

THE CONSTRUCTION OF THE SMYRNA-AIDIN RAILWAY

IN SOUTHWESTERN ANATOLIA, 1856-1866:

A DISCUSSION

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By the middle of the nineteenth century railroads had become a primary means of transportation and commerce and it had become increasingly important for each nation to secure a railroad network in order to assure its economic development. At that time the British<sup>1</sup> were the leading exponents in railroad construction technology. The Ottoman Empire which had been a leading power in the Middle East for centuries, had fallen into decay and was referred to as the "Sick Man of Europe"<sup>2</sup>. It was imperative that positive economic measures be pursued. One of the first steps taken in this direction was the granting of a concession to a British company for the construction of a railway in southwestern Anatolia in order to secure an outlet to the sea.

The purpose of this paper is to relate the major problems encountered in the construction of the first railroad in Turkey, the Smyrna-Aidin Railway in Asia Minor.<sup>3</sup> The evidence indicates that the nature of these difficulties involved for the most part neither technical nor manpower problems. The facts indicate that from the very inception of the Smyrna-Aidin Railway Company, the main drawback along with some management problems<sup>4</sup> was undercapitalization. At the time that construction began in 1857, the company had failed to secure the capital necessary to accomplish its objectives. The shares that had been offered were undersubscribed; the management had some difficulties

enticing the people of Britain to invest their money in the railway. By June of 1858, the records indicate that 15,439 shares had been purchased in Turkey,<sup>5</sup> but, in contrast, only 1,738 had been sold in England with a cash-on-hand balance of only L1,787.<sup>6</sup> This, in spite of the fact that this English company was capitalized at 60,000 shares<sup>7</sup> at 20 pounds sterling (L20) each, of which 15,000 were exclusively reserved for Turkish subjects. As a result of this initial and continuing undercapitalization the company was unable to complete the railroad within the scheduled time period and consequently had to negotiate several extensions of time and permission to issue debentures to raise the necessary capital.<sup>8</sup> It also became necessary for the shareholders to form a Committee of Investigation to determine the nature of the existing problems and make recommendations as to how best to protect their interests.<sup>9</sup>

Turkey in the nineteenth century was making concerted efforts to catch up with the West by instituting a variety of reforms. In 1839, the Commercial Conventions of Balta Liman granted British merchants<sup>10</sup> in Turkey the same privileges as Turkish merchants. That is, they allowed British firms to carry on foreign trade at the same rates as those applicable to Ottoman subjects. The conventions spurred a definite upsurge in commerce between Turkey and England; and within a few years, England was obtaining as much grain from Turkey as she was from Russia. In addition to grain, the British obtained opium, raisins, currants, figs, olive oil, silk, mohair, wool, cotton, sheep, and carpets from the Turks. In 1827, British exports to the Ottoman

Empire amounted to L500,000 and by 1849, the value had increased to  
<sup>11</sup>  
 L2,400,000. Also, social and political reforms were embodied in  
<sup>12</sup>  
 the Hatt-i Shariff of Gulaneh of 1839. Ahd, the Hatt-i Humayun  
 of 1856 decreed reforms in the monetary and financial systems of the  
<sup>13</sup>  
 empire. At this time, roads were envisaged, commerce and agriculture  
 were encouraged, and every means was sought for the empire to "profit  
<sup>14</sup>  
 by the sciences, the arts and the funds of Europe." The period of  
 economic reform in Turkey at this time was known as the Tanzimat Period  
 and was essentially the work of Rashid Pasha, the Turkish Minister of  
<sup>15</sup>  
 Foreign Affairs. It developed because of internal pressure and  
 growth combined with some foreign intervention.

This dramatic process of change was greatly enhanced by the Cri-  
 mean War, when the presence in Istanbul of large numbers of British,  
 French, and Italian soldiers, government officials, merchants, journal-  
 ists, and tourists had produced a marked sociological effect upon the  
 people of Turkey. Contact between East and West had not been so wide-  
<sup>16</sup>  
 spread in many generations.

Meanwhile, in the field of economic reform, the building of  
 railroads had become of prime importance. One of the first persons  
 to recognize the value of railroad construction in the Middle East  
 was Colonel Francis R. Chesney, a British Army officer who had led  
<sup>17</sup>  
 the Euphrates Expedition of 1836. In 1856, Sir William Andrew  
 incorporated the Euphrates Valley Railway Company, and obtained a  
 concession to build a railroad from the Gulf of Alexandretta to

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Basra. His plans were enthusiastically supported by the Turkish Ambassador in London and Lord Henry Palmerston, the British Foreign Minister, and also by Lord Stratford de Redcliffe, the British Ambassador in Constantinople.<sup>19</sup> Colonel Chesney, now General Chesney, was appointed chief consulting engineer for this company. The construction<sup>20</sup> funds could not be secured, however, and the project was abandoned.

At about the same time, in April of 1856, Sir Joseph Paxton, George Wythes, William Jackson, and A.W. Rixon, in England proposed the construction of a railway from Smyrna (Izmir) to Aidin in Turkey.<sup>21</sup> Smyrna was the biggest seaport in western Turkey and exported almost twice as much as any other Turkish port. Aidin, on the other hand, was the center of the fruit district and furnished the most important agricultural products in the Asiatic Turkey export trade. (See appendix I). Also, at that time all freight and transport was carried by camel, and the costs by this mode ran from six pence to one shilling per ton per mile. The distance from Smyrna to Aidin is about 81 miles and the cost of railway construction in Turkey was estimated to average from L10,000 to L12,000 per mile as opposed to an average of L50,000<sup>22</sup> per mile in England.

The Sublime Porte, the Turkish Government, showed great interest in this project because most of the land in and around Aidin was crown land which would appreciate in value with the opening of a railroad to the sea.<sup>23</sup> Consequently, on the 23rd of September of 1856, a concession was granted by the Government of His Imperial

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Majesty, Sultan Abdul Mecid for the rail line from Smyrna to Aidin. Under the terms of this concession, however, the company was required to place L24,000 on deposit with the Turkish Government, to assure the company's compliance with all the terms of the agreement. This concession would later be transferred to the company management which would ultimately complete the work. As previously mentioned, the company was capitalized at 60,000 L20 shares, and accordingly sub-  
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 criptions were invited in 1857-58. The company had been granted a fifty year concession to construct and operate the 81 mile railroad. The concession stipulated that if the line was not completed by September 23, 1860, the company would forfeit its deposit and the Ottoman Government would have the right to seize the line without compensation of any sort to the company. The government also retained these  
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 rights if the company abandoned its work at any time. The Sublime Porte guaranteed the company a net return of six percent on the capital actually expended on construction, but these expenditures were not  
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 to exceed the authorized capital of L1,200,000. The subsequent stockholders' investigative report related that:

In no case was the annual guarantee to exceed L72,000 per annum, and before the entire completion of the line, it was to be due upon the sums expended in the execution of the sections definitively opened for working, in proportion to the cost of construction of each section opened, which should have been duly verified by the Company and a Government commissioner. 28

Also, if the profits exceeded seven per cent, the surplus was to be  
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 divided equally between the Imperial Government and the company.

