



**AMENDED AND RESTATED BYLAWS  
OF  
ADA-ES, INC.**

**ARTICLE I  
OFFICES**

The principal office of the corporation shall be designated from time to time by the corporation and may be within or outside the State of Colorado.

The corporation may have such other offices, either within or outside the State of Colorado, as the Board of Directors may designate or as the business of the corporation may require from time to time.

The registered office of the corporation required by the Colorado Business Corporation Act to be maintained in Colorado may be, but need not be, identical with the principal office, and the address of the registered office may be changed from time to time by the Board of Directors.

**ARTICLE II  
SHAREHOLDERS**

**Section 1 Annual Meeting.** The annual meeting of the shareholders shall be held each year on a date and at a time fixed by the Board of Directors of the corporation (or by the president in the absence of action by the Board of Directors), for the purpose of electing Directors and for the transaction of such other business as may come before the meeting. If the election of Directors is not held on the day fixed as provided herein for any annual meeting of the shareholders, or any adjournment thereof, the Board of Directors shall cause the election to be held at a special meeting of the shareholders as soon thereafter as it may conveniently be held.

A shareholder may apply to the district court in the county in Colorado where the corporation's principal office is located or, if the corporation has no principal office in Colorado, to the district court of the county in which the corporation's registered office is located to seek an order that a shareholder meeting be held (i) if an annual meeting was not held within six months after the close of the corporation's most recently ended fiscal year or fifteen months after its last annual meeting, whichever is earlier, or (ii) if the shareholder participated in a proper call of or proper demand for a special meeting and notice of the special meeting was not given within thirty days after the date of the call or the date the last of the demands necessary to require calling of the meeting was received by the corporation pursuant to C.R.S. § 7-107-102(1)(b), or the special meeting was not held in accordance with the notice.

**Section 2 Special Meetings.** Unless otherwise prescribed by statute, special meetings of the shareholders may be called for any purpose by the president or by the Board of Directors. The president shall call a special meeting of the shareholders if the corporation receives one or more written demands for the meeting, stating the purpose or purposes for which it is to be held, signed and dated by holders of shares representing at least ten percent of all the votes entitled to be cast on any issue proposed to be considered at the meeting.

**Section 3 Place of Meeting.** The Board of Directors may designate any place, either within or outside Colorado, as the place for any annual meeting or any special meeting called by the Board of Directors. A waiver of notice signed by all shareholders entitled to vote at a meeting may designate any place, either within or outside Colorado, as the place for such meeting. If no designation is made, or if a special meeting is called other than by the Board, the place of meeting shall be the principal office of the corporation.

**Section 4 Notice of Meeting.** Written notice stating the place, date, and hour of the meeting shall be given not less than ten nor more than sixty days before the date of the meeting, except that (i) if the number of authorized shares is to be increased, at least thirty days' notice shall be given, or (ii) if any other longer notice period is required by the Colorado Business Corporation Act, such longer period of notice shall be applicable. The secretary shall be required to give such notice only to

shareholders entitled to vote at the meeting except as otherwise required by the Colorado Business Corporation Act.

Notice of a special meeting shall include a description of the purpose or purposes of the meeting. Notice of an annual meeting need not include a description of the purpose or purposes of the meeting except the purpose or purposes shall be stated with respect to (i) an amendment to the articles of incorporation of the corporation, (ii) a merger or share exchange in which the corporation is party and, with respect to a share exchange, in which the corporation's shares will be acquired, (iii) a sale, lease, exchange or other disposition, other than in the usual and regular course of business, of all or substantially all of the property of the corporation or of another entity which this corporation controls, in each case with or without the goodwill, (iv) a dissolution of the corporation, or (v) any other purpose for which a statement of purpose is required by the Colorado Business Corporation Act. Notice shall be given personally or by mail, private carrier, telegraph, teletype, electronically transmitted facsimile or other form of wire or wireless communication by or at the direction of the president, the secretary, or the officer or persons calling the meeting, to each shareholder of record entitled to vote at such meeting. If mailed and if in a comprehensible form, such notice shall be deemed to be given and effective when deposited in the United States mail, addressed to the shareholder at his address as it appears in the corporation's current record of shareholders, with postage prepaid. If notice is given other than by mail, and provided that such notice is in a comprehensible form, the notice is given and effective on the date actually received by the shareholder.

If requested by the person or persons lawfully calling such meeting, the secretary shall give notice thereof at corporate expense. No notice need be sent to any shareholder if three successive notices mailed to the last known address of such shareholder have been returned as undeliverable until such time as another address for such shareholder is made known to the corporation by such shareholder. In order to be entitled to receive notice of any meeting, a shareholder shall advise the corporation in writing of any change in such shareholder's mailing address as shown on the corporation's books and records.

When a meeting is adjourned to another date, time or place, notice need not be given of the new date, time or place if the new date, time or place of such meeting is announced before adjournment at the meeting at which the adjournment is taken. At the adjourned meeting the corporation may transact any business, which may have been transacted at the original meeting. If the adjournment is for more than 120 days, or if a new record date is fixed for the adjourned meeting, a new notice of the adjourned meeting shall be given to each shareholder of record entitled to vote at the meeting as of the new record date.

A shareholder may waive notice of a meeting before or after the time and date of the meeting by a writing signed by such shareholder. Such waiver shall be delivered to the corporation for filing with the corporate records, but this delivery and filing shall not be conditions to the effectiveness of the waiver. Further, by attending a meeting either in person or by proxy, a shareholder waives objection to lack of notice or defective notice of the meeting unless the shareholder objects at the beginning of the meeting to the holding of the meeting or the transaction of business at the meeting because of lack of notice or defective notice. By attending the meeting, the shareholder also waives any objection to consideration at the meeting of a particular matter not within the purpose or purposes described in the meeting notice unless the shareholder objects to considering the matter when it is presented.

