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Joseph Baermann Strauss Detailed Timeline

Acronyms:

CE = Chief Engineer

GG = Golden Gate

GGB = Golden Gate Bridge

GGBHD = Golden Gate Bridge and Highway District

Date	Event
1870 Jan 9	Born in Cincinnati, Ohio of Raphael (Bavaria native, painter of miniatures) and Caroline Baermann (a musician) Strauss
1885?-1888	Attended old Hughes High School on East 5 th Street
1888-1892	Attended University of Cincinnati
1889	Began work to establish a chapter of Sigma Alpha Epsilon on the Cincinnati campus
1891-1892	President of class of 1892
1892	Graduated from University of Cincinnati with a Civil Engineering degree. Presented plan to build a 50-mile railroad bridge across the Bering Straits.
1892	Draftsman for New Jersey Steel and Iron Company in Trenton
1894	Instructor in engineering at University of Cincinnati
1895-1897	Detailer, inspector, estimator and then designer for Lassig Bridge & Iron Company, Chicago
1895 Jun 9	Married May Van, daughter of Charles Van of Cincinnati, in Chicago
1897-1899	Designer and squad boss for Sanitary District of Chicago
1899	Principal assistant engineer, Chicago office manager for Ralph Modjeski, consulting engineer
1902	Started own firm, the Strauss Bascule Bridge Company of Chicago [later became Strauss Engineering Corporation]
1902	Built first bascule rail bridge near Lake Erie over Cuyahoga River
1904	Patented the Strauss Trunnion Bascule Bridge
1905	University of Cincinnati College of Engineering founded [continuation of predecessor department]
1914	Completed single-leaf Strauss bascule bridge over Calumet River at South Chicago
1914	Completed double-leaf Strauss bascule bridge over U.S. Ship Canal at Sault Ste Marie MI
1915	Designed and built Aeroscope for 1915 Panama-Pacific Exposition in

	San Francisco
1915	Completed double-leaf Strauss bascule bridge over Neva River in Petrograd, Russia to the former Winter Palace of the Czar
1917	Strauss asked by Michael O'Shaughnessy, San Francisco city engineer, to offer "an opinion on the feasibility of building a bridge over the Golden Gate" [Thomas D. O'Connor, "The Golden Dream," <i>The Enquirer Magazine</i> , Sunday, September 19, 1982]
1919 Apr 1	Received patent for Reinforced Concrete Gondola Car
1919 Aug 25	Welch resolution authorizing survey of GGB site.
1920 Jan 20	Received patent for "disappearing" Observation Tower
1920	Designed and built bascule door hangar
1920 Jun 28	San Francisco City Engineer O'Shaughnessy arranged with US Coast Guard and Geodetic Survey to obtain soundings.
1920	Strauss sought and received survey of the GG channel floor
1921 Jun 28	Submitted preliminary sketches of GGB to Michael M. O'Shaughnessy, San Francisco City Engineer
1921 Aug 3	Transmitted blueprint for the GGB and estimate (\$17,000,000). \$13,700,000 for the superstructure and \$3,300,000 for the substructure.
1921	Strauss hired Charles Ellis, civil engineer
1922 Mar 1	Submitted prospectus of the GGB.
1922	Proposed formation of special district to construct the GGB, along with O'Shaughnessy and Edward Rainey, Secretary to the Mayor of San Francisco
1923 Jan 13	Association of Bridging the Gate formed.
1923 May 25	Golden Gate Bridge and Highway District Act enacted
1924 Aug 26	Received patent for Military Reconnoitering Apparatus
1924 Dec 20	Provisional permit to construct the GGB
1925 Feb 3	Received patent for Bascule Door Hangar
1925 May 23	GGBHD Act published
1928 Dec 4	GGBHD incorporated
1929 Jan 1	Golden Gate Bridge and Highway District organized. William P. Filmer, President and James Reed, General Manager
1929 Aug 15	Strauss appointed Chief Engineer (CE)
1929 Aug	First meeting of panel of consulting engineers: Moisseiff (leading suspension bridge theorist and designer), Ammann, Derleth
1929 Sep 27	Keesling transmitted to MacDonald, GGBHD General Manager, a digest of the terms of Strauss' contract with the District.
1929 Oct 1	Contract for the land and water test borings for GGB
1929 Oct 7	Strauss contract as CE signed and executed.
1929	Strauss Engineering Corporation
1929	Strauss appointed Charles Ellis, Vice President in Strauss Engineering Corporation, as design engineer for the GGB
1929 Oct 24	Strauss met Keesling of GGBHD Board for first time, in New York
1929 Nov 25	Test borings begun at pier sites
1930 Jan 21	Strauss addressed Rotary Club lunch at Palace Hotel, Keesling present

1930 Jan 30	Keesling wrote Harvey D. Jacob, Esq. in Washington D.C. re litigation (Crawford vs. Superior Court) against GGB District by factions opposed to the bridge. Seeking information on why the case advanced and seeking possible counsel.
1930 Feb 4	Jacob responded to Keesling, concluding the court probably advanced the case on its own and urged Keesling to prepare any further briefs thought necessary. Thinks the GGB has a strong case.
1930	GGB building permit issued by War Department
1930 Feb 25	Preliminary test boring completed
1930 Mar 12	Progress report by Strauss to District Board and engineering consultants
1930 Jun 12	Meeting of GGB consultants in Chicago to review Ellis' preliminary plans
1930 Jun	Strauss awarded honorary Doctor of Science degree (D.Sc.) from University of Cincinnati by Herman Schneider, President
1930	In charge of design/construction of the Columbia River Bridge at Longview WA, completed in 1930
1930	Co-designer of Montreal-South Shore Bridge with a Canadian firm
1930 Jun 26	Strauss and Filmer got testimony from Captain Dollar re bridge clearance
1930 Jul 8	Keesling reported on investigation of Chamber of Commerce and possibility of a personal attack on Strauss
1930 Aug 7	Strauss wrote Irving Morrow accepting his offer to prepare studies and cost estimates for plazas and plaza structures and stated conditions. Cost not to exceed \$2 million. Contract was with Strauss, not the District.
1930 Aug 16	Morrow & Morrow submitted to Board attn Chief Engineer the report of architectural treatment of GGB.
1930 Aug 22	Ellis took his preliminary plans to San Francisco. Strauss had prepared report separately and the GGB directors had it rewritten by the traffic engineer, according to Ellis, who traced Strauss displeasure with him to this occasion. Strauss sent Ellis back to Chicago rather than having him remain in San Francisco to give technical advice.
1930 Aug 28	Keesling reviewed Strauss report [to be submitted to voters] with Strauss, Alan MacDonald [General Manager], Ellis. "...expressing to Professor Ellis my criticism of the Strauss report, the danger of exaggerations, and inaccuracies appearing in the part of the report is largely surplusage." Ellis then delivered a copy of Strauss' report, volume 1, as requested by Keesling. [From Keesling's Daily Calendar]
1930 Sep 1	Keesling phoned Filmer with criticism of report
1930 Sep 2	Keesling arranged for conference on Strauss report with Ellis
1930 Sep 3	Keesling arranged for conference on Strauss report with MacDonald & Taylor
1930 Sep 5	Keesling met with Strauss and MacDonald
1930 Sep 23	Keesling met with Strauss and Duncan re ship owners, desiring 250' vertical clearance under GGB

