

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 OR 15(d) of The Securities Exchange Act of 1934

Date of report (Date of earliest event reported): February 12, 2021

PHUNWARE, INC.
(Exact name of registrant as specified in its charter)

<u>Delaware</u> (State or other jurisdiction of incorporation)	<u>001-37862</u> (Commission File Number)	<u>26-4413774</u> (IRS Employer Identification No.)
<u>7800 Shoal Creek Blvd, Suite 230-S, Austin, Texas</u> (Address of principal executive offices)		<u>78757</u> (Zip Code)

Registrant's Telephone Number, Including Area Code: (512) 693-4199

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	PHUN	The NASDAQ Capital Market
Warrants to purchase one share of Common Stock	PHUNW	The NASDAQ Capital Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 1.01 Entry Into a Material Definitive Agreement.

On February 12, 2021, Phunware, Inc. (the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with Northland Securities, Inc. and Roth Capital Partners, LLC (collectively, the “Underwriters”), relating to an underwritten public offering of 11,111,111 shares of the Company’s common stock, par value \$0.0001 per share (“Common Stock”). The offering price to the public of Common Stock is \$2.25 per share. In addition, under the terms of the Underwriting Agreement, the Company has granted the Underwriters a 30-day option to purchase up to an additional 1,666,666 shares of Common Stock to cover over-allotments, if any.

The shares of Common Stock will be issued pursuant to a prospectus supplement dated as of February 12, 2021, which was filed with the Securities and Exchange Commission in connection with a takedown from the Company’s shelf registration statement on Form S-3 (File No. 333-252694), as amended, which became effective on February 11, 2021, and the base prospectus contained in such registration statement.

The Underwriting Agreement contains customary representations and warranties, agreements and obligations, conditions to closing and termination provisions. The Underwriting Agreement provides for indemnification by the Underwriters of the Company, its directors and executive officers, and by the Company of the Underwriters, for certain liabilities, including liabilities arising under the Securities Act of 1933, as amended (the “Securities Act”), and affords certain rights of contribution with respect thereto. The Company agreed pursuant to the Underwriting Agreement to reimburse the Underwriters for certain expenses incurred in connection with the offering up to \$150,000.

The net proceeds to the Company from the offering, after deducting the underwriting discounts and commissions, are expected to be approximately \$23.375 million, before expenses and assuming the Underwriters’ option is not exercised. The offering is expected to close on or about February 17, 2021, subject to satisfaction of customary closing conditions. The Company intends to use the net proceeds from the offering to satisfy obligations to redeem outstanding convertible debt and for working capital and general corporate purposes.

The legal opinion of Winstead PC relating to the legality of the issuance and sale of the Common Stock in the offering is attached as Exhibit 5.1 to this Current Report on Form 8-K.

The foregoing description of the Underwriting Agreement does not purport to be complete and is subject to, and is qualified in its entirety by reference to, the Underwriting Agreement, which is attached hereto as Exhibit 1.1.

Item 2.02 Results of Operations and Financial Condition.

On February 12, 2021, the Company filed a preliminary prospectus supplement (the “Preliminary Prospectus Supplement”) to its effective shelf registration statement on Form S-3 (File No. 333-252694) (the “Registration Statement”) pursuant to Rule 424(b) under the Securities Act relating the underwritten public offering of its Common Stock. The Company included the following disclosure under the heading “The Company—Recent Developments” in the Preliminary Prospectus Supplement:

“Our financial statements for the fiscal year ended December 31, 2020, will not be available until after this offering is completed and consequently will not be available to you prior to investing in this offering. This is not a comprehensive statement of our financial results and is subject to change. We have provided ranges, rather than specific amounts, for the preliminary estimates of the unaudited financial data described below primarily because our financial closing procedures for fiscal year ended December 31, 2020 are not yet complete and, as a result, our financial results upon completion of our closing procedures may vary from the preliminary estimates. These estimates should not be viewed as a substitute for our full year financial statements prepared in accordance with generally accepted accounting principles in the United States (“GAAP”). Based upon preliminary estimates and information available to us as of the date of this prospectus supplement, we estimate that we will have a range of between approximately \$1.9 million to \$2.1 million in revenue and \$(1.95) million to \$(1.75) million in Adjusted EBITDA for the quarter ended December 31, 2020. We estimate that we will have a range of between approximately

\$9.9 million to \$10.1 million in revenue and \$(8.2) million to \$(8.0) million in Adjusted EBITDA for the fiscal year ended December 31, 2020.

To supplement our consolidated financial statements presented on a GAAP basis, we use Adjusted EBITDA, a non-GAAP financial measure. We define Adjusted EBITDA as net income (loss) plus depreciation and amortization expense, interest expense, and taxes, as further adjusted to eliminate the impact of, when applicable, other non-cash items or expenses that are unusual or non-recurring that we believe do not reflect our core operating results. We believe that Adjusted EBITDA is meaningful to our investors to enhance their understanding of our financial performance for the current period and our ability to generate cash flows from operations that are available for taxes, capital expenditures and debt service. We understand that Adjusted EBITDA is frequently used by securities analysts, investors and other interested parties as a measure of financial performance and to compare our performance with the performance of other companies that report Adjusted EBITDA. Our calculation of Adjusted EBITDA, however, may not be comparable to similarly titled measures reported by other companies. When assessing our operating performance, investors and others should not consider this data in isolation or as a substitute for net income (loss) calculated in accordance with GAAP. Further, the results presented by Adjusted EBITDA cannot be achieved without incurring the costs that the measure excludes. We have not provided guidance for a comparable GAAP measure or a quantitative reconciliation of this non-GAAP financial measure to the most directly comparable GAAP measure because we are unable to determine with reasonable certainty the ultimate outcome of certain significant items necessary to calculate such measure without unreasonable effort. These items include, but are not limited to, certain non-recurring or non-core items we may record that could materially impact net income, such as income taxes. These items are uncertain, depend on various factors, and could have a material impact on the GAAP reported results for the period. Accordingly, undue reliance should not be placed on this preliminary estimate. The preliminary estimate is not necessarily indicative of any future period and should be read together with the sections titled "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements," and under similar headings in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus as well as our financial statements, related notes and other financial information incorporated by reference in this prospectus supplement"

The information set forth in Item 2.02 of this Current Report on Form 8-K shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or incorporated by reference in any filing under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

Item 8.01 Other Events.

On February 12, 2021, the Company issued a press release relating to the matters described in Item 1.01 above titled, "Phunware, Inc. Announces Proposed Public Offering of Common Stock." A copy of such press release is attached hereto as Exhibit 99.1.

On February 12, 2021, the Company issued a press release relating to the matters described in Item 1.01 above titled, "Phunware, Inc. Announces Pricing of Public Offering of Common Stock." A copy of such press release is attached hereto as Exhibit 99.2.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

<i>Exhibit No.</i>	<i>Exhibit Title</i>
1.1	Underwriting Agreement, dated February 12, 2021 by and among Northland Securities, Inc., Roth Capital Partners, LLC and Phunware, Inc.
5.1	Opinion of Winstead PC.
23.1	Consent of Winstead PC (included in Exhibit 5.1).
99.1	Press Release dated February 12, 2021 titled "Phunware, Inc. Announces Proposed Public Offering of Common Stock"
99.2	Press Release dated February 12, 2021 titled "Phunware, Inc. Announces Pricing of Public Offering of Common Stock"

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: February 16, 2021

Phunware, Inc.

By: /s/ Matt Aune
Matt Aune
Chief Financial Officer

11,111,111 Shares¹

Phunware, Inc.

Common Stock, \$0.0001 par value per share

UNDERWRITING AGREEMENT

February 12, 2021

NORTHLAND SECURITIES, INC.
150 South Fifth Street, Suite 3300
Minneapolis, Minnesota 55402

and

ROTH CAPITAL PARTNERS, LLC
888 San Clemente Drive, Suite 400
Newport Beach, CA 92660

As Representatives of the several
Underwriters named in Schedule I hereto

Ladies and Gentlemen:

Phunware, Inc., a Delaware corporation (the “*Company*”), proposes to sell to the several underwriters named in Schedule I hereto (the “*Underwriters*”) an aggregate of 11,111,111 shares (the “*Firm Shares*”) of Common Stock, \$0.0001 par value per share (the “*Common Stock*”), of the Company. The Firm Shares consist of authorized but unissued shares of Common Stock to be issued and sold by the Company. The Company also has granted to the Underwriters an option to purchase up to 1,666,666 additional shares of Common Stock on the terms and for the purposes set forth in Section 3 hereof (the “*Option Shares*”). The Firm Shares and any Option Shares purchased pursuant to this Purchase Agreement are herein collectively called the “*Securities*”. Notwithstanding anything to the contrary herein, the number of shares of the Securities shall not exceed 19.9% of the issued and outstanding securities prior to the offering.

The Company and the several Underwriters hereby confirm their agreement with respect to the sale of the Securities by the Company to the several Underwriters, for whom Northland Securities, Inc. and Roth Capital Partners, LLC are acting as representatives (“*you*” or the “*Representatives*”), as follows:

1 . **Registration Statement and Prospectus.** The Company has prepared and filed with the Securities and Exchange Commission (the “*Commission*”) a registration statement on Form S-3 (File No. 333-252694) under the Securities Act of 1933, as amended (the

¹ Plus an option to purchase up to 1,666,666 additional shares to cover over-allotments.

“Securities Act” or the **“Act”**), and the rules and regulations (the **“Rules and Regulations”**) of the Commission thereunder, and such amendments to such registration statement as may have been required to the date of this Agreement. Such registration statement has been declared effective by the Commission. Each part of such registration statement, including the amendments, exhibits and any schedules thereto, the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Securities Act and the documents and information otherwise deemed to be a part thereof or included therein by Rule 430B under the Securities Act (the **“Rule 430B Information”**) or otherwise pursuant to the Rules and Regulations, as of the time the Registration Statement became effective, is herein called the **“Registration Statement.”** Any registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act is called the **“Rule 462(b) Registration Statement”** and, from and after the date and time of filing of the Rule 462(b) Registration Statement, the term **“Registration Statement”** shall include the Rule 462(b) Registration Statement.

The prospectus in the form in which it has most recently been filed with the Commission on or prior to the date of this Agreement is herein called the **“Base Prospectus.”** Each preliminary prospectus supplement to the Base Prospectus (including the Base Prospectus as so supplemented), that describes the Securities and the offering thereof, that omitted the Rule 430B Information and that was used prior to the filing of the final prospectus supplement referred to in the following sentence is herein called a **“Preliminary Prospectus.”** Promptly after execution and delivery of this Agreement, the Company will prepare and file with the Commission a final prospectus supplement to the Base Prospectus relating to the Securities and the offering thereof in accordance with the provisions of Rule 430B and Rule 424(b) of the Rules and Regulations. Such final supplemental form of prospectus (including the Base Prospectus as so supplemented), in the form filed with the Commission pursuant to Rule 424(b), is herein called the **“Prospectus.”** Any reference herein to the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Securities Act as of the date of such prospectus.

For purposes of this Agreement, all references to the Registration Statement, the Rule 462(b) Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System or any successor system thereto (**“EDGAR”**). All references in this Agreement to financial statements and schedules and other information which is “described,” “contained,” “included” or “stated” in the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus (or other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is incorporated by reference in or otherwise deemed by the Rules and Regulations to be a part of or included in the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus, as the case may be; and all references in this Agreement to amendments or supplements to the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to mean and include the subsequent filing of any document under the Securities Exchange Act of 1934, as amended (the **“Exchange Act”**), and which is deemed to be

incorporated by reference therein or otherwise deemed by the Rules and Regulations to be a part thereof.