**Section 5 Fixing of Record Date.** For the purpose of determining shareholders entitled to (i) notice of or vote at any meeting of shareholders or any adjournment thereof, (ii) receive distributions or share dividends, or (iii) demand a special meeting, or to make a determination of shareholders for any other proper purpose, the Board of Directors may fix a future date as the record date for any such determination of shareholders, such date in any case to be not more than seventy days, and, in case of a meeting of shareholders, not less than ten days, prior to the date on which the particular action requiring such determination of shareholders is to be taken. If no record date is fixed by the Directors, the record date shall be the day before the notice of the meeting is given to shareholders, or the date on which the resolution of the Board of Directors providing for a distribution is adopted, as the case may be. When a determination of shareholders entitled to vote at any meeting of shareholders is made as provided in this section, such determination shall apply to any adjournment thereof unless the Board

of Directors fixes a new record date, which it must do if the meeting is adjourned to a date more than 120 days after the date fixed for the original meeting. Unless otherwise specified when the record date is fixed, the time of day for such determination shall be as of the corporation's close of business on the record date.

Notwithstanding the above, the record date for determining the shareholders entitled to take action without a meeting or entitled to be given notice of action so taken shall be the date a writing upon which the action is taken is first received by the corporation. The record date for determining shareholders entitled to demand a special meeting shall be the date of the earliest of any of the demands pursuant to which the meeting is called.

**Section 6 Voting Lists.** After a record date is fixed for a shareholders' meeting, the secretary shall make, at the earlier of ten days before such meeting or two business days after notice of the meeting has been given, a complete list of the shareholders entitled to be given notice of such meeting or any adjournment thereof. The list shall be arranged by voting groups and within each voting group by class or series of shares, shall be in alphabetical order within each class or series, and shall show the address of and the number of shares of each class or series held by each shareholder. For the period beginning the earlier of ten days prior to the meeting or two business days after notice of the meeting is given and continuing through the meeting and any adjournment thereof, this list shall be kept on file at the principal office of the corporation, or at a place (which shall be identified in the notice) in the city where the meeting will be held. Such list shall be available for inspection on written demand by any shareholder (including for the purpose of this Section 6 any holder of voting trust certificates) or his agent or attorney during regular business hours and during the period available for inspection. The original stock transfer books shall be prima facie evidence as to who are shareholders entitled to examine such list or to vote at any meeting of shareholders.

Any shareholder, his agent or attorney may copy the list during regular business hours and during the period it is available for inspection, provided (i) the shareholder has been a shareholder for at least three months immediately preceding the demand or holds at least five percent of all outstanding shares of any class of shares as of the date of the demand, (ii) the demand is made in good faith and for a purpose reasonably related to the demanding shareholder's interest as a shareholder, (iii) the shareholder describes with reasonable particularity the purpose and the records the shareholder desires to inspect, (iv) the records are directly connected with the described purpose, and (v) the shareholder pays a reasonable charge covering the costs of labor and material for such copies, not to exceed the estimated cost of production and reproduction.

**Section 7 Recognition Procedure for Beneficial Owners.** The Board of Directors may adopt by resolution a procedure whereby a shareholder of the corporation may certify in writing to the corporation that all or a portion of the shares registered in the name of such shareholder are held for the account of a specified person or persons. The resolution may set forth (i) the types of nominees to which it applies, (ii) the rights or privileges that the corporation will recognize in a beneficial owner, which may include rights and privileges other than voting, (iii) the form of certification and the information to be contained therein, (iv) if the certification is with respect to a record date, the time within which the certification must be received by the corporation, (v) the period for which the nominee's use of the procedure is effective, and (vi) such other provisions with respect to the procedure as the Board deems necessary or desirable. Upon receipt by the corporation of a certificate complying with the procedure established by the Board of Directors, the persons specified in the certification shall be deemed, for the purpose or purposes set forth in the certification, to be the registered holders of the number of shares specified in place of the shareholder making the certification.

**Section 8 Quorum and Manner of Acting.** One-third of the votes entitled to be cast on a matter by a voting group represented in person or by proxy, shall constitute a quorum of that voting group for action on the matter. If less than one-third of such votes are represented at a meeting, a majority of the votes so represented may adjourn the meeting from time to time without further notice, for a period not to exceed 120 days for any one adjournment. If a quorum is present at such adjourned meeting, any business may be transacted which might have been transacted at the meeting as originally noticed. The shareholders present at a duly organized meeting may continue to transact

business until adjournment, notwithstanding the withdrawal of enough shareholders to leave less than a quorum, unless the meeting is adjourned and a new record date is set for the adjourned meeting.

If a quorum exists, action on a matter other than the election of Directors by a voting group is approved if the votes cast within the voting group favoring the action exceed the votes cast within the voting group opposing the action, unless the vote of a greater number or voting by classes is required by law or the articles of incorporation.

**Section 9 Proxies.** At all meetings of shareholders, a shareholder may vote by proxy by signing an appointment form or similar writing, either personally or by his duly authorized attorney-in-fact. A shareholder may also appoint a proxy by transmitting or authorizing the transmission of a telegram, teletype, or other electronic transmission providing a written statement of the appointment to the proxy, a proxy solicitor, proxy support service organization, or other person duly authorized by the proxy to receive appointments as agent for the proxy, or to the corporation. The transmitted appointment shall set forth or be transmitted with written evidence from which it can be determined that the shareholder transmitted or authorized the transmission of the appointment. The proxy appointment form or similar writing shall be filed with the secretary of the corporation before or at the time of the meeting. The appointment of a proxy is effective when received by the corporation and is valid for eleven months unless a different period is expressly provided in the appointment form or similar writing.

Any complete copy, including an electronically transmitted facsimile, of an appointment of a proxy may be substituted for or used in lieu of the original appointment for any purpose for which the original appointment could be used.

Revocation of a proxy does not affect the right of the corporation to accept the proxy's authority unless (i) the corporation had notice that the appointment was coupled with an interest and notice that such interest is extinguished is received by the secretary or other officer or agent authorized to tabulate votes before the proxy exercises his authority under the appointment, or (ii) other notice of the revocation of the appointment is received by the secretary or other officer or agent authorized to tabulate votes before the proxy exercises his authority under the appointment. Other notice of revocation may, in the discretion of the corporation, be deemed to include the appearance at a shareholders' meeting of the shareholder who granted the proxy and his voting in person on any matter subject to a vote at such meeting.

The death or incapacity of the shareholder appointing a proxy does not affect the right of the corporation to accept the proxy's authority unless notice of the death or incapacity is received by the secretary or other officer or agent authorized to tabulate votes before the proxy exercises his authority under the appointment.

The corporation shall not be required to recognize an appointment made irrevocable if it has received a writing revoking the appointment signed by the shareholder (including a shareholder who is a successor to the shareholder who granted the proxy) either personally or by his attorney-in-fact, notwithstanding that the revocation may be a breach of an obligation of the shareholder to another person not to revoke the appointment.

