

RESOLUTION OF THE BOARD OF TRUSTEES OF MICHIGAN STATE UNIVERSITY
AUTHORIZING THE ISSUANCE AND DELIVERY OF
GENERAL REVENUE REFUNDING BONDS
AND PROVIDING FOR OTHER MATTERS RELATING THERE

APPROVED

SEPTEMBER 6, 2019

BOARD OF TRUSTEES
MICHIGAN STATE UNIVERSITY

WHEREAS, the Board of Trustees of Michigan State University (the "Board") is a body corporate created by and existing under the Constitution of the State of Michigan of 1963, as amended, with full constitutional authority over and general supervision of Michigan State University (the "University") and control and direction of all expenditures from the University's funds; and

WHEREAS, the Board has previously issued and has outstanding certain series of General Revenue Bonds and General Revenue Refunding Bonds (collectively, the "Prior Bonds"), which are payable from and secured by a lien on General Revenues (hereinafter defined); and

WHEREAS, the Board has previously authorized the issuance of its Commercial Paper Notes, Series B (Taxable) and Commercial Paper Notes, Series F (Tax-Exempt) (collectively, the "Notes," and together with the Prior Bonds, the "Outstanding Obligations"), which are payable from and secured by a lien on General Revenues; and

WHEREAS, the Board has previously entered into certain interest rate swap agreements related to the debt service on certain of the Outstanding Obligations, which are payable from and secured by a lien on General Revenues (collectively, the "Existing Swap Agreements"); and

WHEREAS, the Board has determined it may be appropriate and in the best interests of the University to refund all or a portion of the Prior Bonds and/or all or a portion of the Notes as shall be determined by an Authorized Officer (hereinafter defined) (the portion of the Prior Bonds to be refunded, if any, being herein called the "Bonds to be Refunded," and the portion of the Notes to be refunded, if any, being herein called the "Notes to be Refunded"); and

WHEREAS, in the exercise of its constitutional duties, and in order to prudently control and direct expenditures from the University's funds, the Board has determined it is necessary and desirable to authorize the issuance and delivery of General Revenue Refunding Bonds (the "Bonds"), payable from and secured by a pledge of General Revenues, in order to provide funds which, together with other available funds of the University, will be used to pay all or part of the costs of refunding the Bonds to be Refunded and the Notes to be Refunded, if any, and to pay costs related to the issuance of the Bonds and the refunding; and

WHEREAS, one or more trust agreements (collectively, the "Trust Agreement") or loan agreements (collectively, the "Loan Agreement") must be entered into by and between the Board and a trustee (the "Trustee") or a direct placement lender, in either case to be designated by an Authorized Officer, pursuant to which the Bonds will be issued and secured; and

WHEREAS, it is necessary to authorize the Authorized Officers, or any one of them individually, to negotiate the sale of the Bonds with an underwriter or group of underwriters to be selected by an Authorized Officer (collectively, the "Underwriter") or with a direct placement lender to be selected by an Authorized Officer (the "Purchaser"), and to enter into one or more

bond purchase agreements with the Underwriter or Purchaser (collectively, the "Bond Purchase Agreement") setting forth the terms and conditions upon which the Underwriter or Purchaser will agree to purchase the Bonds and the interest rates thereof and the purchase price therefor, or, in the alternative, to select the Underwriter for all or any portion of any series of the Bonds and to establish the terms for such Bonds through a competitive sale or bidding process pursuant to a Notice of Sale; and

WHEREAS, in order to be able to market the Bonds at the most opportune time, it is appropriate for the Board to ratify and confirm its authorization of the President, the Executive Vice President for Administration, the Vice President for Finance and Treasurer and the Director of Treasury and Financial Management (each an "Authorized Officer"), or any one of them individually, to negotiate, execute and deliver on behalf of the Board, the Trust Agreement or Loan Agreement, the Bond Purchase Agreement, one or more remarketing agreements with the Underwriter or other parties (collectively, the "Remarketing Agreement"), and other related documents, to publish any Notice of Sale required for the sale of any portion of the Bonds, to establish the specific terms of the Bonds and to accept the offer of the Underwriter or Purchaser to purchase the Bonds, all within the limitations set forth herein; and

WHEREAS, the trust agreements and other documents authorizing the Outstanding Obligations create certain conditions for the issuance of obligations payable from and secured by a pledge of General Revenues on a parity basis with the Outstanding Obligations; and