2. ***Representations and Warranties of the Company.***

(a) *Representations and Warranties of the Company.* The Company represents and warrants to, and agrees with, the several Underwriters as follows:

(i) *Registration Statement and Prospectuses.* No order preventing or suspending the use of any Preliminary Prospectus or the Prospectus (or any supplement thereto) has been issued by the Commission and no proceeding for that purpose has been initiated or is pending or, to the knowledge of the Company, threatened by the Commission. As of the time each part of the Registration Statement (or any posteffective amendment thereto) became or becomes effective (including each deemed effective date with respect to the Underwriters pursuant to Rule 430B or otherwise under the Securities Act), such part conformed or will conform in all material respects to the requirements of the Act and the Rules and Regulations. Upon the filing or first use within the meaning of the Rules and Regulations, each Preliminary Prospectus and the Prospectus (or any supplement to either) conformed or will conform in all material respects to the requirements of the Act and the Rules and Regulations. The Registration Statement and any post-effective amendment thereto has become effective under the Securities Act. The Company has complied to the Commission's satisfaction with all requests of the Commission for additional or supplemental information. No stop order suspending the effectiveness of the Registration Statement, any post-effective amendment or any part thereof is in effect and no proceedings for such purpose have been instituted or are pending or, to the knowledge of the Company, are threatened by the Commission.

(ii) *Accurate Disclosure.* Each Preliminary Prospectus, at the time of filing thereof or the time of first use within the meaning of the Rules and Regulations, did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. Neither the Registration Statement nor any amendment thereto, at the effective time of each part thereof, at the First Closing Date (as defined below) or at the Second Closing Date (as defined below) contained, contains or will contain an untrue statement of a material fact or omitted, omits or will omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the Time of Sale (as defined below), neither (A) the Time of Sale Disclosure Package (as defined below) nor (B) any issuer free writing prospectus (as defined below), when considered together with the Time of Sale Disclosure Package, included an untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. Neither the Prospectus

nor any supplement thereto, as of its issue date, at the time of any filing with the Commission pursuant to Rule 424(b) of the Rules and Regulations, at the First Closing Date or at the Second Closing Date included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The representations and warranties in this Section 2(a)(ii) shall not apply to statements in or omissions from any Preliminary Prospectus, the Registration Statement (or any amendment thereto), the Time of Sale Disclosure Package or the Prospectus (or any supplement thereto) made in reliance upon, and in conformity with, written information furnished to the Company by you, or by any Underwriter through you, specifically for use in the preparation of such document, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 6(e).

Each reference to an “*issuer free writing prospectus*” herein means an issuer free writing prospectus as defined in Rule 433 of the Rules and Regulations.

“*Time of Sale Disclosure Package*” means the Preliminary Prospectus dated February 12, 2021, any free writing prospectus set forth on Schedule II and the information on Schedule III, all considered together.

Each reference to a “*free writing prospectus*” herein means a free writing prospectus as defined in Rule 405 of the Rules and Regulations.

“*Time of Sale*” means **6:05 am** (Eastern time) on the date of this Agreement.

(iii) *Issuer Free Writing Prospectuses*. (A) Each issuer free writing prospectus does not include any information that conflicts with the information contained in the Registration Statement, any Preliminary Prospectus or the Prospectus. The foregoing sentence does not apply to statements in or omissions from any issuer free writing prospectus based upon and in conformity with written information furnished to the Company by you or by any Underwriter through you specifically for use therein, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 6(e).

(B) (1) At the earliest time after the filing of the Registration Statement that the Company or another offering participant made a *bona fide* offer (within the meaning of Rule 164(h)(2) under the Securities Act) of the Securities and (2) at the date hereof, the Company was not and is not an “ineligible issuer,” as defined in Rule 405 under the Securities Act, including the Company or any subsidiary in the preceding three years not having been convicted of a felony or misdemeanor or having been made the subject of a judicial or administrative decree or order as described in Rule 405 of the Rules and Regulations (without taking account of any determination by the Commission pursuant to Rule 405 of the Rules and Regulations that it is not necessary that the

Company be considered an ineligible issuer), nor an “excluded issuer” as defined in Rule 164 under the Securities Act.

(C) Each issuer free writing prospectus satisfied, as of its issue date and at all subsequent times to the Time of Sale, all other conditions to use thereof as set forth in Rules 164 and 433 under the Securities Act.

(iv) No Other Offering Materials. The Company has not distributed and will not distribute any prospectus or other offering material in connection with the offering and sale of the Securities other than any Preliminary Prospectus, the Time of Sale Disclosure Package or the Prospectus or other materials permitted by the Act to be distributed by the Company; *provided, however*, that, except as set forth on Schedule II, the Company has not made and will not make any offer relating to the Securities that would constitute a free writing prospectus, except in accordance with the provisions of Section 4(a)(xv) of this Agreement.

(v) Financial Statements. The financial statements of the Company, together with the related notes, set forth or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus comply in all material respects with the requirements of the Securities Act and the Exchange Act and fairly present the financial condition of the Company and its consolidated subsidiaries as of the dates indicated and the results of operations and changes in cash flows for the periods therein specified in conformity with generally accepted accounting principles in the United States (“*GAAP*”) consistently applied throughout the periods involved; the supporting schedules included in the Registration Statement present fairly the information required to be stated therein; all non-GAAP financial information included in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus complies in all material respects with the requirements of Regulation G and Item 10 of Regulation S-K under the Act; and, except as disclosed in the Time of Sale Disclosure Package and the Prospectus, there are no material off-balance sheet arrangements (as defined in Regulation S-K under the Act, Item 303(a)(4)(ii)), or any other relationships with unconsolidated entities or other persons, that may have a material current or, to the Company’s knowledge, material future effect on the Company’s financial condition, results of operations, liquidity, capital expenditures, capital resources or significant components of revenue or expenses. No other financial statements or schedules are required to be included in the Registration Statement, the Time of Sale Disclosure Package or the Prospectus. To the Company’s knowledge, Marcum LLP which has expressed its opinion with respect to the financial statements and schedules filed as a part of the Registration Statement and included in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, is (x) an independent public accounting firm within the meaning of the Act and the Rules and Regulations, (y) a registered public accounting firm (as defined in Section 2(a)(12) of the Sarbanes-Oxley Act of 2002 (the “*Sarbanes-Oxley Act*”)) and (z) not in violation of the auditor independence requirements of the Sarbanes-Oxley Act.

(v i) Organization and Good Standing. Each of the Company and its subsidiaries has been duly organized and is validly existing as a corporation or other entity in good standing under the laws of its jurisdiction of incorporation or formation. Each of the Company and its subsidiaries has full corporate or limited liability company power, as applicable, and authority to own its properties and conduct its business as currently being carried on and as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, and is duly qualified to do business as a foreign corporation or entity in good standing in each jurisdiction in which it owns or leases real property or in which the conduct of its business makes such qualification necessary and in which the failure to so qualify would have a material adverse effect upon the business, prospects, management, properties, operations, condition (financial or otherwise) or results of operations of the Company and its subsidiaries, individually or taken as a whole (“**Material Adverse Effect**”).

(v i i) Absence of Certain Events. Except as contemplated in the Time of Sale Disclosure Package and in the Prospectus, subsequent to the respective dates as of which information is given in the Time of Sale Disclosure Package and the Prospectus, neither the Company nor any of its subsidiaries has incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions, or declared or paid any dividends or made any distribution of any kind with respect to its capital stock; and there has not been any change in the capital stock (other than a change in the number of outstanding shares of Common Stock due to the issuance of shares upon the exercise of outstanding options or warrants or conversion of convertible securities or the issuance, repurchase or forfeiture of outstanding restricted stock awards or units under Company Stock Plans (defined below)), or any material change in the shortterm or longterm debt (other than as a result of the conversion of convertible securities), or any issuance of options, warrants, convertible securities or other rights to purchase the capital stock of the Company or any of its subsidiaries, or any material adverse change in the general affairs, condition (financial or otherwise), business, prospects, management, properties, operations or results of operations of the Company and its subsidiaries, individually or taken as a whole, including as a result of the ongoing COVID-19 pandemic (“**Material Adverse Change**”), or any development which could reasonably be expected to result in any Material Adverse Change.

(v i i i) Absence of Proceedings. Except as set forth in the Time of Sale Disclosure Package and in the Prospectus, there is not pending or, to the knowledge of the Company, threatened or contemplated, any action, suit or proceeding (a) to which the Company or any of its subsidiaries is a party or (b) which has as the subject thereof any officer or director of the Company or any subsidiary, any employee benefit plan sponsored by the Company or any subsidiary or any property or assets owned or leased by the Company or any subsidiary before or by any court or Governmental Authority (as defined below), or any arbitrator, which, individually or in the aggregate, would result in any Material Adverse Change, or would materially and adversely affect the ability of the Company to perform its obligations under this Agreement or which are otherwise material in the context of the sale of the Securities. There are no current or, to the

knowledge of the Company, pending, legal, governmental or regulatory actions, suits or proceedings (x) to which the Company or any of its subsidiaries is subject or (y) which has as the subject thereof any officer or director of the Company or any subsidiary, any employee plan sponsored by the Company or any subsidiary or any property or assets owned or leased by the Company or any subsidiary, that are required to be described in the Registration Statement, Time of Sale Disclosure Package and Prospectus by the Act or by the Rules and Regulations and that have not been so described.

(ix) Disclosure of Legal Matters. There are no statutes, regulations, contracts or documents that are required to be described in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus or required to be filed as exhibits to the Registration Statement by the Securities Act or by the Rules and Regulations that have not been so described or filed.

(x) Authorization: No Conflicts: Authority. This Agreement has been duly authorized, executed and delivered by the Company, and constitutes a valid, legal and binding obligation of the Company, enforceable in accordance with its terms, except as rights to indemnity hereunder may be limited by federal or state securities laws and except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally and subject to general principles of equity. The execution, delivery and performance of this Agreement and the consummation of the transactions herein contemplated will not (A) conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its subsidiaries pursuant to any indenture, mortgage, deed of trust, loan agreement or other material agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company or any of its subsidiaries is subject, (B) result in any violation of the provisions of the Company's or any subsidiary's charter, by-laws or other organizational documents or (C) result in the violation of any law or statute or any judgment, order, rule, regulation or decree of any court or arbitrator or federal, state, local or foreign governmental agency or regulatory authority having jurisdiction over the Company or any of its subsidiaries or any of their properties or assets (each, a "**Governmental Authority**"), except in the case of clauses (A) and (C) as would not result in a Material Adverse Effect. No consent, approval, authorization or order of, or registration or filing with any Governmental Authority is required for the execution, delivery and performance of this Agreement or for the consummation of the transactions contemplated hereby, including the issuance or sale of the Securities by the Company, except such as may be required under the Act, the rules of the Financial Industry Regulatory Authority ("**FINRA**"), the Nasdaq Stock Market Rules or state securities or blue sky laws; and the Company has full power and authority to enter into this Agreement and to consummate the transactions contemplated hereby, including the authorization, issuance and sale of the Securities as contemplated by this Agreement.