1930 Sep	Ellis made keynote address on theory of the GGB to scientists at the West Coast meeting of the National Academy of Sciences in Berkeley.
1930 Oct 16	Commonwealth Club meeting on bridge design, with Derleth crediting Moisseiff and Ellis for the expert design in arguing against detractors of the GGB project. The Club published reports in <i>The Commonwealth</i> pp. 189-196.
1930 Oct 21	Strauss wrote Mr. Cheney of the Commonwealth Club of California, protesting the joint report of the Club on the GGB.
1930 Oct 23	Strauss urged Keesling to enter an official protest of the Club's criticisms of the GGB plans. Attached a 3-page draft.
1930 Nov 4	\$35 million in bonds voted by people of District
1930 Nov 18	Strauss report outlining engineering procedure for construction of GGB. Report designated Ellis director of the Computation Division, to compute stresses. Also under Ellis the specs, contracts and proposal forms, to be reviewed by Mr. Paine in the Plans Division. Preparation of general plans and checking the Contractor's working plans assigned to the Plans Division under Clifford E. Paine. Both Divisions to be in Chicago.
1930 Nov	According to Ellis, Strauss put Paine in charge of GGB project (former student of Ellis and recruited by Ellis to Strauss Engineering Corporation). Strauss assigned Ellis to write all the specs for the complete job (10 different contracts). [From van der Zee, John and Cone, Russ "The case of the missing engineer," <i>San Francisco Examiner Image</i> , May 31, 1992, pp. 6-11]
1930 Dec 3	Strauss addressed the San Francisco Advertising Club at the St. Francis Hotel
1930 Dec 12	Keesling met with Ammann in NYC re practice of submitting plans for entire GGB structure all at once, which Strauss had said could be done without detriment
1931 Jan 19	Morrow & Morrow wrote Strauss to say they had revised the drawings of the SF plaza for the GGB and reduced the size and cost to \$1 million, per Strauss request.
1931 Feb 3	Morrow & Morrow wrote the editor of <i>The American Architect</i> that the February 1931 article on the GGB contains errors and omissions, as no one consulted the Chief Engineer or the Architects. Chief Engineer is in charge, not the architects.
1931 Feb 13	Military Grant for the GGB.
1931 Feb 25	Morrow & Morrow wrote the editor of <i>The American Architect</i> again asking them to print Strauss' letter of correction rather than Morrow's, as it was a more accurate presentation of the situation.
1931 Feb 25	Morrow & Morrow wrote Strauss that the provisions of the road permit issued by the US Govt issued Feb 13 were inadequate for an administrative/maintenance structure, especially as compared with the Hudson River Bridge. Asked Strauss to urge a reconsideration on the part of the Govt.
1931 Mar 12	At consulting board meeting, Strauss presented his own specs for the

	10 contracts. They were revised and submitted to the Board. Ellis completed his own specifications, which became the official specifications for the bridge in 8 volumes. Bids for the GGB based on Ellis' specifications. [per van der Zee article]
1931 April 10	Strauss Filed with GGBHD blueprints for <ul style="list-style-type: none"> • General Plan and Elevation • Presidio road map, property map and road profile • Ft. Baker right-of-way map • Plan, elevation and sections of structure near Fort Point – bridge ends
1931 May 6	Strauss met with Keesling re borings
1931 Jun 17	GGB bids opened
1931	Ellis returned to Chicago office to work on bridge towers. Strauss urged him to take vacation. [per van der Zee]
1931 Jun 19	Strauss asked Professor Beggs to confer with his engineers and consultants re proposal and cost of making model tests of the GGB main towers. Beggs met with Ellis, Paine, Derleth, Ammann, Moisseiff and Troxell.
1931 Jun 22	Beggs report on proposed model construction and cost
1931 Jun 25	Strauss sought approval to move drilling apparatus
1931 Jul 7	Strauss met with Keesling re duties of engineers re inspection
1931 Jul 9	Strauss met with Keesling re bonds and funds for his commissions
1931 Jul 10	Miner Chipman, consulting engineer, wrote Keesling re opposition that there are bad leaks in the Bridge organization, and that the engineering department should keep out of the financing problem. "The Chief Engineer is already under fire as a promoter, a jew, and an alien. If he butts into this Bond matter it will confirm the promotion assertion, and provide more ammunition to the opposition."
1931 Jul 31	Strauss met with Keesling re Pacific Bridge Co. bid
1931 Aug 10	Strauss called Keesling with info from Dean Witter re loan for Bridge District based on option to buy bonds. Keesling reaction: "...my personal reaction that it is none of Strauss' business to be interfering." [From Keesling Daily Calendar]
1931 Aug 11	Strauss left for Keesling a suggestion in the form of a draft resolution for the Board to grant Strauss the right to accept the remainder of his fee in the form of bonds in lieu of cash in the event of a favorable decision from the Supreme Court of California, and that Strauss could pledge his contract as security money to be loaned.
1931 Aug 11	Received patent for Yielding Barrier for Vehicles
1931 Dec 5	Strauss urges Ellis to take two week vacation [per van der Zee]
1931 Dec 16?	Strauss advises Ellis he need not spend so much time on structure. Put him on indefinite vacation without pay, i.e. dismissed. [van der Zee]
1932 Jan 15	Strauss sent the GGB Directors a 9-page statement of the issues involved in the opposition to the GGB, prepared earlier at the request of Mr. Felt.

1932 Jan 28	Strauss invited Keesling to view a film showing some of the Strauss bridges around the world (Arlington Memorial, Longview across the Columbia, etc.).
1932 Feb 2	Film showing at Palace Hotel.
1932 Feb 2	Strauss wrote Filmer re payment to Strauss from funds collected from the City. Filmer and Keesling preferred to give the bank loan preference in order to maintain credit. Strauss pleaded that the huge amount of time spent for the GGBHD has caused him to miss out on other potential work. He had counted on relief from the temporary financing planned by the District, pending the State Supreme Court decision. When the temporary relief program was abandoned, it left Strauss hanging. Strauss maintained that the engineering department in the GGBHD was as important as any other, especially with the present suit and threatened litigation, and asked the GGBHD to make a smaller payment on the loan from the bank in order to advance Strauss \$10,000.
1932 Feb 10	Monthly report of the Chief Engineer to GGBHD Board – re calculations of bridge stresses and concluding that the bridge can be built for \$33 million with \$2 million for contingencies.
1932 Feb 13	Strauss addressed confidential memo to Filmer and Keesling re cost tables for the GGB with money requirements based on the completed bridge, with reductions based on contracts awarded.
1932 Mar 9	Strauss wrote William Stanton a requested statement describing the financial losses caused by attacks on the GGB which voided a bond sale and postponed awarding contracts. The loss was estimated at \$438,101.29.
1932 Apr 9	Strauss wrote Beggs re preliminary experiments on bridge tower model. Not prepared for further testing on a larger model as yet. Waiting for financing litigation final brief of the federal court case to go to Judge April 11 and be concluded mid May.
1932	Strauss was consulting engineer for Arlington Memorial Bridge over the Potomac River, completed 1932
1932 May 9	Strauss met with Keesling about compensation for services rendered in order to provide complete detailed plans for GGB before submission of the bond issue to the voters
1932 May 26	GGBHD Attorney Harlan wrote the Finance Committee that Strauss sought payment in proportion to the amount of work done, not more money for extra work. Since extra work was expended to gather lump sum bids, a higher proportion of payment would logically be made at this time, namely one third.
1932 Jun 1	Strauss wrote Brig. General Charles G. Dawes, Chairman of the Reconstruction Finance Corp (R.F.C. in Washington D.C. supporting the bridge project in case of the question of financing comes up with Dawes.
1932 Jul 31	US Supreme Court settles all litigation over GGB.
1932	Nervous breakdown? divorce? spent time in Adirondacks