Subject to Section 11 and any express limitation on the proxy's authority appearing on the appointment form, the corporation is entitled to accept the proxy's vote or other action as that of the shareholder making the appointment.

**Section 10 Voting of Shares.** Each outstanding share, regardless of class, shall be entitled to one vote, except in the election of Directors, and each fractional share shall be entitled to a corresponding fractional vote on each matter submitted to a vote at a meeting of shareholders, except to the extent that the voting rights of the shares of any class or classes are limited or denied by the articles of incorporation as permitted by the Colorado Business Corporation Act. Cumulative voting shall not be permitted in the election of Directors or for any other purpose.

In the election of Directors each record holder of stock shall be entitled to vote all of his votes for as many persons as there are Directors to be elected. At each election of Directors, that number of candidates equaling the number of Directors to be elected, having the highest number of votes cast in favor of their election, shall be elected to the Board of Directors.

Except as otherwise ordered by a court of competent jurisdiction upon a finding that the purpose of this section would not be violated in the circumstances presented to the court, the shares of the corporation are not entitled to be voted if they are owned, directly or indirectly, by a second corporation, domestic or foreign, and the first corporation owns, directly or indirectly, a majority of the shares entitled to vote for Directors of the second corporation except to the extent the second corporation holds the shares in a fiduciary capacity.

Redeemable shares are not entitled to be voted after notice of redemption is mailed to the holders and a sum sufficient to redeem the shares has been deposited with a bank, trust company or other financial institution under an irrevocable obligation to pay the holders the redemption price on surrender of the shares.

**Section 11 Corporation's Acceptance of Votes.** If the name signed on a vote, consent, waiver, proxy appointment, or proxy appointment revocation corresponds to the name of a shareholder, the corporation, if acting in good faith, is entitled to accept the vote, consent, waiver, proxy appointment or proxy appointment revocation and give it effect as the act of the shareholder. If the name signed on a vote, consent, waiver, proxy appointment or proxy appointment revocation does not correspond to the name of a shareholder, the corporation, if acting in good faith, is nevertheless entitled to accept the vote, consent, waiver, proxy appointment or proxy appointment revocation and to give it effect as the act of the shareholder if:

- the shareholder is an entity and the name signed purports to be that of an officer or agent of the entity;
- the name signed purports to be that of an administrator, executor, guardian or conservator representing the shareholder and, if the corporation requests, evidence of fiduciary status acceptable to the corporation has been presented with respect to the vote, consent, waiver, proxy appointment or proxy appointment revocation;
- the name signed purports to be that of a receiver or trustee in bankruptcy of the shareholder and, if the corporation requests, evidence of this status acceptable to the corporation has been presented with respect to the vote, consent, waiver, proxy appointment or proxy appointment revocation;
- the name signed purports to be that of a pledgee, beneficial owner or attorney-in-fact of the shareholder and, if the corporation requests, evidence acceptable to the corporation of the signatory's authority to sign for the shareholder has been presented with respect to the vote, consent, waiver, proxy appointment or proxy appointment revocation;
- two or more persons are the shareholder as co-tenants or fiduciaries and the name signed purports to be the name of at least one of the co-tenants or fiduciaries, and the person signing appears to be acting on behalf of all the co-tenants or fiduciaries; or
- the acceptance of the vote, consent, waiver, proxy appointment or proxy appointment revocation is otherwise proper under rules established by the corporation that are not inconsistent with this Section 11.

The corporation is entitled to reject a vote, consent, waiver, proxy appointment or proxy appointment revocation if the secretary or other officer or agent authorized to tabulate votes, acting in good faith, has reasonable basis for doubt about the validity of the signature on it or about the signatory's authority to sign for the shareholder.

Neither the corporation nor its officers nor any agent who accepts or rejects a vote, consent, waiver, proxy appointment or proxy appointment revocation in good faith and in accordance with the standards of this Section is liable in damages for the consequences of the acceptance or rejection.

**Section 12 Informal Action by Shareholders.** Any action required or permitted to be taken at a meeting of the shareholders may be taken without a meeting if a written consent (or counterparts thereof) that sets forth the action so taken is signed by all of the shareholders entitled to vote with respect to the subject matter thereof and received by the corporation. Such consent shall have the same force and effect as a unanimous vote of the shareholders and may be stated as such in any

document. Action taken under this Section 12 is effective as of the date the last writing necessary to effect the action is received by the corporation, unless all of the writings specify a different effective date, in which case such specified date shall be the effective date for such action. If any shareholder revokes his consent as provided for herein prior to what would otherwise be the effective date, the action proposed in the consent shall be invalid. The record date for determining shareholders entitled to take action without a meeting is the date the corporation first receives a writing upon which the action is taken.

Any shareholder who has signed a writing describing and consenting to action taken pursuant to this Section 12 may revoke such consent by a writing signed by the shareholder describing the action and stating that the shareholder's prior consent thereto is revoked, if such writing is received by the corporation before the effectiveness of the action.

**Section 13 Meetings by Telecommunication.** Any or all of the shareholders may participate in an annual or special shareholders' meeting by, or the meeting may be conducted through the use of, any means of communication by which all persons participating in the meeting may hear each other during the meeting. A shareholder participating in a meeting by this means is deemed to be present in person at the meeting.

### **ARTICLE III BOARD OF DIRECTORS**

**Section 1 General Powers.** All corporate powers shall be exercised by or under the authority of, and the business and affairs of the corporation shall be managed under the direction of its Board of Directors, except as otherwise provided in the Colorado Business Corporation Act or the articles of incorporation.

**Section 2 Number, Qualifications and Tenure.** The number of Directors of the corporation shall be fixed from time to time by the Board of Directors, within a range of no less than one or more than fifteen, but no decrease in the number of Directors shall have the effect of shortening the term of any incumbent director. A director shall be a natural person who is eighteen years of age or older. A director need not be a resident of Colorado or a shareholder of the corporation.

Directors shall be elected at each annual meeting of shareholders. Each director shall hold office until the next annual meeting of shareholders following his election and thereafter until his successor shall have been elected and qualified. Directors shall be removed in the manner provided by the Colorado Business Corporation Act. Any director may be removed by the shareholders of the voting group that elected the director, with or without cause, at a meeting called for that purpose. The notice of the meeting shall state that the purpose or one of the purposes of the meeting is removal of the director. A director may be removed only if the number of votes cast in favor of removal exceeds the number of votes cast against removal.

