BYLAWS of the TENNESSEE TECHNOLOGY DEVELOPMENT CORPORATION

ARTICLE 1
NAME

The name of the Corporation is the Tennessee Technology Development Corporation.

ARTICLE 2

These Bylaws shall be subject in all respects to the laws of the State of Tennessee and the Corporation’s Charter, to the extent it is consistent with applicable laws.

ARTICLE 3
PURPOSES

The purpose of the Corporation shall be as provided in its Charter. The aims of the Corporation are to be carried out through any and all lawful activities, including others not specifically stated in the Charter but incidental to the stated aims and purposes, both directly and through contributions to any other corporation, trust, fund or foundation whose purposes are charitable, scientific, or educational provided that any such activity or contribution shall conform to any applicable restrictions or limitations set forth in the Corporation’s Charter or which are imposed on corporations described in Section 501(c)(3) of the Internal Revenue Code and the Regulations thereunder or on any contributions of the Corporation which are deductible under Section 170(c)(2) of the Internal Revenue Code as presently enacted, or as they may hereafter be amended or supplemented, or replaced by new sections of similar import, and to the final regulations thereunder.

ARTICLE 4
BOARD OF DIRECTORS

4.1 Composition of the Board. The Board will be composed according to the guidelines specified by the Corporation’s Charter.

4.2 Election of Officers. The Board shall elect a Chair, Vice-Chair, Secretary and such other officers as it deems necessary from among its members.

4.3 Appointment of Committees. In accordance with the guidelines specified by the Corporation’s Charter, the Board shall appoint an Executive Committee to administer the day-to-day operations of the Corporation, with the Executive Committee having authority to act on behalf of the Board during the periods between meetings of the Board. The Board may establish from time to time such additional committees, consisting of directors and/or others, as it deems appropriate, define their purposes and roles, and specify terms or provisions for termination, all on terms set out by the Board.
4.4 **Staff Members.** The Board of Directors shall appoint such staff members as deemed appropriate to assist the Executive Committee in administration of the day-to-day operations of the Corporation, with such staff members having duties, responsibilities, authority, and compensation as set out by the Board.

### ARTICLE 5

#### MEETINGS

5.1 **Meetings of Board and Committees.** The Board shall hold an annual meeting each year, without call, on the first Thursday in April. By resolution, the Board may establish a date or dates on which regular meetings of the Board or any committee shall be held between annual meetings. Special meetings of the Board may be called at any time by the Chair, the President, the Secretary or any two (2) Directors, provided that the Board shall not meet more often than eight (8) times in a calendar year. A committee of the Board may meet on the dates established by the Board, or, if none, on the date set at its previous meetings or when earlier called by its chair or by a majority of its members, provided that the Executive Committee shall not meet more than four (4) times in a calendar year.

5.2 **Place of Meetings.** Meetings of the Board shall be held at any place either within or without the State of Tennessee that the Board may from time to time appoint by resolution or, if no resolution is in force, at the principal office of the Corporation, or at such other place as shall have been designated in the notice of the meetings.

5.3 **Notice Requirements.** Notice of annual and other regular meetings and of any special meetings, setting forth the place and the day and hour of the meeting, shall be given to each Director, by any usual means of communication, not less than two (2) days before the meeting date. The two-day notice requirement may be shortened to not less than twelve (12) hours if it is determined by the Chairman of the Board, to be recorded in the minutes, that the matters to be considered at that meeting require action by the Board within a time frame such that two (2) days’ notice is not practicable. If required by applicable state laws, adequate notice of such meetings shall also be given to the general public. Neither the business to be transacted at, nor the purpose of, any regular or special meeting need be specified in the notice or any waiver of notice except as required by applicable laws of the State of Tennessee.

5.4 **Quorum.** At all meetings of the Board, a majority of the number of Directors then in office shall constitute a quorum for the transaction of business. The presence of a majority of the membership of a committee of the Board shall be required for the transaction of business by that committee. When a quorum is once present to organize a meeting, a meeting may be later adjourned despite the absence of a quorum caused by the subsequent withdrawal of any of those present.