Additionally, this concession called for one-fourth of the shares to be reserved for Ottoman subjects at the same rates and under the same conditions as the other subscribers. <sup>30</sup> Although the subjects of the Sultan showed a great avidity for investment in railway shares, no evidence was found that would indicate whether the majority of the Turkish investors were Muslims or non-Muslims. This point is particularly significant because the Ottoman Empire had many non-Muslims who were Turkish citizens, members of the different millets (separate religious, racial or national legal entities within Turkey); and these would probably be more inclined to invest in such an enterprise. In fact, the London Times reported that up to that time, the Turks either <sup>31</sup> invested in real estate or kept their money under lock and key. The fact that they were willing to invest in the railway on the word of a few Englishmen indicated that they trusted in the European management. <sup>32</sup> The Turkish Government sent out subscription lists to the army and to the various public offices of the Porte and all the Turkish <sup>33</sup> shares were soon taken up. By June 30, 1858, 15,439 share had been <sup>34</sup> sold in Turkey.

It should be pointed out at this time that the Turkish Government followed the free system of competitive bidding as used in England for railway construction, as opposed to imitating the Great Centralized Continental Powers (Germany, France and Austria), where the government assumed control of the railroads, both in the construction and actual operation phases. The initiative, then, was left to the British capitalists; the Porte limiting its role to that of assuring the general

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terms of the concession would be honored.

In the nineteenth century Turkey was in urgent need of such a means of communication with the sea. The interior of the country is divided into valleys and sections which have no common interests or interconnections with each other. Each of these valleys and sections was reasonably self-sufficient and therefore required little commercial interchange with its neighbors. But, all the interior provinces were teeming with natural produce and could easily make use of an outlet to the sea from which to export their produce, perhaps in exchange for sorely needed industrial products. Thus, the Ottoman Government from the beginning showed great interest in the progress of constructing the railway. This benefited the company and the contractor because the Turkish general public looked upon this work with

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distrust. It seems that Western technology, especially the railroad and the telegraph at this time, was greeted with as much superstitious criticism as with favor. Mechanical skill and invention frequently aroused fear and were typically attributed to Satan. Cyrus Hamlin, an American missionary who understood and supported the dissemination of the developing technology, was introduced by one Turk to another as

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"the most Satanic man in the empire". Also, the railroad was viewed by the majority of Turks not so much as a necessary and beneficial industry but rather as a path for tax collectors, invading armies, foreign

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spies or just an aid to the Christian merchants.

Nevertheless, one of the lesser problems that the company first



encountered was with regard to the application of the laws of land expropriation. When the concession was granted, a special and apparently fair law of expropriation was framed and published. Difficulties arose when it was first applied because the land through which the first section of the railroad passed was the agricultural center for Smyrna and the surrounding area. The landowners soon became aware that the railroad would increase the value of their property and, according to the London Times, began to make exorbitant demands for their lands. In one instance, European speculators formed a coalition of landowners to drive up the price of the land.<sup>39</sup> The Turkish authorities, however, solved this problem by threatening to apply the expropriation laws very strictly. According to these, the scale for evaluation was to be based on the taxation rolls for the preceding year.<sup>40</sup> Smyrna was a city where regular cadastres had been kept and as a result most of the landowners were easily persuaded to accept the offers made to them by the railroad.<sup>41</sup>

The matter of securing skilled workmen and laborers, however, posed a special problem. There was no available work force for such a large undertaking, especially no skilled workmen. In Asia Minor, every man who was not a soldier was busy enough in the fields and preferred this type of work by nature and habit. In order to induce them to come to work on the railway, they were offered higher wages than would otherwise be offered in the area. Two to three shillings was the rate for common laborers, and about four shillings was the rate for masons.<sup>42</sup> Fortunately, the laborers became very skilled

workmen in a short period of time, and it was expected that no foreign labor would have to be brought in, except for some of the more difficult bridge and tunnel work.<sup>43</sup>

In the early stages of construction, a dispute arose regarding smoking among the workforce. At first the company prohibited the practice, but as construction progressed, a certain amount of time was allowed to permit the workers a smoke break.<sup>44</sup> Presumably, this was in deference to the customs of the country.

On September 22, 1957, meanwhile,<sup>45</sup> the day of the initial ground-breaking, there was a huge celebration. A large booth was erected for the authorities near the line's starting point and decorated with the Union Jack and the Turkish flag. The interior of the booth was festooned with flags from each of the countries that maintained diplomatic or consular representation in Smyrna. The Pasha, the local governor, with appropriate civil and military dignitaries, received the consuls from the different countries as they arrived for the day's festivities. At five o'clock in the afternoon, the Pasha turned the first clod of earth with a silver spade and filled a mahogany wheelbarrow which was run along a plank following the projected line. The Moolah<sup>46</sup> prayed in a loud voice for success in the enterprise. Consul Blunt, the English representative in Smyrna, and the rest of the consuls followed the Pasha's example in symbolically spading the earth. Several sheep were immolated on the spot where the wheelbarrows were emptied. A salute of twenty-one guns was presented the Pasha and a magni-

ificent ball and supper concluded the day's ceremonies. Nearly all of the population of Smyrna was present at the festivities and most expressed joy and satisfaction with the enterprise. The chief engineer for the contractor, a Mr. Meredith, stated that he hoped to complete the first twenty-five miles of the line by September 1858.<sup>47</sup>

The technical plans called for construction of the line in three sections. The first section was forty-five miles long and ran from Smyrna to the Saladin Dagh mountain range. This mountain range divides the valley of the Cayster from that of the Meander Rivers. The second section consisted of a tunnel through the Saladin Dagh mountains. This was to be the tunnel of Salaheddin.<sup>48</sup> And, the third section ran from the mountains along the valley of the Meander River to Aidin and the fruit district.<sup>49</sup>

Actual construction work, then, was started in September of 1857. In the beginning, most of the work was concentrated on the first section where there was a great deal of cutting to be done. Work was also started on the Salaheddin Tunnel, where the management planned to sink three shafts and work from several points simultaneously.<sup>50</sup>

In November 1857, Consul Blunt was invited to place the first stone for the bridge across the Melese River.<sup>51</sup> The work by this time had progressed satisfactorily and the workmen were making a deep cut in limestone about one mile southeast of Smyrna. Engineer Meredith expected that the work would progress at about one mile per week and stated that work would be carried out from both ends of the Salaheddin Tunnel at the same time. This tunnel work was expected

to take two years and during this time camels were to be employed in hauling construction supplies and materials. The company hoped that by employing the camel drivers in this manner, it could more easily persuade them to accept the railroad.