**Section 3 Vacancies.** Any director may resign at any time by giving written notice to the Secretary. Such resignation shall take effect at the time the notice is received by the Secretary unless the notice specifies a later effective date. Unless otherwise specified in the notice of resignation, the corporation's acceptance of such resignation shall not be necessary to make it effective. Any vacancy on the Board of Directors may be filled by the affirmative vote of a majority of the shareholders at a special meeting called for that purpose or by the Board of Directors. If the Directors remaining in office constitute fewer than a quorum of the Board, the Directors may fill the vacancy by the affirmative vote of a majority of all the Directors remaining in office. If elected by the Directors, the director shall hold office until the next annual shareholders' meeting at which Directors are elected. If elected by the shareholders, the director shall hold office for the unexpired term of his predecessor in office; except that, if the director's predecessor was elected by the Directors to fill a vacancy, the director elected by the shareholders shall hold office for the unexpired term of the last predecessor elected by the shareholders.

**Section 4 Regular Meetings.** A regular meeting of the Board of Directors shall be held without notice immediately after and at the same place as the annual meeting of shareholders. The Board of Directors may provide by resolution the time and place, either within or outside Colorado, for the holding of additional regular meetings without other notice.

**Section 5 Special Meetings.** Special meetings of the Board of Directors may be called by or at the request of the president or any one director. The person or persons authorized to call special meetings of the Board of Directors may fix any place, either within or outside Colorado, as the place for holding any special meeting of the Board of Directors called by them, provided that no meeting shall be called outside the State of Colorado unless a majority of the Board of Directors has so authorized.

**Section 6 Notice.** Notice of the date, time and place of any special meeting shall be given to each director at least two days prior to the meeting by written notice either personally delivered or mailed to each director at his residence or business address, or by notice transmitted by private courier, telegraph, telex, electronically transmitted facsimile or other form of wire or wireless communication. If mailed, such notice shall be deemed to be given and to be effective on the earlier of (i) five days after such notice is deposited in the United States mail, properly addressed, with first class postage prepaid, or (ii) the date shown on the return receipt, if mailed by registered or certified mail return receipt requested, provided that the return receipt is signed by the director to whom the notice is addressed. If notice is given by telex, electronically transmitted facsimile or other similar form of wire or wireless communication, such notice shall be deemed to be given and to be effective when sent, and with respect to a telegram, such notice shall be deemed to be given and to be effective when the telegram is delivered to the telegraph company. If a director has designated in writing one or more reasonable addresses or facsimile numbers for delivery of notice to him, notice sent by mail, telegraph, telex, electronically transmitted facsimile or other form of wire or wireless communication shall not be deemed to have been given or to be effective unless sent to such addresses or facsimile numbers, as the case may be.

A director may waive notice of a meeting before or after the time and date of the meeting by a writing signed by such director. Such waiver shall be delivered to the corporation for filing with the corporate records, but such delivery and filing shall not be conditions to the effectiveness of the waiver. Further, a director's attendance at or participation in a meeting waives any required notice to him of the meeting unless at the beginning of the meeting, or promptly upon his later arrival, the director objects to holding the meeting or transacting business at the meeting because of lack of notice or defective notice and does not thereafter vote for or assent to action taken at the meeting. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

**Section 7 Quorum.** A majority of the number of Directors fixed by the Board of Directors pursuant to Article III, Section 2 or, if no number is fixed, a majority of the number in office immediately before the meeting begins, shall constitute a quorum for the transaction of business at any meeting of the Board of Directors. If less than such majority is present at a meeting, a majority of the Directors present may adjourn the meeting from time to time without further notice, for a period not to exceed sixty days at any one adjournment.

**Section 8 Manner of Acting.** The act of the majority of the Directors present at a meeting at which a quorum is present shall be the act of the Board of Directors.

**Section 9 Compensation.** By resolution of the Board of Directors, any director may be paid any one or more of the following: his expenses, if any, of attendance at meetings, a fixed sum for attendance at each meeting, a stated salary as director, or such other compensation as the corporation and the director may reasonably agree upon. No such payment shall preclude any director from serving the corporation in any other capacity and receiving compensation therefor.

**Section 10 Presumption of Assent.** A director of the corporation who is present at a meeting of the Board of Directors or committee of the Board at which action on any corporate matter is taken shall be presumed to have assented to the action taken unless (i) the director objects at the beginning of the meeting, or promptly upon his arrival, to the holding of the meeting or the transaction of business at the meeting and does not thereafter vote for or assent to any action taken at the meeting, (ii) the director contemporaneously requests that his dissent or abstention as to any specific action taken be entered in the minutes of the meeting, or (iii) the director causes written notice of his dissent or abstention as to any specific action to be received by the presiding officer of the meeting before its adjournment or by the secretary promptly after the adjournment of the meeting.

A director may dissent to a specific action at a meeting, while assenting to others. The right to dissent to a specific action taken at a meeting of the Board of Directors or a committee of the Board shall not be available to a director who voted in favor of such action.

**Section 11 Committees.** By resolution adopted by a majority of all the Directors in office when the action is taken, the Board of Directors may designate from among its members an executive committee and one or more other committees, and appoint one or more members of the Board of Directors to serve on them. To the extent provided in the resolution, each committee shall have all the authority of the Board of Directors, except that no such committee shall have the authority to (i) authorize distributions, (ii) approve or propose to shareholders actions or proposals required by the Colorado Business Corporation Act to be approved by shareholders, (iii) fill vacancies on the Board of Directors or any committee thereof, (iv) amend the articles of incorporation, (v) adopt, amend or repeal the bylaws, (vi) approve a plan of merger not requiring shareholder approval, (vii) authorize or approve the reacquisition of shares unless pursuant to a formula or method prescribed by the Board of Directors, or (viii) authorize or approve the issuance or sale of shares, or contract for the sale of shares or determine the designations and relative rights, preferences and limitations of a class or series of shares, except that the Board of Directors may authorize a committee or officer to do so within limits specifically prescribed by the Board of Directors. The committee shall then have full power within the limits set by the Board of Directors to adopt any final resolution setting forth all preferences, limitations and relative rights of such class or series and to authorize an amendment of the articles of incorporation stating the preferences, limitations and relative rights of a class or series for filing with the Secretary of State under the Colorado Business Corporation Act.