5.5 **Voting.** The vote of a majority of the members present at a meeting at which a quorum is present shall be the act of the Board or any committee unless the provisions of the Tennessee Nonprofit Corporation Act provide for a higher or lower quorum.

5.6 **Presumption of Assent.** A Director who is present at a meeting of the Board, or any committee thereof, shall be presumed to have concurred in any action taken at the meeting unless his dissent to such action shall be entered in the minutes of the meeting or unless he shall submit his written dissent to the person acting as the Secretary of the meeting prior to the adjournment of the meeting or shall deliver or send such dissent by registered or
certified mail to the Secretary of the Corporation within seven (7) days after the adjournment of the meeting. Such right to dissent shall not apply to a Director who voted in favor of such action. A Director who is absent from a meeting of the Board, or any committee thereof, at which such action is taken shall be presumed to have concurred in the action unless he shall deliver or send by registered or certified mail his dissent to such action to the Secretary of the Corporation or shall cause such dissent to be filed with the minutes of the proceedings of the Board or committee within twenty-one (21) days after learning of such action.

5.7 **Action by Consent.** Directors may take any action which they are required or permitted to take without a meeting on written consent setting forth the action so taken, signed by all of the Directors.

5.8 **Telephone Meetings.** Participation by members of the board or any committee designated by the Board in any meeting of the Board or committee shall be permitted by means of telephone conference or similar communications equipment by means of which all persons participating in the meeting can hear each other. In order to meet by telephone conference, the board shall make a determination, to be recorded in the minutes, that the matters to be considered at that meeting require timely action by the Board, that physical presence by all members is not possible within the period of time requiring action, and that participation by some members by telephone is, therefore, necessary. Notice of any meeting by telephone conference shall be in accordance with paragraph 5.3. Such notice shall state that the meeting will be conducted with some members participating by telephone. Any meeting held by telephonic means must be broadcast in the meeting room so as to allow all in attendance to hear the deliberations of the Board. Participation in such a meeting pursuant to this paragraph 5.8 shall constitute presence in person at such meeting for purposes of quorum requirements and voting and for all other purposes not prohibited by applicable state law. The Directors shall be promptly furnished a copy of the minutes of any meeting held under this paragraph.

5.9 **Record of Proceedings.** The Board of Directors shall keep a record of all its proceedings, which shall be at all times subject to the inspection of any member of the Board of Directors. Such records shall be promptly and fully recorded, shall be open to public inspection if required by applicable state laws, and shall include, but not be limited to, a record of persons present, all motions, proposals and resolutions offered, the results of any votes taken, and a record of individual votes in the event of roll call. All decisions of the Board of Directors shall be by public vote, or public ballot or public roll call, unless exempt under applicable Tennessee law.

**ARTICLE 6**

**DUTIES AS TO THE FUNDS OF THE CORPORATION**

6.1 **Disbursements.** Disbursements from the income or from the assets of the Corporation for uses and purposes consistent with the objects and purposes of the Corporation as outlined in the Charter of Incorporation and these By-laws shall be made on the order of or with authority granted by the Board of Directors.

6.2 **Contributions.** Any contribution to the Corporation through any means whatsoever shall not be complete until accepted by the Corporation through action of the Board of Directors, and the Board shall have full authority to reject or refuse to accept any contribution for any reason, including but not limited to the specifications of a use of, or a restriction on the use
of, any contribution which conflicts with the purposes of the corporation, its tax-exempt status, or its status as a public charity.

6.3 Restricted Gifts. If at any time it shall appear that circumstances have so changed as to make unnecessary, undesirable, impractical or impossible a literal compliance by the Corporation with the expressed desire of a donor or testator from whom the Corporation has acquired funds or other property, the Board may take such steps as it deems necessary to direct the application of any such funds or other property to such other educational, charitable, or scientific purposes of a public nature, or others of a similar nature recognized by the federal government as entitled to tax exemption, as in its judgment will to the extent possible carry out the purposes of such donor or testator.

