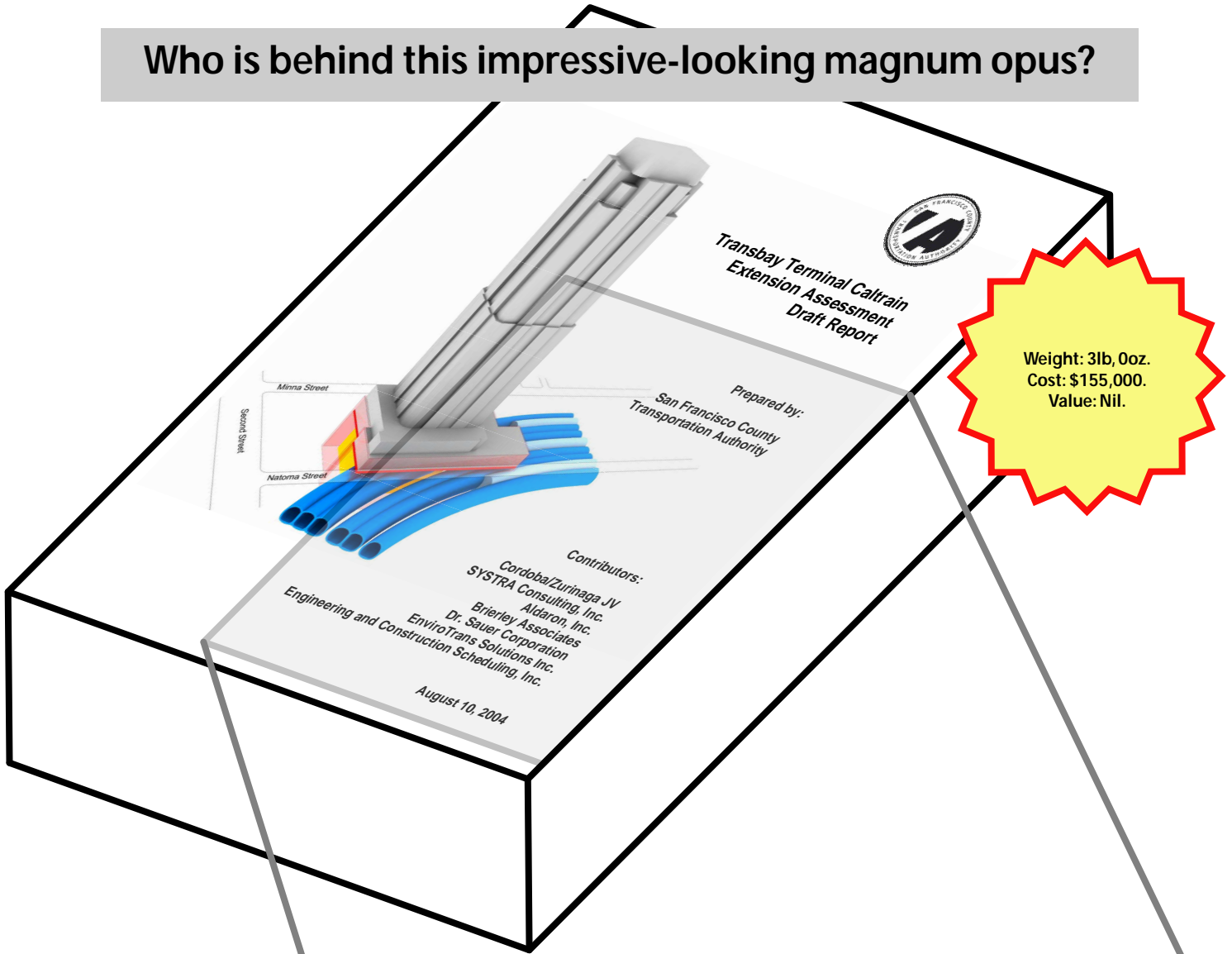


Who is behind this impressive-looking magnum opus?



Weight: 31b, 0oz.
Cost: \$155,000.
Value: Nil.