(xi) Capitalization; the Securities; Registration Rights. The Company has an authorized capitalization as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus. All of the issued and outstanding shares of capital stock of the Company, including the outstanding shares of Common Stock, are duly authorized and validly issued, fully paid and nonassessable, have been issued in compliance with all applicable federal and state and foreign securities laws, were not issued in violation of or subject to any preemptive rights or other rights to subscribe for or purchase securities that have not been waived in writing (a copy of which has been delivered to counsel to the Underwriters), and the holders thereof are not subject to personal liability by reason of being such holders; the Securities which may be sold hereunder by the Company have been duly authorized and, when issued, delivered and paid for in accordance with the terms of this Agreement, will have been validly issued and will be fully paid and nonassessable, and the holders thereof will not be subject to personal liability by reason of being such holders; and the capital stock of the Company, including the Common Stock and the Securities to be purchased pursuant to this Agreement, conforms to the description thereof in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus. Except as otherwise stated in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus, (A) there are no preemptive rights or other rights to subscribe for or to purchase, or any restriction upon the voting or transfer of, any shares of Common Stock pursuant to the Company's charter, bylaws, other organizational documents or any agreement or other instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound; (B) neither the filing of the Registration Statement nor the offering or sale of the Securities as contemplated by this Agreement gives rise to any rights for or relating to the registration of any shares of Common Stock or other securities of the Company (collectively "**Registration Rights**") and (C) any person to whom the Company has granted Registration Rights has agreed not to exercise such rights until after expiration of the Lock-Up Period (as defined below). All of the issued and outstanding shares of capital stock or other applicable equity interests of each of the Company's subsidiaries have been duly and validly authorized and issued and are fully paid and nonassessable, and, except as otherwise described in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus, the Company owns of record and beneficially, free and clear of any security interests, claims, liens, proxies, equities or other encumbrances, all of the issued and outstanding shares of such stock or other applicable equity interests. The Company has an authorized and outstanding capitalization as set forth in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus.

(xii) Stock Options. Except as described in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus, there are no options, warrants, agreements, contracts or other rights in existence to purchase or acquire from the Company or any subsidiary of the Company any shares of the capital stock of the Company or any subsidiary of the Company. The description of the Company's stock option, stock bonus and other stock plans or arrangements (the "**Company Stock Plans**"), and the options or other rights granted thereunder

(collectively, the “*Awards*”), set forth in the Time of Sale Disclosure Package and the Prospectus accurately and fairly presents in all material respects the information required to be shown with respect to the Company Stock Plans and Awards. Each grant of an Award (A) was duly authorized no later than the date on which the grant of such Award was by its terms to be effective by all necessary corporate action, including, as applicable, approval by the board of directors of the Company (or a duly constituted and authorized committee thereof) and any required shareholder approval by the necessary number of votes or written consents, and the award agreement governing such grant (if any) was duly executed and delivered by each party thereto and (B) was made in accordance with the terms of the applicable Company Stock Plan, and all applicable laws and regulatory rules or requirements, including all applicable federal securities laws.

(xiii) *Compliance with Laws*. The Company and each of its subsidiaries holds, and is operating in compliance in all material respects with, all franchises, grants, authorizations, licenses, permits, easements, consents, certificates and orders of any Governmental Authority or selfregulatory body required for the conduct of its business and all such franchises, grants, authorizations, licenses, permits, easements, consents, certifications and orders are valid and in full force and effect; and neither the Company nor any of its subsidiaries has received notice of any revocation or modification of any material franchise, grant, authorization, license, permit, easement, consent, certification or order or has reason to believe that any such material franchise, grant, authorization, license, permit, easement, consent, certification or order will not be renewed in the ordinary course; and the Company and each of its subsidiaries is in compliance in all material respects with all applicable federal, state, local and foreign laws, regulations, orders and decrees.

(xiv) *Ownership of Assets*. The Company and its subsidiaries have good and marketable title to, or have valid rights to lease or otherwise use, all property (whether real or personal) described in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus as being owned, leased or used by them, in each case free and clear of all liens, claims, security interests, other encumbrances or defects except such as are described in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus. The property held under lease by the Company and its subsidiaries is held by them under valid, subsisting and enforceable leases with only such exceptions with respect to any particular lease as do not interfere in any material respect with the conduct of the business of the Company or its subsidiaries as now conducted or as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus to be conducted.

(xv) *Intellectual Property*.

(A) The Company and each of its subsidiaries owns or has the right to use pursuant to a valid and enforceable written license or other legally enforceable right, all Intellectual Property (as defined below) necessary for the conduct of the Company’s and its subsidiaries’ businesses as now conducted or as

described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus to be conducted (the “*Company IP*”). “*Intellectual Property*” means all patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, domain names, technology, know-how and other intellectual property.

(B) To the knowledge of the Company, there is no infringement, misappropriation or violation by third parties of any Company IP. There is no pending or, to the knowledge of the Company, threatened, action, suit, proceeding or claim by others challenging the Company’s or its subsidiaries’ rights in or to any Company IP, and the Company is unaware of any facts which would form a reasonable basis for any such claim. The Intellectual Property owned by the Company and its subsidiaries, and to the knowledge of the Company, the Intellectual Property licensed to the Company and its subsidiaries, has not been adjudged invalid or unenforceable, in whole or in part, and there is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim by others challenging the validity or scope of any Company IP, and the Company is unaware of any facts which would form a reasonable basis for any such claim. There is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim by others that the Company or its subsidiaries infringe, misappropriate or otherwise violate any Intellectual Property or other proprietary rights of others, and neither the Company nor any of its subsidiaries has received any written notice of such claim and the Company is unaware of any other fact which would form a reasonable basis for any such claim.

(C) To the Company’s knowledge, no employee of the Company or any of its subsidiaries is in or has ever been in material violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee’s employment with the Company or any of its subsidiaries or actions undertaken by the employee while employed with the Company or any of its subsidiaries.

(D) The Company and its subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their material Intellectual Property.

(E) All patent applications owned by the Company or its subsidiaries and filed with the U.S. Patent and Trademark Office (the “*PTO*”) or any foreign or international patent authority that have resulted in patents or currently pending applications that describe inventions necessary to conduct the business of the Company or its subsidiaries as now conducted or as described in the Registration Statement, the Time of Sale Disclosure Package and the

Prospectus to be conducted (collectively, the “*Company Patent Applications*”) have been or were duly and properly filed.

(F) The Company and its subsidiaries have complied with their duty of candor and disclosure to the PTO for the Company Patent Applications. To the Company’s knowledge, there are no facts required to be disclosed to the PTO that were not disclosed to the PTO and which would preclude the grant of a patent for the Company Patent Applications. The Company has no knowledge of any facts which would preclude it or its applicable subsidiary from having clear title to the Company Patent Applications that have been identified by the Company as being exclusively owned by the Company or one of its subsidiaries.

(xvi) Data Security. (i) The Company and its subsidiaries each has complied and is presently in compliance with all internal and external privacy policies, contractual obligations, industry standards, applicable laws, statutes, judgments, orders, rules and regulations of any court or arbitrator or other governmental or regulatory authority and any other legal obligations, in each case, relating to the collection, use, transfer, import, export, storage, protection, disposal and disclosure by the Company or its subsidiaries of personal, personally identifiable, household, sensitive, confidential or regulated data (“*Data Security Obligations*”, and such data, “*Data*”); (ii) the Company and its subsidiaries have not received any notification of or complaint regarding and is unaware of any other facts that, individually or in the aggregate, would reasonably indicate non-compliance with any Data Security Obligation; and (iii) there is no action, suit or proceeding by or before any court or governmental agency, authority or body pending or threatened alleging non-compliance with any Data Security Obligation nor are there any incidents under internal review or investigations relating to the same.

(xvii) Data Protection: No Breaches. The Company’s and its subsidiaries’ information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases are adequate for, and operate and perform in all material respects as required in connection with, the operation of the business of the Company and its subsidiaries as currently conducted, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company and its subsidiaries have taken all technical and organizational measures necessary to protect the information technology systems and Data used in connection with the operation of the Company’s and the subsidiaries’ businesses. Without limiting the foregoing, the Company and its subsidiaries have used reasonable efforts to establish and maintain, and have established, maintained, implemented and complied with, reasonable information technology, information security, cyber security and data protection controls, policies and procedures, including oversight, access controls, encryption, technological and physical safeguards and business continuity/disaster recovery and security plans, which are designed to protect against and prevent breach, destruction, loss, unauthorized distribution, use, access, disablement, misappropriation or modification, or other compromise or misuse of or relating to any information technology system or Data used in connection with the operation of the

Company's or its subsidiaries' businesses ("**Breach**" for the purposes of this subsection). There has been no such Breach, and the Company and the subsidiaries have not been notified of and has no knowledge of any event or condition that would reasonably be expected to result in, any such Breach.

(xviii) No Violations or Defaults. Neither the Company nor any of its subsidiaries is in violation of its respective charter, bylaws or other organizational documents, or in breach of or otherwise in default, and no event has occurred which, with notice or lapse of time or both, would constitute such a breach or default in the performance of any obligation, agreement or condition contained in any bond, debenture, note, indenture, loan agreement or any other contract, lease or other instrument to which it is subject or by which any of them may be bound, or to which any of the property or assets of the Company or any of its subsidiaries is subject, except as would not have a Material Adverse Effect.

(xix) Taxes. The Company and its subsidiaries have timely filed all federal, state, local and foreign income and franchise tax returns required to be filed and are not in default in the payment of any taxes which were payable pursuant to said returns or any assessments with respect thereto, other than any which the Company or any of its subsidiaries is contesting in good faith. There is no pending dispute with any taxing authority relating to any of such returns, and the Company has no knowledge of any proposed liability for any tax to be imposed upon the properties or assets of the Company or its subsidiaries for which there is not an adequate reserve reflected in the Company's financial statements included in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus.

(xx) Exchange Listing and Exchange Act Registration. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and is included or approved for listing on the Nasdaq Capital Market and the Company has not taken any action designed to, or likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from the Nasdaq Capital Market, and the Company has not received any notification that the Commission or the Nasdaq Capital Market is contemplating terminating such registration or listing. The Company has complied in all material respects with the applicable requirements of the Nasdaq Capital Market for maintenance of inclusion of the Common Stock thereon. The Company has filed an application to include the Securities on the Nasdaq Capital Market if required. Except as previously disclosed to counsel for the Underwriters or as set forth in the Time of Sale Disclosure Package and the Prospectus, to the knowledge of the Company, no beneficial owners of the Company's capital stock who, together with their associated persons and affiliates, hold in the aggregate 10% or more of such capital stock, have any direct or indirect association or affiliate with a FINRA member.

(xxi) Ownership of Other Entities. Other than the subsidiaries of the Company listed in Exhibit 21.1 to the Company's Annual Report on Form 10-K for

the fiscal year ended December 31, 2019, the Company, directly or indirectly, owns no capital stock or other equity or ownership or proprietary interest in any corporation, partnership, association, trust or other entity.

(x x i i) Internal Controls. The Company and its subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as disclosed in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus, the Company's internal control over financial reporting is effective and none of the Company, its board of directors and audit committee is aware of any "significant deficiencies" or "material weaknesses" (each as defined by the Public Company Accounting Oversight Board) in its internal control over financial reporting, or any fraud, whether or not material, that involves management or other employees of the Company and its subsidiaries who have a significant role in the Company's internal controls; and since the end of the latest audited fiscal year, there has been no change in the Company's internal control over financial reporting (whether or not remediated) that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. The Company's board of directors has, subject to the exceptions, cure periods and the phase in periods specified in the applicable stock exchange rules ("**Exchange Rules**"), validly appointed an audit committee to oversee internal accounting controls whose composition satisfies the applicable requirements of the Exchange Rules and the Company's board of directors and/or the audit committee has adopted a charter that satisfies the requirements of the Exchange Rules.

(x x i i i) No Brokers or Finders. Other than as contemplated by this Agreement, the Company has not incurred any liability for any finder's or broker's fee or agent's commission in connection with the execution and delivery of this Agreement or the consummation of the transactions contemplated hereby.

(x x i v) Broker/Dealer Relationships. Neither the Company nor the subsidiaries or any related entities (i) is required to register as a "broker" or "dealer" in accordance with the provisions of the Exchange Act or (ii) directly or indirectly through one or more intermediaries, controls or is a "person associated with a FINRA member" or "associated person of a FINRA member" (within the meaning of Article I of the bylaws of the FINRA).

