

WELLS FARGO BANK, NATIONAL ASSOCIATION
ASSISTANT SECRETARY'S CERTIFICATE

I, Jeffrey K. Carlson, hereby certify that I am an Assistant Secretary of Wells Fargo Bank, National Association, a national banking association, (the "Bank"), and I hereby further certify as follows:

1. The following is a true and correct extract from resolutions duly adopted by the Board of Directors of the Bank on November 25, 2003, as amended, and no modification, amendment, rescission or revocation of such resolutions has occurred affecting such extract as of the date of this certificate.


RESOLVED, that for the purposes of these resolutions, "Executive Officer" shall mean any person specifically designated as an Executive Officer of the Bank by resolution of the Board of Directors, and "Signing Officer" shall mean the Chairman of the Board, the President, any Senior Executive, Vice President, any Executive Vice President, any Senior Vice President, the Treasurer, any Vice President, any Assistant Vice President, any person whose title includes the word "Officer" (e.g., Commercial Banking Officer, Personal Banking Officer, Trust Officer), or any other person whose title has been or is hereafter designated by the Board of Directors as a title for an officer of the Bank, and such officers are hereby authorized to sign agreements, instruments and other documents on behalf of the Bank in accordance with the signing authorities conferred in Parts A, B and C of these resolutions;

C. Signing Officers

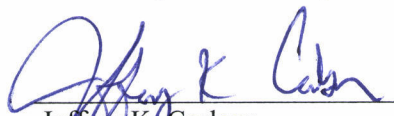
FURTHER RESOLVED, that any Signing Officer, acting alone, may execute on behalf of the Bank, whether acting for its own account or in a fiduciary or other representative capacity:

Trust indentures, declarations of trust, trust and agency agreements, pooling and servicing agreements, fiscal and paying agency agreements, acceptances thereof, consents thereto and any similar agreements, however denominated, to which the Bank is a party in a fiduciary or other representative capacity; certificates of authentication or other indicia of valid issuance with respect to bonds, notes, debentures and other securities or obligations issued under any indenture, mortgage, trust or other agreement; certificates for securities deposited, interim certificates and other certificates for and on behalf of the Bank as depository or agent; countersignatures of stocks, bonds, notes, debentures, voting trust certificates, participation certificates and other certificates, instruments, obligations or other securities on behalf of the Bank as trustee, fiscal and paying agent, transfer agent, registrar or in another similar capacity; and certificates of cancellation and cremation of stocks, bonds, debentures or other securities.

2. The following named persons are Signing Officers of the Bank as of the date hereof, and their correct titles and genuine signatures appear beside their names:

Name	Title	Signature
Maureen Vachuska	Assistant Vice President	

IN WITNESS WHEREOF, I have hereunto set my hand this day February 21, 2018.


Jeffrey K. Carlson
Assistant Secretary