

**RADIO ADMINISTRATION**  
**FCC REGULATORY INFORMATION**  
**ESTABLISHING A MOBILE (DPLM) RADIO STATION**  
**PREPARATION OF FCC FORM 401**

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**1. GENERAL**

**Purpose**

**1.01** This Practice gives instructions for preparing FCC Form 401, which is an application for FCC authority to construct or modify radio facilities in the Domestic Public Land Mobile (DPLM) Radio Service. It is a companion to Practices 400-521-100 (Establishing a Mobile Radio Station—General Considerations) and 400-521-103 (Establishing a Mobile Radio Station—Preparation of FCC Form 403). Local instructions, usually in the 400-5 layer, may have been issued and, if so, should be consulted for specific procedures for processing applications in a particular company or area.

**1.02** This Practice is reissued to make minor corrections and to update information changed as a result of revised FCC application requirements. Revision arrows are used to emphasize the more significant changes.

**Applicable FCC Rules**

**1.03** The DPLM Service is governed specifically by Part 21, Subpart G, of the FCC Rules

and Regulations. It is further governed by Subparts A, B, C, D, and E (of Part 21). In addition, it is regulated by general Parts 0, 1, 2, 13, and 17.

**Description**

**1.04** The three classes of stations which are most commonly employed in the DPLM Service are included in this Practice. They are the base station, mobile station, and auxiliary test station. Definitions of these classes of stations are given in FCC 21.2.

**Description of Practice**

**1.05** Each part in this Practice gives instructions for preparing a particular type of application required for the construction or modification of a DPLM station. For applications requiring the use of an FCC form (termed "formal applications"), step-by-step instructions are given for responding to the numbered "items" on the form and for otherwise completing the application. When appropriate, reference is made to the portion of the FCC Rules and Regulations or other instructions which may be pertinent to the particular part of an application being discussed. For example, "FCC 21.15" refers to paragraph 15 of Part 21 of the FCC Rules and Regulations. ***This abbreviated form of reference should not be used in correspondence with the FCC.*** In correspondence, the proper phrasing is, e.g., "pursuant to §21.15 of the Commission's Rules."

**1.06** The notation "DNA" (does not apply) is used in examples in this Practice where a specific reply is not required to an item. The notation "NA" (not applicable) may also be used. When "DNA" or "NA" is used, a footnote should be included on the margin of the application stating

**NOTICE**

Not for use or disclosure outside the  
Bell System except under written agreement

“\*DNA—Does not apply” or “\*NA—Not applicable.” This has the advantage of providing an entry for each item, reduces the likelihood of omitting a required entry through oversight, and standardizes notations for computerization.

**1.07** To illustrate the preparation of the types of applications covered in these instructions, examples of each type have been reproduced and included as figures. Portions of both actual and hypothetical applications have been used for these examples. The responses given in the examples have a gray background to avoid confusion with the printing on the actual application. Encircled numerical notations have been placed on the examples to indicate the paragraphs of this Practice which discuss the item so marked. In addition, to make the reference paragraph stand out, gray shading has been used as a background for the paragraph headings.

**1.08** The answers shown in each example were prepared for a specific set of circumstances. However, different answers would be required for some items under different conditions for a particular company. Where practical, therefore, examples showing alternate answers have been included. For situations which are beyond the scope of these instructions or when assistance is required, refer to local instructions or appropriate lines of organization.

**1.09** Formal applications may be submitted on reproduced copies of the FCC form specified provided that they are *exact* copies of the original. They must be submitted on 8 by 10-1/2 inch paper, printed on the same number of sides as the original, and reproduced by some high-quality process such as photo-offset. It is also permissible to preprint such copies with universally applicable information such as the address of the applicant and corporate and tariff information. See Practice 400-521-100 and local instructions for information about the number of copies required and to whom they should be sent.

### **General Information**

**1.10** An application for a construction permit (CP) in the DPLM Radio Service must be a formal application submitted on the most recent issue of FCC Form 401.

**1.11** A separate application is required for each base station location. An application for an

auxiliary test station may be combined with that for a base station when both are at the same location. Also, an application for mobile units may be combined on the same application form with the base station [FCC 21.9(a)(2) and (c)(1)]. A completed application for a given station consists of Form 401 with appropriate responses made to all items, associated exhibits, and a completed FCC Form 714. See Practice 440-550-102 for instructions on preparing Form 714.

**1.12** Each application for a construction permit should be accompanied by a letter of transmittal. This letter should include the following:

- (a) Clearly state the purpose of the application.
- (b) Give the nature and location of the proposed facilities.

**Note:** Applications should be complete in themselves; therefore, any waiver requests or other relevant information included in the transmittal letter must also appear under the corresponding item on the Form 401 or must be shown on an exhibit and listed under Item 53.

**1.13** The examples shown were prepared for a new DPLM System to serve Grover City, San Luis Obispo County, California, and surrounding communities. Included are an application for base and mobile stations and a separate application for an auxiliary test station since it is to be at a different location. Responses to some items will be identical for both the base and auxiliary test applications. In these cases only one example is provided.

**Note:** The examples shown in the following paragraphs are intended to illustrate the methods of preparing the particular FCC forms and accompanying exhibits and are *not* to be used as a recommendation for engineering design, equipment types, or arrangements.

## **2. CONSTRUCTION PERMIT FOR NEW STATION**

### **Preparation of Form 401**

**2.01** Near the top center of each page (six pages) enter NEW STATION, the proposed location, and the class. NEW STATION indicates that an FCC call sign has not yet been assigned. The

location shown must be the name of a nearby city, town, mountain, lake, or other landmark shown on a standard U.S. Geological Survey map or aeronautical chart. **The location should be consistent with the location shown in Item 5 of Form**

**401.** If the location shown does not include the name of the "mobile service area," show the name of the area and the word "system" in parentheses as shown in Fig. 1.

NEW AUXILIARY TEST STATION SAN LUIS OBISPO, CALIFORNIA (GROVER CITY SYSTEM)		2.01
FCC Form 401 January 1976	Approved by GAO B-180 227 (RO 219)	DO NOT WRITE IN THIS BLOCK
FEDERAL COMMUNICATIONS COMMISSION Washington, D. C. 20554		File No.
APPLICATION FOR NEW OR MODIFIED COMMON CARRIER RADIO STATION CONSTRUCTION PERMIT UNDER PARTS 21 AND 25		Call Sign

**Fig. 1—Form 401—Top of Each Page—New System**

**2.02** Near the top center of each attached exhibit enter the official company name, "DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE," "NEW STATION," the station location, class, and system name (if required) as discussed in paragraph 2.01 (Fig. 2).

**2.03** Near the right-hand top corner of each exhibit, place the exhibit number and "FCC FORM 401" (Fig. 2). If an exhibit consists of more than one page, add information about the number of pages, such as "Page 1 of 2," "Page 3 of 3," etc.

**2.04** Exhibits should be numbered consecutively in the order in which the need for exhibits arises during the step-by-step preparation of Form

401. Polar diagrams, antenna sketches, and maps must be submitted as separate exhibits with each bearing its own exhibit number. With regard to answers to other items, the FCC has accepted answers to more than one item on the same exhibit where space permits provided that the item to which each answer pertains is clearly identified.

**2.05** **Item 1:** Enter the official corporate name of the company (spelled out in full) and the address to which the FCC should mail the approved authorization. In companies in which applications are filed by the company headquarters, the company headquarters address should be shown. In companies whose areas have been authorized to file applications, the area headquarters address should be used (Fig. 3).

2.02	THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE NEW AUXILIARY TEST STATION SAN LUIS OBISPO, CALIFORNIA (GROVER CITY SYSTEM)	EXHIBIT NO. 3 FCC FORM 401  2.03
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**Fig. 2—Form 401—Exhibit Heading**

SECTION 400-521-101

**2.06** **Item 2:** Enter "Domestic Public Land Mobile" in the space for name of radio service. In the space for class of station, enter "Base," "Mobile," or "Auxiliary Test," as appropriate (Fig. 3).

**2.07** **Item 3:** Since the application requests authority to construct a new radio station for which the FCC has not yet issued any authorization, check "New facility" (Fig. 3).

**2.08** **Item 4:** Enter "DNA\*" (Fig. 3).

**2.09** **Item 5:** Enter the exact location of the proposed antenna structure.

(a) If located in a city or town, enter the name of the city or town in the space provided. If not located within a city or town, leave that space blank.

(b) Enter the county and state in the spaces provided.

(c) In the space entitled "Exact antenna location," enter the street address (Fig. 3). If the location has no recognized street address, enter the distance and direction from the nearest town or city. If located on or near a mountain, lake, or similar landmark shown on a standard U.S. Geological Survey map or aeronautical chart, the name of this landmark may be included if helpful (Fig. 4).

(d) Enter the geographic coordinates accurate to the nearest second of latitude and longitude. See FCC 21.15(k) and Fig. 3 and 4. ***If the proposed station will be located at the site of an existing station, the coordinates must agree with those shown on the current authorization for the existing station.*** This includes any station, whether owned by the applicant Bell System company or not.

**2.10** **Item 6:** Enter "DNA\*" (Fig. 3 and 4).

**2.11** **Item 7:** If there is sufficient space, enter the particulars of operation of the proposed station(s) in accordance with paragraphs 2.12 through 2.18. Information for new base, auxiliary test, and mobile stations must be shown for all appropriate columns. However, if additional space is required, enter "See Exhibit No. \_\_\_" in Item 7 (Fig. 5)

and show the particulars of operation on an attached exhibit similar to Fig. 6.

**2.12** **Item 7(a):** All proposed base, auxiliary test, and mobile transmitting frequencies must be listed and should be shown in MHz. See FCC 21.501 for the list of frequencies. Show these frequencies as follows:

(a) In the top of column (a), write the word "Base" and directly below enter the base station frequency (Fig. 6).

(b) If an auxiliary test transmitter is to be installed at the same location as the base transmitter, write "Test" near the middle of column (a) and directly below enter the frequency (which would be the same as the particular paired mobile station channel).

**Note:** If the auxiliary test transmitter is to be at a different location from the base transmitter, it will be necessary to file a separate Form 401 (Fig. 7).

(c) Also in column (a), write the word "Mobile" and directly below list all mobile frequencies allocated for assignment in the band in which the base station operates (Fig. 6).

**Note:** The mobile station particulars must be included in the same application as the base station information.

**2.13** **Item 7(b):** Enter the appropriate emission designator(s) opposite each of the associated transmitting frequencies (Fig. 6 and 7). When the same emission designator applies to several related frequencies, it may be entered only once as shown in Fig. 6. The emission designator(s) must normally be listed in the FCC's Radio Equipment List, Equipment Acceptable for Licensing (commonly known as Type Acceptance List), as acceptable in the DPLM Service for the particular transmitter involved (FCC 2.201, 2.202, and 21.507). The appropriate designator and method of requesting authority for its use will depend on the service to be furnished as follows:

(a) For base stations which will provide only 1-way signaling service, authority for 15F2 will be required.