Sections 4, 5, 6, 7, 8 and 12 of Article III, which govern meetings, notice, waiver of notice, quorum, voting requirements and action without a meeting of the Board of Directors, shall apply to committees and their members appointed under this Section 11.

Neither the designation of any such committee, the delegation of authority to such committee, nor any action by such committee pursuant to its authority shall alone constitute compliance by any member of the Board of Directors or a member of the committee in question with his responsibility to conform to the standard of care set forth in Article III, Section 14 of these bylaws.

**Section 12 Informal Action by Directors.** Any action required or permitted to be taken at a meeting of the Directors or any committee designated by the Board of Directors may be taken without a meeting if a written consent (or counterparts thereof) that sets forth the action so taken is signed by all of the Directors entitled to vote with respect to the action taken. Such consent shall have the same force and effect as a unanimous vote of the Directors or committee members and may be stated as such in any document. Unless the consent specifies a different effective time or date, action taken under this Section 12 is effective at the time or date the last director signs a writing describing the action taken, unless, before such time, any director has revoked his consent by a writing signed by the director and received by the president or the secretary of the corporation.

**Section 13 Telephonic Meetings.** The Board of Directors may permit any director (or any member of a committee designated by the Board) to participate in a regular or special meeting of the Board of Directors or a committee thereof through the use of any means of communication by which all Directors participating in the meeting can hear each other during the meeting. A director participating in a meeting in this manner is deemed to be present in person at the meeting.

**Section 14 Standard of Care.** A director shall perform his duties as a director, including without limitation his duties as a member of any committee of the Board, in good faith, in a manner he reasonably believes to be in the best interests of the corporation, and with the care an ordinarily prudent person in a like position would exercise under similar circumstances. In performing his duties, a director shall be entitled to rely on information, opinions, reports or statements, including financial statements and other financial data, in each case prepared or presented by the persons herein designated. However, he shall not be considered to be acting in good faith if he has knowledge concerning the matter in question that would cause such reliance to be unwarranted. A director shall not be liable to the corporation or its shareholders for any action he takes or omits to take as a director if, in connection with such action or omission, he performs his duties in compliance with this Section 14.

The designated persons on whom a director is entitled to rely are (i) one or more officers or employees of the corporation whom the director reasonably believes to be reliable and competent in the matters presented, (ii) legal counsel, public accountant, or other person as to matters which the director reasonably believes to be within such person's professional or expert competence, or (iii) a committee of the Board of Directors on which the director does not serve if the director reasonably believes the committee merits confidence.

#### **ARTICLE IV OFFICERS AND AGENTS**

**Section 1 General.** The officers of the corporation shall be a president, one or more vice presidents, a secretary and a treasurer, each of whom shall be appointed by the Board of Directors and shall be a natural person eighteen years of age or older. One person may hold more than one office. The Board of Directors or an officer or officers so authorized by the Board may appoint such other officers, assistant officers, committees and agents, including a chairman of the Board, assistant secretaries and assistant treasurers, as they may consider necessary. Except as expressly prescribed by these bylaws, the Board of Directors or the officer or officers authorized by the Board shall from time to time determine the procedure for the appointment of officers, their authority and duties and their compensation, provided that the Board of Directors may change the authority, duties and compensation of any officer who is not appointed by the Board.

**Section 2 Appointment and Term of Office.** The officers of the corporation to be appointed by the Board of Directors shall be appointed at each annual meeting of the Board held after each annual meeting of the shareholders. If the appointment of officers is not made at such meeting or if an officer or officers are to be appointed by another officer or officers of the corporation, such appointments shall be made as determined by the Board of Directors or the appointing person or persons. Each officer shall hold office until the first of the following occurs: his successor shall have been duly appointed and qualified, his death, his resignation, or his removal in the manner provided in Section 3.

**Section 3 Resignation and Removal.** An officer may resign at any time by giving written notice of resignation to the president, secretary or other person who appoints such officer. The resignation is effective when the notice is received by the corporation unless the notice specifies a later effective date.

Any officer or agent may be removed at any time with or without cause by the Board of Directors or an officer or officers authorized by the Board. Such removal does not affect the contract rights, if any, of the corporation or of the person so removed. The appointment of an officer or agent shall not in itself create contract rights.

**Section 4 Vacancies.** A vacancy in any office, however occurring, may be filled by the Board of Directors, or by the officer or officers authorized by the Board, for the unexpired portion of the officer's term. If an officer resigns and his resignation is made effective at a later date, the Board of Directors, or officer or officers authorized by the Board, may permit the officer to remain in office until the effective date and may fill the pending vacancy before the effective date if the Board of Directors or officer or officers authorized by the Board provide that the successor shall not take office until the effective date. In the alternative, the Board of Directors, or officer or officers authorized by the Board of Directors, may remove the officer at any time before the effective date and may fill the resulting vacancy.

**Section 5 President.** The president shall preside at all meetings of shareholders and all meetings of the Board of Directors unless the Board of Directors has appointed a chairman, vice chairman, or other officer of the Board and has authorized such person to preside at meetings of the Board of Directors. Subject to the direction and supervision of the Board of Directors, the president shall be the chief executive officer of the corporation, and shall have general and active control of its affairs and business and general supervision of its officers, agents and employees. Unless otherwise directed by the Board of Directors, the president shall attend in person or by substitute appointed by him, or shall execute on behalf of the corporation written instruments appointing a proxy or proxies to represent the corporation, at all meetings of the stockholders of any other corporation in which the corporation holds any stock. On behalf of the corporation, the president may in person or by

substitute or by proxy execute written waivers of notice and consents with respect to any such meetings. At all such meetings and otherwise, the president, in person or by substitute or proxy, may vote the stock held by the corporation, execute written consents and other instruments with respect to such stock, and exercise any and all rights and powers incident to the ownership of said stock, subject to the instructions, if any, of the Board of Directors. The president shall have custody of the treasurer's bond, if any. The president shall have such additional authority and duties as are appropriate and customary for the office of president and chief executive officer, except as the same may be expanded or limited by the Board of Directors from time to time.