1932 Aug 12	Strauss wrote Frank G. McDonald describing the readiness of the GGB for construction in all aspects, thus complying with the R.F.C. Act as a completed project exempt from submission to engineering inspection.
1932 Sep 15	Strauss and Filmer met with Building Trades Council re employment of only union labor. [Not legal to restrict, says Keesling in his Calendar]
1932 Sep 23	O. H. Ammann wrote Strauss re his conference with Masslich and Mitchell about the adequacy of the GGB cost estimates.
1932 Sep 26	Strauss wrote Keesling re cost estimates. Strauss wrote Ammann re Keesling's upcoming visit with Masslich & Mitchell, armed with cost tables Strauss prepared.
1932 Oct 2	Composed poem "The Redwoods," published as a song
1932 Oct 19	Chief Engineer's Certificate prepared by Auditor and General Manager shows inspection as an item separate from the Engineer's compensation. [Van Harvey on Feb 17 refers to this as evidence that Strauss was not responsible for inspection cost.]
1932 Nov 30	Strauss reported on surveys of north/south road
1932 Dec 1	Keesling met briefly with Paine re Ellis to review tenor of Ellis' activities. Keesling suggested that Strauss should grant Ellis an interview if at all possible.
1932 Dec 1	Moisseiff wrote letter to Derleth indicating that steel-inspecting engineer Baker did not wish to have inspection headquartered in Chicago, as requested by Paine on behalf of Strauss. Moisseiff and Ammann prefer NYC.
1932 Dec 13	Strauss and MacDonald met with Keesling re McClintic-Marshall contract provisions
1932 Dec 19	From Keesling's Calendar: "...reviewing with W.P. Filmer unsatisfactory results and lack of accomplishment of Strauss, conferences and contacts with Highway Commission. Evidence of attempt to shift responsibility and necessity of protecting against it. Discussed managerial problems. Further discussion at luncheon relative to having the advice and suggest of Clark Cottrell" re North Road problems.
1932 Dec 20	H.V. Tucker called Keesling to request information concerning informal action of the Engineer and General Manager as to qualifications [from Keesling Calendar]
1932 Dec 29	Keesling phoned Strauss re computation of effect of proposals re McClintic-Marshall contract
1933 Jan	Construction of Golden Gate Bridge began
1933 Jan	Cassady wrote in <i>Spanning the Gate</i> (p. 35): "It had been a long, exhausting, expensive and, at times, dirty fight. Joseph Strauss had been involved with every obstacle along the way and he had helped clear them all-but not without cost to himself. In that decade and a half, he was slowly drained, psychologically, emotionally, financially, and for a short time, spiritually. As construction began, he indulged in the well-deserved luxury of a breakdown, spending the first six months of the new year recovering in Adirondacks while Clifford E. Paine was

	building the bridge without him.” [The following entries indicate that Strauss was not out of action entirely, nor was he in the Adirondacks that entire time. In addition to writing a description of the bridge, helping to prepare ground-breaking ceremonies, and speaking at a GGBHD banquet, Strauss seems to have worked hard in February and March on solving the burden of inspection costs by seeking professional and legal advice. Correspondence in April implies Strauss was in Los Angeles, not the Adirondacks. (All correspondence to Strauss over the next six months was addressed to his company at 111 Sutter Street, San Francisco; this could have been forwarded to him by staff.) April 4, after Strauss had received legal opinions, he wrote Keesling about the inspection cost issue. It is after that when Keesling became disgruntled with Strauss’ absence and wanted to work out the disagreements face to face.]
1933 Jan 13	Derleth wrote his view of an inspection and engineering organization for Keesling. Was not aware of the content of the Chief Engineer’s contract at the time. [Van Harvey on Feb 17 wrote that Derleth assumed the District would pay the cost of inspections.]
1933 Jan 14	First questions regarding responsibility for various costs [i.e. inspection] appeared in Harlan’s report to the Building Committee with a requested written opinion. Strauss had no knowledge of this report at the time. Harlan referred to the original October 7, 1929 contract and assumed the inspections were to inform the Chief Engineer about contractor work, not to inform the Board about the Chief Engineer’s work. Only materials inspections in shops would be paid by the District, not inspections of contractor work on the job. Recommended advising Strauss of his contractual role vis-a-vis inspection.
1933 Jan 19	Strauss’ secretary Miss Burns sick, putting Strauss behind in correspondence
1933 Jan 20	Strauss phoned Keesling to alert that inspecting engineer Baker had arrived.
1933 Jan 27	Strauss supplied Keesling and Morrow & Morrow with a physical description of the bridge.
1933 Jan 30	Strauss ordered a fleet to San Francisco for celebration
1933 Feb	First official spade of earth was turned for GGB
1933 Feb 1	Keesling met with Reed, who had conference with Baker re inspection and Reed report as to supervision, desiring protection against Strauss [Strauss had wanted Baker to report to him and have Chicago as his home office]
1933 Feb 3	On the GGBHD Building Committee agenda: the Baker contract or letter and Reed’s understanding with Strauss. Strauss letter unsatisfactory and to be modified.
1933 Feb 17	Attorney Van Harvey wrote Strauss an 8-page letter advising about cost of inspection under Strauss’ contract with the District. The contract had no direct provision for field inspection. The only inspections specified are shop inspections, the cost to be born by the District. Van

	Harvey took inspection and materials (in the shop) and inspection of workmanship (in the field) to be all part of one inspection process. The overall purpose is compliance with specs. All inspection was under the control of the Engineer. Since the District was specified to pay for one part of inspection, it would there pay for all. Van Harvey disagreed with Harlan's premise [see Jan 14] that there are different types of inspections with different payment expectations. Also argued the inspections are for the benefit of the District, an instrument enabling the Chief Engineer to certify "...the correctness of the work." It did not mean the Chief Engineer had to do or pay for the detailed inspection work himself. Further, Strauss' 4% fee was sufficiently lower than for other bridges [ranging from 6.38 to 7%] that it couldn't possibly include inspection cost. Finally, the District wished to impose their own [more expensive] inspection forces in some cases, for which they should absorb the cost.
1933 Feb 18	Keesling conferred with Reed re Strauss' attitude re the type of inspection if he must bear the cost
1933 Feb 25	Strauss spoke at GGB Banquet commemorating the ground-breaking ceremonies, Fairmont Hotel
1933 Feb 26	Official ground-breaking, Strauss given the spade to turn the ground. [Cassady]
1933 Mar 2	Strauss called Keesling to confer re interpretation of the contract re responsibility for inspection.
1933 Mar 2	Morrow & Morrow wrote Strauss re latter's suggestion to submit the architectural treatment plans to the San Francisco Art Commission. Felt this unnecessary because GGB already as an architect on board, unlike other bridges which fell under criticism.
1933 Mar 3	Strauss wrote Beggs wanting revised proposal from Beggs re model test to present to GGBHD Board
1933 Mar	Much correspondence re interpretation of Strauss' contract vis-a-vis field inspection and who pays for it
1933 Mar 7	Van Harvey wrote Strauss a supplement to his opinion of Feb 17 re inspection cost. Cited a case Hibbs v. Arensberg in Pennsylvania that supported Strauss' position.
1933 Mar 9	Ammann wrote Strauss re interpretation of the contract re field inspection, advised that the contract implies Strauss should pay for it
1933 Mar 16	Beggs wrote Strauss with revised proposal for model test
1933 Mar 18	Irving Morrow wrote Strauss with an opinion on inspection cost from the architecture practice point of view. Morrow had reviewed the opinions from Harlan and Van Harvey. Cited AIA document regarding professional practice, which made clear that such costs are not generally born by the architect. Agreed with Van Harvey's opinion and faulted Harlan's. Also received confirmation on his viewpoint from Thomas Chace of ASCE.
1933 Mar 18	Thomas Chace wrote Strauss that an engineer's fee does not usually include architectural or inspection costs.