PART 1																					
1. Name and Post Office address of Applicant (Give street, city, state and Zip Code) (See Instruction No. 6) <span style="float: right;">2.05</span> The Pacific Telephone and Telegraph Company 140 New Montgomery Street San Francisco, California 94105		2. Name of radio service in which authorization is applied for: Domestic Public Land Mobile <span style="float: right;">2.06</span> Class of station <u>Auxiliary Test</u>																			
		3. Application for: <span style="float: right;">2.07</span> <input checked="" type="checkbox"/> New facility and/or <input type="checkbox"/> Change in existing authorization: File No. .... Call .....																			
4. Nature of Proposed Changes/Modifications: <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> Change antenna system DNA*</td> <td><input type="checkbox"/> Add points of communication</td> <td><input type="checkbox"/> Change power</td> </tr> <tr> <td><input type="checkbox"/> Change antenna location</td> <td><input type="checkbox"/> Change points of communication</td> <td><input type="checkbox"/> Add control point</td> </tr> <tr> <td><input type="checkbox"/> Change frequency <span style="float: right;">2.08</span></td> <td><input type="checkbox"/> Replace transmitter</td> <td><input type="checkbox"/> Change control point location</td> </tr> <tr> <td><input type="checkbox"/> Add frequency</td> <td><input type="checkbox"/> Add transmitter</td> <td><input type="checkbox"/> Change alarm center location</td> </tr> <tr> <td colspan="3"><input type="checkbox"/> Other changes (specify)</td> </tr> </table>				<input type="checkbox"/> Change antenna system DNA*	<input type="checkbox"/> Add points of communication	<input type="checkbox"/> Change power	<input type="checkbox"/> Change antenna location	<input type="checkbox"/> Change points of communication	<input type="checkbox"/> Add control point	<input type="checkbox"/> Change frequency <span style="float: right;">2.08</span>	<input type="checkbox"/> Replace transmitter	<input type="checkbox"/> Change control point location	<input type="checkbox"/> Add frequency	<input type="checkbox"/> Add transmitter	<input type="checkbox"/> Change alarm center location	<input type="checkbox"/> Other changes (specify)					
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ENGINEERING DATA (See Instruction 9.)																					
5. Location of transmitting antenna <span style="float: right;">2.09(b)</span> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">City or Town <span style="float: right;">2.09(a)</span></td> <td style="width: 33%;">County</td> <td style="width: 33%;">State</td> </tr> <tr> <td>San Luis Obispo</td> <td>San Luis Obispo</td> <td>California</td> </tr> </table> Exact antenna location (street address) (If in area not designated by street, give distance and direction from, and name of nearest town) <span style="float: right;">2.10</span> 872 Morro Street <span style="float: right;">2.09(c)</span> Geographic coordinates (to be determined in nearest second) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">North Latitude <span style="float: right;">2.09(d)</span></td> <td style="width: 50%;">West Longitude</td> </tr> <tr> <td>35° 16' 58"</td> <td>120° 39' 45"</td> </tr> </table>		City or Town <span style="float: right;">2.09(a)</span>	County	State	San Luis Obispo	San Luis Obispo	California	North Latitude <span style="float: right;">2.09(d)</span>	West Longitude	35° 16' 58"	120° 39' 45"	6. If application is for individual mobile user unit, or for mobile units other than those associated with a single permanently installed base station, or for any other class of station at temporary locations, show area of operation. (See instruction 9-A(b)).  DNA*									
City or Town <span style="float: right;">2.09(a)</span>	County	State																			
San Luis Obispo	San Luis Obispo	California																			
North Latitude <span style="float: right;">2.09(d)</span>	West Longitude																				
35° 16' 58"	120° 39' 45"																				
7. Particulars of operation of the proposed station (See Instruction 9(a) & (d)) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">(a)</td> <td style="width: 10%;">(b)</td> <td style="width: 10%;">(c)</td> <td style="width: 10%;">(d)</td> <td style="width: 10%;">(e)</td> <td style="width: 10%;">(f)</td> <td style="width: 10%;">(g)</td> <td style="width: 10%;">(h)</td> <td style="width: 10%;">(i)</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>Telegraph</td> <td>(Check One) Polarization</td> <td></td> <td></td> <td></td> </tr> </table>				(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)					Telegraph	(Check One) Polarization			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)													
				Telegraph	(Check One) Polarization																

\*DNA-Does not apply

Fig. 3—Form 401—Items 1 Through 6

(b) For base, test, or mobile stations which will provide voice transmission, authority for 16F3 will be required.

(c) When either Improved Mobile Telephone Service (IMTS) or both voice and 1-way signaling service will be rendered, authority for 16F3 will be required. In addition, authority to employ 15F2 emission must be specifically requested in an appropriate statement placed at the bottom of the page or on an attached exhibit which is cross-referenced to Item 7 (Fig. 6). The appropriate statement will depend on the specific circumstances as follows:

(1) For base stations which will provide both 1-way signaling and voice transmission, an appropriate statement would be:

Authority to employ type 15F2 emission is requested in order to provide for the

rendition of 1-way signaling service to customers desiring this service.

(2) When IMTS is involved, an appropriate statement would be:

Authority to employ 15F2 emission is requested to provide for the transmission of the idle tone used in Improved Mobile Telephone Service (IMTS).

(3) FO emission is required for IMTS when three or more transmitters are used. If FO is specified, an appropriate wording might be:

FO emission describes the operation of idle transmitters at approximately one-half watt unmodulated carrier output to override low-level intermodulation products which may appear in receivers. These intermodulation

Add frequency       Add transmitter       Change control point  
 Other changes (specify)       Change alarm center location

**ENGINEERING DATA** (See Instruction 9.)

5. Location of transmitting antenna **2.09(b)**

City or Town <b>2.09(a)</b> Grover City	County San Luis Obispo	State California
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Exact antenna location (street address) (If in area not designated by street, give distance and direction from, and name of nearest town) **2.09(c)**

Hillcrest Drive at the city water tank site      DNA\* **2.10**

Geographic coordinates (to be determined in nearest second)

North Latitude <b>2.09(d)</b> 35° 07' 37" <b>2.09(d)</b>	West Longitude 120° 36' 22"
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6. If application is for individual mobile user unit, or for mobile units other than those associated with a single permanently installed base station, or for any other class of station at temporary locations, show area of operation. (See instruction 9-A(b)).

7. Particulars of operation of the proposed station (See Instruction 9(a) & (d))

(a) Frequency (Mc/s)	(b) Emission Designator	(c) Transmitter Power (Watts)		(d) Maximum Modulating Frequency (cycles/sec.)	(e) (For Telegraph Type Emissions) Maximum Transmission Speed (bauds)	(f) (Check One) Polarization Plane of Radiated Signal		(g) Azimuth of Radio Path (True Bearing)	(h) Length of Radio Path	(i) Points of Communication
		Input	Output			Vertical	Horizontal			
								0		km
								0		km

\*DNA-Does not apply

Fig. 4—Form 401—Items 5 and 6

West Longitude ° ' "

7. Particulars of operation of the proposed station (See Instruction 9(a) & (d))

(a) Frequency (Mc/s)	(b) Emission Designator	(c) Transmitter Power (Watts)		(d) Maximum Modulating Frequency (cycles/sec.)	(e) (For Telegraph Type Emissions) Maximum Transmission Speed (bauds)	(f) (Check One) Polarization Plane of Radiated Signal		(g) Azimuth of Radio Path (True Bearing)	(h) Length of Radio Path	(i) Points of Communication
		Input	Output			Vertical	Horizontal			
								0		km
								0		km
								0		km
								0		km

**2.11**

See Exhibit No. 2

Fig. 5—Form 401—Item 7

products may create false channel indications in mobile receivers.

**2.14 Item 7(c)** For each transmitting frequency, the output power in watts of the associated transmitter must be shown. (Refer to FCC 21.107 and 21.506 for power limitations.) When the same information applies to several related frequencies, it may be listed only once as shown in Fig. 6. Show this information as follows:

- (a) For base and test facilities, a dash should be inserted in the input column (Fig. 6). In

the output column, enter the power as shown in the latest Type Acceptance List. If other than the rated output power is specified for a base transmitter [which has been type-accepted for a fixed output power (nonvariable)], the method of attaining that power must be submitted with the application as an exhibit and will have to be approved as an acceptable method by the Technical Standards Branch of the FCC Office of Chief Engineer. Information supplied by the manufacturer for attaining this nontype-accepted power should be included. Any output power within the type-accepted range for a variable

2.11

EXHIBIT NO. 2  
FCC FORM 401

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
NEW BASE STATION GROVER CITY, CALIFORNIA

Answer to Item 7. Particulars of Operation of the Proposed Station:

(a) Frequency (Mc/s)	(b) Emission Designator	(c) Transmitter Power (Watts)		(d) Maximum Modulating Frequency (cycles/sec.)	(e) (For Telegraph Type Emissions) Maximum Transmission Speed (words)	(f) (Check One) Polarization Plane of Radiated Signal		(g) Azimuth of Radio Path (True Bearing)	(h) Length of Radio Path	(i) Points of Communication
		Input	Output			Vertical	Horizontal			
Base										
	15F2*	-	25	3000 Hz	-	X				Mobile
	16F3									and rural
										subscriber
Mobile										stations
										authorized
157.77	16F3	-	20	3000 Hz	-	X				for this
157.80										service
157.83										Base
157.86										stations
157.89										authorized
157.92										for this
157.95										service
157.98										
158.01										
158.04										
158.07										

\*Authority to employ type 15F2 emission is requested in order to provide for the rendition of one-way signaling service to customers desiring this service.

2.13

Fig. 6—Form 401—Exhibit 2—Answer to Item 7

power transmitter may be requested and requires no explanation as to how this power is attained.

(b) If peak tuned operation of the base transmitter is planned, then include a note in Item 7(c) as follows:

Peak tuned operation of the base transmitter will be used.

(c) For the mobile station power output, enter the type-accepted output power (not to

exceed 60 watts). Insert a dash in the Transmitter Power Input column (Fig. 6 and 7).

2.15 **Item 7(d):** For base, test, and mobile stations, normally enter 3000 Hz [FCC 21.508(a)] (Fig. 6 and 7).

2.16 **Items 7(e), (g), and (h):** Normally insert a dash for base, test, and mobile stations (Fig. 6 and 7).

2.17 **Item 7(f):** Place an "X" in the vertical column to indicate vertical polarization for

Geographic coordinates (to be determined in nearest second)										
North Latitude					West Longitude					
7. Particulars of operation of the proposed station (See Instruction 9(a) & (d))										
(a) Frequency (Mc/s)	(b) Emission Designator	(c) Transmitter Power (Watts)		(d) Maximum Modulating Frequency (cycles/sec.)	(e) (For Telegraph Type Emissions) Maximum Transmission Speed (bauds)	(f) (Choose One) Polarization Plane of Radiated Signal		(g) Azimuth of Radio Path (True Bearing)	(h) Length of Radio Path	(i) Points of Commencement
		Input	Output			Vertical	Horizontal			
157.80	16F3	*	100	3000 Hz	--	X		0	in	Base re-
2.12	2.13	2.14	2.15	2.16			2.17	2.16	in	ceivers
									in	associated
									in	with this
									in	station
									in	2.18
									in	
8. Transmitters										
(a) No. of Transmitters	(b) Make of transmitter	(c) Transmitter Type or Model No.		(d) Frequency Stability	(e) Emission Designator		(f) Class of Station			

Fig. 7—Form 401—Items 7(a), (b), (c), (d), (e), (f), (g), (h), and (i)

base, test, and mobile antennas. Refer to FCC 21.110(a) which specifies a vertically polarized signal (Fig. 7).

**2.18** **Item 7(i)** Indicate the point(s) of communication in the following manner:

(a) For a base station, the response should be:

Mobile and rural subscriber stations authorized for this service.