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Interestingly, at this early date Consul Blunt recommended that a British consular office be established at Aidin upon the completion of the railway. He felt that the increase in trade would justify its establishment. Also, the fact that Aidin was over eighty miles inland made it difficult to protect properly British interests from Smyrna. Blunt even recommended a man by the name of John Fraser for the proposed consular post, and at a yearly salary of L350. It is interesting to note that Fraser was later appointed vice-consul at Smyrna in February of 1858 and with no salary.

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Nevertheless, in March of 1858 work was started on the Caravan Bridge just outside of Smyrna and line construction had progressed as far as a limestone cutting about four miles from Smyrna. The material from the cutting was to be used as fill between the city and the new port facility which was being planned. A locomotive was used to transport this fill more economically. It had arrived from England on March 23rd and was off-loaded at Smyrna with great ceremony. It was christened the St. Sophia and the natives called it the vaporiki, or little steamer. For its first run, it was decorated with the English and Turkish flags, On this first short run to Caravan Bridge it carried a band that played the "Sultan' March." On

the second run, Consul Blunt and his family were taken to the bridge  
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for an inspection tour.

In June 1858, Blunt reported several disturbances concerning the railroad. In one, an Albanian workman named Hassan killed an Ionian. This was a potentially very dangerous situation because the Albanian was probably a Muslim and the Ionian was probably a member of the Greek millet. The Pasha, Scopralie Mustafa, a feeble old man, was very reluctant to provide the railroad and its workers with  
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adequate police protection. In another instance, the contractor wished to discharge about fifty Turkish laborers who had been causing trouble. Hamid Bey, the Chief of Police in Smyrna, was cooperative with the company but could not be of much assistance in this matter  
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because he did not have enough men to do the job. In this instance Blunt requested that the Porte send special instructions from Istanbul to Pasha Mustafa. Mustafa had been appointed Pasha in March 1858 and Blunt was afraid that his indifferent attitude would cause further trouble by leading workers to believe that the government had lost  
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interest in the construction of the line. It seems that the previous Pasha had made it a practice to visit the construction sites at least twice a week, and this had helped to maintain order among the workers. Mustafa, however, had only visited the line once since taking office, and then only to ride the locomotive. On another occasion, Mustafa did not cooperate with Blunt when the Consul had requested Mustafa's assistance in the off-loading of some telegraph

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cable at Smyrna.

Nevertheless, in November of 1858, Lord Stratford de Redcliffe arrived in Smyrna to inspect the progress of the construction work. He was accompanied by Blunt and Meredith to the cutting in the nearby valley of St. Ann. After a reportedly thorough inspection, the party returned to Smyrna where de Redcliffe placed the first stone for the railway station. <sup>61</sup> Present at this ceremony were the Pasha, the Sub-Governor, Lady Stratford and Sir MacDonald Stephenson, the chairman of the Board of Directors for the Imperial Ottoman Railway Company, <sup>62</sup> the official title for the Smyrna-Aidin Railway Company.

Thus, by the latter part of 1858, there were over 2400 workmen <sup>63</sup> employed by the railway. Good wages and regular employment had enabled the contractor to obtain all the laborers and masons required by the undertaking. Certainly, during the fruit season, a few workers would leave the railroad, but they would quickly be replaced. Most of the laborers had become very skilled with picks and shovels and were able to handle these implements with the precision of an English navvy (a workman skilled in canal and railway construction in England). Over 500 men were working in the tunnels and the earthwork was complete and ready for the rails as far as Sediki, about ten miles southeast of Smyrna.

Yet, in September of 1859, the London Times reported that the directors of the company had entered into a contract with a Mr. Cramp-ton to replace Mr. Jackson, the original contractor. It appears that

Jackson was not doing full justice to the Turkey railroad on account  
of other commitments.<sup>64</sup> This was one of the first indications that the  
work was not progressing as scheduled. At the same time, a contract  
was negotiated and signed designating Edwin Clarke as consulting  
engineer. Among other things, Clarke was to provide rolling stock  
and equipment suitable to the climate in Turkey. Crampton and Clarke  
soon predicted that the first section of the line would be complete  
by February 1860.<sup>65</sup> It will be remembered that the original schedule  
had called for a completion date for the entire line of September of  
1860.

In November, 1859, Consul Blunt informed the British Government  
that the railway was not progressing as reported to the directors by  
chief engineer Meredith.<sup>66</sup> According to Blunt, the shareholders in  
Smyrna were aware of the status of the work and knew that the reports  
being submitted were inaccurate. The line could not possibly be com-  
pleted by the spring of 1860, as was being reported. Blunt's message  
even indicated some of the bridges were already collapsing. He stated  
that in his opinion, the Salaheddin Tunnel would take years to complete  
because not one shaft had been sunk to vent the smoke and dust of the  
explosions involved in the necessary blasting.<sup>67</sup> Moreover, reports  
from the local people indicated that much work could be saved by re-  
routing the line around the mountains, a deviation of some twenty  
miles from the projected route.<sup>68</sup>

Later, Engineer Clarke informed Blunt that he was dissatisfied

with the work in general and that the tunnel would have to be abandoned because it had caved-in at several locations. Clarke further stated that a change in the administration was necessary in his opinion. Although Clarke had full authority to implement any changes he deemed necessary, he advised Blunt that he wanted to inform the directors of the company before taking action. Yet, Crampton, on the other hand, was indicating to Blunt that he was satisfied with the work, that the tunnel would soon be completed and that the company could not have secured a better or more capable chief engineer.

Subsequently, in January 1860, Sir MacDonald Stephenson returned to Smyrna for another inspection tour. He appeared to be in favor of a change in administration in order that the work be successfully completed. The following month, in February 1860, the London Times reported that the Smyrna-Aidin Railway Company was in serious trouble, and that the true progress of the work was not being reported to the shareholders. It further reported that the Salaheddin Tunnel would require at least three more years to complete and that the only work accomplished up to that point was on the first section, which would not be complete until July 1860. In conclusion, it surmised that the shoddy manner in which the administration of the enterprise was being conducted would do much to shake Turkish confidence in the British.