WHEREAS, an Authorized Officer shall, on or prior to the date of delivery of the Bonds, certify that the conditions for issuing the Bonds, secured by General Revenues on a parity basis with the Outstanding Obligations, have been met; and

WHEREAS, the refunding of the Bonds to be Refunded and the Notes to be Refunded, if any, and the funding of all or a part of the costs thereof with the proceeds of the Bonds, will serve proper and appropriate public purposes; and

WHEREAS, the Board has full power under its constitutional authority and supervision of the University, and control and direction of expenditures from the University's funds, to refund the Bonds to be Refunded and the Notes to be Refunded and to pay all or a part of the costs of the refunding by issuance of the Bonds, and to secure payment of the Bonds by a pledge of General Revenues.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF MICHIGAN STATE UNIVERSITY, AS FOLLOWS:

1. The Board hereby approves the refunding of all or any portion of the outstanding Prior Bonds and all or any portion of the outstanding Notes, and authorizes the Authorized Officers, or any one of them individually, to select the portion, if any, of the Prior Bonds to constitute the Bonds to be Refunded and the portion, if any, of the Notes to constitute the Notes to be Refunded, in order to produce interest or other cost savings or a more favorable debt service structure, to reduce or eliminate risks associated with variable rate bonds and related interest rate swaps, to provide for more favorable terms or covenants, or to provide for permanent financing of

projects previously financed from short-term debt, and to fund, if deemed appropriate, a portion of the costs of the refunding from available funds of the University and the balance of such costs from the proceeds of the Bonds, and to proceed with the refunding.

In connection with the refunding of all or any portions of any Outstanding Obligations, any Authorized Officer may, in the name and on behalf of the Board, and as its corporate act and deed, modify any Existing Swap Agreements, in whole or in part, and relate any of such Existing Swap Agreements to any portion of the debt service on the Bonds or any Outstanding Obligations, or terminate any Existing Swap Agreements, in whole or in part, and any fees or termination payments required in connection with any such modifications or terminations may be paid from the proceeds of the Bonds, or from available funds of the University, as determined by an Authorized Officer.

2. The Board hereby authorizes the issuance, execution and delivery of the Bonds, in one or more series, to be designated GENERAL REVENUE REFUNDING BONDS, with appropriate series designations, in the aggregate original principal amount established by an Authorized Officer, but not to exceed the aggregate principal amount necessary to accomplish the refunding of the Bonds to be Refunded and the Notes to be Refunded and to pay costs related thereto. The Bonds shall be dated as of the date or dates established by an Authorized Officer, and shall be issued for the purpose of providing funds which, together with other available funds, will be used to pay all or a portion of the costs of refunding the Bonds to be Refunded, if any, and the Notes to be Refunded, if any, to pay the costs of modifying or terminating any Existing Swap Agreements, if deemed appropriate by an Authorized Officer, and to pay costs related to the issuance of the Bonds and the refunding, including the costs of bond insurance premiums, if an Authorized Officer determines such insurance to be appropriate. The Bonds shall be serial bonds or term bonds, which may be subject to redemption requirements, or both, as shall be established by an Authorized Officer, but the first maturity or mandatory redemption date shall be no earlier than February 1, 2020 and the last maturity shall be no later than December 31, 2050. The Bonds may be issued as federally tax-exempt bonds or as federally taxable bonds, or any combination thereof, as shall be determined by an Authorized Officer. The Bonds may bear interest at stated fixed rates for the respective maturities thereof as shall be established by an Authorized Officer, but the weighted average yield of the Bonds (computed using the stated coupon and the stated original offering price) shall not exceed 5.50% per annum for tax-exempt bonds and 8.00% per annum for taxable bonds, subject, in the case of Bonds sold to a Purchaser pursuant to a direct purchase arrangement, to adjustments for increased costs of the Purchaser, rating changes and defaults and other specified factors, but in no event in excess of the lesser of 25% per annum, the maximum rate permitted by law or the maximum rate, if any, specified in the Trust Agreement or Loan Agreement. Alternatively, all or part of the Bonds may bear interest at a variable rate of interest, determined on the basis of an index or a spread to an index or through market procedures, or both, for all or a portion of their term, and the variable rate of interest shall not exceed the lesser of 25% per annum, the maximum rate permitted by law or the maximum rate, if any, specified in the Trust Agreement or Loan Agreement. The Bonds may be subject to redemption or call for purchase prior to maturity at the times and prices and in the manner as shall be established by an Authorized Officer, but no redemption premium shall exceed 3% of the principal amount being redeemed, unless the redemption price is based on a "make whole" formula, in which case no

