UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-A

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

Wireless Facilities, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State of incorporation or organization)

13-3818604

(I.R.S. Employer Identification No.)

4810 Eastgate Mall, San Diego, California

(Address of principal executive offices)

92121

(Zip Code)

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

Title of each class to be so registered

Name of each exchange on which each class is to be registered

Not Applicable

Not Applicable

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A.(c), check the following box. o

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A.(d), check the following box. \boxtimes

 $Securities\ Act\ registration\ statement\ file\ number\ to\ which\ this\ form\ relates:\ (if\ applicable)$

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

Rights to Purchase Series C Preferred Stock (Title of class)

Item 1. Description of Securities to be Registered

On December 16, 2004, the Board of Directors of Wireless Facilities, Inc. (the "Company") authorized and declared a dividend of one right (a "Right") to purchase one one-hundredth of a share of the Company's Series C Preferred Stock ("Series C Preferred") for each outstanding share of Common Stock, par value \$0.001 ("Common Stock"), to stockholders of record as of the close of business December 27, 2004 (the "Record Date"). Each Right entitles the registered holder, subject to the terms of the Rights Agreement, to purchase from the Company one one-hundredth of a share of Series C Preferred at a purchase price of \$54.00, subject to adjustment (the "Purchase Price").

The following summary of the principal terms of the Rights Agreement does not purport to be complete and is qualified in its entirety by reference to all of the provisions of the Rights Agreement attached as Exhibit 4.1 to the Current Report on Form 8-K filed on December 17, 2004 and the Certificate of Designation of the Series C Preferred Stock of Wireless Facilities, Inc. (the "Certificate of Designation") attached as Exhibit 3.1 to the Current Report on Form 8-K filed on December 17, 2004, including the definitions therein of certain terms, which Rights Agreement and Certificate of Incorporation are incorporated herein by reference.

The Rights Agreement

Initially, the Rights will attach to all certificates representing shares of outstanding Company Common Stock, and no separate Rights Certificates will be distributed. Subject to the provisions of the Rights Agreement the Rights will separate from the Company Common Stock and the "Distribution Date" will occur upon the earlier of (i) ten business days following a public announcement (the date of such announcement being the "Stock Acquisition Date") that a person or group of affiliated or associated persons has acquired or obtained the right to acquire beneficial ownership of 15% or more of the then-outstanding Common Stock (an "Acquiring Person"), or (ii) ten business days (or such later date as may be determined by action of the Board of Directors prior to such time as any person becomes an Acquiring Person) following the commencement of a tender offer or exchange offer that would result in a person or group becoming an Acquiring Person. An Acquiring Person does not include certain persons specified in the Rights Agreement.

Certificates for the Rights ("Rights Certificates") will not be sent to stockholders, and the Rights will attach to and trade together with the Common Stock. Common Stock certificates outstanding on the Record Date will evidence the Rights related thereto, and Common Stock certificates issued after the Record Date will contain a notation incorporating the Rights Agreement by reference. Until the Distribution Date (or earlier redemption or expiration of the Rights), the surrender or transfer of any certificates for Common Stock outstanding as of the Record Date, even without notation or a copy of the Summary of Rights being attached thereto, will constitute the transfer of the Rights associated with the Common Stock represented by such certificate.

As soon as practicable after the Distribution Date, Rights Certificates will be mailed to holders of record of Company Common Stock as of the close of business on the Distribution Date, and to each initial holder of certain shares of Company Common Stock issued after the Distribution Date. Thereafter, separate Rights Certificates alone will represent Rights.

The Rights are not exercisable until the Distribution Date and will expire at the close of business on the tenth anniversary of the Rights Agreement unless earlier redeemed or exchanged by the Company as described below.

Following the Distribution Date, and until one of the further events described below, holders of the Rights will be entitled to receive, upon exercise and payment of the Purchase Price, one one-hundredth of a share of Series C Preferred (a "Unit"). The purchase price, the number and kind

of securities purchasable upon exercise of each Right, and the number of Rights outstanding are subject to adjustment, as stated in Section 11 of the Rights Agreement.

Unless the Rights are earlier redeemed, in the event that a person becomes an Acquiring Person, then each holder of a Right (other than Acquiring Persons, whose rights will thereafter be void) will have the right to receive, upon exercise, Common Stock having a value equal to two times the Purchase Price of the Right. The exercise price is the Purchase Price multiplied by the number of Units issuable upon exercise of a Right prior to the event described in this paragraph.