Later, in March 1860, Blunt informed the British Foreign Office that all work on the line had been suspended and that Meredith had



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been dismissed and was being replaced by a Mr. Purser, who reportedly<sup>75</sup> had had previous railroad construction experience in India. He further reported that the railway had suffered much damage during the rainy season. Five bridges had been destroyed along with most of their embankments, and from eight to ten miles of the line was under water. Thus, in spite of the over L350,000 that had been paid out, there was not one meter of permanent line to show for it. This data does not compare favorably with the original cost estimates when it had been predicted that the first section would cost L510,000 for the forty-five miles of run: L300,000 for the line, L90,000 for the rolling stock, and L120,000 for the docks and piers.<sup>76</sup> Yet, in his report, Blunt stated that aside from the difficulties at the tunnel site, the work on the line did not offer particularly difficult engineering problems.<sup>77</sup> Thus, it seems clear that many of the major problems hampering the construction of the line at this time were managerial in nature.

Moreover, in June 1860, Blunt advised Lord John Russell, the British Foreign Minister, that only enough work was being accomplished on the line to prevent the Ottoman Government from exercising its rights under the concession and seizing the railway and the L24,000 on deposit.<sup>78</sup> He also reported that as of that date there was still a five or six mile section of the line under water and that the high-water marks indicated that a ten foot embankment would have prevented such extensive flood damage. Another consequence of the flooding

was that the work on the line would have to be suspended during the summer and autumn because the stagnant water created unsanitary conditions causing the outbreak of malaria. In 1859, which had been a comparatively healthy year, for example, over one hundred workmen had been stricken at one time so the danger was very real and menacing. Blunt, however, surmised that the effects of the malarial conditions could be lessened, perhaps, by stopping work one-half hour before sunset.  
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The original proposed completion date for the line, September 23, 1860, arrived then, and, needless to say, the railway was far from complete. However, the company had already entered into negotiations with the Porte for an extension of time and for permission to issue debentures to raise the additional capital needed to finish the work.  
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The report of the Committee of Investigation later stated:

After having first consented to change of part of the survey, which was to pass through Ayasalook in order to avoid the long tunnel at Sala-heddin, the government agreed further to a delay of three years for the completion of the line...They went further still, and to restore confidence amongst the shareholders, the government, of their own free will, substituted for their right of confiscating the line, a simple clause of foreclosure.

Lastly, to enable the directors to raise the necessary capital, without applying for some time to the discouraged shareholder, and in order to finish the first section...which terminates at Kasbounar when the company could begin to draw the guaranteed interest, the government gave leave to issue debentures of L250,000, repayable in five years.... 81

On September 28, 1860, at the semi-annual meeting of the shareholders, Stephenson reported the results of the recent negotiations with the Ottoman Government.<sup>82</sup> He further stated that in view of the difficulties encountered, it was not realistic to expect more results than had been obtained and that in comparing the Smyrna-Aidin Railway with the East India Railway, it could be seen that the results of the work in Turkey were within reason. It is interesting to note that the London Times also made a comparison, but with the Danube and Black Sea Railway and reported that the results were not very favorable for the Turkish enterprise.<sup>83</sup> Stephenson further pointed out that although the concession had been granted in 1856, nothing substantial had been accomplished until 1858.<sup>84</sup>

Nevertheless, the first twenty-seven miles of the line were finally opened in February of 1861. The resulting income, although small,<sup>85</sup> was encouraging. An additional section to Gelat Cafe, thirty-nine miles southeast of Smyrna, was opened in the following September. At that time, the company announced that the remaining section to Kasbounar, the terminus for the first section, would be completed by November and the next ten miles, taking the line to Ephesus, would be opened in early 1862.<sup>86</sup>

The deviation through Ephesus, as opposed to crossing the mountain range at Saladin Dagh, had been approved by the Porte and this had enabled the company to proceed more expeditiously and also offered better service to the district at no increase in cost. It should

be pointed out that up to this time, the traffic had consisted principally of passengers and, consequently, the operating expenses exceeded the revenues. However, between Kasbounar and Ephesus, the railway would intersect the camel track from Aidin and the company confidently expected cargo traffic to increase shortly. In August of 1861, the company announced plans to construct a branch line for the twenty-seven miles from Aidin to Tireh, in the hopes of increasing the cargo traffic. Subsequently, the London Times reported that work on the line had been delayed due to the devastating effects of malaria on the work force, but that the line to Ephesus would be completed by the summer of 1862.

On September 20, 1861, at their semi-annual meeting, the shareholders were informed by the board of directors that the line had carried over 100,000 passengers since its inauguration. The board also reported that it had received a letter from H.J. Hanson, a company representative in Constantinople, who described the train trip from Smyrna to Gelat Cafe. Hanson indicated that he was very pleased and that there was little doubt in his mind as to the success of the enterprise because he felt that most cargo traffic would eventually be diverted to the line, pointing out that in Turkey there was no competition from canals or roads. At the meeting it was also reported that property values and acreage under cultivation had already increased due to the coming of the railroad.

At any rate, from the date of the inauguration of the first section of the line from Smyrna to Kasbounar on November 14, 1861, the

Porte allowed the company to draw the guaranteed portion of L39,360  
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per annum. On the occasion of the inauguration, a special train conveyed the Governor General, Riza Pasha, and his entourage to Kasbounar. There the Cadi of Smyrna offered a prayer for the Sultan and invoked the blessings of Allah for prosperity in the undertaking. He  
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then prayed for the directors, the shareholders, and the employees.

(It is interesting to note that this was the first time that Christians had been publicly prayed for by Muslims in Asia Minor since the advent of Islam.) Also on this occasion, a dinner was hosted by Crampton, who announced that the Ottoman Government had allowed the release of  
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the L24,000 deposit and the commencement of the guaranteed six percent. W. F. Ferguson, the general manager, reported that the line had now carried over 170,000 passengers without accident and that arrangements had been made to transport 10,000 tons of produce during the next  
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growing season. The Imperial Ottoman Government took official pos-  
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session of the line to Kasbounar in December of 1861.

Subsequently, in September of 1862, the section to Ephesus was  
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officially opened. This opening celebration was attended by Mehmed Rashid Pasha from Constantinople. On his arrival at Smyrna, the Pasha had been received by Ferguson and a special train again took the party to Ephesus where the consecration ceremonies took place. A dinner was offered by Hyde Clarke, a company representative. The proceedings at the dinner were mostly in Turkish, and for the first time in generations, Jews were seated at dinner alongside Muslims  
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and Christians. This particular incident is also significant

because it indicates that, even at this early date, the railway was beginning to influence sociological conditions in the country.