redemption premium shall exceed 40% of the principal amount being redeemed. Interest on the Bonds shall be payable at such times as shall be specified by an Authorized Officer. The Bonds shall be issued in fully-registered form in denominations, shall be payable as to principal and interest in the manner, shall be subject to transfer and exchange, and shall be executed and authenticated, and may be issued in book-entry-only form, all as shall be provided in the Trust Agreement or Loan Agreement. The Bonds shall be sold to the Underwriter or Purchaser for a price to be established by an Authorized Officer (but the Underwriter's or Purchaser's discount, exclusive of original issue discount, shall not exceed 1.50% of the principal amount thereof) plus accrued interest, if any, from the dated date of the Bonds to the date of delivery thereof.

In relation to the debt service on all or any portion of the Bonds, or in relation to the debt service on all or any portion of the Outstanding Obligations, any Authorized Officer may, at any time, on behalf of and as the act of the Board, enter into or modify an interest rate swap, cap, forward starting swap, option, swaption, rate lock or similar agreement or agreements (collectively, the "Swap Agreement") with a counterparty or counterparties to be selected by the Authorized Officer. Such Swap Agreement shall provide for payments between the Board and the counterparty related to interest on all or a portion of the Bonds or any series of Outstanding Obligations, at indexed or market established rates. If the Swap Agreement is entered into at approximately the same time as the issuance of the Bonds and is related to the Bonds, the expected effective interest rates on the Bonds to which the Swap Agreement relates, taking into account the effect of the Swap Agreement, shall be within the limitations set forth herein. Any Swap Agreement may, if determined necessary or appropriate by an Authorized Officer, be subsequently terminated, in whole or in part, which may result in termination payments due by the Board. Any such required payments and other costs of termination may be funded from available funds of the University or the proceeds of the Bonds or other indebtedness of the Board.

Any or all of the Bonds may be made subject to tender for purchase at the option of the holder thereof or to mandatory tender for purchase. The obligation of the Board to purchase any Bonds subject to tender for purchase may be limited to the remarketing proceeds of such Bonds, or may be made payable from General Revenues, from available cash reserves of the University, subject to such limitations as may be specified in the Trust Agreement or Loan Agreement, or from a letter of credit, line of credit, standby bond purchase agreement or other liquidity device (the "Liquidity Device"), or any combination thereof, all as shall be determined by an Authorized Officer and provided for in the Trust Agreement or Loan Agreement. Any reimbursement obligation for draws under the Liquidity Device shall be a limited and not a general obligation of the Board, payable from, and may be secured by a pledge of, General Revenues. Each Authorized Officer is individually authorized to execute and deliver at any time, for and on behalf of the Board, any amendments to the Trust Agreement or Loan Agreement and any agreements or instruments with a party or parties selected by an Authorized Officer necessary to obtain, maintain, renew or replace, and provide for repayments under, any Liquidity Device deemed by such officer to be required for the purposes of this Resolution.

Any Bonds authorized and issued hereunder may, at any time upon direction of an Authorized Officer, be subsequently converted to another mode or structure authorized hereby, either through procedures established in the Trust Agreement or Loan Agreement pertaining

thereto, or through the issuance hereunder of refunding Bonds to refund and replace the outstanding Bonds to be converted. Any such refunding Bonds issued hereunder shall be subject to the terms, conditions and limitations contained in this Resolution. Each Authorized Officer is individually authorized to execute and deliver, for and on behalf of the Board, any documents or instruments, including but not limited to, any amendments to the Trust Agreement or Loan Agreement, necessary or convenient for the purpose of accomplishing the conversion as described in this paragraph.

3. The Bonds, and the obligations of the Board under the Swap Agreement and the Liquidity Device, if any, shall be limited and not general obligations of the Board payable from and, except as provided below in this Section 3, secured by a lien on, the General Revenues (as shall be defined in the Trust Agreement or Loan Agreement in a manner generally consistent with the definition thereof contained in the trust agreements pursuant to which the Prior Bonds were issued). Except as otherwise determined by an Authorized Officer, as provided below in this Section 3, the lien on General Revenues securing the Bonds, the Swap Agreement and the Liquidity Device, if any, shall be on a parity basis with the liens on General Revenues securing the Outstanding Obligations. The Bonds, and the obligations of the Board under the Swap Agreement and the Liquidity Device, if any, may also be payable from and secured by a lien on moneys, securities or other investments from time to time on deposit in certain funds created pursuant to the Trust Agreement or Loan Agreement or agreements entered into in connection with the Swap Agreement or Liquidity Device.