(x x v) Insurance. The Company and each of its subsidiaries carries, or is covered by, insurance from reputable insurers in such amounts and covering such risks as is adequate for the conduct of its business and the value of its properties and

the properties of its subsidiaries and as is customary for companies engaged in similar businesses in similar industries; all policies of insurance and any fidelity or surety bonds insuring the Company or any of its subsidiaries or its business, assets, employees, officers and directors are in full force and effect; the Company and its subsidiaries are in compliance with the terms of such policies and instruments in all material respects; there are no claims by the Company or any of its subsidiaries under any such policy or instrument as to which any insurance company is denying liability or defending under a reservation of rights clause; neither the Company nor any of its subsidiaries has been refused any insurance coverage sought or applied for; and neither the Company nor any of its subsidiaries has reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not have a Material Adverse Effect.

(xxvi) Director Independence. The Company's board of directors meets the independence requirements of, and has established an audit committee that meets the independence requirements of, the rules and regulations of the Commission and the Nasdaq Capital Market.

(xxvii) Investment Company Act. The Company is not and, after giving effect to the offering and sale of the Securities, will not be or be required to register as an "investment company," as such term is defined in the Investment Company Act of 1940, as amended.

(xxviii) Eligibility to Use Form S-3. The conditions for use of Form S3, in connection with the offer and sale of the Securities, as set forth in the General Instructions thereto, have been satisfied.

(xxix) Securities Act Filing Fee. The Company has paid the registration fee for this offering pursuant to the Rules and Regulations.

(xxx) Incorporated Documents. The documents incorporated by reference in the Time of Sale Disclosure Package and in the Prospectus, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Securities Act or the Exchange Act, as applicable, and were filed on a timely basis with the Commission and none of such documents contained an untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; any further documents so filed and incorporated by reference in the Time of Sale Disclosure Package or in the Prospectus, when such documents are filed with the Commission, will conform in all material respects to the requirements of the Exchange Act, and will not contain an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(xxxix) Sarbanes-Oxley Act. The Company is in compliance with all applicable provisions of the Sarbanes-Oxley Act and the rules and regulations of the Commission thereunder.

(xxxixii) Disclosure Controls. The Company has established and maintains disclosure controls and procedures (as defined in Rules 13a-14 and 15d-14 under the Exchange Act) and such controls and procedures are effective in ensuring that material information relating to the Company, including its subsidiaries, is made known to the principal executive officer and the principal financial officer. The Company has utilized such controls and procedures in preparing and evaluating the disclosures in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus.

(xxxixiii) eXtensible Business Reporting Language. The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement, Time of Sale Disclosure Package and Prospectus fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto.

(xxxixiv) No Unlawful Payments. Neither the Company or a subsidiary nor any director, officer or employee of the Company or a subsidiary, nor, to the knowledge of the Company, any agent, affiliate, representative or other person associated with or acting on behalf of the Company or a subsidiary has (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made or taken an act in furtherance of an offer, payment, promise to pay or authorization or approval of any unlawful payment or benefit, giving or receipt of money, property, gifts or anything else of value, directly or indirectly, to any foreign or domestic government official or employee, including of any government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office; or (iii) made, offered, agreed, requested or taken an act in furtherance of any unlawful bribe or other unlawful benefit, including, without limitation, any rebate, payoff, influence payment, kickback or other unlawful or improper payment or benefit. The Company and its subsidiaries have instituted, maintained and enforced, and will continue to maintain and enforce policies and procedures designed to promote and ensure compliance with all applicable anti-corruption laws and the representations and warranties contained herein. The Company will not use, directly or indirectly, the proceeds from the offering of Securities hereunder in furtherance of any offer, payment, promise to pay or authorization or approval of any payment or benefit, giving or receipt of money, property, gifts or anything else of value, to any person in violation of any anti-corruption laws.

(xxxixv) Anti-Bribery and Anti-Money Laundering Laws. Each of the Company, its subsidiaries, its affiliates and any of their respective officers, directors, supervisors, managers, agents or employees, has not violated, its participation in the offering will not violate, and the Company and each of its subsidiaries has instituted and

maintains policies and procedures designed to ensure continued compliance with, each of the following laws: anti-bribery laws, including but not limited to, any applicable law, rule, or regulation of any locality, including but not limited to any law, rule, or regulation promulgated to implement the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, signed December 17, 1997, including the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.K. Bribery Act 2010, or any other law, rule or regulation of similar purposes and scope, or anti-money laundering laws, including but not limited to, applicable federal, state, international, foreign or other laws, regulations or government guidance regarding anti-money laundering, including, without limitation, Title 18 U.S. Code Section 1956 and 1957, the Patriot Act, the Bank Secrecy Act, and international anti-money laundering principles or procedures by an intergovernmental group or organization, such as the Financial Action Task Force on Money Laundering, of which the United States is a member and with which designation the United States representative to the group or organization continues to concur, all as amended, and any Executive order, directive, or regulation pursuant to the authority of any of the foregoing, or any orders or licenses issued thereunder.

(xxxvi) OFAC.

(A) Neither the Company nor any of its subsidiaries, nor any of their directors, officers or employees, nor, to the Company's knowledge, any agent, affiliate or representative of the Company or its subsidiaries, is an individual or entity that is, or is owned or controlled by an individual or entity that is:

(1) the subject of any sanctions administered or enforced by the U.S. Department of Treasury's Office of Foreign Assets Control, the United Nations Security Council, the European Union, Her Majesty's Treasury, or other relevant sanctions authority (collectively, "**Sanctions**"), nor

(2) located, organized or resident in a country or territory that is the subject of Sanctions (including, without limitation, the Crimea Region of the Ukraine, Cuba, Iran, Libya, North Korea, Sudan and Syria).

(B) Neither the Company nor any of its subsidiaries will, directly or indirectly, use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other individual or entity:

(1) to fund or facilitate any activities or business of or with any individual or entity or in any country or territory that, at the time of such funding or facilitation, is the subject of Sanctions; or

(2) in any other manner that will result in a violation of Sanctions by any individual or entity (including any individual or entity participating in the offering, whether as underwriter, advisor, investor or otherwise).

(C) For the past five years, neither the Company nor any of its subsidiaries has knowingly engaged in, and is not now knowingly engaged in, any dealings or transactions with any individual or entity, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(xxxvii) Compliance with Environmental Laws. Except as disclosed in the Time of Sale Disclosure Package and the Prospectus, neither the Company nor any of its subsidiaries is in violation of any statute, any rule, regulation, decision or order of any Governmental Authority or any court, domestic or foreign, relating to the use, disposal or release of hazardous or toxic substances or relating to the protection or restoration of the environment or human exposure to hazardous or toxic substances (collectively, “**Environmental Laws**”), owns or operates any real property contaminated with any substance that is subject to any Environmental Laws, is liable for any off-site disposal or contamination pursuant to any Environmental Laws, or is subject to any claim relating to any Environmental Laws, which violation, contamination, liability or claim would, individually or in the aggregate, have a Material Adverse Effect; and the Company is not aware of any pending investigation which might lead to such a claim nor is the Company or any of its subsidiaries anticipating incurring any material capital expenditures relating to compliance with Environmental Laws.

(xxxviii) Compliance with Occupational Laws. The Company and each of its subsidiaries (A) is in compliance, in all material respects, with any and all applicable foreign, federal, state and local laws, rules, regulations, treaties, statutes and codes promulgated by any and all Governmental Authorities (including pursuant to the Occupational Health and Safety Act) relating to the protection of human health and safety in the workplace (“**Occupational Laws**”); (B) has received all material permits, licenses or other approvals required of it under applicable Occupational Laws to conduct its business as currently conducted; and (C) is in compliance, in all material respects, with all terms and conditions of such permit, license or approval. No action, proceeding, revocation proceeding, writ, injunction or claim is pending or, to the Company’s knowledge, threatened against the Company or any of its subsidiaries relating to Occupational Laws, and the Company does not have knowledge of any facts, circumstances or developments relating to its operations or cost accounting practices that could reasonably be expected to form the basis for or give rise to such actions, suits, investigations or proceedings.

(xxxix) ERISA and Employee Benefits Matters. (A) To the knowledge of the Company, no “prohibited transaction” as defined under Section 406 of ERISA or

Section 4975 of the Code and not exempt under ERISA Section 408 and the regulations and published interpretations thereunder has occurred with respect to any Employee Benefit Plan. At no time has the Company or any ERISA Affiliate maintained, sponsored, participated in, contributed to or has or had any liability or obligation in respect of any Employee Benefit Plan subject to Part 3 of Subtitle B of Title I of ERISA, Title IV of ERISA, or Section 412 of the Code or any “multiemployer plan” as defined in Section 3(37) of ERISA or any multiple employer plan for which the Company or any ERISA Affiliate has incurred or could incur liability under Section 4063 or 4064 of ERISA. No Employee Benefit Plan provides or promises, or at any time provided or promised, retiree health, life insurance, or other retiree welfare benefits except as may be required by the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended, or similar state law. Each Employee Benefit Plan is and has been operated in material compliance with its terms and all applicable laws, including but not limited to ERISA and the Code and, to the knowledge of the Company, no event has occurred (including a “reportable event” as such term is defined in Section 4043 of ERISA) and no condition exists that would subject the Company or any ERISA Affiliate to any material tax, fine, lien, penalty or liability imposed by ERISA, the Code or other applicable law. Each Employee Benefit Plan intended to be qualified under Code Section 401(a) is so qualified and has a favorable determination or opinion letter from the IRS upon which it can rely, and any such determination or opinion letter remains in effect and has not been revoked; to the knowledge of the Company, nothing has occurred since the date of any such determination or opinion letter that is reasonably likely to adversely affect such qualification; (B) with respect to each Foreign Benefit Plan, such Foreign Benefit Plan (1) if intended to qualify for special tax treatment, meets, in all material respects, the requirements for such treatment, and (2) if required to be funded, is funded to the extent required by applicable law, and with respect to all other Foreign Benefit Plans, adequate reserves therefor have been established on the accounting statements of the applicable Company or subsidiary; (C) neither the Company nor any of its subsidiaries has any obligations under any collective bargaining agreement with any union and no organization efforts are underway with respect to employees of the Company or any of its subsidiaries. As used in this Agreement, “**Code**” means the Internal Revenue Code of 1986, as amended; “**Employee Benefit Plan**” means any “employee benefit plan” within the meaning of Section 3(3) of ERISA, including, without limitation, all stock purchase, stock option, stock-based severance, employment, change-in-control, medical, disability, fringe benefit, bonus, incentive, deferred compensation, employee loan and all other employee benefit plans, agreements, programs, policies or other arrangements, whether or not subject to ERISA, under which (1) any current or former employee, director or independent contractor of the Company or its subsidiaries has any present or future right to benefits and which are contributed to, sponsored by or maintained by the Company or any of its subsidiaries or (2) the Company or any of its subsidiaries has had or has any present or future obligation or liability; “**ERISA**” means the Employee Retirement Income Security Act of 1974, as amended; “**ERISA Affiliate**” means any member of the Company’s controlled group as defined in Code Section 414(b), (c), (m) or (o); and “**Foreign Benefit Plan**” means any Employee Benefit Plan established, maintained or

contributed to outside of the United States of America or which covers any employee working or residing outside of the United States.

(x1) Business Arrangements. Except as disclosed in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, neither the Company nor any of its subsidiaries has granted exclusive rights to develop, manufacture, produce, assemble, distribute, license, market or sell its products to any other person and is not bound by any agreement that affects the exclusive right of the Company or such subsidiary to develop, manufacture, produce, assemble, distribute, license, market or sell its products.

(xli) Labor Matters. No labor problem or dispute with the employees of the Company or any of its subsidiaries exists or is threatened or imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its or its subsidiaries' principal suppliers, contractors or customers, that could have a Material Adverse Effect.