At any rate, with the completion of the line to Ephesus, it was expected that there would be an increase in cargo traffic due to the fact that most of the competition from the camel owners would be eliminated. According to some reports approximately 70,000 camel loads of figs were expected during the fruit season. Also in regard to freight, most merchants in Smyrna believed that if the government removed the tithe tax, there would be an increase in cotton production, which up to that time had been averaging about 50,000 bales per year. It was reported that the Smyrna area could produce about 500,000 bales of cotton per year and the railway actively encouraged the expansion of its production. Consequently, cotton exports from Smyrna increased from about 6,000 bales in 1860 to nearly 60,000 in 1862, and were expected to exceed 200,000 bales in 1863. Although the Ottoman Government had promised to promote the production of cotton, as of this time, it had not taken definite steps in this direction. Interestingly, it would appear that this was an opportune time for the Turks to increase their production of cotton since American cotton for the English textile mills was in short supply owing to the effects of the American Civil War.

Among other results of the coming of the railroad to Turkey, however, were the increase in the amounts of produce coming into Smyrna. Figs especially were arriving in greater quantities and in

better condition. Also, all shipments were arriving relatively free from pilferage. This, of course, in effect amounted to a virtual increase in production. Furthermore, the profits resulting from railway shipment were reported in the following terms: on figs, 10%,  
101  
on grain, 5%, on grapes, 10%, and on raisins, 10%.

Nevertheless, in March 1863, the company reported that the increase in traffic due to the opening of the line to Ephesus had not materialized as had been projected. The company conjectured that this was probably on account of the short distance from Ephesus to Smyrna. Another possible reason, they conjectured, was that shippers were reluctant to transfer their cargoes from camels to the railway. However, the directors felt that they would not have worry about this problem as soon as the line was open all the way to Aidin, where the  
102  
cargoes could be loaded directly onto the train.

Yet, at about the same time, the Board of Directors concluded that the railroad could not be completed to Aidin by September of 1863, when the extension granted was due to expire. Stephenson then proposed two alternatives. One called for a postponement of the construction of the remainder of the line until the company's shares increased in value. The second alternative involved the negotiation of suitable arrangements with the Porte and with the contractor in order to increase the company's capital. Stephenson emphasized that the better alternative was the latter so that the line could be  
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completed as soon as possible. Also in this regard, the directors

advised that the tunnel required between Ephesus and Aidin would take at least three years to complete and would require an additional  
 104  
 L60,000.

In April of 1863, Sultan Abdul Aziz had shown great interest in the railway during an official visit, and the Ottoman Government, thus,  
 105  
 appeared willing to grant the necessary time extension. The following June, then, the Imperial Ottoman Government issued a firman (imperial decree) granting a second extension of time for the completion of the Smyrna-Aidin Railway. The new terms included an extension to September of 1866 and permission to increase the company's capital from L1,200,000 to L1,784,000 upon which the Porte agreed to pay six per-  
 106  
 cent interest. This, in effect, increased the guaranteed income from L72,000 to L112,000, and as a further inducement to the company, the government also agreed that the division of the profits should  
 107  
 apply only to the excess over eight percent as opposed to six percent.

In March, 1864, Engineer Clarke reported that the tunnel shafts had been sunk without encountering major problems with the underground  
 108  
 springs and that the work could be completed by September, 1866. Mr. Purser stated that the remainder of the line from Ayasalood to Aidin had been started in December of 1863 and was progressing satisfactorily. This part of the line was also divided into three sections. The first part, from Ayasalook to the summit of a mountain range, was five and one-half miles long; the second, from that summit to Bolochik, was seven and one-half miles, and the third, from Bolochik to Aidin,



was nineteen miles. In crossing the mountains, however, two tunnels would be required. One of these was about eight hundred yards long and the other was about two hundred. There were also about forty locations where cuttings and embankments were required, and these were short, deep and in hard material.

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The tunneling, of course, presented a special problem in obtaining the skilled labor required owing to the hardness of the rock.

The problem was solved by securing skilled mine workers from England, who possessed the required skill. By April of 1865, work was being

done on twelve faces of the tunnel and over eleven hundred yards of

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tunnel had been excavated. Meanwhile, in the Meander Valley, work

was progressing so as to be completed at the same time that the tunnels

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were finished. Purser and Clarke reported in September of 1865

that work was progressing on schedule in spite of a recent outbreak

of cholera. During the tunnel work, the contractor reported a few

accidents. Unexplainedly, one included three English women and

112

three children.

Nevertheless, at the semi-annual shareholder meeting in London

in September, 1865, Stephenson reported that despite all the diffi-

culties encountered in the construction of the line, the project

was very near completion. It was also announced that the heavy

expenses of the half-year could be attributed to heavy station ex-

penses in the interior, engine repairs, fuel and high maintenance

113

costs incurred in the renewal of the line with new railroad ties.

In March of 1866, the directors reported that receipts were up  
 about forty-one percent over 1865. <sup>114</sup> At this same time, it was  
 announced that the line had renewed throughout and that the loco-  
 motives and rolling stock were all in good order. In addition, the  
 shareholders were informed that two more locomotives were being ship-  
 ped from England to Smyrna for the line. A Mr. Billings, reportedly  
 one of the earliest and largest British shareholders, stated that he  
 had great confidence that the line would show a good profit. <sup>115</sup> By  
 this time, incidentally, weekly receipts were running about L800. <sup>116</sup>

Yet, in April of that year, a special meeting of shareholders  
 was called in London where Stephenson reported that it was necessary  
 to raise additional capital in order to complete the line by Septem-  
 ber. It was proposed to issue L300,000 in preference shares at six  
 percent interest in order to enable the company to borrow L100,000  
 upon good terms using these shares as security. The directors indi-  
 cated that this would be the best course of action to follow. <sup>117</sup> On  
 the 27th of that month, a meeting was held by the debenture holders.  
 Here, Stephenson explained that the unavoidable delay in opening the  
 line had prevented the company from selling the L300,000 in bonds  
 at a price that would have enabled the company to pay off the debentures  
 in May of 1865. <sup>118</sup> The directors then requested an extension of one  
 year to pay the debentures and promised to raise the interest from six  
 percent to ten percent for the one year period. These arrangements  
 were agreed to by the debenture-holders. <sup>119</sup>

Thus, the Smyrna-Aidin was finally completed and began operating  
 its entire length on July 1, 1866. <sup>120</sup> It had been completed six  
 years behind schedule and about nine years from the start of construction.  
 During the period of construction, the company had had to request  
 two extensions of time from the Ottoman Government and had had to  
 raise its capital from L1,200,000 to L1,784,000. But, following the  
 completion of the work, a controversy developed between a group of  
 shareholders and the board of directors. The irate shareholders  
 charged that the directors had mismanaged the company, and a Committee  
 of Investigation was named to study the situation and make recommenda-  
 tions regarding the actions of the board of directors. <sup>121</sup> The crux  
 of this dispute centered on the manner in which the interest payments  
 received from the Ottoman Government should be disbursed. The share-  
 holders felt that the interest should first be divided among them.  
 The directors, on the other hand, believed that an arrangement should  
 be worked out to pay off the debentures first, allowing also for the  
 payment of past due interest. <sup>122</sup>