Similarly, unless the Rights are earlier redeemed, in the event that a person becomes an Acquiring Person and (i) the Company is acquired in a merger or other business combination transaction and the Company is not the surviving corporation, (ii) any person merges with the Company and all or part of the Company Common Stock is converted or exchanged for securities, cash or property of the Company or other person or (iii) fifty percent (50%) or more of the Company's assets or earning power is sold or transferred, each holder of a Right (other than Acquiring Persons, whose rights will thereafter be void) will thereafter have the right to receive, upon exercise, shares of common stock of the acquiring company having a value equal to two times the exercise price of the Right.

The Purchase Price payable and the number of Units issuable upon the exercise of the Rights are subject to adjustment from time to time to prevent dilution (i) in the event of a stock dividend on, or a subdivision, combination or reclassification of, the Series C Preferred, (ii) if holders of the Series C Preferred are granted certain rights or warrants to subscribe for Preferred Stock, or (iii) upon the distribution to the holders of the Series C Preferred of evidence of indebtedness, cash or assets (excluding regular periodic cash dividends) or of subscription rights or warrants (other than those referred to above).

With certain exceptions, no adjustment to the Purchase Price will be required until cumulative adjustments amount to at least 1% of the Purchase Price. The Company is not required to issue fractional shares of Series C Preferred (other than fractions which are integral multiples of one one-hundredth (1/100) of a share of Series C Preferred, which may be evidenced by depositary receipts). In lieu thereof, an adjustment in cash may be made based on the current market price of a share of Series C Preferred on the day of exercise.

At any time until ten business days following the Stock Acquisition Date, a majority of the Board of Directors may redeem the Rights in whole, but not in part, at a price of \$0.001 per Right, payable in cash, shares of Common Stock or other consideration considered appropriate by the Board of Directors.

At any time after any person becomes an Acquiring Person, the Board of Directors may exchange the Rights (other than Rights owned by the Acquiring Person), in whole or in part, at an exchange ratio of one share of Common Stock per Right.

Until a Right is exercised, the holder of the Right, as such, will have no rights as a stockholder of the Company (other than any rights resulting from such holder's ownership of Common Stock), including, without limitation, the right to vote or to receive dividends.

Any of the provisions of the Rights Agreement may be amended in any respect without the approval of the Rights holders or stockholders at any time prior to the date the Rights are no longer redeemable. After that date, the terms of the Rights and the Rights Agreement may be amended without the consent of the Rights holders in order to cure any ambiguities or to make changes that do not adversely affect the interests of Rights holders (other than an Acquiring Person).

Description of Series C Preferred Stock

The Units that may be acquired upon exercise of the Rights will be nonredeemable and subordinate to any other shares of preferred stock issued by the Company. Each Unit will have one vote, voting together with the Company Common Stock. In the event of any merger, consolidation or other transaction in which shares of Company Common Stock are exchanged, each Unit will be entitled to receive the per share amount paid in respect of each share of Company Common Stock.

In the event of liquidation, the holder of a Unit will receive a preferred liquidation payment equal to the greater of \$0.01 per Unit and the per share amount paid in respect of the Company Common Stock. The rights of holders of the Series C Preferred with respect to liquidation and voting, and in the event of mergers and consolidations, are protected by customary anti-dilution provisions.

Exhibit Number Description

3.1 Certificate of Designation of the Series C Preferred Stock of Wireless Facilities, Inc. is incorporated by reference to Exhibit 3.1 from the Wireless Facilities, Inc. Current Report on Form 8-K, dated December 17, 2004.

4.1 Rights Agreement, dated as of December 16, 2004, between Wireless Facilities, Inc. and Wells Fargo Bank, N.A., including the form of Rights Certificate, the Summary of Rights and the Certificate of Designation of the Series C Preferred Stock of Wireless Facilities, Inc., is incorporated by reference to Exhibit 4.1 from the Wireless Facilities, Inc. Current Report on Form 8-K, dated December 17, 2004.

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

WIRELESS FACILITIES, INC.

Date: December 17, 2004

/s/ ERIC M. DEMARCO

Eric M. DeMarco President and Chief Executive Officer

4

EXHIBIT INDEX

Exhibit Number Description

- 3.1 Certificate of Designation of the Series C Preferred Stock of Wireless Facilities, Inc. is incorporated by reference to Exhibit 3.1 to the Wireless Facilities, Inc. Current Report on Form 8-K, dated December 17, 2004.
- 4.1 Rights Agreement, dated as of December 16, 2004, between Wireless Facilities, Inc. and Wells Fargo Bank, N.A., including the form of Rights Certificate, the Summary of Rights and the Certificate of Designation of the Series C Preferred Stock of Wireless Facilities, Inc., is incorporated by reference to Exhibit 4.1 to the Wireless Facilities, Inc. Current Report on Form 8-K, dated December 17, 2004.

QuickLinks

<u>Item 1. Description of Securities to be Registered SIGNATURE EXHIBIT INDEX</u>