(xlii) Restrictions on Subsidiary Payments to the Company. No subsidiary of the Company is currently prohibited, directly or indirectly, from paying any dividends to the Company, from making any other distribution on such subsidiary's capital stock, from repaying to the Company any loans or advances to such subsidiary from the Company or from transferring any of such subsidiary's property or assets to the Company or any other subsidiary of the Company, except as provided by applicable state law or described in or contemplated by the Time of Sale Disclosure Package and the Prospectus.

(xliii) Statistical Information. Any third-party statistical and market-related data included in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus are based on or derived from sources that the Company believes to be reasonably current and reliable and accurate in all material respects.

(xliv) Underwriter Agreements. Except for this Agreement, the Company is not a party to any agreement with an agent or underwriter for any other underwritten public offering.

(xlv) Forward-looking Statements. No forward-looking statement (within the meaning of Section 27A of the Act and Section 21E of the Exchange Act) contained in the Registration Statement, the Time of Sale Disclosure Package or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(b) Effect of Certificates. Any certificate signed by any officer of the Company and delivered to you or to counsel for the Underwriters shall be deemed a representation and warranty by the Company to each Underwriter as to the matters covered thereby.

3. ***Purchase, Sale and Delivery of Securities.***

(a) ***Firm Shares.*** On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company agrees to issue and sell the Firm Shares to the several Underwriters, and each Underwriter agrees, severally and not jointly, to purchase from the Company the number of Firm Shares set forth opposite the name of such Underwriter in Schedule I hereto. The purchase price for the Firm Shares shall be \$2.10375 per share. In making this Agreement, each Underwriter is contracting severally and not jointly; except as provided in paragraph (b) of this Section 3, the agreement of each Underwriter is to purchase only the respective number of Firm Shares specified in Schedule I.

The Firm Shares will be delivered by the Company to you for the accounts of the several Underwriters against payment of the purchase price therefor by wire transfer of same day funds payable to the order of the Company at the offices of Northland Securities, Inc., 150 South Fifth Street, Suite 3300, Minneapolis, Minnesota 55402, or such other location as may be mutually acceptable, at 9:00 a.m. Central time on the second (or if the Securities are priced, as contemplated by Rule 15c6-1(c) under the Exchange Act, after 4:30 p.m. Eastern time, the fourth) full business day following the date hereof, or at such other time and date as you and the Company determine pursuant to Rule 15c6-1(a) under the Exchange Act, such time and date of delivery being herein referred to as the ***“First Closing Date.”***

(b) ***Option Shares.*** On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company hereby grants to the several Underwriters an option to purchase all or any portion of the Option Shares at the same purchase price as the Firm Shares, for use solely in covering any overallocments made by the Underwriters in the sale and distribution of the Firm Shares. The option granted hereunder may be exercised in whole or in part at any time (but not more than once) within 30 days after the effective date of this Agreement upon notice (confirmed in writing) by the Underwriters to the Company setting forth the aggregate number of Option Shares as to which the Underwriters are exercising the option, the names and denominations in which the certificates for the Option Shares are to be registered and the date and time, as determined by you, when the Option Shares are to be delivered, such time and date being herein referred to as the ***“Second Closing”*** and ***“Second Closing Date,”*** respectively; *provided, however,* that the Second Closing Date shall not be earlier than the First Closing Date nor earlier than the second business day after the date on which the option shall have been exercised. Each Underwriter agrees, severally and not jointly, to purchase the number of Option Shares (subject to such adjustments to eliminate fractional shares as you may determine) that bears the same proportion of the total number of Option Shares to be purchased on such Second Closing Date as the number of Firm Shares set forth in Schedule I hereto opposite the name of such Underwriter bears to the total number of Firm Shares. No Option Shares shall be sold and delivered unless the Firm Shares previously have been, or simultaneously are, sold and delivered.

The Option Shares will be delivered by the Company to you for the accounts of the several Underwriters against payment of the purchase price therefor by wire transfer of same day funds payable to the order of the Company at the offices of Northland Securities, Inc., 150 South Fifth Street, Suite 3300, Minneapolis, Minnesota 55402, or such other location as may be mutually acceptable at 9:00 a.m., Central time, on the Second Closing Date.

(c) *Delivery.* If the Underwriters so elect, delivery of the Firm Shares or the Option Shares may be made by credit through full fast transfer to the accounts at The Depository Trust Company designated by the Representatives. Certificates representing the Firm Shares and the Option Shares in definitive form and in such denominations and registered in such names as you have set forth in your notice of option exercise, or evidence of their issuance, will be made available for checking at a reasonable time preceding the First Closing Date or the Second Closing Date, as applicable, at the office of Northland Securities, Inc., 150 South Fifth Street, Suite 3300, Minneapolis, Minnesota 55402, or such other location as may be mutually acceptable.

(d) *Purchase by Representatives on Behalf of Underwriters.* It is understood that each of you, individually and not as Representatives of the several Underwriters, may (but shall not be obligated to) make payment to the Company on behalf of any Underwriter for the Securities to be purchased by such Underwriter. Any such payment by you shall not relieve any such Underwriter of any of its obligations hereunder. Nothing contained herein shall constitute any of the Underwriters an unincorporated association or partner with the Company.

4. *Covenants.*

(a) *Covenants of the Company.* The Company covenants and agrees with the several Underwriters as follows:

(i) *Required Filings.* During the period beginning on the date hereof and ending on the later of the Second Closing Date or such date, as in the opinion of counsel for the Underwriters, the Prospectus is no longer required by law to be delivered (assuming the absence of Rule 172 under the Securities Act), in connection with sales by an Underwriter or a dealer (the "*Prospectus Delivery Period*"), prior to amending or supplementing the Registration Statement (including any Rule 462(b) Registration Statement), the Time of Sale Disclosure Package or the Prospectus, the Company shall furnish to the Underwriters for review a copy of each such proposed amendment or supplement, and the Company shall not file any such proposed amendment or supplement to which the Underwriters or counsel to the Underwriters reasonably object. Subject to this Section 4(a)(i), immediately following execution of this Agreement, the Company will prepare the Prospectus containing the Rule 430B Information and other selling terms of the Securities, the plan of distribution thereof and such other information as may be required by the Securities Act or the Rules and Regulations or as the Underwriters and the Company may deem appropriate, and if requested by the Underwriters, an issuer free writing prospectus containing the selling terms of the Securities and such other information as the Company and the Underwriters

may deem appropriate, and will file or transmit for filing with the Commission, in accordance with Rule 424(b) or Rule 433 of the Rules and Regulations, as the case may be, copies of the Prospectus and each issuer free writing prospectus.

(i i) Notification of Certain Commission Actions. After the date of this Agreement until the end of the Prospectus Delivery Period, the Company shall promptly advise the Underwriters in writing (A) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission, (B) of the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to any Preliminary Prospectus, the Time of Sale Disclosure Package or the Prospectus, (C) of the time and date that any post-effective amendment to the Registration Statement becomes effective, (D) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or of any order preventing or suspending its use or the use of any Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus or any issuer free writing prospectus, or (E) of any proceedings to remove, suspend or terminate from listing or quotation the Common Stock from any securities exchange upon which it is listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time during the Prospectus Delivery Period, the Company will use its best efforts to obtain the lifting of such order at the earliest possible moment. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b) and 430B, as applicable, under the Securities Act and will use its reasonable efforts to confirm that any filings made by the Company under Rule 424(b), Rule 433 or Rule 462 were received in a timely manner by the Commission (without reliance on Rule 424(b)(8) or Rule 164(b)).

(i i i) Continued Compliance with Securities Laws. (A) During the Prospectus Delivery Period, the Company will comply with all requirements imposed upon it by the Securities Act, as now and hereafter amended, and by the Rules and Regulations, as from time to time in force, and by the Exchange Act so far as necessary to permit the continuance of sales of or dealings in the Securities as contemplated by the provisions hereof, the Time of Sale Disclosure Package and the Prospectus. If during such period any event occurs as a result of which the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) would include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary or appropriate in the opinion of the Company or its counsel or the Underwriters or counsel to the Underwriters to amend the Registration Statement or supplement the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) to comply with the Securities Act or to file under the Exchange Act any document which would be deemed to be incorporated by reference in the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) in order to comply with the Securities Act or the Exchange Act, the Company promptly will

(x) notify you of such untrue statement or omission, (y) amend the Registration Statement or supplement the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) or file such document (at the expense of the Company) so as to correct such statement or omission or effect such compliance, and (z) notify you when any amendment to the Registration Statement is filed or becomes effective or when any supplement to the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) is filed.

(B) During the Prospectus Delivery Period, if at any time following issuance of an issuer free writing prospectus there occurred or occurs an event or development as a result of which such issuer free writing prospectus conflicted or would conflict with the information contained in the Registration Statement, the Preliminary Prospectus or the Prospectus or included or would include, when taken together with the Time of Sale Disclosure Package, an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at that subsequent time, not misleading, the Company (x) has promptly notified or promptly will notify the Underwriters of such conflict, untrue statement or omission, (y) has promptly amended or will promptly amend or supplement, at its own expense, such issuer free writing prospectus to eliminate or correct such conflict, untrue statement or omission, and (z) has notified or promptly will notify you when such amendment or supplement was or is filed with the Commission where so required to be filed.

(iv) *Blue Sky Qualifications.* The Company, at its own expense, shall take or cause to be taken all necessary action required by law to qualify the Securities for sale under the securities laws of such jurisdictions as you reasonably designate and to continue such qualifications in effect so long as required for the distribution of the Securities, except that the Company shall not be required in connection therewith to qualify as a foreign corporation or to execute a general consent to service of process in any state.

(v) *Provision of Documents.* The Company will furnish, at its own expense, to the Underwriters and counsel for the Underwriters copies of the Registration Statement, and to the Underwriters and any dealer each Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus, any issuer free writing prospectus, and all amendments and supplements to such documents, in each case as soon as available and in such quantities as you may from time to time reasonably request.

(vi) *Rule 158.* The Company will make generally available to its security holders as soon as practicable, but in no event later than 15 months after the end of the Company's current fiscal quarter, an earnings statement (which need not be audited) covering a 12month period that shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 of the Rules and Regulations.

(vii) Payment and Reimbursement of Expenses. The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, will pay or cause to be paid (A) all expenses (including transfer taxes allocated to the respective transferees) incurred in connection with the delivery to the Underwriters of the Securities, (B) all expenses and fees (including, without limitation, fees and expenses of the Company's accountants and counsel) in connection with the preparation, printing, filing, delivery, and shipping of the Registration Statement (including the financial statements therein and all amendments, schedules, and exhibits thereto), the Securities, each Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus, any issuer free writing prospectus and any amendment thereof or supplement thereto, and the printing, delivery, and shipping of this Agreement and other underwriting documents, including Blue Sky Memoranda (covering the states and other applicable jurisdictions), (C) all filing fees incurred in connection with the qualification of the Securities for offering and sale by the Underwriters or by dealers under the securities or blue sky laws of the states and other jurisdictions which you shall designate, (D) the fees and expenses of the transfer agent or registrar, (E) the filing fees incident to any required review and approval by FINRA of the terms of the sale of the Securities, (F) listing fees, if any, (G) the cost and expenses of the Company relating to investor presentations or any "roadshow" undertaken in connection with marketing of the Securities, (H) all reasonable, out-of-pocket expenses of the Underwriters (including, but not limited to, reasonable fees and disbursements of the Underwriters' counsel and the Underwriters' reasonable travel, database, printing, postage, facsimile and telephone expenses) incurred in connection with the Underwriters' investigation of the Company, preparing to market and marketing the Securities, sale of the Securities or in contemplation of performing their obligations hereunder, which amount shall not exceed \$150,000 in the aggregate, (I) all fees and expenses relating to the Underwriters' use of i-Deal's book-building, prospectus tracking and compliance software (or other similar software) for the offering of the Securities and (J) all other costs and expenses of the Company incident to the performance of its obligations hereunder that are not otherwise specifically provided for herein.