6.4 Management of Assets. Any fund or funds or assets of any kind or nature whatsoever which may be acquired by the Corporation from any source whatsoever may be transferred by the Board of Directors or any officer or staff member of the Corporation so authorized by the Board of Directors for the purpose of management and investment to any bank or banks in the State of Tennessee, having trust powers and active in the acceptance and management of trusts.

6.5 Agency Relationship. Any transfer of any asset of this Corporation made to any of such banks shall vest legal title to any such asset in the said transferee bank, as agent of any custodian for the Corporation, nevertheless, for the sole purpose of management and investment subject to the approval of the Board and any income thereon shall be income of this Corporation. The Board may enter into any agency agreement with each such bank, giving each of them such powers and duties pertaining to the assets so held by it as may be deemed proper and consistent with the purposes of the Corporation by the Board of Directors, and agreed to by said bank.

6.6 Authority. The Board may authorize any officer, staff member, or agent of the Corporation by resolution to enter into any contract or execute and deliver any instrument in the name of the corporation, and no officer, staff member, or agent shall have any power or authority to bind the Corporation by any contract or engagement, or to pledge its credit or to render it liable for any amount, without such authorization.

6.7 Depositories. All funds of the Corporation shall be deposited to its credit in such depository or depositories as the Board may designate, and for the purpose of such deposits, any person or person to whom such power is delegated by resolution of the Board may endorse, assign, and deposit checks, drafts and other orders for the payment of funds payable to the order of the Corporation. All checks, drafts or other orders shall be signed by such person or persons as may from time to time be designated by the Board.

6.8 Net Earnings. No part of the net earnings of the corporation shall inure to the benefit of, or be distributed to its directors, officers, or other private persons, except that the corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes set forth hereinabove.

ARTICLE 7
MISCELLANEOUS

7.1 Conflict of Interest. In order to assure the integrity and objectivity of decisions made on behalf of the Corporation, each Director, officer, and staff member is required to disclose to the Corporation in writing any conflict of interest transaction. A conflict of interest
transaction is a transaction with the Corporation in which a Director, an officer, or staff member has a direct or indirect interest. Any conflict of interest must be resolved in accordance with applicable state law before the Corporation may proceed with the transaction.

7.2 **Stock in Other Companies.** The Board of Directors may authorize a corporate representative to vote, endorse for transfer or take any other action necessary with respect to shares of stock and securities issued by any other corporation and owned by this Corporation; and he/she may make, execute and deliver any proxy, waiver or consent with respect thereto, all in accordance with the directives of the Board.

7.3 **Documentary materials.** Any documentary materials or data made or received by any member of the Board of Directors or employee of the Corporation to the extent that such material or data consists of trade secrets or commercial or financial information regarding the operation of any business conducted by an applicant for, or recipient of, any form of assistance which the Corporation is empowered to render, or regarding the competitive position of such applicant in a particular field of endeavor, shall not be deemed public records and shall not be subject to the provisions of Tennessee Code Annotated, Title 10, Chapter 7; provided, that if the Corporation purchases a qualified security from such applicant, the commercial and financial information, excluding trade secrets, shall be deemed to be a public record of the corporation and subject to the provisions of Title 10, Chapter 7, after the expiration of three (3) years from the date of purchase of such qualified security, or, in the case of such information being made or received by any member of the Board of Directors or employee of the corporation after the purchase of such qualified security, three (3) years from the date such information was made or received. Any discussion or consideration of such trade secrets or commercial or financial information, may be held by the Board, or any group of members thereof, in executive sessions closed to the public. All applications (except the identity of the applicants) and supporting documentary materials or data, including personal financial records, trade secrets, commercial or financial information and proprietary information of applicants, and all executive sessions or portions thereof conducted by the Board, or any group of members thereof, for the purpose of reviewing applications for assistance shall be confidential and exempt from the provisions of Tennessee Code Annotated, Title 8, Chapter 44.

7.4 **Indemnification of Directors and Officers.** Any Director or officer, or his/her executor or administrator, shall be entitled to indemnification in accordance with and to the extent allowed by the provisions of the Tennessee Nonprofit Corporation Act.

