 of these multiple units (or two trains more than proposed by Winton Engine Corporation), representing 68.6% of the suburban mileage instead of 62% which Winton Engine Corporation proposed. In doing this, helper unit has been arranged for all trains handling express so that it would not be necessary to lengthen schedules of those trains, except No 106, which will require lengthening 9 minutes, and No 149 which will require lengthening 10 minutes. It is probable that schedule of No 106 could be lengthened 9 minutes without great harm. Train 149's schedule could possibly be lengthened 10 minutes without serious objection, although it is the only service on the Peninsula between departures from San Jose at 1 35 PM and 3 40 PM.

Attached are three statements under Proposal No 1 showing how trains handled by 9 multiple units will have to be pooled in order to produce results indicated:

Pool 1 - Rosters multiple units and steam service Mondays - Fridays, inclusive

Pool 2 - Rosters multiple units and steam service Saturdays, only

Pool 3 - Rosters six multiple units without supplemental steam service, Sundays, only

Proposal No 2

In view of -

(1) this proposal contemplating use of new style facility on thePeninsula and it not having been demonstrated how successfully it will handle our service;

(2) it being our desire to not lengthen the schedules of any trains; and

(3) our desire to keep initial investment as low as possible,

the Committee has made a further study to ascertain the maximum amount of train service that could be handled with a minimum number of multiple units.

By careful rostering -

5 multiple units will handle 22 trains on week days
18 trains on Saturdays
all service on Sundays,

or 49.2% of the total mileage of the Peninsula service. This study contemplates the use of steam service on Peninsula trains handling mail and express. Under this scheme, average mileage per day of multiple unit is 203 as against 157 under plan of operating 9 multiple units, and as against 153 under plan of Winton Engine Corporation.

Schedules of trains will be affected as follows:

Lengthened	Shortened
105 - 15"	107 - 5"
106 - 9"	135 - 5"
156 - 5"	137 - 10"
159 - 8"	120 - 6"
	126 - 5"
	130 - 12"
	136 - 10"

The lengthening of the schedules of the trains shown above is based on train making the 24 stops and flags called for in timetable. However, the maximum number of stops trains actually make are 20, which, no doubt, would permit of a schedule lengthened less than the time shown. So far as Trains 105, 106, 159 are concerned, it would not be harmful to lengthen present schedules a few minutes.

Specific attention is directed to the fact that these multiple units are powered with 600 horsepower engines capable of making 75 miles per hour with trains making fewer stops; however, this does not give sufficient power to maintain present schedules of trains making practically all stops. Furthermore, if trailers in the way of coaches or baggage cars are added to these trains, they will not be able to make schedules at present maintained by steam operation. For this reason, Proposal 2 plans that all trains carrying mail and express be operated by steam. A further consideration is that occasionally it is necessary for mid-day trains to pick up extra equipment and on such occasions trains could not perform on schedule. Generally speaking, the cars would be very desirable on the mid-day trains for business now moving.

Attached are statements under Proposal No 2 showing how trains handled by 5 multiple units will have to be pooled in order to produce results indicated:

Pool 1 - Rosters multiple units and steam service Mondays - Fridays, inclusive

Pool 2 - Rosters multiple units and steam service Saturdays, only

Pool 3 - Rosters five multiple units without supplemental steam service, Sundays, only

Attached also are statements showing the consists of all trains under the various proposals, showing present consists and number of multiple units required, etc.

Also attached is statement showing the yearly train mileage as between steam and multiple unit operation -

(1) on basis of operating 9 multiple units, and

(2) on basis of operating 5 multiple units.

It will be noted that under the 9 multiple unit operation, average annual mileage per unit will be 57,286, average daily mileage 157, whereas under the plan of operating 5 multiple units, average mileage per unit per annum will be 73,924, or 203 per day.

Particular attention is called to the fact that under Proposal No 2, with use of 5 multiple units, it is possible to take care of 49.2% of the Peninsula mileage while under the Winton plan of using 9 units they propose taking care of 62% of the mileage. Committee's further study of the 9 units contemplates 68.6%.

It is Committee's thought that initial investment of $650,000 for 5 units would seem more logical than an investment of $1,170,000 for 9 units, until the complete suitability of these units is demonstrated.

The Committee has not studied the financial estimates of the Winton Engine Corporation report, nor the financial savings to be achieved under Proposals 1 and 2, the data for this study having been turned over to Bureau of Transportation Research. However, it appears, if the figures in the Winton Engine Corporation report are accurate, that the greatest return on the investment would be under our Proposal No 2.

(Signed) L. P. Hopkins
L. C. Ioas
L. Kocher

SAN FRANCISCO - SAN JOSE COMMUTE SERVICE

YEARLY STEAM - MULTIPLE UNIT TRAIN MILEAGE

ON BASIS OPERATING 9 M U, AS PER PROPOSAL 1

Present

Pool	Frequency	Steam	M U	Total
Present	Monday to Sunday, inclusive	751,200	-	751,200

Proposed

No 1	Monday to Friday, inclusive	197,612	381,203	578,815
No 2	Saturday only	38,017	70,725	108,742
No 3	Sundays and Holidays	_____	63,643	63,643
	Total	235,629	515,571	751,200
		31.4%	68.6%	100.0%

Average annual mileage per M U..... 57,286
Average daily mileage per M U..... 157

ON BASIS OPERATING 5 M U, AS PER PROPOSAL 2

Present

Pool	Frequency	Steam	M U	Total
Present	Monday to Sunday, inclusive	751,200	-	751,200

Proposed

No 1	Monday to Friday, inclusive	316,738	262,077	578,815
No 2	Saturday only	64,844	43,898	108,742
No 3	Sundays and Holidays	_____	63,643	63,643
	Total	381,582	369,618	751,200
		50.8%	49.2%	100.0%

Average annual mileage per M U..... 73,924
Average daily mileage per M U..... 203