(viii) Use of Proceeds. The Company will apply the net proceeds from the sale of the Securities to be sold by it hereunder for the purposes set forth in the Time of Sale Disclosure Package and in the Prospectus.

(ix) Company Lock Up. The Company will not, without the prior written consent of the Representatives, from the date of execution of this Agreement and continuing to and including the date 90 days after the date of the Prospectus (the "**Lock-Up Period**"), (A) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for or that represent the right to receive Common Stock, (B) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such

transaction described in clause (A) or (B) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise, or (C) publicly disclose the intention to do any of the foregoing; except, in each case, for (x) the sale of the Securities as contemplated by this Agreement, (y) issuances of shares of Common Stock upon the exercise, conversion or exchange (including by means of a cashless exercise) of options, warrants or convertible securities and the vesting of restricted stock awards or units disclosed as outstanding in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, and (z) the issuance of employee stock options not exercisable during the Lock-Up Period and the grant, redemption, forfeiture or distribution of restricted stock awards, restricted stock units or shares of Common Stock pursuant to the Company Stock Plans as in effect on the date hereof in the ordinary course of business consistent with past practices; provided, however that the Company is permitted to engage in an “at-the-market” offering of the Securities after the 45th day of this Agreement. The Company agrees not to accelerate the vesting of any option or warrant or the lapse of any repurchase right prior to the expiration of the Lock-Up Period.

(x) *Additional Lock-Ups*. The Company has caused to be delivered to you prior to the date of this Agreement a letter, in the form of Exhibit A hereto (the “*Lock-Up Agreement*”), from each individual or entity listed on Schedule IV. The Company will enforce the terms of each Lock-Up Agreement and issue stop-transfer instructions to the transfer agent for the Common Stock with respect to any transaction or contemplated transaction that would constitute a breach of or default under the applicable Lock-Up Agreement.

(xi) *No Market Stabilization or Manipulation*. The Company has not taken and will not take, directly or indirectly, any action designed to or which might reasonably be expected to cause or result in, or which has constituted, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities. The Company acknowledges that the Underwriters may engage in passive market making transactions in the Securities on the Nasdaq Capital Market in accordance with Regulation M under the Exchange Act.

(xii) *Commission Reports*. During the Prospectus Delivery Period, the Company will file on a timely basis with the Commission such periodic and special reports as required by the Rules and Regulations.

(xiii) *Internal Controls*. During the Prospectus Delivery Period, the Company and its subsidiaries will maintain such controls and other procedures, including without limitation those required by Sections 302 and 906 of the Sarbanes-Oxley Act and the applicable regulations thereunder, that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Commission’s rules and forms, including without limitation, controls and procedures designed to ensure that information required to be disclosed by

the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive officer and its principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure, to ensure that material information relating to Company, including its subsidiary, is made known to them by others within those entities.

(xiv) *Sarbanes-Oxley*. During the Prospectus Delivery Period, the Company and its subsidiaries will comply with all applicable provisions of the Sarbanes-Oxley Act.

(xv) *Free Writing Prospectuses*. The Company represents and agrees that, unless it obtains the prior written consent of the Representatives, it has not made and will not make any offer relating to the Securities that would constitute an issuer free writing prospectus or that would otherwise constitute a free writing prospectus required to be filed with the Commission; provided that the prior written consent of the Representatives shall be deemed to have been given in respect of the free writing prospectuses included in Schedule II. Any such free writing prospectus consented to by the Representatives is hereinafter referred to as a "**Permitted Free Writing Prospectus**." The Company represents that it has treated or agrees that it will treat each Permitted Free Writing Prospectus as an issuer free writing prospectus and has complied and will comply with the requirements of Rule 164 and Rule 433 applicable to any Permitted Free Writing Prospectus.

5. **Conditions of Underwriters' Obligations**. The obligations of the several Underwriters hereunder are subject to the accuracy, as of the date hereof and at each of the First Closing Date and the Second Closing Date (as if made at such Closing Date), of and compliance with all representations, warranties and agreements of the Company contained herein, to the performance by the Company of its obligations hereunder and to the following additional conditions:

(a) *Required Filings; Absence of Certain Commission Actions*. If filing of the Prospectus, or any amendment or supplement thereto, or any issuer free writing prospectus, is required under the Securities Act or the Rules and Regulations, the Company shall have filed the Prospectus (or such amendment or supplement) or such issuer free writing prospectus with the Commission in the manner and within the time period so required (without reliance on Rule 424(b)(8) or Rule 164(b)); the Registration Statement shall remain effective; no stop order suspending the effectiveness of the Registration Statement or any part thereof, any Rule 462(b) Registration Statement, or any amendment thereof, nor suspending or preventing the use of the Time of Sale Disclosure Package, the Prospectus or any issuer free writing prospectus shall have been issued; no proceedings for the issuance of such an order shall have been initiated or threatened; any request of the Commission for additional information (to be included in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus, any issuer free writing prospectus or otherwise) shall have been complied with to your satisfaction.

(b) Continued Compliance with Securities Laws. No Underwriter shall have advised the Company that (i) the Registration Statement or any amendment thereof or supplement thereto contains an untrue statement of a material fact which, in your opinion, is material or omits to state a material fact which, in your opinion, is required to be stated therein or necessary to make the statements therein not misleading, or (ii) the Time of Sale Disclosure Package or the Prospectus, or any amendment thereof or supplement thereto, or any issuer free writing prospectus contains an untrue statement of fact which, in your opinion, is material, or omits to state a fact which, in your opinion, is material and is required to be stated therein, or necessary to make the statements therein, in light of the circumstances under which they are made, not misleading.

(c) Absence of Certain Events. Except as contemplated in the Time of Sale Disclosure Package and in the Prospectus, subsequent to the respective dates as of which information is given in the Time of Sale Disclosure Package and in the Prospectus, neither the Company nor any of its subsidiaries shall have incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions, or declared or paid any dividends or made any distribution of any kind with respect to its capital stock; and there shall not have been any change in the capital stock (other than a change in the number of outstanding shares of Common Stock due to the issuance of shares upon the exercise of outstanding options or warrants or conversion of convertible securities or the issuance, repurchase or forfeiture of outstanding restricted stock awards or units under Company Stock Plans), or any material change in the shortterm or longterm debt of the Company (other than as a result of the conversion of convertible securities), or any issuance of options, warrants, convertible securities or other rights to purchase the capital stock of the Company or any of its subsidiaries, or any Material Adverse Change or any development involving a prospective Material Adverse Change (whether or not arising in the ordinary course of business), or any loss by strike, fire, flood, earthquake, accident or other calamity, whether or not covered by insurance, incurred by the Company or any subsidiary, the effect of which, in any such case described above, in your judgment, makes it impractical or inadvisable to offer or deliver the Securities on the terms and in the manner contemplated in the Time of Sale Disclosure Package and in the Prospectus.

(d) Opinion of Company Counsel. On each Closing Date, there shall have been furnished to you, as Representatives of the several Underwriters, the opinion, dated as of the applicable Closing Date, of Winstead PC, counsel for the Company, in form and substance satisfactory to you.

(e) Opinion of Company's Intellectual Property Counsel. On each Closing Date, there shall have been furnished to you, as Representatives of the several Underwriters, the opinion, dated as of the applicable Closing Date, of TIPS Group, intellectual property counsel for the Company, in form and substance satisfactory to you.

(f) Opinion of Underwriters' Counsel. On each Closing Date, there shall have been furnished to you, as Representatives of the several Underwriters, such opinion or opinions from Faegre Drinker Biddle & Reath LLP, counsel for the several Underwriters, dated such Closing Date and addressed to you, with respect to such matters as you reasonably may

request, and such counsel shall have received such papers and information as they request to enable them to pass upon such matters.

(g) *Comfort Letters.* On the date hereof, on the effective date of any post-effective amendment to the Registration Statement filed after the date hereof and on each Closing Date you, as Representatives of the several Underwriters, shall have received an accountant's "comfort" letter from Marcum LLP, dated such date and addressed to you, in form and substance satisfactory to you.

(h) *Secretary's Certificate.* On each Closing Date, there shall have been furnished to you, as Representatives of the several Underwriters, in form and substance reasonably satisfactory to you, a certificate executed by the Secretary of the Company, signing in such capacity, dated the date of delivery (i) certifying that attached thereto are true and complete copies of the resolutions duly adopted by the board of directors or any duly authorized committee thereof of the Company authorizing the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby (including, without limitation, the issuance of the Securities pursuant to this Agreement), which authorization shall be in full force and effect on and as of the date of such certificate, (ii) certifying that attached thereto are true and complete copies of the Company's charter, bylaws or other organizational documents, which shall be in full force and effect on and as of the date of such certificate and have not been amended, modified or rescinded since the date hereof, (iii) certifying that attached thereto is any correspondence from the Commission related to the Registration Statement or the offering contemplated by this Agreement, and (iv) containing any other certification that you shall reasonably request.

(i) *Officers' Certificate.* On each Closing Date, there shall have been furnished to you, as Representatives of the several Underwriters, a certificate, dated such Closing Date and addressed to you, signed by the chief executive officer and by the chief financial officer of the Company, to the effect that:

(i) The representations and warranties of the Company in this Agreement are true and correct as if made at and as of such Closing Date, and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to such Closing Date;

(ii) No stop order or other order suspending the effectiveness of the Registration Statement or any part thereof or any amendment thereof or the qualification of the Securities for offering or sale nor suspending or preventing the use of the Time of Sale Disclosure Package, the Prospectus or any issuer free writing prospectus, has been issued, and no proceeding for that purpose has been instituted or, to the best of their knowledge, is contemplated by the Commission or any state or regulatory body; and

(iii) Affirms the accuracy of the matters set forth in subsection (c) of this Section 5.

(j) Lock-Up Agreement. The Underwriters shall have received all of the Lock-Up Agreements referenced in Section 4 and the Lock-Up Agreements shall remain in full force and effect.

(k) FINRA No Objections. FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.

(l) Other Documents. The Company shall have furnished to you, as Representatives of the several Underwriters, and counsel for the Underwriters such additional documents, certificates and evidence as you or they may have reasonably requested.

(m) Exchange Listing. The Securities to be delivered on each Closing Date have been approved for listing on the Nasdaq Stock Market, subject to official notice of issuance.

All such opinions, certificates, letters and other documents will be in compliance with the provisions hereof only if they are satisfactory in form and substance to you and counsel for the Underwriters. The Company will furnish you with such conformed copies of such opinions, certificates, letters and other documents as you shall reasonably request.

6. ***Indemnification and Contribution.***

(a) Indemnification by the Company. The Company agrees to indemnify and hold harmless each Underwriter, its affiliates, directors and officers and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Act or Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject, under the Act or otherwise (including in settlement of any litigation if such settlement is effected with the written consent of the Company), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, including the 430B Information and any other information deemed to be a part of the Registration Statement at the time of effectiveness and at any subsequent time pursuant to the Rules and Regulations, if applicable, any Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto, any issuer free writing prospectus, or any issuer information that the Company has filed or is required to file pursuant to Rule 433(d) of the Rules and Regulations, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse each Underwriter for any legal or other expenses reasonably incurred and documented by it in connection with investigating or defending against such loss, claim, damage, liability or action as such expenses are incurred; *provided, however*, that the Company will not be liable in any such case to the extent that any such loss, claim, damage, liability or action arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with written information furnished to the Company by you, or by any Underwriter through you, specifically for use in the preparation thereof; it being

understood and agreed that the only information furnished by an Underwriter consists of the information described as such in Section 6(e).