Then, on March 30, 1867, T.G. Fardell, a member of the Committee  
 of Investigation informed the British Foreign Minister, Lord Stanley,  
 that a committee had been appointed for the purposes of examining  
 and reporting on the actions of the railway company's board of direct-  
 ors. <sup>123</sup> This committee had been formed on March 29, 1867. <sup>124</sup>

Subsequently, the committee presented a report of its findings  
 to a meeting of the shareholders held on May 21, 1867. <sup>125</sup> Among the

conclusions reached by the investigators was that the difficulties encountered by the company had arisen principally due to the fact that the company had been unable to secure the necessary subscribers among British subjects. According to their report, "the present unfortunate position of the share and debenture holders alike is entirely attributable to the original error in attempting to construct a line without subscribed capital." <sup>126</sup> The report further stated that not the slightest allusion to financial difficulties had been made by the directors until 1860 when the shareholders were advised that "one of the principal obstacles to the more vigorous prosecution of the works has been lack of funds." <sup>127</sup> The report also pointed out that in a meeting between company representatives, F. Whittall and Hyde Clarke and the Turkish Minister of Public Works in Constantinople on August 20, 1860, the Ottoman representative had expressed great dissatisfaction with the position of the company and had gone as far as to talk of seizing the line on the expiration date of the original concession. <sup>128</sup> Clarke and Whittall had been dispatched to the Turkish capital to discuss the subject of the first debentures. <sup>129</sup> Apparently, the Turkish Government was very reluctant to permit the issue of the debentures, but it did finally agree to their issue. The following month, September, 1860, Whittall and Clarke, in a joint letter, informed the company that the Porte had authorized the issuance of debentures to the extent of L250,000 for five years, at six percent interest, the company undertaking to reserve 12,500 shares for their re-

130  
 imbursement. The government, however, reiterated that it reserved  
 all rights afforded them under the original concession.<sup>131</sup> The supple-  
 mental concession was finally issued to the company in March of 1861,<sup>132</sup>  
 and on April 15, the new concession was received through the Foreign  
 Office, and on this same date, the form of the debentures was approved  
 by the board. The committee further informed that throughout the  
 negotiations, the Turkish Government consistently refused the creation  
 of first mortgage debentures, arguing that the Turkish and English  
 shareholders must be protected, as they had been persuaded to subscribe  
 on the basis of their faith in the original prospectus.<sup>133</sup> The second  
 issue of debentures was authorized by the Porte in December, 1863 and  
 at that time, the company was authorized to increase its capital in  
 the amount of L584,000, thus raising the original amount to L1,784,000.  
 Also at this time, the Imperial Ottoman Government agreed:

to augment its annual guarantee by the sum of  
 L40,000 during forty-two years to be computed  
 from the date of opening of the entire line  
 from Smyrna to Aidin being delivered in good  
 working order...such guarantee of the State  
 shall not exceed the sum of L39,360....134

The main point of contention between the Board of Directors and the  
 shareholders, then, centered on the matter of how the money from the  
 guarantee was to be applied.

After due investigation, then, the Committee delivered its report  
 in which it listed its conclusions and recommendations regarding the  
 actions of the company's Board of Directors. Among the items listed

in the report were:

1. That the amount of shares subscribed by the Board was not enough;
2. That the issue of debentures in 1861 had not been in accordance with the terms of the concession;
3. That the manner in which a large portion of the capital had been issued was most reckless and reprehensible;
4. That a competent person be sent to Turkey to report on the best means to increase traffic on the line, and;
5. That it was necessary to provide funds for the completion of the undertaking, the developing of traffic, and for meeting liabilities in a legitimate manner, and so as to cause the least sacrifice to the shareholders and the debenture holders. (See Appendix III)

In summary, then, the foregoing analysis and description of the Smyrna-Aidin Railway in Turkey, especially in its construction phase from 1857 to 1866, indicates that the constant problems were caused first, by the lack of sufficient operating capital, and secondly, by the lack of sound, efficient and conscientious management on site. Fortunately, although these problems appeared to be insurmountable, they were eventually overcome with the help and perseverance of the Ottoman Government. This railroad was ultimately a successful operation and by the end of the nineteenth century, it had been extended several times and was eventually linked with the Bagdad Railway. This latter railway ran from Constantinople on the Bosphorus to Ankara in central Anatolia to Bagdad on the Tigris River in Persia. The linking of the Smyrna-Aidin Railway, the first railroad in Turkey, with the Bagdad

Railway gave the Turkish Government a direct southern connection from Smyrna (Izmir) to Bagdad and was thus very much worth all the trials and tribulations suffered during its initial phases.

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In doing my research I have had to rely almost exclusively on the Dispatches of the British Consul at Smyrna and on the London Times. Both of these sources have a great deal of material dealing with the entire period of construction from 1856 when the company was formed to 1867 when the Committee of Investigation was nominated to look into the problems facing the company. The Smyrna Mail, although published in Smyrna, was not used very extensively because there are only two reels in the UTEP Archives and they only cover part of the period from September 1862 to May 1864.

The books by Anthony Nutting, Sidney Nettleton Fisher and Roderic H. Davison were used mostly to secure background information concerning the Ottoman Empire and the Tanzimat Period. The book by Francis R. Chesney provides good information about early attempts by the British to bring the railroad and the steamboat to the Middle East in the 1830's. The books by Maybelle Kennedy Chapman and Edward Earle Mead are very useful in reference to railroads which were built later in Anatolia, especially the conflict that developed between Germany and England in regard to the Bagdad Railway.

In my research, I did not discover any information which would indicate that there has been much written on this topic. I came across references to a report in Accounts and Papers, 1896, Vol. XCVI, Turkey No. 4 (1896), Report by Major Law on Railways in Asiatic Turkey, which according to Chapman contains detailed information about the Smyrna-Aidin Railway. However, I was unable to secure these reports.