1933 Mar 25	Morrow wrote Strauss again [see Mar 18] with further interpretation re supervision vs superintendence, the latter being a more general-level responsibility for quality of work.
1933 Apr 4	Strauss wrote Keesling re who bears cost of inspection, District or Strauss? He garnered opinions from several engineers and transmitted them to Manager Reed.
1933 Apr 7	Harlan [District lawyer] said interest contemplated by Strauss provision for specified amounts
1933 Apr 19	Strauss wrote Keesling [misspelled Kiesling] from the Ambassador in Los Angeles referring to a letter to Mr. Filmer and saying about them [indefinite antecedent] "...no adverse movement should be permitted to get a head start." Strauss apologized for missing Keesling's call at the William Taylor, which he had left for a quieter place and complete rest. He was feeling better and hoped to be back before long.
1933 Apr 21	Keesling wrote Strauss that it took a while for Keesling to realize that Strauss was compelled to stay away from his office, implying a more serious indisposition than Keesling had surmised. When Keesling called Strauss at the hotel in LA, they reported that Strauss was merely out and expected at any time [implying not sick....]. Keesling reported that the Argonaut [anti-bridge?] activities were an irritation. Hoped that Strauss would recover and be back soon.
1933 Apr 24	Paine (not Strauss) wrote Lawson (Berkeley geologist and inspector) asking him to make inspections on arranged dates through Strauss, Cone, or Paine on behalf of Strauss.
1933 Apr 26	Strauss wrote Keesling from the Ambassador in Los Angeles thanking Keesling for his letter of April 21 and surmised that eventually the people will realize it's time to leave the District alone and let it carry out its undertakings. Strauss reported feeling better and will be all right if he can avoid dissipating his energies so freely.
1933 Apr 26	Lawson asks Paine to have confidence in his judgment and seeks ability to inspect when he needs to keep himself informed properly. Argues that if CE must arrange his inspections, it defeats purpose of having one.
1933 Apr 28	Lawson sends above correspondence to Keesling.
1933 Apr 29	Keesling alerts Reed re Lawson/CE dispute on inspection. Also wrote Lawson that Keesling agrees with Lawson's position.
1933 May 1	Lawson wrote Keesling that Paine sent letter conceding Lawson's point. No more friction anticipated.
1933 May 20	Harlan wrote Reed as requested re extra compensation for Strauss having to redesign the connecting roads and streets as requested by City and State officials. Strauss' contract seems to have provided that Strauss would make such adjustments as part of the contract. In addition, the District already paid the State to take care of the North approach except for the Sausalito approach.
1933 Jun 7	Keesling met with Paine, Derleth, Reed re plans for marina connections
1933 Jun 14	Charles W. Duncan from Strauss Engineering Corporation sent

	Keesling an etching of The Redwoods with a poem by Strauss.
1933 Jun 23	Keesling conferred with Reed re Strauss Co. statement prepared by Paine for fees. Keesling Calendar: "...policy of requiring Strauss' presence in order to prevent evasion and delay."
1933 Jun 29	Keesling Calendar: "...phoned Cone, informing him of purpose of insisting upon conference with Strauss and confidence in him personally, in order to avoid misunderstanding. Same expression to Paine, calling him at Strauss' office." Keesling had conference with Filmer re Strauss situation.
1933 Jul 12	O'Brien of the Ukiah Press [and on the GGBHD Board representing Mendocino] wrote an editorial about the Strauss situation.
1933 Jul 13	O'Brien sent copy of editorial to his friend Keesling and said he was sorry for Strauss.
1933 Jul 14	Keesling wrote O'Brien and did not fault his editorial, but clarified that Keesling's own comments referred only to the absence of the Engineer. Welch from the Board broadened the issue to include failure of the Board to settle the issue of payment for inspection in the field. The claims for extra services convinced Keesling [and others?] that Strauss should be on the job, to settle important issues and prevent Strauss from thrusting that responsibility upon his subordinates. At the time Keesling spoke his mind [at a Board meeting], press reports indicated Strauss was well enough to be on the job.... Keesling didn't mind a genius such as Strauss operating without constant individual presence, but he thought Strauss needed to be present to address adjustments to his contract. Keesling expressed his own sympathy for Strauss, but felt that regarding Strauss' rights under the contract vis-a-vis inspection, Strauss needed to come to the table with an open mind.
1933 Jul 19	Strauss called Keesling re status of Contracts IV and V. Keesling requested conference for consideration of problems re fees and extras.
1933 Jul 22	Strauss wrote Irving Morrow that the District may not be able to get a larger area for the toll area for the GGB. Execute designs assuming no increase in area. It wouldn't be ideal, but may be necessary.
1933 Jul 27	Morrow wrote letter re details for a color and lighting contract. [This letter presumably received by Strauss; see Mar 30, 1934.]
1933 Aug	Strauss absent
1933 Aug 7	Strauss addressed long (12-page) letter to Keesling stating his position re the contract and field inspection, extra work, and terms of payment. Pointed out hardship of receiving payments based on the rate at which the contractor performed his work, rather than at the rate Strauss performed his.
1933 Aug 9	Strauss submitted report to Board recommending color and lighting study.
1933 Aug 14	Strauss wrote Reed about the need to excavate to a lower depth to get a solid footing for Pylon S-1; proceeded because necessary and would seek approval of the Board later.
1933 Aug 20	Building Committee reviewed extensive letter from Strauss re cost of

	inspection and extras
1933 Aug 22	Strauss supplied Keesling with a status of electrical work for the GGB. Awaits color and lighting study from Morrow.
1933 Aug 24	Building Committee: Sidney Taylor letter to Strauss re to desirability of traffic study as related to streets in San Francisco. Not much impressed with it. ??? [From Keesling Calendar] Strauss send Ammann a request for opinion on nature of contract.
1933 Aug 25	Strauss wrote Ammann re color and lighting study
1933 Aug 31	Strauss received reply from Ammann, who believed no contract should be let with assurance to contractor "that he may fabricate locally portions excepted in report of Board of Engineers." Amman willing to endorse a recommendation authorizing the Chief Engineer "to increase local tonnage depending upon quality of work turned out and efforts of plant to improve equipment and organization after contract is let."
1933 Sep 1	Strauss called Keesling "...relating to claims for adjustment and interpretation of contract as related to inspection and extra work. Informed Strauss of my general attitude and as well statement made by Moisieff relating to the intention of fixing responsibility for payment by the Engineer of expense of inspection in the field. Strauss disturbed by what he believes to be lack of co-operation. He referred to activities of progress and cost estimates from the office of the District and criticisms by Mr. Murtagh, a discharged inspector. Informed him that my interpretation of commissions from the General Manager based upon Murtagh criticism intended only as support by the Engineer in urging greater progress by Barrett & Hilp. [From Keesling Calendar]
1933 Sep 1	Ammann wrote Strauss re color and lighting study, regretting not knowing that an illuminating engineer was being recommended by Reed (General Manager) in addition to employing Morrow. Strauss had indicated Morrow had all the required qualifications. Can't say whether both are required or who should be subordinate to whom. Recommends Strauss and Reed reach agreement on necessity for both.
1933 Oct 13	Reed urged Building Committee to address engineering work on the Lyon Street lateral, which Strauss claimed was outside his contract.
1933 Oct 14	Strauss wrote Felt re Reed's request Oct 13 and included a communication for their consideration. [not available]
1933 Oct 14	Reed recommends to Building Committee that Chief Engineer do his color and lighting study, separate from issue of hiring an illuminating engineer.
1933 Nov 1	Keesling went to south works with Strauss, Cone, Derleth re fender damage
1933 Nov 2	Keesling (Chair of Building Committee) wrote Board of Directors re extra work for Marina road and Lyon Street outlet. The work is not in Chief Engineer's contract. Revision of plans caused by City of San Francisco request.
1933 Nov 7	Keesling recommended to Board to accept Strauss recommendation for color and lighting study by Morrow.