7.5 **Amendment of Charter and Bylaws.** The Board of Directors may amend the Corporation’s Charter and Bylaws subject to the approval of the General Assembly as required by the provisions of Chapter No. 517 of the 1997 Tennessee Public Acts. The Corporation shall provide notice of any meeting of Directors at which an amendment of the Charter or Bylaws is to be approved, with such notice being in conformance with the provisions of the Tennessee Nonprofit Corporation Act. The amendment must be approved by a majority of the Directors in office at the time the amendment is adopted.
CHARTER

of the

TENNESSEE TECHNOLOGY DEVELOPMENT CORPORATION

The undersigned persons, pursuant to the Tennessee Nonprofit Corporation Act and Public Chapter No. 517 of the 1997 Tennessee Public Acts, adopt the following charter for the above listed corporation:

1. The name of the corporation is:

TENNESSEE TECHNOLOGY DEVELOPMENT CORPORATION

2. The corporation is a public benefit corporation.

3. (a) The complete address of the corporation’s initial registered office in Tennessee is:

<table>
<thead>
<tr>
<th>Street Address</th>
<th>City</th>
<th>State, Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>530 Gay Street</td>
<td>Knoxville</td>
<td>TN 37902</td>
</tr>
</tbody>
</table>

County of Knox

(b) The name of the initial registered agent, to be located at the address listed in 3(a), is:

CT Corporation

4. The names and complete addresses of the incorporators are:

Dr. William B. Campbell, Jr.
1216 Westland Bay Drive
Concord, TN 37922

Mr. R. Darrell James
1194 South Bear Creek Road
Dicksor, TN 37055

Dr. Alv.n W. Trivelpiece
8 River Run Way
Oak Ridge, TN 37830

5. The complete address of the corporation’s principal office is:

Rachel Jackson Bldg., 6th Floor
320 Sixth Avenue, North
Nashville, TN 37243-0405

6. The corporation is not for profit.
The corporation shall have no members.

8. (a) The business, purposes, and powers of the corporation are:

(1) To contribute to the strengthening of the economy of the State through the development of science and technology and to promote the development of Tennessee businesses by supporting the transfer of science, technology, and quality improvement methods to private and public enterprises;

(2) Identify scientific and technological problems and opportunities related to the economy of Tennessee and seek resources to overcome such problems or realize such opportunities;

(3) Identify specific areas where scientific research and technological investigation would contribute to the improvement of productivity of Tennessee businesses and farmers;

(4) Determine specific areas in which financial investment in scientific and technological research and development from private businesses located in Tennessee could be enhanced or increased if State resources were made available to assist in financing activities;

(5) Assist in establishing cooperative associations of universities in Tennessee and private enterprises for the purpose of coordinating research and development programs that will, consistent with the primary educational function of the universities, aid in the creation of new products and jobs in Tennessee;

(6) Assist in financing the establishment and continued development of technology intensive businesses in Tennessee;

(7) Assist Tennessee entrepreneurial businesses in identifying ways to enhance productivity and market competitiveness through science and technology;

(8) Seek to secure State and other sources of funding to attract federal and other science and technology resources to the State;

(9) Advise universities of the research needs of Tennessee businesses and improve the exchange of scientific and technological information for the mutual benefit of universities and private businesses;

(10) Coordinate and facilitate programs established throughout the State to provide Tennessee businesses with scientific and technological information;

(11) Provide financial assistance through contracts, grants and loans to programs of scientific and technological research and development;

(12) To encourage, foster, stimulate and advance the civic, commercial, financial and economic interests of the communities of Tennessee by promoting the use of modern technologies by industrial plants, educational and scientific research facilities and other facilities; to acquaint and inform the public governmental entities and private organizations as to its objectives by providing information, technical and financial assistance and such other features as will foster, encourage, stimulate and advance these purposes;
(13) To enter into contracts or trust agreements with inventors or applicants for or owners of patents, or of patent rights or interests, and with owners of or applicants for trademarks, trade names, brands, and labels, and with authors or applicants for or owners of copyrights and/or copyright registrations, foreign or domestic, and the protection thereof, and for the testing, development, improvement, manufacture, use, disposition of patented articles, trademarks, trade names, brands, labels, copyrights, devices, and processes, and for the disposition of the patent rights and interests of the inventor or author, copyright holder, and/or registration owner upon such terms and conditions, and with such provisions as to application and use of earnings and proceeds, as may be agreed upon;