(b) *Indemnification by the Underwriters.* Each Underwriter will, severally and not jointly, indemnify and hold harmless the Company, its affiliates, directors and officers and each person, if any, who controls the Company within the meaning of Section 15 of the Act and Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities, joint or several, to which the Company may become subject, under the Act or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of such Underwriter), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, including the 430B Information and any other information deemed to be a part of the Registration Statement at the time of effectiveness and at any subsequent time pursuant to the Rules and Regulations, if applicable, any Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto, or any issuer free writing prospectus, or any issuer information that the Company has filed or is required to file pursuant to Rule 433(d) of the Rules and Regulations, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in reliance upon and in conformity with written information furnished to the Company by you, or by such Underwriter through you, specifically for use in the preparation thereof (it being understood and agreed that the only information furnished by an Underwriter consists of the information described as such in Section 6(e)), and will reimburse the Company for any legal or other expenses reasonably incurred and documented by the Company in connection with investigating or defending against any such loss, claim, damage, liability or action as such expenses are incurred.

(c) *Notice and Procedures.* Promptly after receipt by an indemnified party under subsection 6(a) or 6(b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; but the omission so to notify the indemnifying party shall not relieve the indemnifying party from any liability that it may have to any indemnified party except to the extent such indemnifying party has been materially prejudiced by such failure (through the forfeiture of substantive rights or defenses). In case any such action shall be brought against any indemnified party, and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate in, and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel reasonably satisfactory to such indemnified party, and after notice from the indemnifying party to such indemnified party of the indemnifying party's election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof other than reasonable costs of investigation; *provided, however*, that if, in the reasonable judgment of the Representatives (upon written advice received from its outside

counsel), it is advisable for the Underwriters to be represented by separate counsel, the Representatives shall have the right to employ a single counsel (in addition to local counsel) to represent the Representatives and all Underwriters who may be subject to liability arising from any claim in respect of which indemnity may be sought by the Underwriters under subsection (a) of this Section 6, in which event the reasonable fees and expenses of such separate counsel shall be borne by the indemnifying party or parties and reimbursed to the Underwriters as incurred. An indemnifying party shall not be obligated under any settlement agreement, consent to judgment or other compromise relating to any action under this Section 6 to which it has not agreed in writing. In addition, no indemnifying party shall, without the prior written consent of the indemnified party (which consent shall not be unreasonably withheld or delayed), effect any settlement of any pending or threatened proceeding unless such settlement includes an unconditional release of such indemnified party for all liability on claims that are the subject matter of such proceeding and does not include a statement as to, or an admission of, fault, culpability or a failure to act by or on behalf of an indemnified party. Notwithstanding the foregoing, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel pursuant to this Section 6(c), such indemnifying party agrees that it shall be liable for any settlement effected without its written consent if (i) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

(d) Contribution; Limitations on Liability; Non-Exclusive Remedy. If the indemnification provided for in this Section 6 is unavailable or insufficient to hold harmless an indemnified party under subsection 6(a) or 6(b) above, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of the losses, claims, damages or liabilities referred to in subsection 6(a) or 6(b) above, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Securities or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total gross proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriters and the parties' relevant intent, knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this subsection (d) were to be determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to in

the first sentence of this subsection (d). The amount paid by an indemnified party as a result of the losses, claims, damages or liabilities referred to in the first sentence of this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred and documented by such indemnified party in connection with investigating or defending against any action or claim which is the subject of this subsection (d). Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the Securities purchased by it hereunder exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this subsection (d) to contribute are several in proportion to their respective underwriting obligations and not joint. The remedies provided for in this Section 6 are not exclusive and shall not limit any rights or remedies that might otherwise be available to any indemnified party at law or in equity.

(e) Information Provided by the Underwriters. The Underwriters severally confirm and the Company acknowledges that the statements with respect to the public offering of the Securities by the Underwriters set forth in the second paragraph under the caption "Underwriting" in the Time of Sale Disclosure Package and in the Prospectus are correct and constitute the only information concerning such Underwriter furnished in writing to the Company by or on behalf of the Underwriters specifically for inclusion in the Registration Statement, any Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus or any issuer free writing prospectus.

7. **Representations and Agreements to Survive Delivery.** All representations, warranties, and agreements of the Company and the several Underwriters herein or in certificates delivered pursuant hereto, including but not limited to the agreement of the Company and the several Underwriters contained in Section 6 hereof, shall remain operative and in full force and effect regardless of any investigation made by or on behalf of any Underwriter or any controlling person thereof, or the Company or any of its officers, directors, or controlling persons, and shall survive delivery of, and payment for, the Securities to and by the Underwriters hereunder and any termination of this Agreement.

8. **Termination of this Agreement.**

(a) Right to Terminate. You, as Representatives of the several Underwriters, shall have the right to terminate this Agreement by giving notice to the Company as hereinafter specified at any time at or prior to the First Closing Date, and the option referred to in Section 3(b), if exercised, may be cancelled at any time prior to the Second Closing Date, if (i) the Company shall have failed, refused or been unable, at or prior to such Closing Date, to perform any agreement on its part to be performed hereunder, (ii) any condition of the Underwriters' obligations hereunder is not fulfilled, (iii) trading in the Company's Common Stock shall have been suspended by the Commission, the Nasdaq Capital Market or Canadian Securities Exchange or trading in securities generally on the NYSE American, Nasdaq Stock

Market, New York Stock Exchange or Canadian Securities Exchange shall have been suspended, (iv) minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required, on the NYSE American, Nasdaq Stock Market, New York Stock Exchange or Canadian Securities Exchange, by such Exchange or by order of the Commission or any other Governmental Authority having jurisdiction, (v) a banking moratorium shall have been declared by federal or New York state authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States, or (vi) there shall have occurred any attack on, outbreak or escalation of hostilities or act of terrorism involving the United States, any declaration by the United States of a national emergency or war, any material adverse change in financial markets, any substantial change or development involving a prospective substantial change in United States or international political, financial or economic conditions, or any other calamity or crisis that, in your judgment, is material and adverse and makes it impractical or inadvisable to proceed with the completion of the sale of and payment for the Securities.

(b) Notice of Termination. If you elect to terminate this Agreement as provided in this Section, the Company shall be notified promptly by you by telephone, confirmed by letter.

(c) Effect of Termination. No party shall be relieved of any liability under this Agreement arising from any breach of its obligations hereunder occurring prior to termination of this Agreement as a result of the termination of this Agreement.

9. **Notices.** Except as otherwise provided herein, all communications hereunder shall be in writing and, if to the Underwriter, shall be mailed via overnight delivery service or hand delivered via courier or sent via email to Northland Securities, Inc., 150 South Fifth Street, Suite 3300, Minneapolis, Minnesota 55402, Attention: Head of Investment Banking and to Roth Capital Partners, LLC, 888 San Clemente Drive, Suite 400, Newport Beach, CA 92660 with a copy to (which shall not constitute notice) Faegre Drinker Biddle & Reath LLP, 2200 Wells Fargo Center, 90 South Seventh Street, Minneapolis, Minnesota 55402, Attention: Jonathan R. Zimmerman, email: Jon.Zimmerman@FaegreDrinker.com; if to the Company, shall be mailed via overnight delivery service, hand delivered or sent via email to it at 7800 Shoal Creek Blvd, Suite 230-S Austin, Texas, 78757, with a copy to (which shall not constitute notice) Winstead PC, 401 Congress Ave., Suite 2100, Austin, Texas, 78701 Attention: Alex R. Allemann, email: aallemann@winstead.com; or in each case to such other address as the person to be notified may have requested in writing. Any party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose.

10. **Persons Entitled to Benefit of Agreement.** This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns and, with respect to Section 6, the controlling persons, officers and directors referred to in Section 6. Nothing in this Agreement is intended or shall be construed to give to any other person, firm or corporation any legal or equitable remedy or claim under or in respect of this Agreement or any provision herein contained. The term "successors and assigns" as herein used

shall not include any purchaser, as such purchaser, of any of the Securities from any of the several Underwriters.

11. **Absence of Fiduciary Relationship.** The Company acknowledges and agrees that: (a) the Underwriters have been retained solely to act as underwriters in connection with the sale of the Securities and that no fiduciary, advisory or agency relationship between the Company and the Underwriters has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Underwriters have advised or are advising the Company on other matters; (b) the price and other terms of the Securities set forth in this Agreement were established by the Company following discussions and arms-length negotiations with the Underwriters and the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement; (c) it has been advised that the Underwriters and their affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Underwriters have no obligation to disclose such interest and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; (d) it has been advised that the Underwriters are acting, in respect of the transactions contemplated by this Agreement, solely for the benefit of the Underwriters, and not on behalf of the Company; and (e) it waives to the fullest extent permitted by law, any claims it may have against the Underwriters for breach of fiduciary duty or alleged breach of fiduciary duty in respect of any of the transactions contemplated by this Agreement and agrees that the Underwriters shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary duty claim on behalf of or in right of the Company, including shareholders, employees or creditors of the Company.

12. **Governing Law; Waiver of Jury Trial.** This Agreement shall be governed by and construed in accordance with the laws of the State of New York. The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its shareholders and affiliates) and each of the Underwriters hereby irrevocably waive, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

13. **Counterparts.** This Agreement may be executed in one or more counterparts and may be delivered by facsimile transmission or by electronic delivery of a portable document format (PDF) file or via DocuSign electronic signature, and, if executed in more than one counterpart, the executed counterparts shall each be deemed to be an original and all such counterparts shall together constitute one and the same instrument.

14. **General Provisions.** This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof, including that certain engagement letter, dated February 12, 2021, by and among the Company and the Representatives (other than as set forth in Section 6, Annex I, and Annex II (F-K)). This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The Section headings herein are for the convenience of

the parties only and shall not affect the construction or interpretation of this Agreement. The invalidity or unenforceability of any Section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other Section, paragraph or provision hereof. If any Section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

[Signature Page Follows]

Please sign and return to the Company the enclosed duplicates of this letter whereupon this letter will become a binding agreement between the Company and the several Underwriters in accordance with its terms.

Very truly yours,

Phunware, Inc.

By /s/ Alan S. Knitowski
Name Alan S. Knitowski
Its Chief Executive Officer

Confirmed as of the date first
above mentioned, on behalf of
themselves and the several Underwriters
named in Schedule I hereto.

Northland Securities, Inc.

By /s/ Jeff Peterson
Jeff Peterson
Head of Investment Banking

Roth Capital Partners, LLC

By /s/ Aaron M. Gurewitz
Aaron M. Gurewitz
Head of Equity Capital Markets

[Signature Page to Underwriting Agreement]

SCHEDULE I

Underwriters

Underwriter	Number of Firm Shares
Northland Securities, Inc.	6,111,111
Roth Capital Partners, LLC	5,000,000
Total	11,111,111

US.131466268.03

SCHEDULE II

Certain Permitted Free Writing Prospectuses

None.

US.131466268.03

SCHEDULE III

Pricing Information

Firm Shares: 11,111,111 shares

Option Shares: 1,666,666 shares

Price to the public: \$2.25 per share

Price to the Underwriters: \$2.10375 per share

US.131466268.03

SCHEDULE IV

List of Individuals and Entities Executing Lock-Up Agreements

- a) Alan S. Knitowski
- b) Luan Dang
- c) Matt Aune
- d) Randall Crowder
- e) Keith Cowan
- f) Eric Manlunas
- g) Lori Tauber Marcus
- h) Blythe Masters
- i) Kathy Tan Mayor
- j) George Syllantavos

US.131466268.03

EXHIBIT A

Form of Common Stock Lock-Up Agreement

See attached.