1933 Nov 10	Strauss wrote Emery Smith of Smith, Emery & Co. that their inspection test samples of cement were being sent to their laboratory in cloth sacks, not air-tight containers as specified. Demanded an explanation.
1933 Nov 20	Keesling met with Strauss and Filmer at Strauss' office "relating to attitude of directors, which is disturbing Strauss, who believes that an unfortunate prejudice exists among some of the directors. Some disturbances in inter-office relations." Suggested all communications go through General Manager.
1933 Nov 23	Strauss wrote letter of introduction to Keesling for an employee of Norman Chandler, member of Gillis, Emmett & Chandler firm in LA. Norman and father Harry (publisher of the <i>LA Times</i>) were friends of Strauss.
1933 Nov 24	GGBHD Attorney and General Manager prepared analysis of CE's contract.
1933 Nov 27	Strauss wrote Morrow accepting his July 7, 1933 proposal for a color and lighting study of the GGB.
1933 Dec 27?	Strauss received above contract analysis.
1934 Jan 2	Note from ? [someone on Finance Committee?] to Filmer and Reed recommending that Strauss have no dealings with the Bond Syndicate re the "pier and fender matter" which affects the whole financing program. Strauss had drafted a letter to Osborne of the Syndicate, and it was declared by an unnamed person as grossly inaccurate. Declared Strauss negligent of his proper responsibilities.
1934 Jan 4	Above contract analysis sent to Building Committee
1934 Jan 4?	Strauss had chance to review the analysis received after Christmas.
1934 Jan 5	The Auditor John Ruckstell wrote General Manager Reed that he had a monthly progress payment claim from Strauss for December. Auditor deemed that no amount was due.
1934 Jan 9	Strauss received from Reed copies of references in the contract analysis that Strauss did not have. Then finished his review.
1934 Jan 10	General Manager Reed wrote the GGBHD Auditing Committee re Strauss's contract and method of determining payment. The Auditor thought the method of payment to Strauss used in 1933 was flawed [agreed to by Alan MacDonald, Harlan and Paine, MacDonald being Reed's predecessor as General Manager]. Reed wanted discussion for future payments but permission to pay the December claim as per the 1933 formula. By way of explanation, the 1933 payout formula was based on a ratio of Strauss' total fee of \$965,000, whereas the Auditor thought Strauss should be paid a ratio of the <i>balance</i> , one third of the total having already been paid out.
1934 Jan 17	Strauss wrote Keesling 6-page letter, to the effect that he didn't have a chance to review the contract analysis before it went to the Building Committee, as initially agreed. Asked for additional response time before Building Committee considered the report. Also rebutted statements in the report. Strauss claimed that from the time the Board changed the requirements from preliminary plans to final plans, Strauss

	told MacDonald this constituted a change in the contract. Maintained that his contract does not call for him furnishing field inspections. Also emphasized that the contract allowed for agreement on Extra Work and corresponding compensation. Brought up the problem that the new General Manager Reed does not want to follow the old formula for payment schedule, upon which Strauss was depending for his own financial program. Wanted resolution on who paid for travel of consultants. Wanted to resolve issues without hiring an attorney, but since the Building Committee received the analysis in state that Strauss found objectionable, he felt he needed now to hire an attorney to represent him to the District.
1934 Jan 18	GGBHD Building Committee considered Strauss' revised letter re interpretation of his contract
1934 Jan 20	Beggs at Princeton tested model of bridge tower
1934 Jan 25	Beggs wrote Strauss re demo test presentation January 20
1934 Jan 31	Strauss submitted certificate that contained revised estimates from the October 19, 1932 estimates.
1934 Feb 1	Keesling Calender re Strauss: "...conflict of authority related to releasing information concerning soundings"
1934 Feb 2	Moisseiff wrote Paine; Begg's concerns academic. Analysis is sufficient.
1934 Feb 6	Beggs wrote Paine re torsional stresses
1934 Feb 7	Paine from Strauss Engineering Corporation wrote Moisseiff agreeing that Begg's testing was sufficient.
1934 Feb 7	Strauss wrote Keesling comparing cost estimates of the GGB from August 27, 1930, October 19, 1932 and January 9, 1934. The figures were \$27,165,000, \$24,693,905 and \$25,832,677 respectively. He was defending the cost in light of bad press re cost to taxpayers.
1934 Feb 16	Keesling conferred with Strauss re relief map incident, with Keesling expressing regret at Strauss' continued chagrin and denial of all knowledge and admonishing discontinuance of an unfortunate attitude.
1934 Feb 19	Keesling conferred with Strauss re relief map. There were indications Strauss would criticize it, which would create public misunderstanding. Strauss informed Keesling his (Strauss') check had proved the map to be substantially correct. Keesling then met with Filmer re the importance of coordination between Reed (General Manager) and the CE (Strauss) notwithstanding difficulties; essential to keep the CE informed, not only for cooperation and service, but as well to avoid disavowal of responsibility. The importance of such policy stressed by additional information from PWA local authorities, lack of consultation with the CE necessitating personal request for conference between the CE and the local Board....
1934 Feb 27	Strauss presented a 5-page draft progress report to Keesling, to appear in daily papers.
1934 Mar 1	Keesling had informal conference with Strauss re Strauss' apprehensions concerning delay

1934 Mar 1	Strauss lawyers John L. McNab and Henry C. Clausen submit opinion on inspection issue
1934 Mar 16	Strauss advised no further tests with model needed
1934 Mar 26	Strauss received a letter from Morrow re conclusion on Color and Lighting Contract details.
1934 Mar 26	Harlan transmitted a memo with the Morrow Color and Lighting Contract.
1934 Mar 30	Strauss wrote Reed re Harlan's memo on the Morrow Color and Lighting Contract. Requested more detail as originally provided by Morrow July 27, 1933. Noted that Morrow would be working on paint color selection, but not supervising preparation and testing of paint samples otherwise.
1934 Apr 18	Strauss hearing with GGBHD Board
1934 Apr 28	Keesling read argument of Strauss' counsel
1934 May 2	John McNap, attorney for Strauss, sent Keesling a memorandum with observations re the Strauss contract. Thought that the contract language seemed to cover every form of inspection. Surprised however that companies in hardship such as M-M received generous treatment, whereas Strauss' claim was received by some Directors in a hostile spirit, judging from arguments advanced at the hearing [what hearing?]. Sought meeting with Keesling and subsequently the Building Committee subcommittee.
1934 May 25	Strauss wrote Morrow acknowledging his letters of May 23 and 24, and thanked Morrow for offering to look over plans and specs for removal and reconstruction of the Presidio buildings.
1934 Jun 8	Irving Morrow, Architect, wrote Strauss to report on May progress on the color and lighting study. He stated his preference for red, and visited Sherwin-Williams to get a sample made to his liking. He also investigated lighting (sodium vapor lamps) and hand rails.
1934 Jun 11	Strauss wrote Irving Morrow, Architect, re design of lamp posts and wanting to discuss with Morrow and Mr. Paine together.
1934 Jun 11	Strauss wired McDonough, Dir of Engineering at the PWA, following appearance of June 10 articles in both the <i>San Francisco Examiner</i> and <i>San Francisco Chronicle</i> intimating McDonough is not in full agreement with the GGB south pier design (criticized by geologist Lawson of Stanford). Strauss emphasized it was approved by the consulting engineers and construction is proceeding satisfactorily. Requested detail on what parts of design were in question.
1934 Jun 12	Strauss wrote Morrow to acknowledge Morrow's report of Jun 8 and seeking an extra copy for the General Manager.
1934 Jun 12	Reed sent note to Keesling re above articles, and declared McDonough's letter to Senator Johnson unethical. Who released the letter to the press? McDonough or Johnson? Also mentions Strauss' objections to the letter and feels the matter should be dealt with at the engineering level (via Strauss).
1934 Jul 6	Keesling interviewed Strauss re assumption re field inspection costs