No recourse shall be had for the payment of the principal amount of or interest or premium on the Bonds, or for the payment of any amounts owing under the Swap Agreement or the Liquidity Device, if any, or any claim based thereon, against the State of Michigan, or any member or agent of the Board (including, without limitation, any officer or employee of the University), as individuals, either directly or indirectly, or, except as specifically provided in the Trust Agreement or Loan Agreement or the instruments entered into in connection with the Swap Agreement or the Liquidity Device, if any, against the Board, nor shall the Bonds and interest or premium with respect thereto, or any obligations of the Board in connection with the Swap Agreement or Liquidity Device, if any, become a lien on or be secured by any property, real, personal or mixed, of the State of Michigan or the Board, other than General Revenues and the moneys, securities or other investments from time to time on deposit in certain funds established as pledged pursuant to the Trust Agreement or Loan Agreement or pursuant to agreements entered into in connection with the Swap Agreement or Liquidity Device, if any.

Any pledge of General Revenues, and funds specified in the Trust Agreement or Loan Agreement or in any agreements entered into in connection with the Swap Agreement or the Liquidity Device, if any, shall be valid and binding from the date of the issuance and delivery of the Bonds or such agreements, and all moneys or properties subject thereto which are thereafter received shall immediately be subject to the lien of the pledge without physical delivery or further act. The lien of said pledge shall be valid and binding against all parties (other than the holders of any other bonds, notes or other obligations secured by a parity first lien on General Revenues) having a claim in tort, contract or otherwise against the Board, irrespective of whether such parties have notice of the lien.

Notwithstanding anything herein to the contrary, any obligations of the Board under the Swap Agreement or any agreement with respect to the Liquidity Device may, if determined appropriate by an Authorized Officer, be payable and secured on a subordinated basis to the Bonds and other General Revenue obligations of the Board, or may be payable from General Revenues but be unsecured.

4. The right is reserved to issue additional bonds, notes or other obligations payable from General Revenues and secured on a parity or subordinated basis with the Bonds and the Outstanding Obligations by a lien on General Revenues, upon compliance with the terms and conditions therefor as shall be set forth in the Trust Agreement or Loan Agreement.

5. Each Authorized Officer is hereby individually authorized and directed, in the name and on behalf of the Board, and as its corporate act and deed, to select the Trustee, if any, and to negotiate the terms of and execute and deliver the Trust Agreement or Loan Agreement. The Trust Agreement or Loan Agreement may contain such covenants on behalf of the Board and terms as such Authorized Officer deems appropriate and as shall be approved by the Office of the General Counsel, including, but not limited to, covenants with respect to the establishment of General Revenues at levels expressed as a percentage of debt service on the Bonds or all General Revenue obligations of the Board, and with respect to the issuance of additional bonds, notes or other obligations payable from and secured by General Revenues. In addition, each Authorized Officer is hereby individually authorized, empowered and directed to negotiate, if deemed appropriate by an Authorized Officer in connection with the issuance of the Bonds, for the acquisition of bond insurance and to execute and deliver an insurance commitment or other documents or instruments required in connection with such insurance.

6. Each Authorized Officer is hereby individually authorized and directed, in the name and on behalf of the Board and as its corporate act and deed, to select the Underwriter or Purchaser and to negotiate, execute and deliver the Bond Purchase Agreement with the Underwriter or Purchaser setting forth the terms of the Bonds and the sale thereof, and containing such other covenants and agreements of the Board as may be required by the Underwriter or the Purchaser in connection therewith, in such form as an Authorized Officer may approve upon recommendation of the Office of the General Counsel, all within the limitations set forth herein. In the alternative, if determined appropriate by an Authorized Officer, selection of the Underwriter and setting of the terms for all or any portion of any series of the Bonds may be made through a competitive sale or other bidding process, and each Authorized Officer is individually authorized to accept the winning bid or offer of the Underwriter for the purchase of the Bonds. Each Authorized Officer is hereby further individually authorized and directed, in the name and on behalf of the Board and as its corporate act and deed, to negotiate, execute and deliver the Remarketing Agreement, if any, with the Underwriter or other party selected by the Authorized Officer.