(b) For a mobile station, the response should be:

Base station authorized for this service.

(c) For an auxiliary test station (Fig. 7), the response should be:

Base receivers associated with this station.

Where appropriate, the responses shown in (a), (b), and (c) may be combined in one sentence as shown in Fig. 6.

**2.19** **Item 8(a)** As in Item 7, use separate lines for base, auxiliary test, and mobile stations. Enter the number of new base, test,

and mobile transmitters involved. The number of mobile units normally should include sufficient units to cover the period of the license (Fig. 8 and 9).

**2.20** **Item 8(b)** Enter the manufacturer of the base and test transmitter. The make of transmitter should agree exactly with the listing in the latest FCC Type Acceptance List. For the make of the mobile transmitters, enter an asterisk and answer at the bottom of the page as shown in Fig. 9.

**2.21** **Item 8(c)** For base and test transmitters, enter the type number exactly as shown in the latest Type Acceptance List (Fig. 8 and 9). For mobile transmitters, enter an asterisk (Fig. 9).

**2.22** **Item 8(d)** Enter the frequency stability for the particular transmitters proposed as shown in the latest Type Acceptance List (Fig. 8 and 9). Many auxiliary test stations use mobile transmitters, and the frequency stability is sometimes outside the allowable limits [FCC 21.101] for a base station. If a waiver of FCC 21.101 is required, then a note should be added as follows:

A waiver of Section 21.101 of the Commission's Rules is requested to allow operation of a mobile unit as a base test station. This test

8. Transmitters					
(a) No. of Transmitters	(b) Make of transmitters	(c) Transmitter Type or Model No.	(d) Frequency Stability	(e) Emission Designator	(f) Class of Station
1	Motorola Inc.	CC3068	0.0005	16F3	Auxiliary Test
2.19	2.20	2.21	2.22	2.23	2.23
9. By what means will the transmitter(s) be rendered inaccessible to unauthorized persons? Transmitter will be located in an attended telephone equipment building.					
2.24					

Fig. 8—Form 401—Item 8

8. Transmitters					
(a) No. of Transmitters	(b) Make of transmitters	(c) Transmitter Type or Model No.	(d) Frequency Stability	(e) Emission Designator	(f) Class of Station
1	Motorola Inc.	CC3069	0.0005	15F2 16F3	Base
50	*	*	0.0005	16F3	Mobile
2.19	2.20	2.21	2.22	2.23	2.23
9. By what means will the transmitter(s) be rendered inaccessible to unauthorized persons? Base transmitter will be located in a locked telephone equipment building. 2.24					
*Mobile transmitting equipment in accordance with Commission's Radio Equipment List, Equipment Acceptable for Licensing.					
2.20					

Fig. 9—Form 401—Item 8—Mobile Equipment Note

station will operate only on the assigned mobile frequencies either to test base stations or to simulate mobile operation. Therefore, operation within the frequency tolerance limits of mobile equipment will not present a potential interference problem.

**2.23 Items 8(e) and (f):** For base, test, and mobile transmitters enter the emission designator and the class of station in the appropriate columns (Fig. 8 and 9). This information must be consistent with that shown in Item 7.

**2.24 Item 9:** Enter a statement similar to those shown in Fig. 8 and 9 as the particular circumstances dictate.

**2.25 Item 10:** Enter information about the control point location as follows:

(a) Since the control point must normally be able to place the transmitter in an inoperative condition (FCC 21.118), place an "X" in the "Yes" block. Also, since the control point must normally be at a location which is continuously staffed, place an "X" in the "Continuous" block (Fig. 10). If answers other than these are given, explain and request waivers of appropriate Rules, if necessary [FCC 21.118(d)(2) and 21.205(h)(3)].

(b) If the control point is to be located outside the service area of the proposed radio

FCC FORM 401		Page 2
10. Location of Control Point(s) <u>1/ 2/</u>		16. Do Proposed radio facilities contemplate multiplex type of transmission? <u>1/</u> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>2.28</b> If authorization for the channelizing equipment has previously been granted by the Commission, or is being requested under separate application, specific reference thereto should be made herein.
Number and Street <b>872 Morro Street</b> <b>2.25</b>		
City or Town <b>San Luis Obispo</b>	State <b>California</b>	
Can transmitter(s) be placed in an inoperative condition from this contr. point? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Specify hours control point will be staffed by operating personnel <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Limited hours (specify)		
11. Describe the means by which personnel at the control point can determine when there is a deviation from the terms of the station authorization or when operation is not in accordance with the Commission's rules governing the class of station involved. <u>1/ 2/</u> <b>Equipment in accordance with Sections 21.118 and 21.515 of the Commission's Rules</b> <b>2.26</b>		
12. Location of Alarm Center <u>1/ 2/ 3/</u> <b>DNA*</b>		
Number and Street <b>2.27</b>		
City or Town	State	
Can transmitter(s) be placed in an inoperative condition from this alarm center? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Specify hours alarm center will be staffed by operating personnel <input type="checkbox"/> Continuous <input type="checkbox"/> Limited hours (specify)		
13. Describe the means by which personnel at the alarm center can determine when there is a deviation from the terms of the station authorization or when operation is not in accordance with the Commission's rules governing the class of station involved. A brief description of each automatic alarm proposed to be used should be included <u>1/ 2/ 3/</u> <b>DNA*</b> <b>2.27</b>		
14. Will radio facilities be used to connect either control point(s) or alarm center(s) to transmitter(s)? <u>1/ 2/</u> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", identify radio facilities: <b>2.28</b>		
15. Applicants for individual user units should attach as Exhibit _____ the showing required by Section 21.15(i) of Part 21. See Instruction 9.A(h), <u>2/ 3/</u> <b>DNA*</b> <b>2.29</b>		
1/ If application is for individual user mobile unit, or for mobile units other than this item need NOT be answered. 2/ If application is for temporary-fixed station facilities pursuant to Section 21.15(i) of Part 21, this question need NOT be answered. 3/ If application is filed under Part 25 this question need NOT be answered.		

Fig. 10—Form 401—Items 10, 11, 12, 13, 14, 15, and 16

system, place a statement similar to the following on an exhibit and cross-reference it to Item 10:

(Town to be served) is the message center located within the service area. (Control point location) serves only as a control point, and exchange service will be provided in accordance with Section 21.513 of the Commission's Rules.

(c) For manual stations where the switchboard operator performs the function of base station identification and both the control point and the transmitter(s) will be located outside of the service area, authority to identify the station by the name of the rate center located within the service area must be specifically requested [FCC 21.213(b)(3)]. In such cases, a statement similar to the following should be included in the exhibit prepared in accordance with paragraph 2.25(b).

Authority is requested to identify this station by the geographical location (name of rate center to be used by operator) in lieu of the call sign.

**2.26 Item 11:** Enter "Equipment in accordance with Sections 21.118 and 21.515 of the Commission's Rules" (Fig. 10).

(a) If IMTS is proposed, add "See Exhibit No. \_\_\_" and on the exhibit include the following:

Applicant requests a waiver of the requirements of Section 21.208(g)(2) of the Commission's Rules which provide for keeping chronological records of each transmission. To furnish a more convenient service, the proposed radio system is so designed that customers can

Fig. 10—Form 401—Items 10, 11, 12, 13, 14, 15, and 16

place calls without the use of an operator. Keeping chronological records of each transmission would be impractical under these conditions.

(b) Some IMTS Systems record the required traffic data on automatic message accounting tapes (AMA) and therefore do not require this waiver. In such cases, add the following statement:

In accordance with Sections 21.208(d) and 21.208(g)(2), all traffic information will be recorded and retained as prescribed in the Commission's Rules.

**Note:** Steps should be taken to insure that AMA tapes are retained according to the Rules.

**2.27 Items 12 and 13:** Normally answered "DNA\*" (Fig. 10). However, if there are unique conditions where an alarm center is provided, enter the information as appropriate. See the FCC Form 401 Instruction Sheet, Part 9A(e), for the definition of an alarm center.

**2.28 Items 14 and 16:** Answer by placing an "X" in the appropriate box. This is generally answered "No" (Fig. 10). If the answer is "Yes," provide the required information.

**2.29 Item 15:** Enter "DNA\*" (Fig. 10).

**2.30 Item 17:** Provide information about the transmitting antenna(s) associated with the base and test stations (not mobile) as follows:

(a) Enter the full name of the manufacturer and the manufacturer's type number of the antenna(s) (Fig. 11). Typical examples of the antenna make and type number are:

Decibel Products, Inc. DB-264

Mark Products Co. C-3150

Scala Radio Corporation OG4-150

Communication Products Co. 128-509

**Note:** Do not use the trade name only, i.e., Decibel DB-264. If appropriate, state "lower half used" or "upper half used."

(b) Enter the maximum power gain of the antenna with reference to a half-wave dipole antenna as it is proposed to be used at this station; this value should be obtained from the manufacturer's latest data (Fig. 11).

<b>17. Transmitting antenna 1/</b>			
Make Scala Radio Corporation		Type No. LP-150-170	
Maximum antenna power gain over reference half-wave dipole antenna			
2.30		7.2 decibels	
<b>18. Radiation characteristics of installed antenna system 1/</b>			
<input type="checkbox"/> Non directional in horizontal plane			
<input checked="" type="checkbox"/> Directional in horizontal plane with center of main lobe of radiation directed 290 degrees minutes clockwise from true North			
2.31			
Directional antenna pattern (polar diagram) showing power distribution (expressed in decibels of power gain over a reference half-wave dipole antenna) of signal radiated in the horizontal plane is attached hereto as Exhibit No. 3			
<b>19. Antenna transmission line data 1/2/</b>			
Make Andrew Corporation 1/2" Foam Heliax	Type No. HJ4-50	Length (feet) 35	Total Loss (decibels) 0.4
Andrew Corporation	RG8A/U	6	0.2 0.6
<b>20. Description of transmitting antenna structure (Height, include obstruction light, if required)</b>			

Fig. 11—Form 401—Items 17, 18, and 19

**2.31 Item 18:** Provide information about the radiation characteristics of the transmitting antenna as follows:

(a) In the appropriate space, indicate whether a directional or a nondirectional antenna will be used (Fig. 11).

(b) For directional antennas, enter the azimuth of the main lobe of radiation (Fig. 11).

(c) Provide an antenna radiation pattern (polar diagram) as an exhibit similar to Fig. 12. Enter the exhibit number in the space provided in Item 18 (Fig. 11). The radiation pattern

**SECTION 400-521-101**

should be prepared on letter-size polar coordinate paper and should show:

- (1) The antenna power gain distribution in the horizontal plane expressed in decibels [FCC 21.15(j)(4)]
- (2) True north
- (3) The azimuth of the main lobe of radiation (directional antennas only).

**Note:** Horizontal field strength (voltage) patterns provided by some manufacturers are not acceptable until converted to show power distribution.

- (d) For directional antennas, place a small chart on the radiation pattern [paragraph 2.31(c)] showing the antenna gain in dB on bearings of 0, 45, 90, 135, 180, 225, 270, and 315 degrees and on the bearing to each cochannel station within 75 miles. These are the same bearings for which other information must be shown in response to Item 26 (paragraph 2.40 and Fig. 12).

**Note:** If an antenna which is normally nondirectional is so placed that it no longer radiates an equal amount of power in all directions (side-mounted on a metal tower), it must be shown as directional in the application and all information normally required for a directional antenna must be provided.

