



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

September 17, 2010

Thomas M. Ray, President
CoreSite Realty Corporation
1050 17th Street
Suite 800
Denver, CO 80265

**Re: CoreSite Realty Corporation
Amendment No. 5 to Registration Statement on
Form S-11
Filed September 13, 2010
File No. 333-166810**

Dear Mr. Ray:

We have reviewed Amendment No. 5 to your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

The Restructuring Transactions, page 7

1. On page 8, you disclose that that you will own 42.5% of the operating partnership. In footnote 10 on page 42, you estimate that you will own 37% of such partnership. Please tell us why the two figures are different on the noted pages.

Material Terms of Our Indebtedness to be Outstanding After this Offering, page 62

2. We note the revised disclosure of the anticipated terms of your expected credit facility. Please revise to identify the lender or tell us why you are not able to provide such disclosure.

Pro Forma Condensed Consolidated Financial Statements, page F-6

3. Based on the disclosure on page 8, we note the operating units that will be purchased from the entities contributing your Predecessor and Acquired Properties will be at the initial public offering price per share of your common stock net of underwriting discounts and commissions. Please disclose the unit purchase price per share here and elsewhere in your document so that it is clear how the aggregate amount of cash consideration given for these units is calculated.

Exhibits

4. You have indicated that exhibit 10.8 is the employment agreement between you and Deedee M. Beckman and has been previously filed. Exhibit 10.8 currently on file is your tax protection agreement. Please file the noted employment agreement.
5. Please note that your contribution agreement, listed as exhibit 10.12 in this index, was filed and labeled as exhibit 10.9 with your prior amendment. Please tell us why you have not filed all the exhibits and schedules referenced in your contribution agreement.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Thomas M. Ray, President
CoreSite Realty Corporation
September 17, 2010
Page 3

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Yolanda Crittendon at (202) 551-3472 or Cicely LaMothe, Accounting Branch Chief, at (202) 551-3413 if you have questions regarding comments on the financial statements and related matters. Please contact Stacie Gorman, Attorney – Advisor, at (202) 551-5858 or me at (202) 551-3386 with any other questions.

Sincerely,

Duc Dang
Attorney – Advisor

Cc: Patrick H. Shannon, Esq.
via facsimile (202) 637-2201