Great Salt Lake City

January 2d, 1855

E. J Steptoe

Lieut Col. U. S. A.

Dear Sir.

Your note of present date is received after <my> thanks for solicitude regarding my health, which by the way, I am happy to report is much improved.

I proceed to discuss the business part of your letter, in relation to the contemplated improvement of the road south, by the appropriation for that purpose made by Congress.

I should have been pleased with an opportunity to have conversed with you upon the subject, and should been able to have done so to day had the weather permitted you to have come out.

It appears obvious that whatever is expended should be laid out in good and permanent improvement upon the best line of travel that can be selected upon the route, indicated in the law; whether it will take the route through the entire distance or not, as doubtless upon a fair representation of the facts in the case being made to the proper department, this may be followed up by further necessary appropriations to complete the proposed improvement. The state road south from this city to the point of the Mountain at what is called the dug way around said point is probably the best and most direct that can be selected, and needs an expenditure through the low lands and across the two Cottonwoods of a few Thousand dollars. The dug way will also require an expense of about fifteen hundred dollars. From this point to the Provo there is no obstruction or difficulty but may be obviated by the labor of the inhabitants. Across this stream, there should be a good substantial Bridge. This stream, like many others which flow rapidly from the Mountains, owing to the vast amount of wash, consisting of gravel, sand and other rubbish deposited, raises the banks and bed of the stream above the level lands and bottoms below.

This, when the floods come causes frequent changes in the channel and great liability to undermine piers and abutments. Two bridges have been carried away from across this stream, each time being undermined by the swelling currant, being also obstructed by piers in the stream hindering the free passage of the flood, wood, &c.

My mind in regard to Bridging the streams is that a good Lattice suspension Bridge, or, what is called Rennington patent, spaning the entire stream, is far preferable to any other. The abutment should be laid with great care by excavating on each side to the depth of six or eight feet, and then planting spurs three or four feet still below, and floor over the base of the abutments with timber, and then build up with square timber, with frequent ties, and good solid masonery. The stream should also be directed and confined within its <banks> ~~limits~~ by a good and sufficient levy extending across the bottom to the high ground, but this ought also to be done by the inhabitants. A Bridge with buts or piers in the stream could be built for less money, but for the reasons above suggested, it would be more liable to undermine and wash away as well as endanger the bridge and changeing the channel by obstructing the free passage of flood, wood, &c.

From this point there would be nothing to do until you come to the Spanish Fork which has a tolerable good bridge, but needs a dike to keep the water when high in the channel. We pass now to Chicken Creek, which though small, is impassible without a bridge; two or three hundred dollars will be all that is required at this place. At the Savier there is a bridge which though light is insured to stand five years, at the end which period, or sooner, if this should be carried away would need to be replaced by a better one. From this point to Fillmore over the two passes and across Lake Valley there should, in my opinion, be expended about two thousand dollars, fixing the road, removing obstructions &c. And from Fillmore over the west range of mountains to Line Creek, the road needs but little labor save what may be accomplished by the inhabitants, probably a thousand dollars would be sufficient to expend. Pike Creek is a small stream but quite necessarily that it should be bridged as it is a bad place to cross. From thence to the Beaver stream the road should be straightened, after raising the mountain, and these streams, some four or five in number, where the road should cross, should be bridged; it is also probable that there may be a ravine to cross which will require considerable work, and from this place to Parowan, over the west pass, a few hundred dollars expense would make a passable road. The inhabitants will probably make the remainder to the Muddy, or Coal Creek, where another lattice suspension Bridge should span the stream although it is not as bad as the Provo, the banks and bottom being better where the road crosses.

I presume that the foregoing mentioned improvements will consume the appropriations and I think that further improvements should be based upon additional appropriations if made at all, and upon view and location of the road.

I hope that you will pardon me for the freedom with which I have made my suggestions having when with you experienced reciprocal freedom in co and suggestions in relation to public matters.

Since I learned of the appropriation being made I have at different times considered upon its expenditures to the best advantage, and from my knowledge of the route, having passed over it several times, I am clearly of the opinion that the foregoing contains suggestions for its most judicious application

I have the honor to be

Most Respectfully