

March 31, 2011

VIA EDGAR CORRESPONDENCE AND E-MAIL

Securities and Exchange Commission
100 F. Street, N.E.
Washington, D.C. 20549-3628
Attention: Mr. James E. O'Connor, Esq.
Division of Investment Management

Re: Horizon Technology Finance Corporation
Preliminary Proxy Statement on Schedule 14A, Filed March 18, 2011
File No. 814-00802

Dear Mr. O'Connor:

On behalf of our client, Horizon Technology Finance Corporation, a Delaware corporation (the "Company"), we are responding to your comments communicated to us by telephone on March 31, 2011, with respect to the above-referenced Preliminary Proxy Statement. To facilitate your review, your comments are restated below in italics, followed by the Company's response to each such comment. Terms used and not defined in this letter shall have the meaning described in the Preliminary Proxy Statement.

1. Please disclose the information required by Item 407(c)(2)(vi) of Regulation S-K regarding whether, and if so how, a nominating committee considers diversity in identifying nominees for director.

The current disclosure on page 14 of the Preliminary Proxy Statement satisfies the requirements of Item 407(c)(2)(vi) by providing the following: "[t]he Nominating and Corporate Governance Committee has not adopted a formal policy with regard to the consideration of diversity in identifying individuals for election as members of the Board, but the Committee will consider such factors as it may deem are in the best interests of the Company and its Stockholders. Those factors may include a person's differences of viewpoint, professional experience, education and skills, as well as his or her race, gender and national origin. In addition, as part of the Board's annual-self assessment, the members of the Nominating and Corporate Governance Committee evaluates the membership of the Board and whether the Board maintains satisfactory policies regarding membership selection."

2. Please clarify whether the use of the terms “we,” “us” and “our” in the Preliminary Proxy Statement is intended to refer to the Company or the Board, and revise any nonconforming uses of such terms in the Definitive Proxy Statement on Schedule 14A to be filed by the Company.

Because the Proxy Statement is furnished by and on behalf of the Board, the disclosure on page 1 of the Preliminary Proxy Statement will be revised in the Definitive Proxy Statement to specify that the terms “we,” “us” and “our” refer to the Board of Directors and the term “Company” refers to Horizon Technology Finance Corporation. All instances in the Preliminary Proxy Statement in which the terms “we,” “us” or “our” were used in reference to the Company will be revised in the Definitive Proxy Statement to read “the Company,” “the Company” and “the Company’s,” respectively, and all necessary conforming revisions will be included in the Definitive Proxy Statement.

3. Please revise the tabular disclosures in the Preliminary Proxy Statement under the headings “Nominees for Class I Directors,” “Class II Directors” and “Class III Directors” to comply with the requirements of Item 401(e)(2) of Regulation S-K by:

- **removing references to directorships held by directors or nominees for director during the past five years at companies without a class of securities registered pursuant to Section 12 of the Exchange Act or subject to the requirements of Section 15(d) of the Exchange Act; and**
- **specifying the time period during which any director or nominee for director held a directorship at any company with a class of securities registered pursuant to Section 12 of the Exchange Act or subject to the requirements of Section 15(d) of the Exchange Act.**

The following provisions in the Preliminary Proxy Statement will be revised in the Definitive Proxy Statement in the manner set forth below:

- On page 6, the directorships included opposite David P. Swanson’s name in the table under the heading “Nominees for Class I Directors” will be removed, as such directorships relate to companies without a class of securities registered pursuant to Section 12 of the Exchange Act or subject to the requirements of Section 15(d) of the Exchange Act.
 - On page 7, the directorships included opposite James J. Bottiglieri’s name in the table under the heading “Class II Directors” will be removed, as such directorships relate to companies without a class of securities registered pursuant to Section 12 of the Exchange Act or subject to the requirements of Section 15(d) of the Exchange Act; *provided, however*, that Mr. Bottiglieri’s directorship in CODI will be retained because CODI’s securities are registered pursuant to Section 12(b) of the Exchange Act. Further, the time period during which Mr. Bottiglieri has served as a director of CODI will be specified in the table.
 - On page 8, the directorships included opposite Brett N. Silvers’ name in the table under the heading “Class II Directors” will be removed, as such directorships relate to entities without a class of securities registered pursuant to Section 12 of the Exchange Act or subject to the requirements of Section 15(d) of the Exchange Act.
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4. Please revise the table under the heading "Compensation of Directors and Executive Officers" in the Preliminary Proxy Statement to comply with the requirements of Instruction 2 to Item 22(b)(13)(i) of Schedule 14A.

Pursuant to Instruction 2 to Item 22(b)(13)(i) of Schedule 14A, because the Company has not completed its first full year since its organization, the table under the heading "Compensation of Directors and Executive Officers" on page 16 of the Preliminary Proxy Statement will be revised in the Definitive Proxy Statement to reflect the estimated payments to the Company's independent directors during the 2011 fiscal year rather than the actual payments made to such persons during the period October 28, 2010 through December 31, 2010. The estimated payments to the Company's independent directors during the 2011 fiscal year will be calculated in accordance with the independent director compensation guidelines described under the heading "Compensation of Directors," which immediately precedes the "Compensation of Directors and Executive Officers" section in the Proxy Statement.

5. Please revise the last reported closing sale price of the Company's Common Stock to reflect a more recent date than March 16, 2011, in the Definitive Proxy Statement.

The last reported closing sale price of the Company's Common Stock on March 31, 2011, will be reflected in the Definitive Proxy Statement, which date is the trading day immediately preceding the date on which the Definitive Proxy Statement will be filed.

6. Please revise disclosure under the heading "Examples of Dilutive Effect of the Issuance of Shares Below NAV" to specify that the discount to NAV at which the Company may offer its Common Shares may be greater than the discounts reflected in the examples provided in the Proxy Statement.

The first full paragraph on page 25 of the Preliminary Proxy Statement will be revised in the Definitive Proxy Statement to include the following disclosure: "The examples above reflect hypothetical examples of a discount to NAV only, and the actual discount to NAV may be greater than as reflected above."

We appreciate the efforts of the staff and look forward to resolving the above comments as soon as possible. In response to the above comments, the Company has also executed a written statement acknowledging certain items referenced during the above-referenced March 31, 2011 telephone communications, which written statement is attached hereto as Appendix A.

Please contact the undersigned at the above number if you have any questions.

Very truly yours,

/s/ Stephen C. Mahon
Stephen C. Mahon

In response to the request by the staff of the Securities and Exchange Commission (the "Commission") in its telephone communications with the Company's legal counsel on March 31, 2011, through execution of this statement, the Company hereby acknowledges the following: (i) the Company is responsible for the adequacy and accuracy of the disclosures in its filings; (ii) staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; and (iii) the Company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

**HORIZON TECHNOLOGY FINANCE
CORPORATION**

By: /s/ John C. Bombara

John C. Bombara
Senior Vice President, General Counsel,
Chief Compliance Officer and Secretary

March 31, 2011