	and alternate Funston Ave approach
1934 Jul 11	Building Committee, President Filmer, General Manager Reed and Attorney Harlan met with Chief Engineer Strauss and his counsel John L. McNab and Henry C. Clausen re Strauss contract.
1934 Jul 14	Morrow sent Strauss a letter stating his position re color for the GGB.
1934 Jul 20	Building Committee reviewed calculation of Strauss payments
1934 Jul 23	Building Committee reported to Board of Directors re the Chief Engineer's contract and claims. Stood by its previous recommendation of May 15, 1934. Maintained that the contract is clear regarding field inspection. District hired and paid inspectors pending determination of the controversy. Committee thought progress payments were correct and if the Chief Engineer paid for inspections as he ought, his progress payments would end sooner.
1934 Jul 30	Building Committee met re annoyance of controversy between Contractor and Chief Engineer and General Manager re added reinforcement in south pier
1934 Aug 2	Morrow wrote Strauss two letters, one about plate housings covering the struts on the Marin tower, and the other re his completed inspection of the portal enclosures on the Marin tower.
1934 Aug-Sep	Keesling reviewed Strauss contract
1934 Sep	Keesling reviewed McClintic-Marshall contract
1934 Sep 24	Meeting of all re above
1934 Sep 28	Keesling conferred with Strauss re information from Cone re proposed installment payment of salaries
1934 Sep 29	Derleth wrote Keesling a personal memo that the Chief Engineer's staff was advised that there might be a delay in payment of their wages, or a partial payment, or the staff might be reduced should the Chief Engineer fail to have liquid cash. Derleth worried about the future of the bridge and advised Russ Cone to seek advice from Keesling should the anticipated cuts materialize, and not accept delayed or partial payments without talking with Keesling. Derleth opposed a lump sum contract for a bridge of this magnitude. Asked that the Directors insist on sufficient staff for inspection and engineering, in Chicago and in S.F.
1934 Oct 1	Keesling wrote O'Brien confidentially telling him that Strauss prevailed upon his staff to accept one-half pay for the period ending Saturday October 6. Thought the cause must be lack of funds. Worried that if this was a problem now, what would happen when the Chief Engineer was fully paid under the contract, a point rapidly approaching.
1934 Oct 1	Keesling wrote Derleth that the portion of the fee reserved under contract is not out of line but that the reservation is not available for current payroll. "It will be the problem of the Chief Engineer to meet the payroll.... The incident is indicative of the characteristic which causes some concern as we approach complete payment under the terms of the contract."
1934 Oct 1	Strauss called Keesling re transcript of testimony in Bailey Willis

	matter.
1934 Oct 1	Strauss wrote Reed re rapid transit over the GGB. Alternate designs for street car service were scratched due to decline in street car transportation. Possibility for train rail would have to be explored.
1934 Oct 3	O'Brien of the Ukiah Press wrote Keesling that Keesling's latest news about S. [Strauss?] was unknown to O'Brien but not unexpected. O'Brien disliked the inclination to tear down in the bridge directorate and hoped for a solution so no one may be hurt. O'Brien expressed willingness to do all he could to effect a fair adjustment and insist that it be followed. "I believe the party in peril will listen to what I say, if I lay down on him."
1934 Oct 8	Caisson for south pier towed into position. Storm that night (heaviest in 30 years) damaged mooring cables and steel work supporting the working platform
1934 Oct 9	Strauss went to scene, discussed situation with Cone and Derleth, and later Pacific Bridge Company and Reed.
1934 Oct 10	Strauss submitted to GGB Board a special report on rapid transit. Capacity of bridge is sufficient for light weight rapid transit but some strengthening would be required. Offers to undertake investigation.
1934 Oct 10	Strauss permitted contractor to remove the caisson for south pier
1934, Oct 16	Paine attended meeting re McClintic-Marshall Co.
1934 Oct 19	Strauss distressed that McClintic-Marshall Co. withheld construction schedule
1934 Oct 19	Strauss wrote Keesling and Special Committee on M-M claims. Strauss had read the proposed draft agreement signed by M-M officials and took exception to four clauses, relating to furnishing a schedule, bonus for saving time, reference to delay vis-a-vis the south pier, and reference to dispute settlement, already covered in the general conditions of the contract.
1934 Oct 27	Strauss wrote Ammann and Moisseiff re their review of the new construction method
1934 Oct 31	Strauss call Keesling to object to further borings
1934 Oct 31	Strauss reported to Building Committee on revised procedure for construction of the pier.
1934 Nov 6	Strauss wrote Lawson and Sedgwick re foundation loads for the south pier
1934 Nov 8	Strauss was present at a joint meeting of the Building & Finance Committees to discuss elevators in the towers. Strauss was asked why estimates were so far apart from actual bids. Strauss didn't know; hadn't seen original estimates. Gave Strauss task of analyzing cost. Other matters discussed were: traveling crane for maintenance, intercommunication, access, pouring piers, Bailey Willis matter, Lawson bill, borings, Lawson's view of how deep to drill the bore to find sandstone (Willis had said the sandstone slopes down and east). Strauss was instructed to proceed with drilling.
1934 Nov 14	Strauss submitted report re revised procedure

1934 Nov 19	Strauss special report on changing the construction method for the south pier to Building Committee.
1934 Dec 10	Strauss met with Board of Engineers to discuss Paine's sketches/estimates for including rapid transit. Board agreed in substance with report to be submitted Dec 19.
1934 Dec 19	Strauss submitted Rapid Transit report to GGBHD Directors.
1934 Dec 29	Paine transmitted new plans for stiffening trusses and floor steel to M-M Corp. Offered to check M-M layouts
1935 Jan 2	M-M acknowledged receipt of original drawings from Paine.
1935 Jan 11	Mr. Jones of M-M Corp wrote Paine acknowledging receipt of new drawings. Would not deliver a design until revisions are finalized.
1935 Jan 14	Paine conferred with Jones of M-M re schedule of production for stiffening trusses and floor system.
1935 Jan 19	Paine wrote Paulus of M-M to the effect that he may revise drawings after issued.
1935 Jan 24	Strauss wrote Derleth re Cone's report on pressure tests for the south pier
1935 Jan 28	Strauss prepared for GGBHD a supplementary report on the unbudgeted balance for the bridge.
1935 Jan 30	Strauss presented GGBHD Board with supplementary report on rapid transit. Included comments from Moissief, Ammann, and Derleth, which were at variance with agreement Dec 10. They recommended higher live load for rapid transit (and higher cost). Strauss maintained loading was sufficient given new lighter loads for rapid transit. Advised against strengthening the structure.
1935 Feb 4	Morrow wrote Strauss a report of his final conclusions re bridge color (orange vermillion). Based conclusion on appearance, not economy, and on emphasizing the bridge rather than playing it down. Selected warm color to contrast with the cool atmospheric colors of the bridge's environment.
1935 Feb 14	Keesling inquired re litigation involving Chief Engineer personally from Behrens of the <i>Chronicle</i>
1935 Feb 20	Strauss wrote Paulus of M-M Corporation that they should not order any material according to Paine's Dec 29 plans before the working drawings were approved by the Chief Engineer unless at their own risk. Also took exception to Jones' assertion that delivery of plans constituted a date of last revision. Maintained a right to revise design drawings. Affirmed that revisions causing delays for M-M may be the basis for a claim. Strauss did not anticipate any delays for M-M in this instance of the tower construction or suspended structure. Accepted the schedule developed Jan 14. Asked if M-M planned to use the advanced schedule dated January 31.
1935 Feb 23	Strauss memo to Reed indicated a Chief Wire Inspector and Assistant Wire Inspector would soon be needed.
1935 Feb 27	Keesling conferred with Strauss re his personal troubles, and determining his stand on his claim for fees.