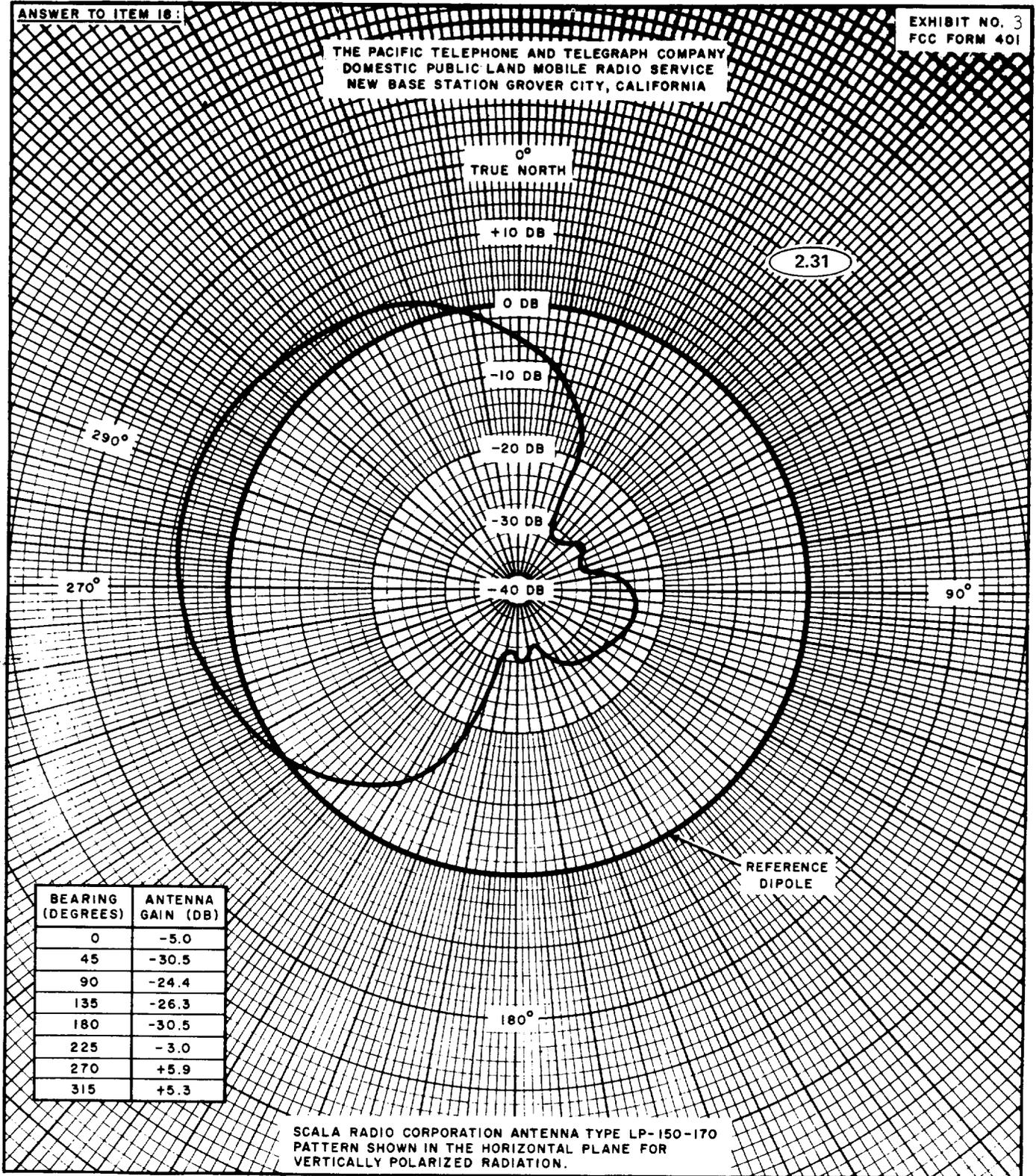


Fig. 12—Exhibit 3—Answer to Item 18—Antenna Pattern

2.32 **Item 19:** Enter information about the transmitting antenna transmission line and associated line equipment in one of the following manners:

(a) For comparatively simple arrangements using no line equipment, list each type of line employed showing the full name of the manufacturer, the manufacturer's type number, the length in feet, and the loss in dB (Fig. 11). Losses should be computed to the nearest 0.1 dB using the latest loss figures obtainable from the manufacturer. Typical examples of transmission line make and type number are:

MAKE	TYPE NO.
Andrew Corporation Foam Heliac 1/2"	FH4
Andrew Corporation Foam Heliac 7/8"	FHJ5, FH5
Andrew Corporation Foam Heliac 1-5/8"	FH7
Decibel Products, Inc. Foam Cable 7/8"	DB-2026

**Note:** Do not itemize or include a miscellaneous loss for connectors, etc.

(b) When diplexers or complicated line arrangements are involved:

(1) Enter "See Exhibit No. \_\_\_" as shown in Fig. 13, and provide a block diagram of the transmission line makeup on an exhibit similar to Fig. 14. If connections for future channels are provided, show this as illustrated in Fig. 14.

(2) Enter information about each type of line involved as in paragraph 2.32(a).

**Note:** If necessary, the manufacturer's full name may be shown on the exhibit (Fig. 14) and an abbreviated name placed in Item 19.

(3) List each item of transmission line equipment showing the name (see preceding note) of the manufacturer, the manufacturer's type number, and the attenuation of the

Make	Type No.	Length (feet)	Total Loss (decibels)
2.32			
20. Description of transmitting antenna structure (Heights given should include obstruction light, if required, and any other summounting appurtenance) 1/2/			
Overall height in feet above ground		Overall height in feet above mean	

Fig. 13—Form 401—Item 19

transmitted signal in dB. The loss must agree with the latest information published by the manufacturer. Also show output power at the transmitter and the antenna. However, if a diplexer is included in the manufacturer's type acceptance number for the proposed transmitter, the loss of this diplexer shall not be itemized. Typical examples of transmission-line equipment are:

MAKE	TYPE NO.
Motorola Inc. Diplexer	TLN-6808A
Farinon Electric Co. Duplexer	11011

2.33 **Item 20:** Enter the information required, and provide a vertical profile sketch as "Exhibit No. \_\_\_." Refer to FCC 21.15(c) which specifies the antenna sketch requirements. Also show the height at the center of antenna radiation. This height is required for calculations in Item 26. (See Fig. 15, 16, and 17.) In cases where a receiving-only antenna structure is associated with the radio station, a copy of FCC Form 714 together with an antenna structure sketch of the proposed antenna should be included as an exhibit [FCC 21.15(d)]. The FCC will specify the lighting and marking requirements, if any, of the receiving-only antenna structure on the construction permit for the radio station.

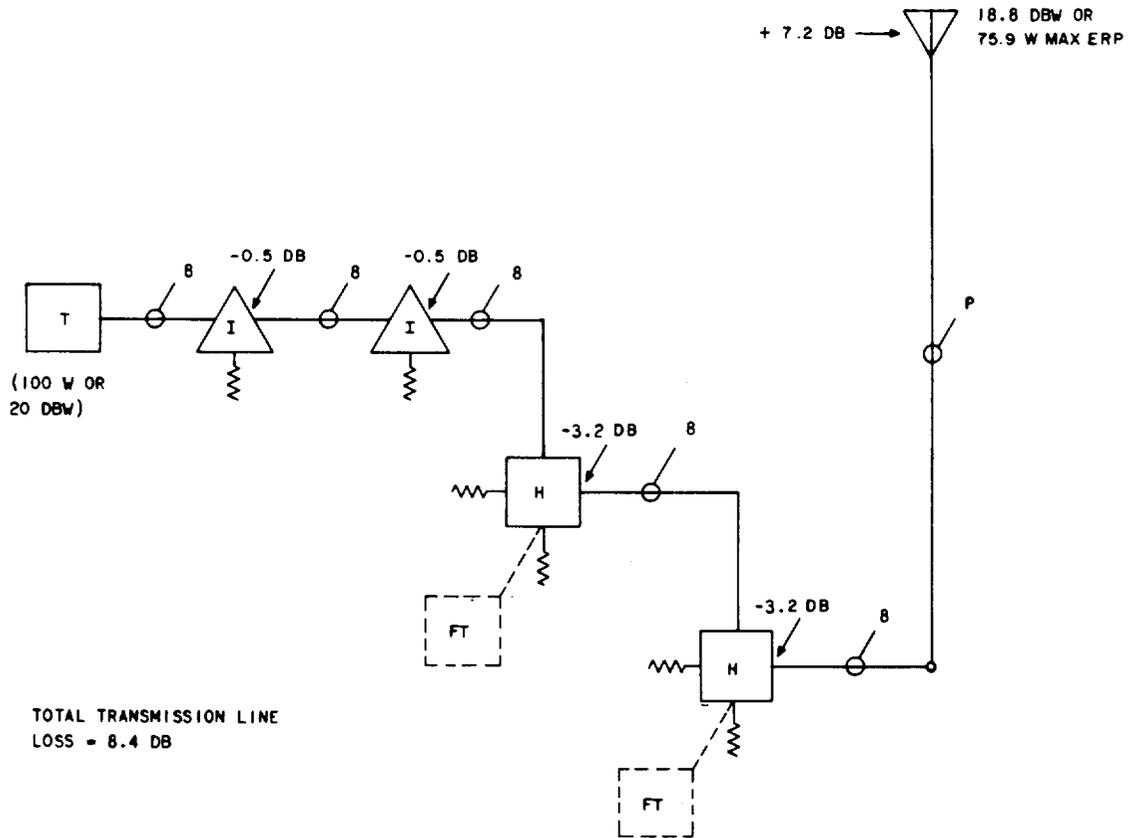
**Note:** If the proposed antenna is placed on an existing authorized antenna structure, the

SUPPLEMENTARY ANSWER TO ITEM 19:

EXHIBIT NO.4  
FCC FORM 401

2.32

BLOCK DIAGRAM OF PROPOSED TRANSMISSION LINE ARRANGEMENT



LEGEND:

PROPOSED BASE TRANSMITTER

FUTURE BASE TRANSMITTER

ISOLATOR, MELABS TYPE R347-666

RESISTANCE, COAXIAL CABLE TERMINATION

ANTENNA SYSTEM, SCALA RADIO CORPORATION TYPE 2CA5-450

HYBRID, MELABS TYPE H4105

COAXIAL TRANSMISSION LINE, AMPHENOL-BORG ELECTRONICS CORPORATION TYPE RG-8A/U TRANSMISSION LINE LENGTH 50 FT

COAXIAL TRANSMISSION LINE, PRODELIN INC. TYPE 64-875 TRANSMISSION LINE LENGTH 12.5 FT

Fig. 14—Exhibit 4—Supplementary Answer to Item 19

2.33

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
NEW AUXILIARY TEST STATION  
SAN LUIS OBISPO, CALIFORNIA  
(GROVER CITY SYSTEM)

ANSWER TO ITEM 20:

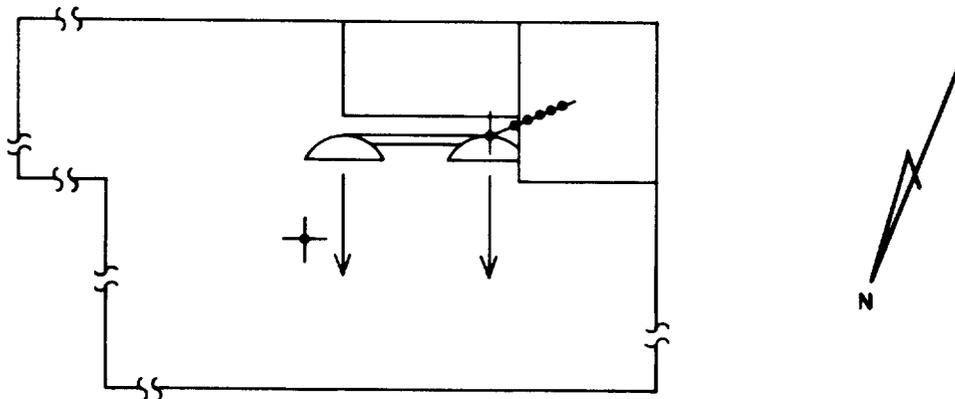
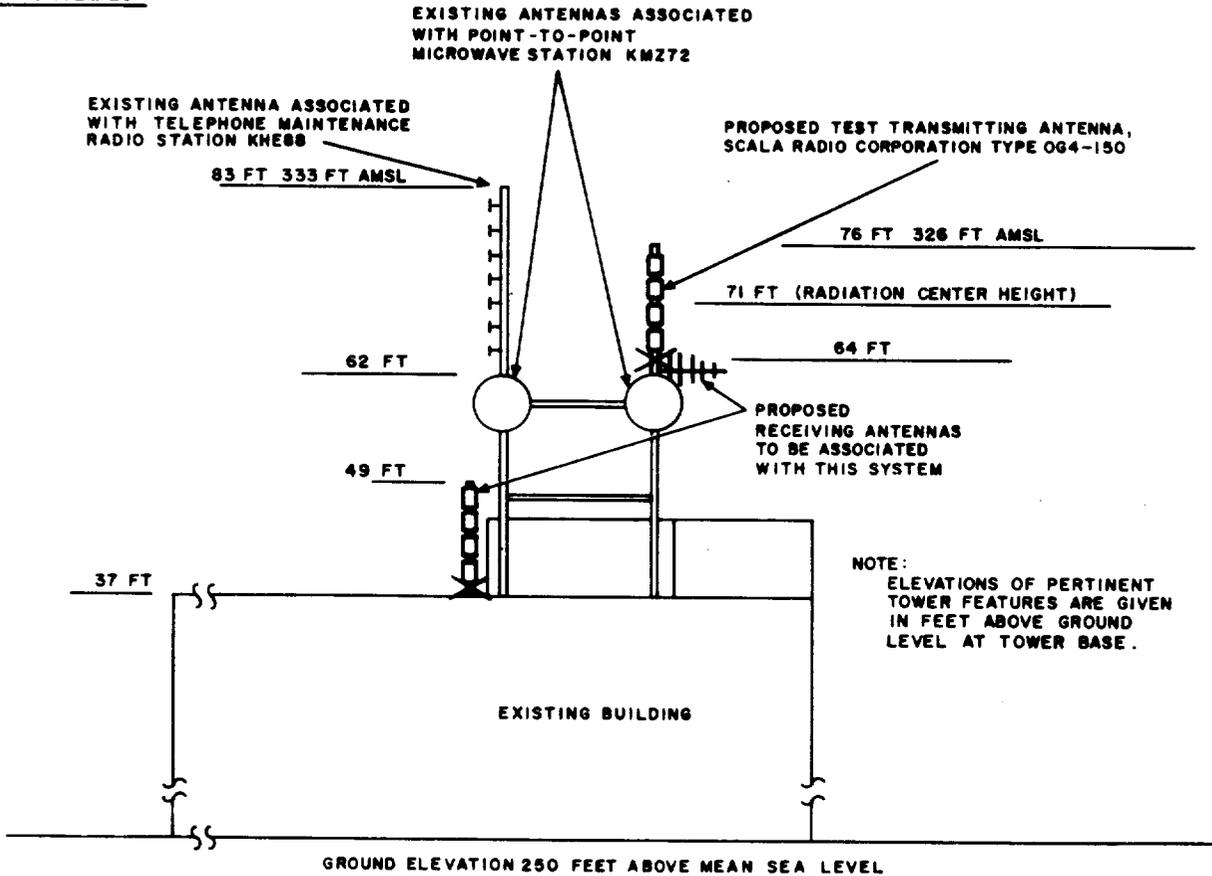


Fig. 15—Exhibit 5—Answer to Item 20—Auxiliary Test Station

2.33

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
NEW BASE STATION GROVER CITY, CALIFORNIA

ANSWER TO ITEM 20:

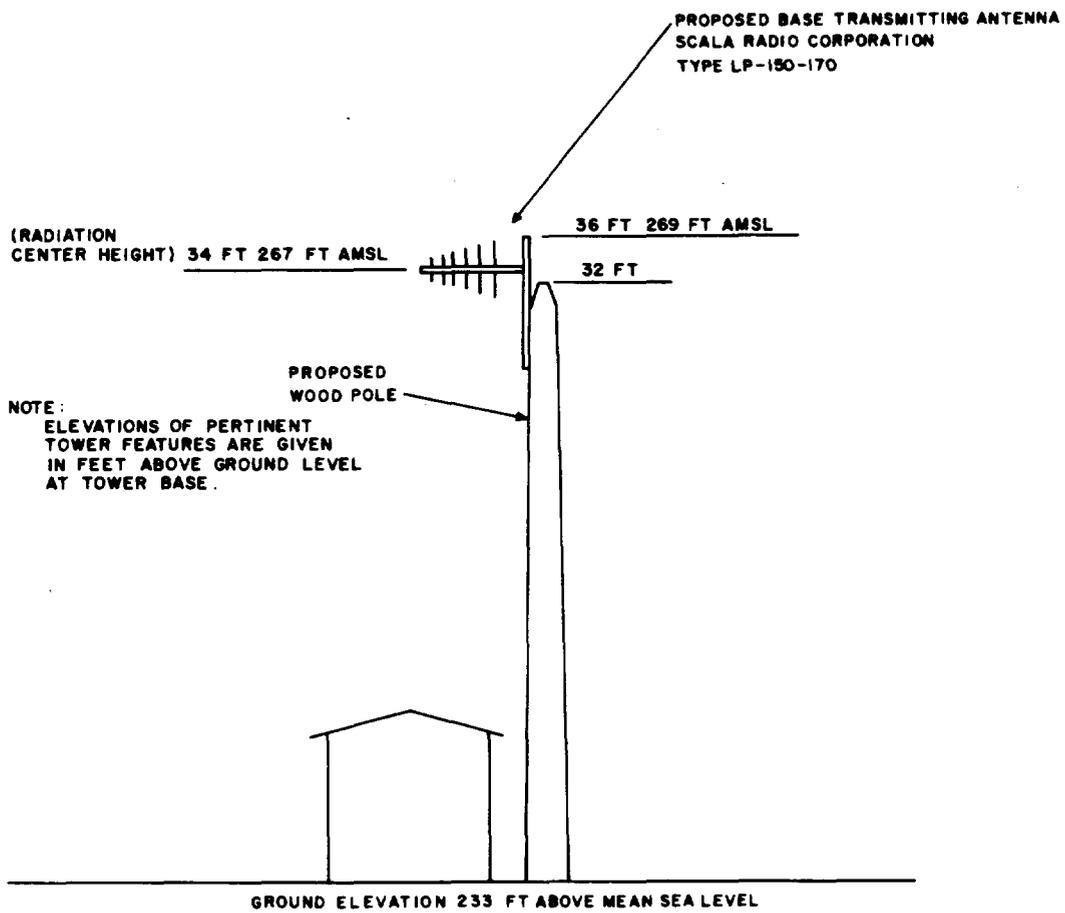


Fig. 16—Exhibit 5—Answer to Item 20—New Base Station

20. Description of transmitting antenna structure (Heights given should include obstruction light, if required, and any other summounting appurtenance) <u>1/2/</u>	
Overall height in feet above ground  76 feet <b>2.33</b>	Overall height in feet above mean sea level  326 feet
Submit, as Exhibit No. <u>2</u> , a vertical profile sketch of total structure (including supporting building, if any) giving heights in feet above ground for all significant features. Clearly indicate existing portion, noting particulars of aviation obstruction lighting already prescribed.	
21. Will proposed transmitting antenna be supported by the antenna structure of any other radio station? <u>1/2/</u> <b>2.34</b> <u>Point-to-Point Microwave Station KMZ/2</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
22. Distance from transmitting antenna structure to nearest runway of nearest aircraft landing area— <u>8450</u> feet. <u>1/2/</u> <b>2.35</b>	
23. List any natural formation or existing man made structure (hills, trees, water tanks, tower, etc.) which applicant believes would tend to shield the antenna structure from aircraft and thereby minimize the aeronautical hazard of the antenna structure <u>1/2/</u> None <b>2.36</b>	
than those associated with a single permanently installed base station, as 21.610 and 21.611 or 21.707 and 21.708, this item need NOT be answered.	

Fig. 17—Form 401—Items 20, 21, 22, and 23

sketch must be consistent with information on file for the existing structure. Check the current authorization and most recent application for the structure.

**2.34 Item 21:** Place an "X" in the appropriate box. If the answer to this item is "Yes," include the radio service and the call sign of each radio station using the structure (Fig. 17).

**2.35 Item 22:** Provide the information requested. For the significance of this item, see Federal Aviation Regulations (FAR) Part 77. Also refer to FCC Part 17 and Fig. 17 and 18.

**2.36 Item 23:** If no shielding objects exist, enter "None" (Fig. 17); otherwise, enter the information requested as shown in Fig. 18.

**Note:** However, even if provided, this may not be sufficient evidence of shielding as required by the Antenna Survey Branch of the FCC. FCC 17.14(a) requires applicants claiming an exemption from notification to the FAA to submit a detailed statement with the application explaining the request. Based on individual circumstances, it may be advisable

structure (hills, trees, water tanks, tower, etc.) in feet above ground. Clearly indicate existing portion, noting particulars of aviation obstruction lighting already prescribed.
21. Will proposed transmitting antenna be supported by the antenna structure of any other radio station? <u>1/2/</u> <input type="checkbox"/> Yes <input type="checkbox"/> No
22. Distance from transmitting antenna structure to nearest runway of nearest aircraft landing area— <u>23,500</u> feet. <u>1/2/</u> <b>2.35</b>
23. List any natural formation or existing man made structure (hills, trees, water tanks, tower, etc.) which applicant believes would tend to shield the antenna structure from aircraft and thereby minimize the aeronautical hazard of the antenna structure <u>1/2/</u> Prudential Tower Building - 1100 ft. NE Height 550 ft. AMSL <b>2.36</b>
than those associated with a single permanently installed base station, as 21.610 and 21.611 or 21.707 and 21.708, this item need NOT be answered.

Fig. 18—Form 401—Item 23

to file FAA Form 7460-1 to avoid processing delays.

**2.37 Item 24:** This item must be completed only for:

- (a) An application for an auxiliary test station which will not be in the same location as the associated base station.
- (b) An application for a base station for which a composite map is submitted in response to Item 25(a).

Otherwise, enter "DNA\*" as shown in Fig. 19. When required, prepare an exhibit by plotting the station's location on a full-size U.S. Geological Survey quadrangle of the area involved. Use a 7.5-minute quadrangle for this purpose if available. The coordinates must be accurate to 1 second of longitude and latitude and should agree with those shown in Item 5 of Form 401. The location of the transmitting antenna is considered to be the station location. Enter the exhibit's number in the space provided in Item 24. [Refer to FCC 21.116 and 21.15(j)(8). Also see discussion of Item 25].

