

SLAC MEMORANDUM

July 13, 1994

TO: Ted Lavine, NLCTA Safety Officer

FROM: Brad Youngman, Chair SLAC Earthquake Safety Committee



SUBJECT: Approval of NLCTA Buildings

The following NLCTA Buildings have been approved by the SLAC Earthquake Safety Committee:

Structure	Date
NLCTA Control Building	5/11/94
NLCTA Overhead Utilities Cable Tray System	9/13/93
B501 Power Substation	8/11/93
End Station B South Wall Reinforcement	5/27/93
NLCTA Shielding Enclosure	8/27/92

cc:

SLAC Earthquake Safety Committee Members
EFD Files

MEMORANDUM

September 13, 1993

to: Brad Youngman, chairman, SLAC E.Q. Safety Committee
from: William P. Savage
subject: NEXT LINEAR COLLIDER TEST ACCELERATOR (NLS)
OVERHEAD UTILITIES SUPPORT SYSTEM, ESB

As requested by Richard Boyce, I am submitting a copy of structural calculation and plots of engineering drawings of subject system for your Committee's review & approval.

As noted in the calculations (sh. 21B), I have used the SLAC established earthquake coefficient of 0.6g for the lateral-design force in the diagonal bracing and associated anchor bolts. However, be aware that this coefficient has been adjusted in accordance with the UBC, chapter 23, which reflects the difference in EQ response of a rigid vs. moment-resisting, bracing system. Loads (lateral) are transmitted to the main structural system thru moment resisting, cantilever elements. This adjustment is arrived at by varying the coefficient, R_w , in the basic shear formula, $V = ZICW/R_w$. R_w , in UBC Table No. 23-0, is 8 for rigid and 12 for moment resisting systems. Therefore, using the SLAC coefficient, base shear is reduced by $8/12 = 2/3$, or the EQ coefficient is reduce from 0.6 to 0.4.

Please give me a call for any questions you may have after reviewing the attachments.

cc: Richard Boyce

attachments: structural calc. (40 sheets)
drawings No.: WPS091393(3 sheets)