(14) To acquire and to sell and dispose of inventions (whether or not patentable), patents, patent rights, trademarks, trade names, brands, labels, works of authorship and/or copyrights, foreign and domestic, and interest therein including territorial rights, and to grant licenses to others to manufacture, use, and sell and publish or either, and to itself manufacture, use, sell, and publish or either, under patents, registrations and/or copyrights, foreign and domestic, or rights and interest therein, and to receive, collect, and enforce collection of royalties, or other considerations, for inventions (whether or not patentable), patents, trademarks, trade names, brands, labels, copyrights, or patent rights or interest, or devices, articles, or processes of which disposition may be made or contracted for, and

(15) To do all and everything necessary, suitable, and proper for the accomplishment of any of the purposes or the attainment of any of the objects or the furtherance of any of the powers herein set forth, either alone or in association with other corporations, firms, or individuals, and to do every other act or acts, thing or things incidental or appurtenant to or growing out of or connected with the aforesaid business or powers or any part or parts thereof, including the power to hold stock in other corporations where deemed necessary to carry out the purpose of this charter, provided the same be not inconsistent with the laws under which the corporation is organized.

(b) The corporation may receive money from any source, may borrow money, may enter into contracts, and may expend money for any activities appropriate to its purpose.

(c) The corporation may appoint staff and do all other things necessary or incidental to carrying out its purpose.

(d) The enumeration herein of the objects and purposes of this corporation shall be construed as powers as well as objects and purposes and shall not be deemed to exclude by inference any powers, objects, or purposes which this corporation is empowered to exercise, whether expressly by force of the laws of the State of Tennessee now or hereinafter in effect or implicitly by the reasonable construction of said laws.

Any changes in the articles of incorporation or bylaws shall be made by the corporation's Board of Directors subject to the approval by the General Assembly of the State of Tennessee.

The corporation shall have no seal.

(a) The corporation shall submit an annual report to the Governor and to the General Assembly. Such report is due on the first day of November of each year and shall include detailed information on the structure, operation, and financial status of the corporation.
(b) The corporation shall conduct an annual public hearing to receive comments from interested parties regarding the report. Notice of such hearing shall be given at least thirty (30) days before the hearing.

(c) The corporation is subject to an annual audit by the comptroller of the Treasury, and the corporation shall bear the full costs of this audit.

12. (a) The corporation shall be governed by a Board of Directors consisting of seventeen (17) natural persons.

(b) Seven (7) members of the Board of Directors shall represent and be appointed from the private sector; three (3) representatives of the private sector shall be appointed by the Governor, two (2) representatives shall be appointed by the Speaker of the House of Representatives, and two (2) representatives shall be appointed by the Speaker of the Senate.

(c) Seven (7) members of the Board shall represent and be appointed from the public sector; three (3) representatives of the public sector shall be appointed by the Governor, two (2) representatives shall be appointed by the Speaker of the House of Representatives, and two (2) representatives shall be appointed by the Speaker of the Senate. One (1) representative of the public sector appointed by the Governor shall be a person selected from a list of three (3) citizens furnished by the Tennessee Municipal League or from a list of three (3) citizens furnished by the Tennessee County Services Association.

(d) The Commissioner of Economic and Community Development shall serve ex officio on the Board of Directors of the corporation.

(e) Two (2) members of the Tennessee Science and Technology Advisory Council shall serve on the Board of Directors. The vice-chair of the council shall serve ex officio as one (1) of the two (2) members. The council shall elect the second board member from among its members who have been appointed to the council by either the Speaker of the House or the Speaker of the Senate. At least one (1) of the members appointed pursuant to this subsection shall be from the private sector.