7. The President and the Vice President for Finance and Treasurer are each individually authorized, empowered and directed, in the name and on behalf of the Board, and as its corporate act and deed, to execute the Bonds by manual or facsimile signature and, if deemed appropriate, to impress or imprint the University seal thereon, and to deliver the Bonds to the Underwriter or Purchaser in exchange for the purchase price therefor.

8. Each Authorized Officer is hereby individually authorized to solicit ratings on the Bonds from any national rating services that the Authorized Officer deems appropriate and, if necessary, to cause the preparation of a Preliminary Official Statement and an Official Statement with respect to each series of the Bonds, to deem such official statements "final" in accordance with applicable law, and to execute and deliver the Official Statements. In the event that all or a portion of any series of the Bonds is to be sold by means of a competitive sale or bidding process, as provided in this Resolution, each Authorized Officer is individually authorized to prepare and publish or cause to be published, or otherwise distribute, in such manner as an Authorized Officer shall determine, a Notice of Sale for such Bonds. Each Authorized Officer, or the Underwriter or the University's financial advisor, as appropriate, is authorized to circulate and use, in accordance with applicable law, the Notice of Sale, the Preliminary Official Statements and the Official Statements in connection with the offering, marketing and sale of the Bonds.

9. Each Authorized Officer, the Secretary of the Board, the Vice President for Legal Affairs and General Counsel and any Associate or Assistant General Counsel, and all other appropriate officers or representatives of the Board or the University and each one of them, are authorized to perform all acts and deeds and to execute and deliver for and on behalf of the Board all instruments and documents required by this Resolution, the Trust Agreement or Loan Agreement, the Remarketing Agreement, the Swap Agreement, the Liquidity Device and the Bond Purchase Agreement, or necessary, expedient and proper in connection with the issuance, sale and delivery of the Bonds, as contemplated hereby, including, if deemed appropriate, one or more escrow deposit agreements with an escrow agent to be selected by an Authorized Officer as may be necessary to accomplish any refunding authorized hereby. Each Authorized Officer is individually authorized to designate and empower the escrow agent to subscribe for United States Treasury Securities – State and Local Government Series, on behalf of the Board, as may be necessary in connection with any refunding authorized hereby. Any action required under the Trust Agreement or Loan Agreement, the Remarketing Agreement, the Bond Purchase Agreement, the Swap Agreement or the Liquidity Device or any other instrument related to the Bonds, and any action necessary or appropriate in connection with the ongoing administration of the financing program authorized hereby, may be taken by and on behalf of the Board by an Authorized Officer. Any reference to any specified officer of the Board or the University in this Resolution shall include any interim or acting officer occupying such position or having been assigned all or a portion of the functions of such position.

10. In accordance with the requirements of Rule 15c2-12 of the United States Securities and Exchange Commission, the Board may be required in connection with the issuance of the Bonds to enter into one or more continuing disclosure undertakings for the benefit of the holders and beneficial owners of the Bonds. Each Authorized Officer is individually authorized to cause to be prepared and to execute and deliver, on behalf of the Board, the continuing disclosure undertakings.

11. If deemed necessary by the University's bond counsel, each Authorized Officer is individually authorized to arrange for the publication of a notice of and to conduct a public hearing with respect to the issuance of the Bonds, all in accordance with the requirements of Section 147(f) of the Internal Revenue Code of 1986, as amended.

12. Any resolutions or parts of resolutions or other proceedings of the Board in conflict herewith are hereby repealed insofar as such conflict exists.

I hereby certify that the attached is a true and complete copy of a resolution adopted by the Board of Trustees of Michigan State University at a meeting held on September 6, 2019, in accordance with applicable law, and that the minutes of the meeting at which the resolution was adopted were kept and will be or have been made available at the Office of the Secretary of the Board of Trustees of Michigan State University.

I further certify as follows:

1. Present at the meeting were the following Board members:

Absent from the meeting were the following Board members:

2. The following members of the Board voted for the adoption of the Resolution:

The following members of the Board voted against adoption of the Resolution:

RESOLUTION DECLARED ADOPTED.

Nakia Barr, Secretary
Board of Trustees of Michigan State University