**Note:** If a topographic map which shows the proposed station location has been previously filed, a new map need not be submitted provided that specific reference is made to the previously filed map as shown in Fig. 20.

**2.38 Item 25(a):** This item is to be completed only for base stations. Prepare and furnish as an exhibit the topographic map(s) marked with

FCC Form 401

24. Topographic data for fixed stations 1/2/ DNA\* **2.37**

Attach, in duplicate as Exhibit No. \_\_\_\_\_, a topographic map (a U.S. Geological Survey quadrangle or map of comparable detail and accuracy) with the exact location of the proposed station drawn and identified thereon. In cases where FCC Form 401-A, is required to be filed, such map must be furnished in triplicate and should be attached to such Form.

25. Topographic data for base and aeronautical ground stations 1/2/

(a) Attach, in duplicate as Exhibit No. 6, topographic Map(s) (U.S. Geological Survey quadrangles or maps of comparable detail and accuracy) for the area within 10 miles of the proposed transmitter location and draw thereon the following: **2.38**

(1) Proposed transmitting antenna location plotted accurately to the nearest second of Latitude and Longitude.

(2) Eight uniformly spaced radials each extending to a distance of ten or more miles from the proposed transmitting antenna location in addition to radials in direct line with each co-channel station within 7.5 miles.

(b) Attach, as Exhibit No. 7, profile graphs with reasonably large scales for the radials in (a) (2) above. Each graph shall show the ground elevation along the radial and the elevation of the antenna radiation center. Identify each graph by its azimuth bearing from the proposed antenna location. Direction of True North shall be zero azimuth; azimuths of other radials shall be measured clockwise from True North. Show source of topographical data on each graph. **2.39**

\*DNA-Does not apply

Fig. 19—Form 401—Items 24 and 25

the required radials. [Refer to FCC 21.15(j)(8).] The map is used to check the location of the station, the elevation, and the reasonableness of the profile graphs prepared in response to Item 25(b). When more than one map is required, the maps may be submitted individually or they may be combined into a composite map. During the preparation, bear the following in mind:

(a) General:

- (1) Use U.S. Geological Survey quadrangles when available.
- (2) Use as large a scale of map as may be conveniently handled which still shows the required accuracy.
- (3) Do not make the station plot lines too wide or they will not be accurate to the nearest second.
- (4) Place the exhibit number of the map in the space provided in Item 25(a) (Fig. 19).

NEW AUXILIARY TEST STATION SAN LUIS OBISPO, CALIFORNIA  
(GROVER CITY SYSTEM)

FCC Form 401 Page 3

24. Topographic data for fixed stations 1/2/ **2.37**

Attach, in duplicate as Exhibit No. \_\_\_\_\_, a topographic map (a U.S. Geological Survey quadrangle or map of comparable detail and accuracy) with the exact location of the proposed station drawn and identified thereon. In cases where FCC Form 401-A, is required to be filed, such map must be furnished in triplicate and should be attached to such Form.

25. Topographic data for base and aeronautical ground stations 1/2/ DNA\*

(a) Attach, in duplicate as Exhibit No. \_\_\_\_\_, topographic Map(s) (U.S. Geological Survey quadrangles or maps of comparable detail and accuracy) for the area within 10 miles of the proposed transmitter location and draw thereon the following:

(1) Proposed transmitting antenna location plotted accurately to the nearest second of Latitude and Longitude.

(2) Eight uniformly spaced radials each extending to a distance of ten or more miles from the proposed transmitting antenna location in addition to radials in direct line with each co-channel station.

27. Location of Fixed Antennas Receiving Signals of This Station 1/2/

(a) City or Town	County	State
Geographic coordinates (to be determined to nearest second)		
North Latitude ° ' "	West Longitude ° ' "	
(b) City or Town	County	State
North Latitude ° ' "	West Longitude ° ' "	
(c) List frequencies, call letters, and location of stations to be regularly received by station described in Item 5		

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT. U.S. CODE, TITLE 18, SECTION 1001.

1/ If application is for individual user mobile unit, or for mobile units other than those associated with a single permanently installed base station, this item need NOT be answered.

2/ If application is for temporary-fixed station facilities pursuant to Sections 21.610 and 21.611 or 21.707 and 21.708, this item need NOT be answered.

3/ If application is filed under Part 25 this question need NOT be answered.

4/ If communication with one or more foreign countries is proposed, identify the country(ies) and complete applicable parts of Item 27.

\*DNA—Does Not Apply

This proposed station is collocated with DPLMR Station KMA609. An application for license modification, dated May 12, 1977, is currently on file for Station KMA609 and a map is included as a part of the application.

Fig. 20—Form 401—Item 24—Auxiliary Test Station Collocated With Another Mobile Station

(b) Individual maps:

- (1) Use full-size quadrangles. Do not crop or trim them.
- (2) When several maps are required, prepare a key sheet similar to Fig. 21 to show the relationship.

(c) Composites:

- (1) When individual maps are used for composites, trim only on sides which would be adjoined to other maps.
- (2) Reproduce composites by some method which will produce permanent, legible copies and do not reduce them in size to the point where the elevation, location, and other data cannot be easily read.
- (3) Place a small sketch on the composite to show the relationship of the individual maps used.
- (4) In response to Item 24 (refer to paragraph 2.37), submit a separate map showing the station's location.

**2.39** **Item 25(b):** Prepare the profiles as a separate exhibit (Fig. 22). Also refer to FCC 21.115. If space permits, it is acceptable to place more than one profile on a sheet of graph paper. Note that while the entire 10-mile profile is drawn, only the 2- to 10-mile portion of it is used to determine average elevation.

**2.40** **Item 26(a):** Enter the specified information as follows:

- (a) From the data developed in Item 25(b), enter the average elevation value for each of the eight radials in the first column (Fig. 23). Subtract these values from the height of the antenna radiation center expressed in feet above mean sea level (as shown on the sketch prepared for Item 20), and insert the difference in the second column. Determine the collective average terrain elevation of all eight radials, and enter the value at the bottom of the first column. Subtract this value from the height of the antenna radiation center above mean sea level, and insert the difference at the bottom of the third column.

(b) Where supplemental radials have been drawn and profiles prepared in the direction of cochannel stations within 75 miles, give the information required for all columns as previously described, but do not include this data in the calculations of average terrain elevation. ***If there are no cochannel stations within 75 miles, include an entry to that effect (Fig. 23).***

(c) In the third column, insert the calculated effective radiated power for each radial. This value should be determined from and should agree with the information contained in Item 7(c) (transmitter output power); Item 18, the polar diagram exhibit (antenna radiation characteristics); and Item 19 (transmission line data). (See Fig. 23.) Also refer to FCC 21.505 and 21.506 for maximum power limitations.

**2.41** **Item 26(b):** Enter "DNA\*."

**2.42** **Items 27(a) and (b):** Enter the location(s) of the base station receiver(s). If there is only one receiver location at the base transmitter site, enter "Same as base station" in Item 27(a). If there are two receiver locations, enter the information in Items 27(a) and 27(b), respectively. If there are more than two base receiver locations, enter "See Exhibit No. \_\_\_" as shown in Fig. 24 and place the locations on an exhibit similar to Fig. 25.

**2.43** **Item 27(c):** Enter "Mobile units authorized for this service" and include the mobile transmitting frequency paired with the base station frequency shown in Item 7(a) (Fig. 24).

**2.44** **Item 28(a):** Enter "A suitable frequency meter will be provided" (Fig. 26).

**2.45** **Item 28(b):** Enter "DNA\*" (Fig. 26).

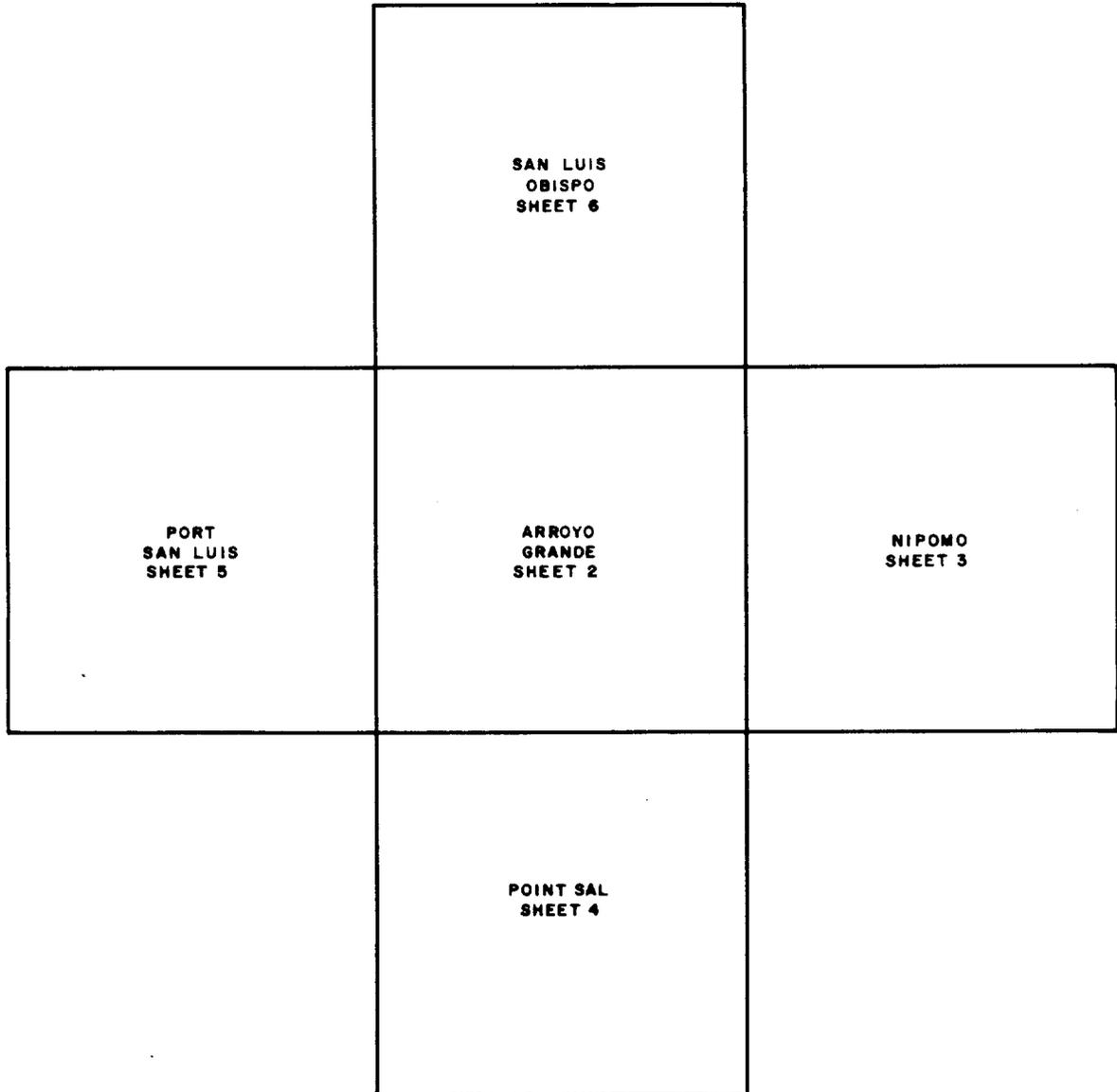
**2.46** **Item 28(c):** Enter the make and model number of the frequency meter to be used; then add the words "or other suitable frequency meter" as shown in Fig. 26. The frequency measuring or calibrating device must have an accuracy of within one-half of the allowed frequency tolerance of the transmitter being measured (i.e., one-half of the tolerance shown in the type acceptance information for the transmitter). Also, this cannot exceed the requirements of FCC 21.101 for the type of station and frequency band involved.