**Section 6 Vice Presidents.** The vice presidents shall assist the president and shall perform such duties as may be assigned to them by the president or by the Board of Directors. In the absence of the president, the vice president, if any (or, if more than one, the vice presidents in the order designated by the Board of Directors, or if the Board makes no such designation, then the vice president designated by the president, or if neither the Board nor the president makes any such designation, the senior vice president as determined by first election to that office), shall have the powers and perform the duties of the president.

**Section 7 Secretary.** The secretary shall (i) prepare and maintain as permanent records the minutes of the proceedings of the shareholders and the Board of Directors without a meeting, a record of all actions taken by a committee of the Board of Directors in place of the Board of Directors on behalf of the corporation, and a record of all waivers of notice of meetings of shareholders and of the Board of Directors or any committee thereof, (ii) see that all notices are duly given in accordance with the provisions of these bylaws and as required by law, (iii) serve as custodian of the corporate records and of the seal of the corporation and affix the seal to all documents when authorized by the Board of Directors, (iv) keep at the corporation's registered office or principal place of business a record containing the names and addresses of all shareholders in a form that permits preparation of a list of shareholders arranged by voting group and by class or series of shares within each voting group, that is alphabetical within each class or series and that shows the address of, and the number of shares of each class or series held by, each shareholder, unless such a record shall be kept at the office of the corporation's transfer agent or registrar, (v) maintain at the corporation's principal office the originals or copies of the corporation's articles of incorporation, bylaws, minutes of all shareholders' meetings and records of all action taken by shareholders without a meeting for the past three years, all written communications within the past three years to shareholders as a group or to the holders of any class or series of shares as a group, a list of the names and business addresses of the current Directors and officers, a copy of the corporation's most recent corporate report filed with the Secretary of State, and financial statements showing in reasonable detail the corporation's assets and liabilities and results of operations for the last three years, (vi) have general charge of the stock transfer books of the corporation, unless the corporation has a transfer agent, (vii) authenticate records of the corporation, and (viii) in general, perform all duties incident to the office of secretary and such other duties as from time to time may be assigned to him by the president or by the Board of Directors. Assistant secretaries, if any, shall have the same duties and powers, subject to supervision by the secretary. The Directors and/or shareholders may however respectively designate a person other than the secretary or assistant secretary to keep the minutes of their respective meetings.

Any books, records, or minutes of the corporation may be in written form or in any form capable of being converted into written form within a reasonable time.

**Section 8 Treasurer.** The treasurer shall be the principal financial officer of the corporation, shall have the care and custody of all funds, securities, evidences of indebtedness and other personal property of the corporation and shall deposit the same in accordance with the instructions of the Board of Directors. Subject to the limits imposed by the Board of Directors, he shall receive and give receipts and acquittances for money paid in on account of the corporation, and shall pay out of the corporation's funds on hand all bills, payrolls and other just debts of the corporation of whatever nature upon maturity. He shall perform all other duties incident to the office of the treasurer and, upon request of the Board, shall make such reports to it as may be required at any time. He shall, if required by the Board, give the corporation a bond in such sums and with such sureties as shall be satisfactory to the Board, conditioned upon the faithful performance of his duties and for the restoration to the corporation of all books, papers, vouchers, money and other property of whatever

kind in his possession or under his control belonging to the corporation. He shall have such other powers and perform such other duties as may from time to time be prescribed by the Board of Directors or the president. The assistant treasurers, if any, shall have the same powers and duties, subject to the supervision of the treasurer.

The treasurer shall also be the principal accounting officer of the corporation. He shall prescribe and maintain the methods and systems of accounting to be followed, keep complete books and records of account as required by the Colorado Business Corporation Act, prepare and file all local, state and federal tax returns, prescribe and maintain an adequate system of internal audit and prepare and furnish to the president and the Board of Directors statements of account showing the financial position of the corporation and the results of its operations.

## **ARTICLE V STOCK**

**Section 1 Certificates.** The Board of Directors shall be authorized to issue any of its classes of shares with or without certificates. The fact that the shares are not represented by certificates shall have no effect on the rights and obligations of shareholders. If the shares are represented by certificates, such shares shall be represented by consecutively numbered certificates signed, either manually or by facsimile, in the name of the corporation by the president, a vice president, the secretary or an assistant secretary. In case any officer who has signed or whose facsimile signature has been placed upon such certificate shall have ceased to be such officer before such certificate is issued, such certificate may nonetheless be issued by the corporation with the same effect as if he were such officer at the date of its issue. The names of the owners of the certificates, the number of shares, and the date of issue shall be entered on the books of the corporation. Each certificate representing shares shall state upon its face:

- That the corporation is organized under the laws of Colorado;
- The name of the person to whom issued;
- The number and class of the shares and the designation of the series, if any, that the certificate represents;
- The par value, if any, of each share represented by the certificate;
- If the corporation is authorized to issue different classes of shares or different series within a class, the certificate shall contain a conspicuous statement, on the front or the back, that the corporation will furnish to the shareholder, on request in writing and without charge, information concerning the designations, preferences, limitations, and relative rights applicable to each class, the variations in preferences, limitations, and rights determined for each series, and the authority of the Board of Directors to determine variations for future classes or series; and
- Any restrictions imposed by the corporation upon the transfer of the shares represented by the certificate.

If shares are not represented by certificates, within a reasonable time following the issue or transfer of such shares, the corporation shall send the shareholder a complete written statement of all of the information required to be provided to holders of uncertificated shares by the Colorado Business Corporation Act.

**Section 2 Consideration for Shares.** Certificates or uncertificated shares shall not be issued until the shares represented thereby are fully paid. The Board of Directors may authorize the issuance of shares for consideration consisting of any tangible or intangible property or benefit to the corporation, including cash, promissory notes, services performed or other securities of the corporation. Future services shall not constitute payment or partial payment for shares of the

corporation. The promissory note of a subscriber or an affiliate of a subscriber shall not constitute payment or partial payment for shares of the corporation unless the note is negotiable and is secured by collateral, other than the shares being purchased, having a fair market value at least equal to the principal amount of the note. For purposes of this Section 2, "promissory note" means a negotiable instrument on which there is an obligation to pay independent of collateral and does not include a non-recourse note.

**Section 3 Lost Certificates.** In case of the alleged loss, destruction or mutilation of a certificate of stock, the Board of Directors may direct the issuance of a new certificate in lieu thereof upon such terms and conditions in conformity with law as the Board may prescribe. The Board of Directors may in its discretion require an affidavit of lost certificate and/or a bond in such form and amount and with such surety as it may determine before issuing a new certificate.