	Keesling referred to litigation [against Strauss] instituted by Doc Meyers and other litigation and complications, claim for compensation for services under an earlier engagement [without foundation said Strauss]. Also pending action against the District for 1% additional. Strauss' concern resulted from what he believed to be antagonism in the office, and antagonism of the [District] attorney, which developed as a result of claims for extra work. Lack of coordination....
1935 Mar 9	Strauss received report on settlement levels from Cone
1935 Summer	Operated experimental school for transient boys in Clyde CA
1935 Jun 13	O'Brien wrote Strauss to meet with the Building Committee and arrange for his fee re extra work order for the Easton & Smith contract. O'Brien wanted this settled before another contention should arise. [Was O'Brien on the Roads-Traffic Committee at this point?]
1935 Jul 10	John R. Steel, chief engineer, California Street Cable Railway Co, wrote an editorial in the <i>San Francisco News</i> pointing to Strauss as the chief visionary for the design and character of the GGB, as opposed to architect Morrow, who came to the project after the basic concepts were in place.
1935 Jul 23	Strauss asked Keesling for pay
1935 Aug 5	Keesling met with Strauss re extra work fee problems.
1935 Aug 26	Morrow & Morrow wrote Strauss that he would design the toll plaza for the GGB for \$7,000. Any changes after District approval that increased the amount of work would result in extra compensation.
1935 Aug 28	Strauss wrote Morrow that the agreement of Aug 26 was acceptable, with a modification they discussed.
1935 Sep 19	Strauss heard that remarked there were only two members of the GGB Board of Directors. Paine wrote Keesling denying any such comment.
1935 Oct 1	Mr. Kuss started as wire inspector for District.
1935 Oct 7	Mr. Blondin started as assistant inspector for District.
1935 Oct 24,25	Strauss met with Morrow, Reed, and Paine to discuss revisions to plans X-1A to X-5A relating to the Toll Area.
1935 Oct 29	Strauss sent info from above meeting to Ammann and Moisseiff. Strauss was heading south for a week; Morrow would forward the plans. Asked Ammann and Moisseiff to approve them before the Board's November meeting.
1935 Nov 9,11	Keesling met with Strauss re toll plaza
1935 Nov 13	Strauss submitted special report on maintenance painting to GGBHD. Recommended accepting proposal from McClintic-Marshall to paint and split cost of painting towers to specs, perhaps thus ending dispute on whether M-M is supposed to perform the maintenance painting.
1935 Nov 16	Strauss called Keesling re work fees
1935 Nov 27	Keesling wrote the GGBHD Directors approving the recommendation of Strauss re paint type and accepting shared cost.
1935 Dec 3	Paine wrote Strauss that Harlan (GGBHD attorney) was seeking Board approval on final form on paint agreement with M-M, thus delaying painting. Paine didn't get to see the final draft. Apologized that he

	had no chance to review it with Strauss.
1935 Dec 5	Strauss wrote Reed that Contract IV contractors were proceeding with spec'd painting procedure despite the delay due to M-M situation.
1935 Dec 6	Reed wrote Strauss that changing the procedure in light of using synthetic paint might be a good idea. To be resolved at Dec 11 mtg. [Hint to wait?!]
1935 Dec 7	Derleth wrote Filmer and Keesling that painting should proceed as agreed, allow M-M to paint in the shops [versus on site] and not require M-M to change specs to synthetic paint. Disagreed with Paine stance of limiting the amount of painting in the shops.
1935 Dec 30	Strauss sent President Filmer memoranda re additional compensation for foundation investigations, revision of North and South approaches, and revisions of Military Replacements. Asked Filmer to meet with him informally before passing on to the General Manager, Attorney and the Board.
1935-1936	Strauss submitted memos and details re military replacements 10/7/35, 11/25/35, 12/30/35, 1/14/36
1936 Jan 7	Insurance Commissioner of the State of Washington wrote Keesling to learn whether Dr. Harry Meyers [Doc Meyers] had anything to do with financing a bridge in San Francisco Bay and his standing in the community.
1936 Jan 9	Keesling replied there was a Dr. H. H. Meyers associated with Mr. Strauss in early stages of the movement to build the GGB. Dr. Meyers had nothing to do with the financing of the GGB, but was interested in proposals to bridge the bay from San Francisco to Oakland. A few months before he was in a controversy with Mr. Strauss; they composed their differences and they continue in some relationship.
1936 Jan 14	Strauss submitted letter to Building Committee re N.C.O. and other expenses.
1936 Feb 6	Strauss submitted letter re fees
1936 Feb 7,12,21	Keesling met with Strauss re fees
1936 Feb 12	Building Committee met. First point of discussion was Strauss claims in his letter of January 14 re N.C.O. Quarters, part of the military replacements program to replace 14 buildings. Strauss had based his estimates on the original Weeks permit to build the bridge, and his contract was based on the Weeks grant. Discussed inspection fees to Kuss, and whether these should be paid by the Chief Engineer or the District. Discussed cost of redesign due to foundation problems and who pays. Discussed location and cost of toll terminal. [from transcript of meeting]
1936 Feb 15	Morrow & Morrow wrote Strauss with revised cost figures for extra work in changing the Plaza scheme, changes dictated by the District. Relied on Strauss to seek adequate compensation from the District for the extra work.
1936 Feb 17	Morrow & Morrow wrote Strauss that the changes to the toll plaza

	would cost an estimated \$1,300. This figure didn't take into account the time wasted if due consideration had been given initially, nor the slow pace of work since mid December.
1936 Feb 24	Building Committee met re Strauss fees
1936 Feb 26	Keesling received communication from Internal Revenue Department re Strauss unpaid taxes. Conferred with Attorney Harlan to reply to Collector.
1936 Mar 6	Strauss writes Reed re simplifying toll classifications
1936 Apr 1,23	Keesling met with Strauss re his financial difficulties and extra compensation for military replacements
1936 Apr 15	Strauss reported to Board that he completed his own estimate of the cost of the complete work as revised for Contract VIII (Electrical). Submitted report "Revisions in Electrical Plans."
1936 Apr 24	Building Committee met with Strauss, Harlan, Secretary Felt, and Paine.
1936 Apr 28	Keesling wrote Board about April 15 meeting with Strauss. Strauss recommended no lighting on Sausalito Lateral; Reed wanted it, Building Committee said it could wait. The Board had accepted the original plans and specs prepared by Strauss' Chicago staff under Paine, and they have subsequently been modified. Plans were submitted to GE, who complimented Chief Engineer and staff on coimpletteness. Reed wanted to hire a consulting electrical engineer. Building Committee felt no need for consultant, but advice of General Manager Reed is necessary. [He was away.]
1936 Apr 29	Strauss temporarily rejected some cable from Roebling.
1936 May 7/8	Strauss subsequently accepted the Roebling cable.
1936 May 8	Pay advance arrangement for CE
1936 Jun 6	Morrow wrote Strauss re letter from Mr. Danysh [of Ansel Adams Galleries which became Adams-Danysh Galleries in 1934].
1936 Jun 18	Strauss wrote Irving Morrow re Morrow's June 6 letter and statement from Danysh that the GGBHD would sponsor a project by supplying materials could not be part of their understanding. Strauss clarified that he could not commit the District.
1936 Aug 31	Keesling met with Strauss re publicity releases in paper and re his re-opening claim for compensation for military replacements, forgetting or overlooking his own attitude toward the Board which indicates only a desire to get everything that he can. This is proved by Strauss' claims for extra compensation by reason of delay, etc for an additional 1% to which he is not entitled. [Keesling Calendar]
1936 Sept 21	Strauss submitted request for extra compensation again
1936 Sep 28	Strauss wrote Keesling re Morrow's estimated toll plaza cost, which came in above preliminary estimate. Strauss requested modified (less-expensive) plans and recommended approval from the Committee.
1936 Sep 28	Building Committee, together with Reed, Strauss, Felt, Harlan, and Paine, reviewed claims from Roebling Company re rejection of cable wire by Strauss April 29, 1936.