Response to Item 25(a)

EXHIBIT NO.  
FCC FORM 401  
SHEET 1 OF 6

2.38(b)

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
NEW BASE STATION GROVER CITY, CALIFORNIA



TOPOGRAPHIC MAP KEY SHEET

Fig. 21—Exhibit 6—Topographic Map Key Sheet

Response to Item 25(b)

2.39

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
NEW BASE STATION GROVER CITY, CALIFORNIA

PROFILE ON BEARING 045° TRUE NORTH.  
SOURCE OF DATA, EXHIBIT NO. 3.

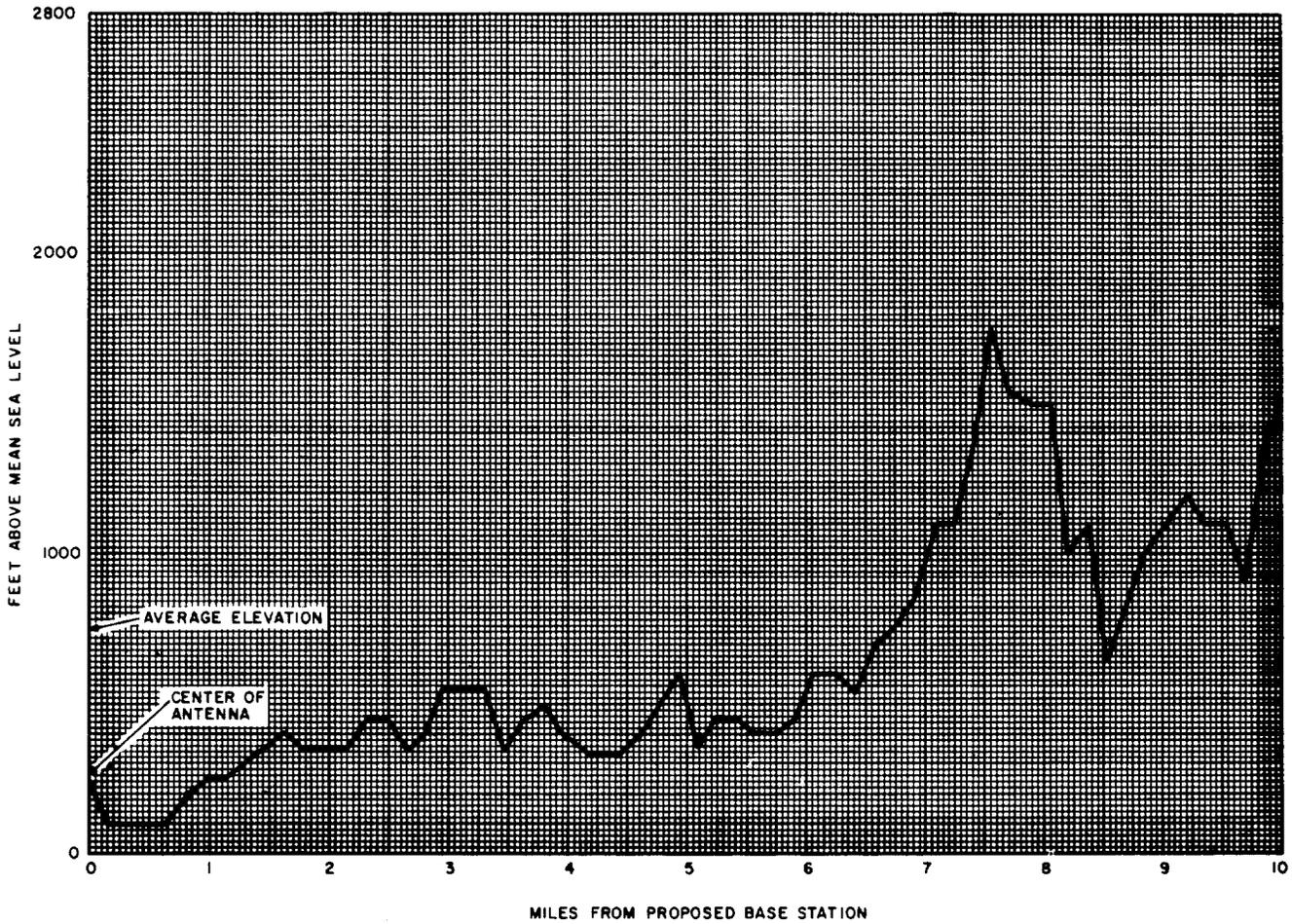


Fig. 22—Exhibit 7—Profile

Show source of topographical data on each graph.

26.(a) From the profile graphs in 25(b) for the eight mile distance between two and ten miles from the proposed transmitting antenna location, and in accordance with the procedure prescribed in the Commission's rules, supply the following tabulation of data: 1/ 2/ 3/

Radial Bearing (Degrees True)	Average Elevation of Radial (2-10 mi.) in Feet Above Mean Sea Level	Height of Antenna Radiation Center in Feet Above Average Elevation of Radial (2-10 miles)	Effective Radiated Power in Radial Direction (watts)
2.40 0°	427	-160	6.90
45°	750	-483	0.02
90°	625	-358	0.08
135°	285	-18	0.05
180°	62	205	0.02
225°	0	267	10.40
270°	0	267	86.70
315°	422	-155	80.90
(*)			
(*)	There are no cochannel stations within 75 miles		
(*)			
Average Terrain Elev. 428 ft		Antenna Radiation Center Height in Feet Above Average Terrain: -161	
2.41	direction of each co-channel station within 75 miles. Do not include in case of average terrain elevation.		

26.(b) For any antenna associated with a communication satellite earth station, show the minimum elevation proposed to be used: DNA degrees.

\*DNA-Does not apply CERTIFICATION OF PERSON RESPONSIBLE FOR Engineering Information Submitted

Fig. 23—Form 401—Items 26(a) and (b)

Page 3

27. Location of Fixed Antennas Receiving Signals of This Station 1/ 2/ 2.42

(a) City or Town See Exhibit No. 8 County \_\_\_\_\_ State \_\_\_\_\_

Geographic coordinates (to be determined to nearest second)

North Latitude ° ' " West Longitude ° ' "

(b) City or Town \_\_\_\_\_ County \_\_\_\_\_ State \_\_\_\_\_

North Latitude ° ' " West Longitude ° ' "

(c) List frequencies, call letters, and location of stations to be regularly received by station described in Item 5

Mobile units authorized for this service-  
157.80 MHz 2.43

28. Frequency measurements

Fig. 24—Form 401—Item 27

**Note:** Since the frequency measuring equipment shown must be capable of the required accuracy for all proposed facilities, it may be necessary to list more than one type of meter when more than one station

or more than one frequency band is involved. If so, indicate the facilities with which each meter will be associated.

2.47 **Item 28(d):** Enter the accuracy in percent for each frequency meter shown in Item 28(c), Fig. 26. Immediately following the figure(s), add "or better" as shown in Fig. 26. When more than one meter is involved, indicate the facility with which the meter information is associated.

2.48 **Item 28(e):** Enter "By comparison with other standards" (Fig. 26).

2.49 **Item 28(f):** Enter "As required" (Fig. 26).

2.50 **Engineering Certification:** The engineering certification (bottom of Page 3 of FCC Form 401) must be signed by the person having overall responsibility for the engineering data entered in Items 1 through 28. Normally, this will be the chief engineer of the company or of the area of the company which prepared the application. The mailing address of the person who signs this certification and the date of signing must be entered in the space provided (Fig. 27).

2.51 **Items 29 Through 38:** These items should be cross-referenced to the current FCC Form 430 on file with the Commission as shown in Fig. 28.

2.52 **Items 39 and 40:** Answer as shown in Fig. 28 and 29.

2.53 **Item 41:** Normally answer intrastate services (i.e., 2-way land mobile and 1-way signaling) as shown in Fig. 30. Attach an exhibit showing a schedule of the proposed charges (or a copy of those sections of the tariff which include the charges) as shown in Fig. 31. However, if you have previously filed an application which includes the current applicable charges for the proposed service and this exhibit is more than one page in length [FCC 21.13(b)], you may respond to the item by referencing the station call sign, date of filing, and file number of the application which included this information. Applications for air-ground stations, primarily an interstate service, should be answered as shown in Fig. 29.

2.54 **Item 42:** For the majority of locations, this item will be answered as shown in Fig. 29. However, each company must determine

EXHIBIT NO. 8  
FCC FORM 401

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
NEW BASE STATION GROVER CITY, CALIFORNIA

Answer to Items 27(a) and (b): 2.42

<u>City or Locality</u>	<u>(County)</u>	<u>State</u>	<u>Coordinates</u>
Tassajera Peak	(San Luis Obispo)	California	35° 23' 33" N 120° 42' 29" W
Grover City	(San Luis Obispo)	California	35° 07' 37" N 120° 36' 22" W
San Luis Obispo	(San Luis Obispo)	California	35° 16' 58" N 120° 39' 45" W

Fig. 25—Exhibit 8—Answer to Items 27(a) and (b)

28. Frequency measurements

(a) What provision will be made for measurement and periodic checking of the station frequency?  
A suitable frequency meter will be provided. 2.44

(b) If a frequency measuring device is not to be provided, give name and address of frequency checking agency to be employed by applicant  
DNA\* 2.45

(If frequency checking agency is shown above, the succeeding subparagraphs of this question are not to be answered)

(c) What type of frequency measurement or calibration apparatus will be used? MCH-5 frequency meter or other suitable frequency meter. 2.46

(d) Within how many cycles or within what percentage will this apparatus measure the frequency?  
0.00025% or better 2.47

(e) What methods will be used to check calibration of this precision instrument?  
By comparison with other standards. 2.48

(f) How often will calibration of this instrument be checked?  
As required 2.49

\*DNA—Does not apply

Fig. 26—Form 401—Items 28(a), (b), (c), (d), (e), and (f)

whether this answer is appropriate for radio installations in its territory and develop an appropriate response if necessary.

**Note:** Some state commissions are now requiring a franchise for new 1-way paging stations or expansions to existing 1-way paging stations. It is advisable to review this matter with your state commission prior to filing an application for a new or expanded paging station. The FCC will not accept these applications for filing in cases where their information indicates state authority is required unless one of the following is submitted in response to Item 42.

(a) In cases where a state franchise is required to provide the proposed service and such authorization is not available at the time the application is filed, the applicant must request a waiver of FCC 21.13(f) to permit submission of the application prior to obtaining state certification. The state certification must be obtained before the FCC will grant the construction permit.

(b) In questionable cases, the applicant may state as a response to Item 42 that a letter has been requested from the state commission

26.(b) For any antenna associated with a communication satellite earth station, show the minimum elevation proposed to be used: \_\_\_\_\_ degrees.

**2.50** CERTIFICATION OF PERSON RESPONSIBLE FOR PREPARING Engineering Information Submitted in this Application

I hereby certify that I am the technically qualified person responsible for preparation of the engineering information contained in this application; that I am familiar with Parts 21 or 25 of the Commission's Rules; that I have either prepared or reviewed the engineering information submitted in this application; and, that it is complete and accurate to the best of my knowledge.