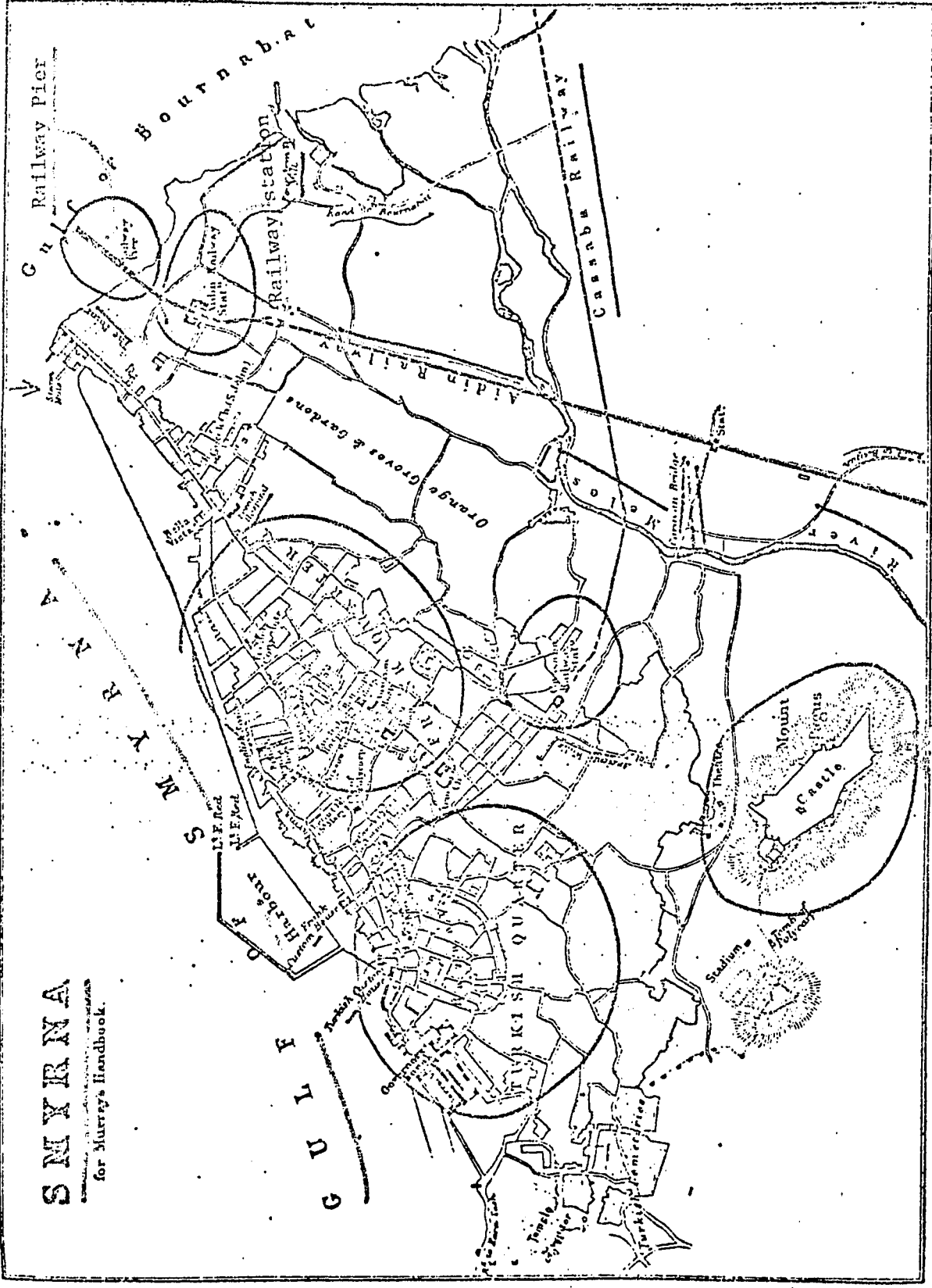


## APPENDIX I

Map of Smyrna

Map of Western Turkey

Map of Turkey



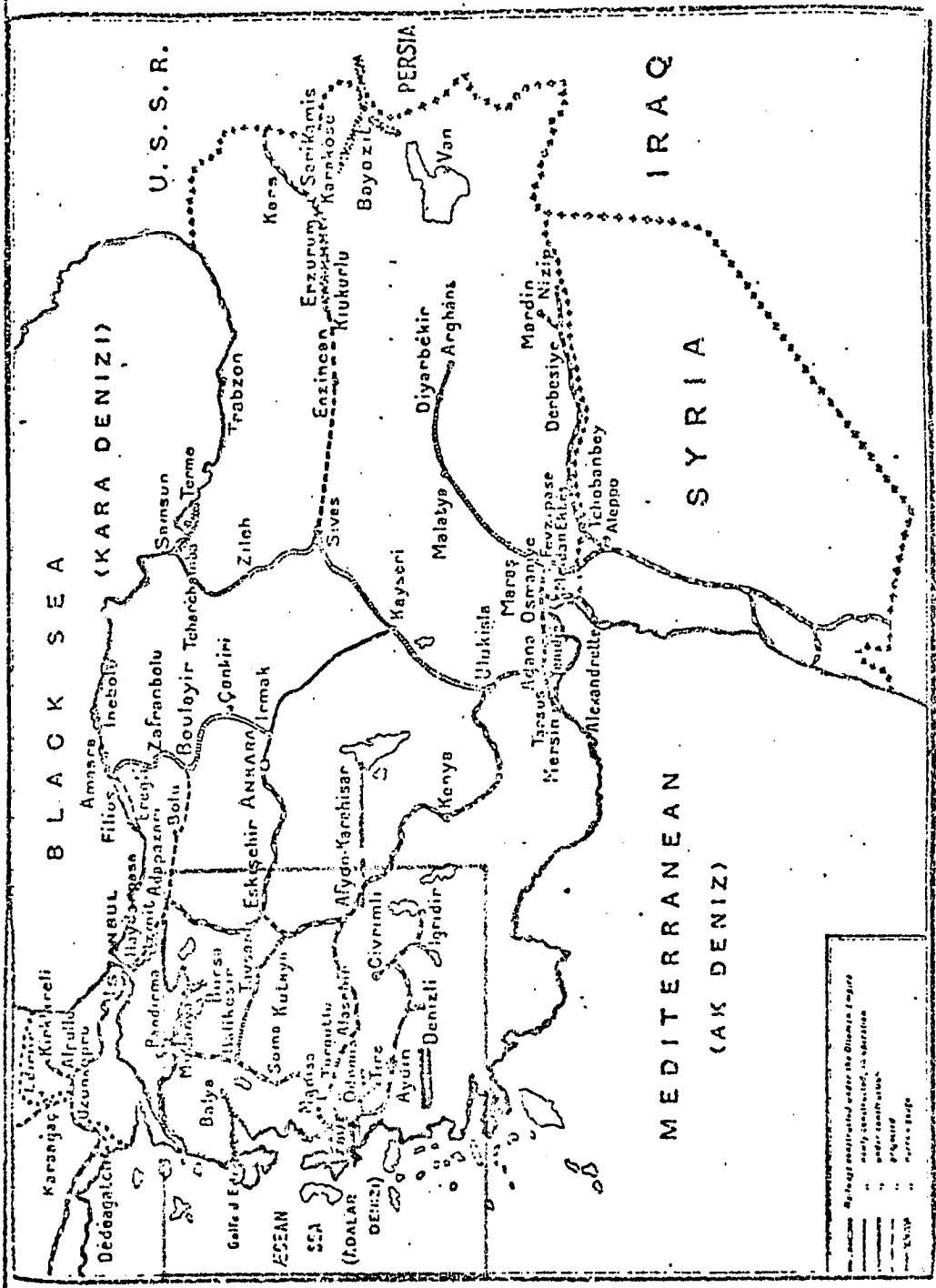
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MAP SHOWING IZMIR AND AYDIN IN SOUTHWESTERN ANATOLIA