**Section 4 Transfer of Shares.** Upon surrender to the corporation or to a transfer agent of the corporation of a certificate of stock duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, and receipt of such documentary stamps as may be required by law and evidence of compliance with all applicable securities laws and other restrictions, the corporation shall issue a new certificate to the person entitled thereto, and cancel the old certificate. Every such transfer of stock shall be entered on the stock books of the corporation, which shall be entered on the stock books of the corporation, which shall be kept at its principal office or by the person and the place designated by the Board of Directors.

Except as otherwise expressly provided in Article II, Sections 7 and 11, and except for the assertion of dissenters' rights to the extent provided in Article 113 of the Colorado Business Corporation Act, the corporation shall be entitled to treat the registered holder of any shares of the corporation as the owner thereof for all purposes, and the corporation shall not be bound to recognize any equitable or other claim to, or interest in, such shares or rights deriving from such shares on the part of any person other than the registered holder, including without limitation any purchaser, assignee or transferee of such shares or rights deriving from such shares on the part of any person other than the registered holder, including without limitation any purchaser, assignee or transferee of such shares or rights deriving from such shares, unless and until such other person becomes the registered holder of such shares, whether or not the corporation shall have either actual or constructive notice of the claimed interest of such other person.

**Section 5 Transfer Agent, Registrars and Paying Agents.** The Board may at its discretion appoint one or more transfer agents, registrars and agents for making payment upon any class of stock, bond, debenture or other security of the corporation. Such agents and registrars may be located either within or outside Colorado. They shall have such rights and duties and shall be entitled to such compensation as may be agreed. The corporation and any transfer agent, registrar or other agent shall refuse to register any transfer of securities originally issued under Regulation S of the Securities Act of 1933 unless such transfer is made in accordance with Regulation S, pursuant to registration under the Securities Act of 1933 or pursuant to exemption from registration under the Securities Act of 1933.

## ARTICLE VI INDEMNIFICATION OF CERTAIN PERSONS

**Section 1 Indemnification.** For purposes of Article VI, a "Proper Person" means any person (including the estate or personal representative of a director) who was or is a party or is threatened to be made a party to any threatened, pending, or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, and whether formal or informal, by reason of the fact that he is or was a director, officer, employee, fiduciary or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, partner, trustee, employee, fiduciary or agent of any foreign or domestic profit or nonprofit corporation or of any partnership, joint venture, trust, profit or nonprofit unincorporated association, limited liability company, or other enterprise or employee benefit plan. The corporation shall indemnify any Proper Person against reasonably incurred expenses (including attorneys' fees), judgments, penalties, fines (including any excise tax assessed with respect to an employee benefit plan) and amounts paid in settlement reasonably incurred by him connection with such action, suit or proceeding if it is determined by the groups set forth in Section 4 of this

Article that he conducted himself in good faith and that he reasonably believed (i) in the case of conduct in his official capacity with the corporation, that his conduct was in the corporation's best interests, or (ii) in all other cases (except criminal cases), that his conduct was at least not opposed to the corporation's best interests, or (iii) in the case of any criminal proceeding, that he had no reasonable cause to believe his conduct was unlawful. Official capacity means, when used with respect to a director, the office of director and, when used with respect to any other Proper Person, the office in a corporation held by the officer or the employment, fiduciary or agency relationship undertaken by the employee, fiduciary, or agent on behalf of the corporation. Official capacity does not include service for any other domestic or foreign corporation or other person or employee benefit plan.

A director's conduct with respect to an employee benefit plan for a purpose the director reasonably believed to be in the interests of the participants in or beneficiaries of the plan is conduct that satisfies the requirements in (ii) of this Section 1. A director's conduct with respect to an employee benefit plan for a purpose that the director did not reasonably believe to be in the interests of the participants in or beneficiaries of the plan shall be deemed not to satisfy the requirement of this section that he conduct himself in good faith.

No indemnification shall be made under this Article VI to a Proper Person with respect to any claim, issue or matter in connection with a proceeding by or in the right of a corporation in which the Proper Person was adjudged liable to the corporation or in connection with any proceeding charging that the Proper Person derived an improper personal benefit, whether or not involving action in an official capacity, in which he was adjudged liable on the basis that he derived an improper personal benefit. Further, indemnification under this Section in connection with a proceeding brought by or in the right of the corporation shall be limited to reasonable expenses, including attorneys' fees, incurred in connection with the proceeding.

**Section 2 Right to Indemnification.** The corporation shall indemnify any Proper Person who was wholly successful, on the merits or otherwise, in defense of any action, suit, or proceeding as to which he was entitled to indemnification under Section 1 of this Article VI against expenses (including attorneys' fees) reasonably incurred by him in connection with the proceeding without the necessity of any action by the corporation other than the determination in good faith that the defense has been wholly successful.

**Section 3 Effect of Termination of Action.** The termination of any action, suit or proceeding by judgment, order, settlement or conviction, or upon a plea of nolo contendere or its equivalent shall not of itself create a presumption that the person seeking indemnification did not meet the standards of conduct described in Section 1 of this Article VI. Entry of a judgment by consent as part of a settlement shall not be deemed an adjudication of liability, as described in Section 2 of this Article VI.

**Section 4 Groups Authorized to Make Indemnification Determination.** Except where there is a right to indemnification as set forth in Sections 1 or 2 of this Article or where indemnification is ordered by a court in Section 5, any indemnification shall be made by the corporation only as determined in the specific case by a proper group that indemnification of the Proper Person is permissible under the circumstances because he has met the applicable standards of conduct set forth in Section 1 of this Article. This determination shall be made by the Board of Directors by a majority vote of those present at a meeting at which a quorum is present, which quorum shall consist of Directors not parties to the proceeding ("Quorum"). If a Quorum cannot be obtained, the determination shall be made by a majority vote of a committee of the Board of Directors designated by the Board, which committee shall consist of two or more Directors not parties to the proceeding, except that Directors who are parties to the proceeding may participate in the designation of Directors for the committee. If a Quorum of the Board of Directors cannot be obtained and the committee cannot be established, or even if a Quorum is obtained or the committee is designated and a majority of the Directors constituting such Quorum or committee so directs, the determination shall be made by (i) independent legal counsel selected by a vote of the Board of Directors or the committee in the manner specified in this Section 4 or, if a Quorum of the full Board of Directors cannot be obtained and a committee cannot be established, by independent legal counsel selected by a majority vote of the full Board (including Directors who are parties to the action) or (ii) a vote of the shareholders.