Audit reveals "**the most financially incompetent agency**"
City Contoller Ed Harrington has seen. (SF Chron 24 Mar 2004)

Lead preparer and SFCTA consultant Luis Zurinaga is
not a registered, licensed Professional Engineer
in the state of California.

Dr. Sauer Corp. was part of **two losing teams** which
unsuccessfully sought the TJPA's Program Management/
Program Control contract.

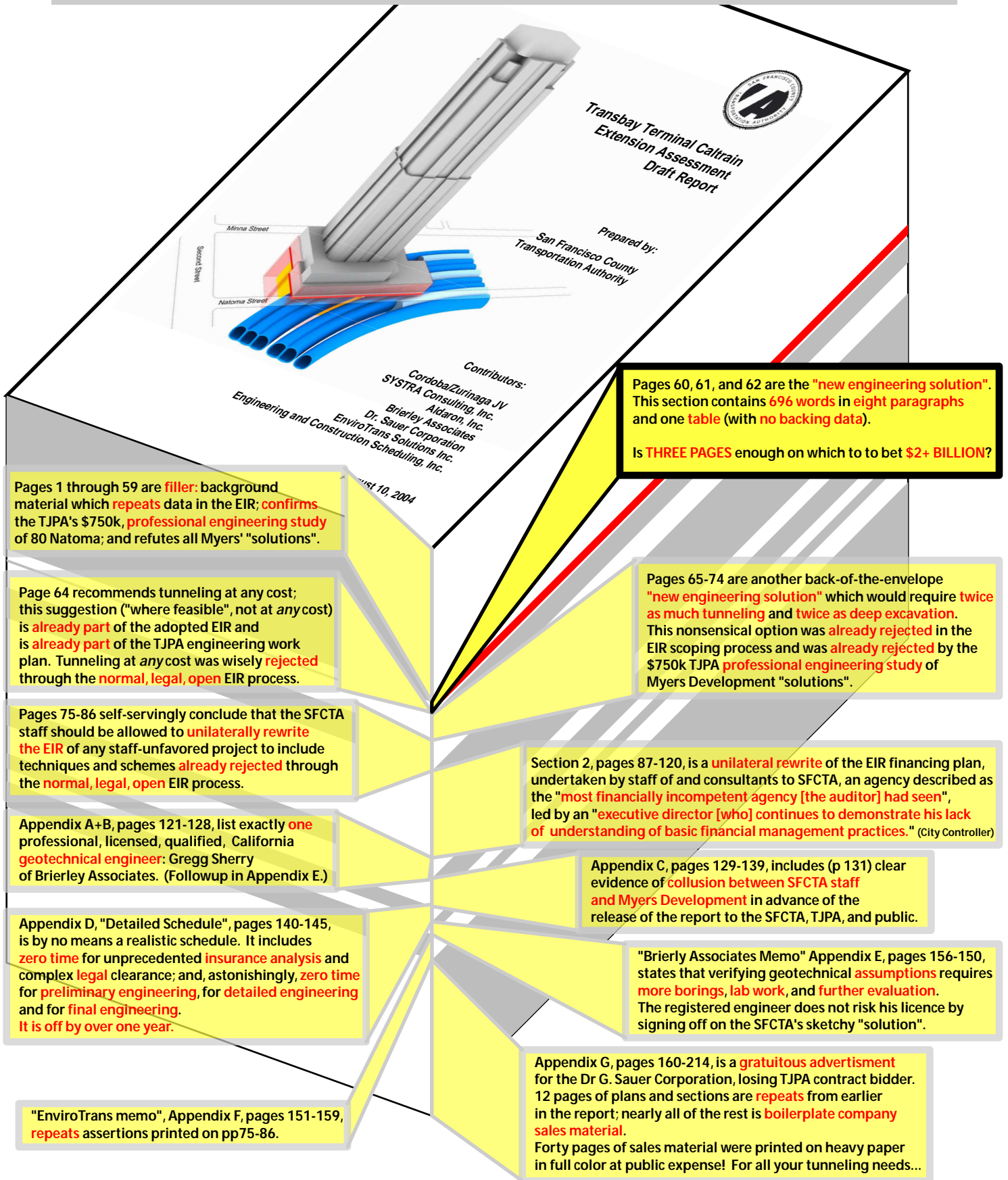
Prepared by

**San Francisco County
Transportation Authority**

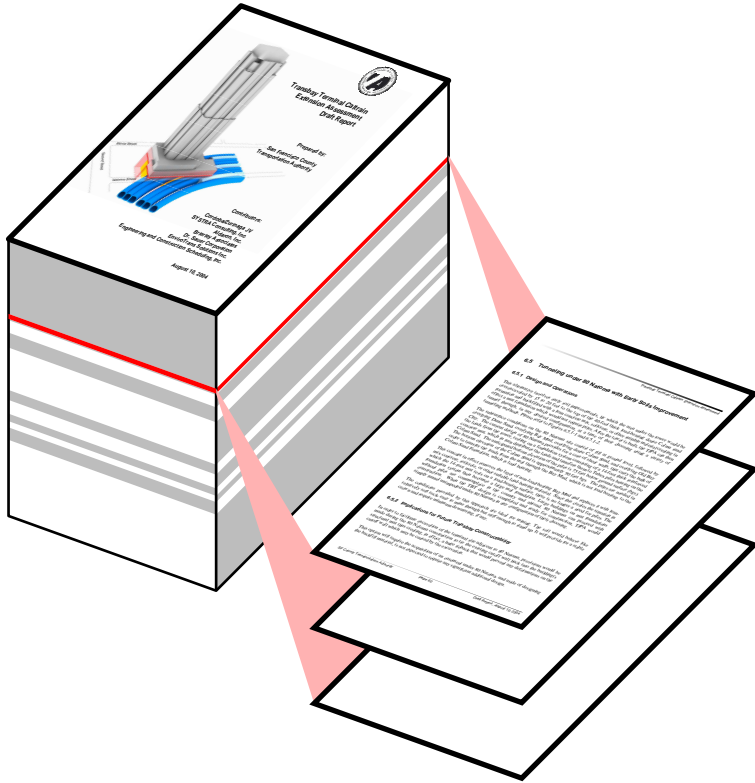
Contributors:

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Aldaron, Inc.
Brierley Associates
Dr. Sauer Corporation
EnviroTrans Solutions Inc.
Engineering and Construction Scheduling, Inc.

222 pages, heavy paper, single-sided, bright colors, lots of repetition... it's certainly printed to *appear* impressive. But what's *really* inside the SFCTA "Assessment Report"?



The three pages of "new engineering solution" revealed in the 222-page, typo-ridden SFCTA Assessment Report can be comfortably reproduced on the back of a paper napkin.



6.5 Tunneling under 80 Natoma with Early Soils Improvement

6.5.1 Design and Operations

This alternative involves early soil improvements, by which the area under the tower would be overexcavated by 15 to 20 feet to the top of the 40-foot thick load-bearing dense Colma sand formation and backfilled with a lean concrete mix, soilcrete, or other suitable material creating in effect a mat foundation which would not require piles. After the tower is built, the TJPA can then tunnel through, in any desired configuration, at a time of their choosing using a variety of tunneling methods. Please refer to Figures 6.5.1-1 and 6.5.1-2.

The subsurface conditions on the 80 Natoma site consist of fill at ground level, followed by overlying Dune Sand, overlying Bay Mud, overlying dense Colma Sand, and overlying Old Bay Clay. The current design of 80 Natoma provides for a core of shear walls, that carry the bulk of the loads from the tower, resting on a foundation system consisting of a 14-foot thick reinforced concrete mat, which in turn distributes the loads and transfers them to Tubex piles bearing on the Colma Sand. The anticipated bottom elevation of the piles is 75 feet below ground surface (bgs). The bottom elevation of the Colma Sand is approximately 90 feet bgs. The piles are needed in order to transfer the loads from the mat through the Bay Mud, which is not load bearing, to the Colma Sand Formation, which is load bearing.