1936 Sep 30	Board referred the matter of extending the west wing wall of the Marin abutment to Strauss, who recommended the retaining wall be built by the State.
1936 Oct 1	Strauss submitted report to Building Committee Chair Keesling re Roebing claim.
1936 Oct 2	Keesling met with Strauss re his financial distress
1936 Oct 8	Keesling wrote GGBHD Board about Sep 28 meeting on Roebing claim. Prior to April 29 “a considerable amount of unacceptable wire was encountered during the spinning operation.” There had been many cut-outs. Field staff and Roebing reps agreed on the defects. Strauss felt it necessary to assure the wire was as specified.
1936 Oct 16	Reed wrote Strauss and Reed for recommendation on paint to be used for fourth coat.
1936 Oct 19	Strauss wrote Keesling re McClintic/Marshall Agreement and claims.
1936 Oct 20	Meeting of Reed, General Manager, with State Engineer Purcell, to discuss Marin retaining wall. Strauss could not be there, engaged in pending litigation by him against the District.
1936 Oct 26	Strauss litigation discussed by Keesling with Attorney Harlan re expert testimony, problems relating to Derleth [didn’t want to testify and jeopardize relationship with Strauss] and data in files
1936 Oct 27	Building Committee met re an extension of the wing wall at the north abutment. Paine, Principal Assistant Engineer, was in attendance.
1936 Oct 30	Strauss wrote Reed that the specs were stuck in Harlan’s hands.
1936 Nov 2	Keesling reviewed Strauss litigation.
1936 Nov 5	Keesling wrote the GGBHD Directors re the Marin Abutment wing wall construction. Reviewed meeting of Oct 20, when State Highway Department maintained GGBHD should build the wall, necessary to protect the rocker base of the Bridge itself. Building Committee concluded the Bridge District should build the wall.
1936 Nov 12	Strauss wrote Reed that final paint contract still not advertised.
1936 Nov 18	Strauss attorney John L. McNab wrote Filmer a 5-page summary of the Strauss vs. Golden Gate Bridge District case. The jury decided in favor of Strauss. He reviewed the history in that originally the engineering plans would be prepared progressively as the work advanced. Following disbelief of Strauss’ estimates [believed too low] the Board pledged that the entire project would be submitted to general bids. If they did not come within Strauss’ estimate, no further work would be done without a vote of the people. Following the election, Strauss was ordered to prepare all plans. Strauss hired 32 engineers to prepare all the plans for lump sum bids, all of which was mostly discarded when the actual calculations and detail work was prepared. This extra work had not been contemplated in the original contract. Harlan, attorney for the GGBHD, maintained that as an appointee of a public body, Strauss could not have his compensation increased. The Court said this only applies to publicly elected officials. Harlan also claimed extra work would have to be

	agreed upon in writing. The jury that this provision was waived by the action of the District in order the extra work to be done. In the end the jury decided in favor of Strauss on 3 counts: that he was entitled to recover for the extra services, that Strauss was not liable for failure to do the Funston Avenue approach work, and that Strauss testified truthfully respecting matters before the Board at the time the extra work was ordered. Strauss was allowed \$262,500 by the jury. McNab was reluctant to advise the Board regarding an appeal, only pointing out that delay in paying Strauss would add interest to the amount ultimately to be paid and that the case as decided was very solid.
1936 Dec 22	Morrow wrote Strauss that considerable extra work was done by changing the Toll Plaza buildings. Also because of unexpected changes in small items such as wall finishes, radiators, mill work, etc.
1937 Feb 17	Work on GGB suspended due to accident with stripping platform
1937 Feb 20	Strauss inspected accident site and recovered net
1937 Mar 10	Strauss and Morrow spoke by phone re Toll Plaza.
1937 Mar 11	Morrow wrote Strauss re problems of cost vs design with Toll Plaza changes. Not happy with resulting hodge-podge design. Recommended plantings to save the look.
1937 Apr 3	Morrow constructed list of changes affecting cost since Feb 3.
1937 Apr 13	Morrow was paid \$200.
1937 Apr 21	Strauss wrote Morrow that with an additional \$500 payment, Morrow would waive all claims for further payment beyond the \$1000 (half due May 1 and half at the end of construction).
1937 May 7	Morrow wrote Strauss the prices for additional flag poles at the Toll Plaza.
1937 May 8	Morrow wrote Strauss with copy to Cone that Morrow forwarded Strauss instructions to execute the inside faces of the abutment piers as required.
1937 May 26	Construction of Golden Gate Bridge completed
1937 May 27	Bridge opened to pedestrians. Dedication party attended by UC President Raymond Walters.
1937	Strauss proposed rapid transit system for Los Angeles
1937	Strauss song entitled "The Redwoods" with music by Oscar Rasbach published by Sherman, Clay & Co., San Francisco and New York. Dedicated to Annette Strauss.
1937 Aug 19	Strauss wrote Keesling explaining the locomotive incident, assuring that the locomotive was not imbedded in the concrete as indicated in a <i>Nation's Business</i> article August 1937.
1937 Aug 20	Keesling wrote Merle Thorpe of <i>Nation's Business</i> to muse over the incorrect article. Keesling indicated he served as a Director of the GGBHD for seven years and as Chairman of the Building Committee "until decapitated by a lot of political mongrels."
1938 May 16	Died in Los Angeles from heart condition, entombed in the Mausoleum at Forest Lawn Memorial Park, Glendale CA. Survived by wife Ethelyn Annette Strauss and sons Ralph V. Strauss and Richard K.

	Strauss. In Memoriam statement in back cover of GGBHD 1937-1938 Annual Report states: "...construction of the Golden Gate Bridge culminated his great career as a bridge engineer."
1938	Strauss succeeded by Russ Cone as Chief Engineer of GGB
1938 Sep14	GGB plaque dedication ceremony. Director A. R. O'Brien gave an address. He stated that the building of the GGB brought Strauss no permanent financial compensation. Strauss put everything he had into the construction, yet "the Golden Gate Bridge, for my dead friend, turned out to be a mute monument of misery."
1939 Apr 26	A Post Office Inspector from Tacoma WA wrote Keesling re a Tacoma trial under the mail fraud and conspiracy laws involving oil lease sales. A principal defendant, "Dr." H. H. Meyers, was represented as a wealthy man associated with Joseph B. Strauss in building the GGB. It seemed fact that Meyers induced Strauss to pay him a percentage of his fee as chief engineer, but Strauss "advised before his death that Meyers had failed to perform the services in consideration of which the money was paid him." Inspector Swenson asked Keesling if he knew whether Meyers did anything to procure Strauss' appointment as Chief Engineer or performed any service in furtherance of or benefit to the campaign for the sale of the Bridge bonds.
1941 May 28	Statue of Strauss by Frederick W. Schweigardt of San Francisco unveiled

Information and quotations from letters and other communications come from the files of:

Keesling, Stanford University Archives

Derleth, UC Berkeley Water Resources Center Archive

Morrow, UC Berkeley Environmental Design Archives