Authorization of indemnification and advance of expenses shall be made in the same manner as the determination that indemnification or advance of expenses is permissible except that, if the determination that indemnification or advance of expenses is permissible is made by independent legal counsel, authorization of indemnification and advance of expenses shall be made by the body that selected such counsel.

**Section 5 Court-Ordered Indemnification.** Any Proper Person may apply for indemnification to the court conducting the proceeding or to another court of competent jurisdiction for mandatory indemnification under Section 2 of this Article, including indemnification for reasonable expenses incurred to obtain court-ordered indemnification. If a court determines that the Proper Person is entitled to indemnification under Section 2 of this Article, the court shall order indemnification, including the Proper Person's reasonable expenses incurred to obtain court-ordered indemnification. If the court determines that such Proper Person is fairly and reasonably entitled to indemnification in view of all the relevant circumstances, whether or not he met the standards of conduct set forth in Section 1 of this Article or was adjudged liable in the proceeding, the court may order such indemnification as the court deems proper except that if the Proper Person has been adjudged liable, indemnification shall be limited to reasonable expenses incurred in connection with the proceeding and reasonable expenses incurred to obtain court-ordered indemnification.

**Section 6 Advance of Expenses.** Reasonable expenses (including attorneys' fees) incurred in defending an action, suit or proceeding as described in Section 1 may be paid by the corporation to any Proper Person in advance of the final disposition of such action, suit or proceeding upon receipt of (i) a written affirmation of such Proper Person's good faith belief that he has met the standards of conduct prescribed by Section 1 of this Article VI, (ii) a written undertaking, executed personally or on the Proper Person's behalf, to repay such advances if it is ultimately determined that he did not meet the prescribed standards of conduct (the undertaking shall be an unlimited general obligation of the Proper Person but need not be secured and may be accepted without reference to financial ability to make repayment), and (iii) a determination is made by the proper group (as described in Section 4 of this Article VI) that the facts as then known to the group would not preclude indemnification. Determination and authorization of payments shall be made in the same manner specified in Section 4 of this Article VI.

**Section 7 Additional Indemnification to Certain Persons Other Than Directors.** In addition to the indemnification provided to officers, employees, fiduciaries or agents because of their status as Proper Persons under this Article, the corporation may also indemnify and advance expenses to them if they are not Directors of the corporation to a greater extent than is provided in these bylaws, if not inconsistent with public policy, and if provided for by general or specific action of its Board of Directors or shareholders or by contract.

**Section 8 Witness Expenses.** The sections of this Article VI do not limit the corporation's authority to pay or reimburse expenses incurred by a director in connection with an appearance as a witness in a proceeding at a time when he has not been made a named defendant or respondent in the proceeding.

**Section 9 Report to Shareholders.** Any indemnification of or advance of expenses to a director in accordance with this Article VI, if arising out of a proceeding by or on behalf of the corporation, shall be reported in writing to the shareholders with or before the notice of the next shareholders' meeting. If the next shareholder action is taken without a meeting at the instigation of the Board of Directors, such notice shall be given to the shareholders at or before the time the first shareholder signs a writing consenting to such action.

## ARTICLE VII PROVISION OF INSURANCE

**Section 1 Provision of Insurance.** By action of the Board of Directors, notwithstanding any interest of the Directors in the action, the corporation may purchase and maintain insurance, in such scope and amounts as the Board of Directors deems appropriate, on behalf of any person who is or was a director, officer, employee, fiduciary or agent of the corporation, or who, while a director, officer, employee, fiduciary or agent of the corporation, is or was serving at the request of the corporation as a director, officer, partner, trustee, employee fiduciary or agent of any other foreign or

domestic corporation or of any partnership, joint venture, trust, profit or nonprofit unincorporated association, limited liability company, other enterprise or employee benefit plan, against any liability asserted against, or incurred by, him in that capacity or arising out of his status as such, whether or not the corporation would have the power to indemnify him against such liability under the provisions of Article VI or applicable law. Any such insurance may be procured from any insurance company designated by the Board of Directors of the corporation, whether such insurance company is formed under the laws of Colorado or any other jurisdiction of the United States or elsewhere, including any insurance company in which the corporation has an equity interest or any other interest, through stock ownership or otherwise.

## **ARTICLE V MISCELLANEOUS**

**Section 1 Seal.** The Board of Directors may adopt a corporate seal, which shall be circular in form and shall contain the name of the corporation and the words, "Seal, Colorado."

**Section 2 Fiscal Year.** The fiscal year of the corporation shall be as established by the Board of Directors.

**Section 3 Amendments.** The Board of Directors shall have power, to the maximum extent permitted by the Colorado Business Corporation Act, to make, amend and repeal the bylaws of the corporation at any regular or special meeting of the Board unless the shareholders, in making, amending or repealing a particular bylaw, expressly provide that the Directors may not amend or repeal such bylaw. The shareholders also shall have the power to make, amend or repeal the bylaws of the corporation at any annual meeting or at any special meeting called for that purpose.

**Section 4 Receipt of Notices by the Corporation.** Notices, shareholder writings consenting to action, and other documents or writings shall be deemed to have been received by the corporation when they are actually received: (1) at the registered office of the corporation in Colorado; (2) at the principal office of the corporation (as that office is designated in the most recent document filed by the corporation with the secretary of state for Colorado designating a principal office) addressed to the attention of the secretary of the corporation; (3) by the secretary of the corporation wherever the secretary may be found; or (4) by any other person authorized from time to time by the Board of Directors or the president to receive such writings, wherever such person is found.

**Section 5 Gender.** The masculine gender is used in these bylaws as a matter of convenience only and shall be interpreted to include the feminine and neuter genders as the circumstances indicate.

**Section 6 Conflicts.** In the event of any irreconcilable conflict between these bylaws and either the corporation's articles of incorporation or applicable law, the latter shall control.

**Section 7 Definitions.** Except as otherwise specifically provided in these bylaws, all terms used in these bylaws shall have the same definition as in the Colorado Business Corporation Act.