This concept in effect removes the layer of non-load-bearing Bay Mud and replaces it with lean-mix concrete, soilcrete, or other suitable load-bearing material. Since this creates the situation in which the 14-foot mat rests on a load-bearing surface, there is no longer a need for piles. The foundation system then becomes a large mat foundation. Large buildings on mat foundations without piles are commonplace in the country and abroad. 80 Natoma can proceed with construction. When the TBT design is completed and ready for construction, TJPA would simply tunnel unimpeded under 80 Natoma in any configuration of their choosing.

The conditions provided by this approach are ideal for mining. The soil would behave like relatively soft rock, easy to mine through but stiff enough to stand up. It will provide for a stable crown and require minimum dewatering, if any.

6.5.2 Implications for Future Transbay Constructability

In order to facilitate excavation of the terminal site adjacent to 80 Natoma, provisions would be made during the 80 Natoma construction to tie the existing cutoff wall back into the building's structural mat thus creating, in effect, a huge tieback that would prevent any deformations on the cutoff wall which may be caused by the excavation.

This option will require the acquisition of an easement under 80 Natoma, and aside of designing the backfill material, is not expected to require any significant additional design.

60

6.5.3 Schedule Impact

This option will require the minimum time to execute. Assuming that the city agencies cooperate in expediting the review and permit process, we estimate the implementation of this option to take approximately 13 weeks. Please refer to Appendix D for a detailed schedule.

6.5.4 Cost

Cost Element	Cost Impact
Design Modifications Costs	\$0.3 M
Additional Excavation, hauling of Material and Soil Stabilization	\$3 M
Savings from Not Acquiring 80 Natoma	-\$32.5** to -\$187 M***
Cost of Acquisition of Easement	TBD
TOTAL	-\$29.2 to -\$183.7M (Savings)!****

* Cost related to moving the Transbay Terminal building Eastward towards Beale Street is not included due to the fact that depending on the option chosen this may be either a savings or a cost addition.
 ** Amount of initial TJPA offer for the purchase of the 80 Natoma site.
 *** Per Jack Myers letter dated August 5, 2004

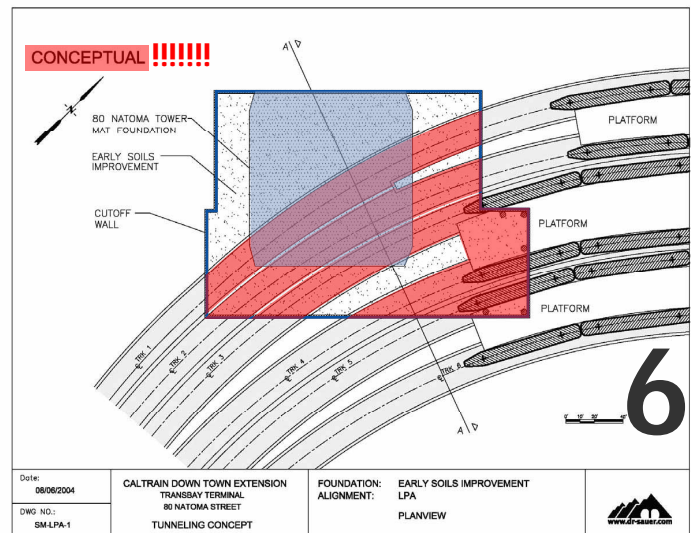
6.5.5 Summary

This option meets all the feasibility criterion of this assessment. It preserves the LPA alignment, it causes minimum delay to the construction of 80 Natoma, and provides for future constructability of the Transbay Terminal.

(Note space left over for additional New Engineering Solutions!)

61

Figure 6.5.1-1: SM-LPA-1



62

Would you build a 50 story high-rise and then *remove over half of its foundation?*
 This is completely without precedent anywhere in the world, for very good reason—it's impossible.