—	Highways maintained under the Ottoman Empire
—	Highways constructed in Ottoman
—	Highways under construction
—	Proposed
—	Other roads

## APPENDIX II

Timetable of the Smyrna and Aidin Railway taken from the Smyrna Mail of February 3, 1862. At that time the railway was only open to Ayasalook.

UP TRAINS FROM SMYRNA		DOWN TRAINS FROM AYASALOOK	
ORDINARY TRAINS	AM	ORDINARY TRAINS	PM
Smyrna	7:30	Ayasalook	2:30
Caravan Bridge	7:37	Kosbounar	2:55
Boudja	7:53	Jelat Kahve	3:10
Seidikevy	8:15	Turbali	3:35
Jimovassi	8:30	Trianda	3:43
Develikvy	8:43	Kyass	4:10
Kyass	9:08	Develikvy	4:20
Triande	9:23	Jimovassi	4:45
Turbali	9:33	Seidikevy	5:05
Jelat Kahve	9:58	Boudja	5:20
Kosbounar	10:13	Caravan Bridge	5:35
Ayasalook	10:40	Smyrna	5:45

Passengers must take their tickets to the station at which they wish to alight, under no circumstances will they be allowed to re-bark. All monies to be received at the rate of 100 piastres to the Turkish Pound. Passengers are required to show their tickets at all times when called upon by the officer of the company.

Railway time will be kept at all stations European style.

Passengers are allowed personal baggage: First Class, 50 Okes. Second Class, 40 Okes. Third Class, 25 Okes. Above this weight will be charged for. Dogs will be charged : 1½ piastres, 14 miles. 3 piastres, 28 miles. 5 piastres beyond this distance.

During the sporting season, Sportman's dogs will be taken at one fare to and from any station.

Passengers will not be allowed to enter a carriage when the train is in motion and they are particularly requested not to attempt to alight until after the train has stopped.

Passengers in state of intoxication will not be allowed to travel by train.

Horses, cattle, merchandize and parcels, must be at the station 15 minutes before time of departure to insure being dispatched by such train.

Passengers who intend to depart by the morning train should take their baggage to the Point on Caravan Bridge station the previous day, where accomodations have been provided for its deposit at the rate of 1 piastre per package, for which a ticket will be given.

Return tickets are issued on Sundays from Smyrna Point & Caravan Bridge stations beyond Seidikevy at reduced fares and available for return on Monday. Return tickets at a fare and one half will be issued on application to the station master to parties of 20 and upwards to any station by the ordinary train.

It is requested that any irregularity be immediately notified to the general manager, Smyrna Point.

Horses may be obtained at Ayasalook Station for Ephesus upon giving one day's previous notice at the office of the general manager.

Passengers for Bainudin, Tireh, Odemish, may obtain horses at Turbali Station upon application to the station master.

Passengers for Aidin may obtain horses at Kosbounar upon application.

By Order  
General Manager  
W. F. Ferguson.

## APPENDIX III

Conclusions of the Committee of Investigation: (May 21, 1867)

Upon the foregoing evidence the Committee come to the following conclusions:

1. That this line has been essentially a contractor's line.
2. That with the amount of shares subscribed for bona fide, the Board was not justified in bringing out the Company.
3. That the form of debenture (1861) is not in accordance with the terms of the concession, and that the Directors acted most improperly in sanctioning such a form after the correspondence which took place with the Ottoman Government in 1860.
4. That there is no fund from which to reimburse the principal of the L 250,000 debentures (1st issue), except the L 304,000 of reserved debentures (2nd issue), and therefore the guarantee cannot be appropriated for the redemption of these debentures in the manner suggested by the Directors.
5. That the manner in which a large proportion of the capital has been used is most reckless and reprehensible, and that the discount of 15 percent on the first debentures was paid in an underhand way, and was, in the Committee's opinion, ultra vires.
6. That the manner in which the contract has been varied from time to time has been to the interest of the contractor, and to the injury of the undertaking, while the Directors have been indemnified by the contractor from personal liabilities under all concessions.

7. Assuming that the Directors intended to promote the interests of the Company, the Committee cannot forget that the shareholders were kept in ignorance of their real position and it is difficult to understand how the Directors, as men of business, could have sanctioned arrangements which have brought such disastrous results.

Suggestions for the future:

1. That the expenses of home management be at once reduced.
2. That a strict investigation be made into all claims against the Company, and that no further payments be made to the Contractor until this is done.
3. That a full statement of all assets and liabilities be prepared.
4. That the financial projects of the Directors be suspended.
5. That a competent person be sent to Turkey to report upon the best means for developing traffic, to protect the interests of the Company, and to negotiate with the Government in order to provide funds for putting the undertaking in a good working state.
6. That proper representations be made to the Government of H.I.M. the Sultan on behalf of the Turkish and English shareholders, who, by no fault of their own, have been brought into their present unfortunate position.
7. That in the opinion of the Committee it is the duty of the Company and its managers to co-operate with the Imperial Government for the maintenance and conduct of the undertaking, and to carry out a policy of conciliation with all allied interests.



8. That the management of the Company's affairs at Smyrna be put in the hands of competent persons.
9. That it is the duty of management to provide for the legal and equitable interests of the shareholders and bondholders.
10. That with a view to secure the sympathy and co-operation of the Imperial Government, and the early payment of installments on the guarantee, and the efficiency of all financial and political arrangements on which the future of the Company so much depends, as well as to give information to the Ottoman Government--a permanent representative be appointed for Turkey at such remuneration as will enable him to devote his whole time to the interests of the Company.
11. That it is necessary to provide funds for the completion of the undertaking, the development of the traffic, and for meeting liabilities in a legitimate manner, and so as to cause the least sacrifice to the shareholders and debenture holders.
12. That in order to carry out the above suggestions a board commanding the confidence of the Government, and all parties interested in the undertaking, be appointed.

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