PCA | PENSION CONSULTING ALLIANCE

MEMORANDUM

Date:  May 15, 2017

To:      Henry Jones, Chairman, Investment Committee

From:  Pension Consulting Alliance, LLC

RE:      Proposed Revision to Real Assets Benchmark

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Pension Consulting Alliance, LLC **("PCA") has been aske**d in its capacity as Board Consultant for Private Asset Classes - Real Estate to opine on the proposed revision to the Real Assets benchmark for use in the periodic asset allocation portion of the asset liability management process.

Currently, the Real Assets benchmark is a blend of a real estate benchmark (NCREIF-ODCE), an infrastructure benchmark (CPI + 4%) and a forestland benchmark (NCREIF Timber), weighted in accordance to the strategic target allocations within the Real Assets portfolio (83%, 8.5%, and 8.5%, respectively).

In the April 2017 review of private asset class roles and benchmarks, Staff recommended the consolidation of all three existing segments into one Real Asset Class and the adoption of an MSCI Investment Property Databank (IPD) benchmark. To reiterate, this change in benchmark would apply only to the asset liability management process, and would not change the benchmark used for performance reporting and/or staff compensation purposes.

As has been discussed many times before, private asset class benchmarks are notoriously difficult. Underlying universes, definitions and methodologies vary and create both obvious and subtle differences in applicability. An exhaustive comparison of the NCREIF-ODCE and MSCI-IPD benchmarks is both beyond the scope of this letter and unnecessary for the purposes at hand. The most salient points here are that the two benchmarks capture the gross and net performance of institutional, core operating properties in the U.S., and for asset allocation purposes, both serve as an appropriate proxy for the income-oriented core real estate that CalPERS is targeting through its Real Assets program.  The MSCI-IPD indices are advantaged by being compatible with the BarraOne risk analysis framework used in **CalPERS'** asset allocation process, and thereby contributing more efficiently to system wide needs.

**The more notable component of change, in PCA's opinion, is the relinquishment of** benchmarks specific to the infrastructure and forestland segments of the program. Nonetheless, PCA finds this evolution acceptable, given (i) the broad similarity in role and

objectives for the segments, (ii) CalPERS' historical and ongoing challenges in deploying capital into these two segments, and thus their relatively small existing exposures, and (iii) the imperfect nature of private benchmarks in general.

It is important that the board consider the possible ramifications associated with having different benchmarks for making asset allocation decisions, assessing investment performance, and calculating staff compensation.  Given that there is currently little functional difference between the NCREIF-ODCE and MSCI-IPD benchmarks, PCA **supports Staff's recommendation, with the caveat that t**he private benchmark space is a dynamic one and should be monitored on an ongoing basis.