February 12, 2021

Phunware, Inc.
7800 Shoal Creek Blvd
Suite 230-S
Austin, Texas 78757

Ladies and Gentlemen:

We have acted as legal counsel to Phunware, Inc., a Delaware corporation (the "Company"), in connection with the offering and sale by the Company of 11,111,111 shares (the "Shares") of the Company's common stock, par value \$0.0001 per share ("Common Stock"), covered by the registration statement on Form S-3 (File No. 333-252694) filed by the Company with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act") (as amended, and together with the base prospectus contained therein and prospectus supplement, dated as of February 12, 2021, filed pursuant to Rule 424(b) under the Securities Act in connection with such offering (the "Prospectus Supplement"), the "Registration Statement"), pursuant to that certain Underwriting Agreement, dated as of February 12, 2021 (the "Underwriting Agreement"), by and between the Company, Northland Securities, Inc. and Roth Capital Partners, LLC.

In connection with this opinion, we have examined originals or copies, certified or otherwise identified to our satisfaction, of (i) the Registration Statement, including the Prospectus Supplement, (ii) the Underwriting Agreement, (iii) the Certificate of Incorporation of the Company, as currently in effect, (iv) the Amended and Restated Bylaws of the Company, as currently in effect, and (v) certain resolutions adopted by the Board of Directors of the Company and committees thereof with respect to the Underwriting Agreement and the issuance of the Shares. We have also examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Company and such agreements, certificates of public officials, certificates of officers or other representatives of the Company and others, and such other documents, certificates and records, as we have deemed necessary or appropriate as a basis for the opinion set forth herein.

In our examination, we have assumed and have not verified (i) the legal capacity of all natural persons, (ii) the genuineness of all signatures (other than persons signing on behalf of the Company), (iii) the authenticity of all documents submitted to us as originals, (iv) the conformity with the originals of all documents supplied to us as copies, (v) the accuracy and completeness of all corporate records and documents made available to us by the Company and (vi) that the foregoing documents, in the form submitted to us for our review, have not been altered or amended in any respect material to our opinion stated herein. We have relied as to factual matters upon certificates from officers of the Company and certificates and other documents from public officials and government agencies and departments and we have assumed the accuracy and authenticity of such certificates and documents.

Based on the foregoing, and subject to the assumptions, qualifications and limitations set forth herein, as of the date hereof, we are of the opinion that the Shares have been duly authorized for issuance, and when issued and delivered by the Company and paid for pursuant to the terms of the Underwriting Agreement, the Shares will be validly issued, fully paid and non-assessable.

For purposes of our opinion above, we express no opinion as to the law of any jurisdiction other than the General Corporation Law of the State of Delaware (including the statutory provisions, all applicable provisions of the Delaware Constitution and reported judicial decisions interpreting the foregoing). The opinion expressed herein is given as of this date, and we do not undertake to supplement this opinion with respect to any events or changes occurring subsequent to the date hereof.

We hereby consent to the filing of this opinion as an exhibit to the Current Report on Form 8-K to be filed with the Commission in connection with the offering and to the use of our name under the caption "Legal Matters" in the Prospectus Supplement. In giving this consent, we do not thereby admit that we are included in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

WINSTEAD PC

By: /s/ Alex R. Allemann
Alex R. Allemann
Authorized Signatory

Phunware, Inc. Announces Proposed Public Offering of Common Stock

AUSTIN, TX, February 12, 2021, **Phunware, Inc. (NASDAQ: PHUN)** (“**Phunware**” or “**the Company**”) a fully-integrated enterprise cloud platform for mobile that provides products, solutions, data and services for brands worldwide, today announced that it has commenced a proposed underwritten public offering of common stock of the Company. Phunware expects to grant the underwriters a 30-day option, solely to cover over-allotments, if any, to purchase additional shares of its common stock. The offering is subject to market and other conditions, and there can be no assurance as to whether or when the offering may be completed, or as to the actual size or terms of the offering.

Northland Securities Inc. and Roth Capital Partners are acting as joint book-running managers for the offering.

Phunware intends to use the proceeds to satisfy obligations to redeem outstanding convertible debt and for working capital and general corporate purposes.

A registration statement relating to the securities being sold in the offering has been declared effective by the Securities and Exchange Commission on February 11, 2021. The securities will be offered only by means of a prospectus supplement and accompanying prospectus forming a part of the effective registration statement. A preliminary prospectus supplement related to the offering will be filed with the SEC and will be available on the SEC’s website located at www.sec.gov. Copies of the preliminary prospectus supplement and the accompanying prospectus relating to the offering may be obtained, when available, from Northland Securities, Inc., Attention: Heidi Fletcher, 150 South Fifth Street, Suite 3300, Minneapolis, MN 55402, or by calling (612) 851-4918, or by emailing hfletcher@northlandcapitalmarkets.com; Roth Capital Partners, LLC, 888 San Clemente Drive, Suite 400, Newport Beach, CA 92660, (800) 678-9147 or by accessing the SEC’s website, www.sec.gov.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy these securities, nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation, or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

Safe Harbor Clause and Forward-Looking Statements

This press release includes forward-looking statements. All statements other than statements of historical facts contained in this press release, including statements regarding our future results of operations and financial position, business strategy and plans, and our objectives for future operations, are forward-looking statements. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “expose,” “intend,” “may,” “might,” “opportunity,” “plan,” “possible,” “potential,” “predict,” “project,” “should,” “will,” “would” and similar expressions that convey uncertainty of future events or

outcomes are intended to identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking.

The forward-looking statements contained in this press release are based on our current expectations and beliefs concerning future developments and their potential effects on us. Future developments affecting us may not be those that we have anticipated. These forward-looking statements involve a number of risks, uncertainties (some of which are beyond our control) and other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to, those factors described under the heading "Risk Factors" in our filings with the Securities and Exchange Commission (SEC), including our reports on Forms 10-K, 10-Q, 8-K and other filings that we make with the SEC from time to time. Should one or more of these risks or uncertainties materialize, or should any of our assumptions prove incorrect, actual results may vary in material respects from those projected in these forward-looking statements. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws. These risks and others described under "Risk Factors" in our SEC filings may not be exhaustive.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. We caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and developments in the industry in which we operate may differ materially from those made in or suggested by the forward-looking statements contained in this press release. In addition, even if our results or operations, financial condition and liquidity, and developments in the industry in which we operate are consistent with the forward-looking statements contained in this press release, those results or developments may not be indicative of results or developments in subsequent periods.

About Phunware, Inc.

Everything You Need to Succeed on Mobile — Transforming Digital Human Experience

Phunware, Inc. (NASDAQ: PHUN), is the pioneer of Multiscreen-as-a-Service (MaaS), an award-winning, fully integrated enterprise cloud platform for mobile that provides companies the products, solutions, data and services necessary to engage, manage and monetize their mobile application portfolios and audiences globally at scale. Phunware's Software Development Kits (SDKs) include location-based services, mobile engagement, content management, messaging, advertising, loyalty (PhunCoin & Phun) and analytics, as well as a mobile application framework of pre-integrated iOS and Android software modules for building in-house or channel-based mobile application and vertical solutions. Phunware helps the world's most respected brands create category-defining mobile experiences, with more than one billion active devices

touching its platform each month. For more information about how Phunware is transforming the way consumers and brands interact with mobile in the virtual and physical worlds, visit <https://www.phunware.com>, <https://www.phuncoin.com>, <https://www.phuntoken.com>, and follow @phunware, @phuncoin and @phuntoken on all social media platforms.

Phunware PR & Media Inquiries:

press@phunware.com

T: (512) 693-4199

Phunware Investor Relations:

Matt Glover and John Yi

Gateway Investor Relations

Email: PHUN@gatewayir.com

Phone: (949) 574-3860

Phunware, Inc. Announces Pricing of Public Offering of Common Stock

AUSTIN, TX, February 12, 2021, **Phunware, Inc. (NASDAQ: PHUN)** (“**Phunware**” or “**the Company**”) a fully-integrated enterprise cloud platform for mobile that provides products, solutions, data and services for brands worldwide, today announced the pricing of its previously announced underwritten public offering of 11,111,111 shares of its common stock at a price to the public of \$2.25 per share. In addition, Phunware has granted the underwriters a 30-day option, solely to cover over-allotments, if any, to purchase up to 1,666,666 additional shares of its common stock at the public offering price, less underwriting discounts and commissions. The offering is expected to close on February 17, 2021, subject to customary closing conditions.

Northland Securities Inc. and Roth Capital Partners are acting as joint book-running managers for the offering.

The gross proceeds to the Company from the public offering, before deducting underwriting discounts and offering expenses payable by the Company, are expected to be approximately \$25 million, assuming the underwriters’ option is not exercised. Phunware intends to use the net proceeds from the public offering to satisfy obligations to redeem outstanding convertible debt and for working capital and general corporate purposes.

A registration statement relating to the securities being sold in the offering has been declared effective by the Securities and Exchange Commission on February 11, 2021. The securities will be offered only by means of a prospectus supplement and accompanying prospectus forming a part of the effective registration statement. A preliminary prospectus supplement related to the offering will be filed with the SEC and will be available on the SEC’s website located at www.sec.gov. Copies of the preliminary prospectus supplement and the accompanying prospectus relating to the offering may be obtained, when available, from Northland Securities, Inc., Attention: Heidi Fletcher, 150 South Fifth Street, Suite 3300, Minneapolis, MN 55402, or by calling (612) 851-4918, or by emailing hfletcher@northlandcapitalmarkets.com; Roth Capital Partners, LLC, 888 San Clemente Drive, Suite 400, Newport Beach, CA 92660, (800) 678-9147 or by accessing the SEC’s website, www.sec.gov.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy these securities, nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation, or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

Safe Harbor Clause and Forward-Looking Statements

This press release includes forward-looking statements. All statements other than statements of historical facts contained in this press release, including statements

regarding our future results of operations and financial position, business strategy and plans, and our objectives for future operations, are forward-looking statements. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “expose,” “intend,” “may,” “might,” “opportunity,” “plan,” “possible,” “potential,” “predict,” “project,” “should,” “will,” “would” and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking.

The forward-looking statements contained in this press release are based on our current expectations and beliefs concerning future developments and their potential effects on us. Future developments affecting us may not be those that we have anticipated. These forward-looking statements involve a number of risks, uncertainties (some of which are beyond our control) and other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to, those factors described under the heading “Risk Factors” in our filings with the Securities and Exchange Commission (SEC), including our reports on Forms 10-K, 10-Q, 8-K and other filings that we make with the SEC from time to time. Should one or more of these risks or uncertainties materialize, or should any of our assumptions prove incorrect, actual results may vary in material respects from those projected in these forward-looking statements. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws. These risks and others described under “Risk Factors” in our SEC filings may not be exhaustive.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. We caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and developments in the industry in which we operate may differ materially from those made in or suggested by the forward-looking statements contained in this press release. In addition, even if our results or operations, financial condition and liquidity, and developments in the industry in which we operate are consistent with the forward-looking statements contained in this press release, those results or developments may not be indicative of results or developments in subsequent periods.

About Phunware, Inc.

Everything You Need to Succeed on Mobile — Transforming Digital Human Experience

Phunware, Inc. (NASDAQ: PHUN), is the pioneer of Multiscreen-as-a-Service (MaaS), an award-winning, fully integrated enterprise cloud platform for mobile that provides companies the products, solutions, data and services necessary to engage, manage and monetize their mobile application portfolios and audiences globally at scale. Phunware’s Software Development Kits (SDKs) include location-based services, mobile

engagement, content management, messaging, advertising, loyalty (PhunCoin & Phun) and analytics, as well as a mobile application framework of pre-integrated iOS and Android software modules for building in-house or channel-based mobile application and vertical solutions. Phunware helps the world's most respected brands create category-defining mobile experiences, with more than one billion active devices touching its platform each month. For more information about how Phunware is transforming the way consumers and brands interact with mobile in the virtual and physical worlds, visit <https://www.phunware.com>, <https://www.phuncoin.com>, <https://www.phuntoken.com>, and follow @phunware, @phuncoin and @phuntoken on all social media platforms.

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