(f) One (1) representative of the private sector and one (1) representative of the public sector appointed by the Governor shall initially serve a two (2) year term. One (1) representative of the private sector and one (1) representative of the public sector appointed by the Speaker of the House shall initially serve a two (2) year term. One (1) representative of the private sector and one (1) representative of the public sector appointed by the Speaker of the Senate shall initially serve a two (2) year term. One (1) representative of the private sector and one (1) representative of the public sector appointed by the Governor shall initially serve a three (3) year term. One (1) representative of the private sector appointed by the Speaker of the Senate and one (1) representative of the public sector appointed by the Speaker of the House shall initially serve a three (3) year term. One (1) representative of the private sector and one (1) representative of the public sector appointed by the Governor shall initially serve a four (4) year term. One (1) representative of the private sector appointed by the Speaker of the House and one (1) representative of the public sector appointed by the Speaker of the Senate shall initially serve a four (4) year term. After the initial appointments, all members shall serve four (4) year terms, except the Commissioner of Economic and Community Development who shall serve by virtue of his or her office and the two (2) members of the Tennessee Science and Technology Council, who shall serve according
to their respective terms on the council. Board members are eligible to serve successive terms if reappointed by the original authority.

(g) The Board of Directors shall appoint an Executive Committee of five (5) of its members to administer the day-to-day operations of the corporation. The Chair of the corporation shall also serve as the Chair of the Executive Committee.

(h) The Board of Directors shall not meet more than eight (8) times in a calendar year. The Executive Committee shall not meet more than four (4) times in a calendar year.

(i) The corporation shall elect a chair, vice-chair, secretary and such other officers as it deems necessary from among its members.

13. In accordance with the provisions of Chapter No. 517 of the 1997 Tennessee Public Acts, any documentary materials or data made or received by any member of the Board of Directors or employee of the corporation to the extent that such material or data consists of trade secrets or commercial or financial information regarding the operation of any business conducted by an applicant for, or recipient of, any form of assistance which the corporation is empowered to render, or regarding the competitive position of such applicant in a particular field of endeavor, shall not be deemed public records and shall not be subject to the provisions of Tennessee Code Annotated, Title 10, Chapter 7; provided, that if the corporation purchases a qualified security from such applicant, the commercial and financial information, excluding trade secrets, shall be deemed to be a public record of the corporation and subject to the provisions of Title 10, Chapter 7, after the expiration of three (3) years from the date of purchase of such qualified security, or, in the case of such information being made or received by any member of the Board of Directors or employee of the corporation after the purchase of such qualified security, three (3) years from the date such information was made or received. Any discussion or consideration of such trade secrets or commercial or financial information, may be held by the Board, or any group of members thereof, in executive sessions closed to the public. All applications (except the identity of the applicants) and supporting documentary materials or data, including personal financial records, trade secrets, commercial or financial information and proprietary information of applicants, and all executive sessions or portions thereof conducted by the Board, or any group of members thereof, for the purpose of reviewing applications for assistance shall be confidential and exempt from the provisions of Tennessee Code Annotated, Title 8, Chapter 44.

14. (a) The Charter of the corporation shall remain in effect until the General Assembly provides for termination of such certification.

(b) Upon dissolution of the corporation, the Board of Directors shall, after paying or making provisions for the payment of all liabilities of the corporation, distribute all assets of the corporation except property of the State of Tennessee in such manner as the Board of Directors shall determine to such organization or organizations organized and operated exclusively for charitable, educational, or scientific purposes as shall at the time qualify as an organization described in Section 501(c)(3) of the Internal Revenue Code, or corresponding provisions of any subsequent federal tax laws, contributions to which are deductible under said Code and which have purposes consistent with and similar to the purposes for which this corporation is organized and in accordance with local, state and federal regulations regarding housing funds.

15. Debts incurred by the corporation under authority of Chapter No. 517 of the 1997 Public Acts of the State of Tennessee do not represent or constitute a debt of the State
of Tennessee within the meaning of the provisions of the Constitution of Tennessee or Tennessee Code Annotated.

16. This Charter shall be subject in all respects to the laws of the State of Tennessee.