By J. J. Smith (signed) J. J. Smith (printed) Dated this 6<sup>th</sup> day of July 1977

Address: 111 North Market Street, Room 711 San Jose, California 95113  
Number Street City State

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT U.S. CODE, TITLE 18, SECTION 1001.

1/If application is for individual user mobile unit, or for mobile units other than those associated with a single permanently installed base station, this item need NOT be answered.  
2/If application is for temporary-fixed station facilities pursuant to Sections 21.610 and 21.611 or 21.707 and 21.708, this item need NOT be answered.  
3/If application is filed under Part 25 this question need NOT be answered.  
4/If communication with one or more foreign countries is proposed, identify the country(ies) and complete applicable parts of Item 27.

Fig. 27—Form 401—Certification

on this issue and will be forwarded to the FCC when received.♦

- 2.55** **Item 43:** Answer as shown in Fig. 29.
- 2.56** **Item 44:** Enter the exhibit number in the space provided in Item 44 (Fig. 29). Provide an exhibit similar to Fig. 32 to demonstrate the amount of time spent on noncommon carrier activity. Each company must determine the values for Item 44. Refer to local instructions for completing this item.
- 2.57** **Items 45 and 46:** Answer as shown in Fig. 29.
- 2.58** **Item 47:** Show the estimated cost to establish the proposed facilities (Fig. 29). Do not include the cost of such items as telephone or power extensions, the control terminal, or other costs involving the connection of the radio installation to the general telephone network.
- 2.59** **Item 48:** Provide an exhibit similar to Fig. 34 to demonstrate financial qualifications. (If these requirements have not been met by your company, more specific information must be submitted as required by FCC 21.17). Enter the exhibit number in the space provided in Item 48 (Fig. 33).
- 2.60** **Items 49 and 50:** Prepare an exhibit similar to Fig. 35 giving the required information. Enter the exhibit number in the spaces provided in Items 49 and 50 (Fig. 33). This

exhibit should include a general description of the type of service to be provided and the technical personnel responsible for the station. The particular description will of course depend on the individual characteristics of the proposed station. Included should be:

- (a) A description of the system operation (service characteristics)
  - (b) A general description and the number of technical personnel available for maintenance and operation of this station
  - (c) Class of licenses held by these technical people
  - (d) Employer of these technical personnel
  - (e) Normal location of these technical personnel
  - (f) Number on call 24 hours per day
  - (g) Estimated time for technical people to reach this station for maintenance and repairs.
- 2.61** **Item 51:** Enter "DNA\*" (Fig. 36).
- 2.62** **Item 52:** Information must be furnished to justify the need for the proposed facilities. Refer to FCC 21.500 and also to Practice 400-521-100 for detailed instructions on the preparation of the "showing of need." This information should be furnished on an exhibit (Fig. 36 and 37).

NEW BASE STATION GROVER CITY, CALIFORNIA

2.51

Page 4

FCC Form 401		LEGAL AND OTHER DATA	
9. Applicant is: (check one) *			
<input type="checkbox"/> Individual		<input type="checkbox"/> Partnership	
<input type="checkbox"/> Corporation		<input type="checkbox"/> Unincorporated Association	
		(X yes or no)	YES NO
10. Is individual Applicant or each member of a partnership Applicant a citizen of the United States? *			
11. Is Applicant or any party to this application a representative of an alien or of a foreign government? *			
12. If Applicant is a Partnership, attach as EXHIBIT _____, one copy, properly certified, of the partnership agreement, or if oral, complete details thereof. *			
13. If Applicant is a Corporation (Including Joint stock Companies) or Association, answer the following: *			
(See 21.15c of the Rules)			
a. Under laws of what State or Country is it organized? <u>IL</u>			
(1) Attach as EXHIBIT(s) _____ a certified copy of the Articles of Incorporation (charter) and the By-Laws.			
(2) Attach as EXHIBIT _____ the names, addresses and percentages held of all stockholders owning and/or voting 10 percent or more of applicant's stock.			
b. Give address of applicant's principal office:			
_____			
c. Is any director or officer an alien?			
d. Is more than one-fifth of the capital stock or membership interest voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?			
e. Is Applicant directly or indirectly controlled by any other corporation? (If "Yes", give names and addresses of all such controlling corporations including organization having final control.)			
f. Is the Applicant directly or indirectly controlled by any other corporation of which any officer or more than one-fourth of the directors are aliens? (If "Yes", attach as EXHIBIT _____ a statement relating the facts)			
g. Is more than one-fourth of the capital stock of any controlling corporation owned of record, or may it be voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign government? (If "Yes", attach as EXHIBIT _____ a statement relating the facts)			
h. Under laws of what State or country is each such controlling corporation organized? _____			
(Attach as EXHIBIT(s) _____ a certified copy of the Articles of Incorporation (Charter) and the By-Laws)			
34. Has applicant or any party to this application had any FCC station license or permit revoked or had any application for permit, license or renewal denied by this Commission? *			
(If "Yes", attach as EXHIBIT _____ a statement giving call sign of license or permit revoked and relate circumstances)			
35. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or of unfair methods of competition? *			
(If "Yes", attach as EXHIBIT _____ a statement relating the facts)			
36. Has the applicant, or any party to this application, or any person directly or indirectly controlling the applicant ever been convicted of a crime for which the penalty imposed was a fine of \$500 or more, or an imprisonment of six months or more? *			
(If "Yes", attach as EXHIBIT _____ a statement relating the facts)			
37. Is applicant, or any person directly or indirectly controlling the applicant, presently a party in any matter referred to in Items 34, 35 and 36? *			
(If "Yes", attach as EXHIBIT _____ a statement relating the facts)			
38. Is applicant directly or indirectly, through stock ownership, contract, or otherwise currently interested in the ownership or control of any other radio stations licensed by this Commission? If "Yes", give: *			
Call Sign & Service	Location	Name of Licensee	
39. Has applicant ever been directly or indirectly interested in the ownership or control of any radio stations other than those stated in 38 above? If "Yes", give:			
Call Sign & Service	Location	Name of Licensee	
Licensed radio stations	formerly owned or operated	by companies of the	
Bell System.			
		2.52	

X

\* Data on file with the Commission on current FCC Form 430 (as amended to date).

Fig. 28—Form 401—Example of Page 4

FCC Form 401		Page 5	
		YES	NO
40. Will applicant offer communication services to the public 24 hours every day? <u>1/2/</u> <span style="float: right;">2.52</span> If "No", state hours and days during which station will be open for such service:			
Hours	Days	X	
41. Are the charges for the proposed service contained in a tariff filed with the FCC? <u>1/2/</u> <span style="float: right;">2.53</span> If "Yes", identify: <u>FCC Tariff 263</u> If "No", attach as EXHIBIT _____ a schedule of proposed charges. (The statement of rates required herein does not constitute a filing of schedules of charges required by Section 203 of the Communications Act of 1934, as amended, prior to commencing service.)		X	
42. Does local or state law require any franchise or other authorization to maintain or render the services proposed herein? <u>1/</u> <span style="float: right;">2.54</span> (If "Yes", attach as EXHIBIT _____ a single certified copy of franchise or authorization)			X
43. If application is for modification of a construction permit: <u>1/</u> <span style="float: right;">2.55</span> (a) The time required to complete construction after authority is granted is <u>INA</u> months. (b) Attach as EXHIBIT _____ a statement giving: (1) the extent of construction as of the date of this application, and (2) the justification for not having completed construction in accordance with outstanding construction permit.			
44. In what businesses, employment or activities, other than communications common carrier, are applicant and its principals engaged? <u>1/</u> <span style="float: right;">2.56</span> (Attach as EXHIBIT <u>10</u> a statement giving the following for each such activity: (a) nature of activity (b) location of activity (c) hours devoted to each activity			
45. What is applicant's relation to station? <u>1/</u> <span style="float: right;">2.57</span> <input checked="" type="checkbox"/> Owner <input type="checkbox"/> Lessee <input type="checkbox"/> Other (Attach as EXHIBIT _____ copies of all agreements affecting applicant's ownership, operation, use and/or control of the station facilities.)			
46. Is applicant directly or indirectly interested in or affiliated with any entity or person engaged in the business of providing a public land line message telephone service. <u>1/</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <span style="float: right;">2.57</span> (If "Yes", and applicant is not a landline telephone carrier, attach as EXHIBIT _____ a statement relating the facts)			
47. Estimated cost to establish proposed facilities: <span style="float: right;">2.58</span>			
a. Transmitter(s) and receiver(s)	\$ <u>6,700</u>		
b. Antenna(s) and waveguide or antenna transmission line(s)	\$ <u>600</u>		
c. Power plant, control, and common equipment	\$ _____		
d. Land, buildings, towers, etc.	\$ <u>5,100</u>		
e. Channelizing equipment	\$ _____		
f. Miscellaneous	\$ <u>800</u>		
Total cost	\$ <u>13,200</u>		
48. Attach as EXHIBIT _____ a statement showing applicant's financial ability to construct and operate this station. Include the most recent balance sheet _____ as of a date at least within 90 days of the filing of this application. If _____ answered. _____ of written instruments, other _____			
2/If application is filed under Part 25 this question need NOT be answered.			

\*INA--Does Not Apply

Fig. 29—Form 401—Items 40 Through 47

**Note:** The actual market study should not be submitted as part of the application.

with each application, should be on an exhibit and listed under Item 53. This information includes:

**2.63 Item 53:** Answer "Yes" and enter the numbers of all attached exhibits in numerical order as shown in Fig. 36. Show the item number (of Form 401) or FCC Rule for which each exhibit was submitted. (Instructions are attached to Form 401.) Information not requested by a particular item on FCC Form 401, but required to be submitted

- (a) The environmental statement required by FCC 21.13(e)
- (b) Identification of any application (in the DPLMR Service) pending at the FCC for new or additional facilities within the coverage area of the proposed station as required by FCC 21.15(i)(2)

FCC Form 401		Page 5	
		YES	NO
40. Will applicant offer communication services to the public 24 hours every day? <u>1/2/</u> If "No", state hours and days during which station will be open for such service:			
Hours	Days		
41. Are the charges for the proposed service contained in a tariff filed with the FCC? <u>1/2/</u> If "Yes", identify: _____ <b>2.53</b> If "No", attach as EXHIBIT <u>9</u> a schedule of proposed charges. (The statement of rates required herein does not constitute a filing of schedules of charges required by Section 203 of the Communications Act of 1934, as amended, prior to commencing service.)			X
42. Does local or state law require any franchise or other authorization to maintain or render the services proposed herein? <u>1/</u> (If "Yes", attach as EXHIBIT _____ a single certified copy of franchise or authorization)			
43. If application is for modification of a construction permit: <u>1/</u> (a) The time required to complete construction after authority is granted is _____ months. (b) Attach as EXHIBIT _____ a statement giving: (1) the extent of construction as of the date of this application, and (2) the justification for not having completed construction in accordance with outstanding construction permit.			
44. In what businesses, employment or activities, other than communications common carrier, are applicant and its principals engaged? <u>1/</u> (Attach as EXHIBIT _____ a statement giving the following for each such activity: (a) nature of activity (b) location of activity (c) hours devoted to each activity)			
45. What is needed			

Fig. 30—Form 401—Item 41

## (c) Site availability required by FCC 21.15(a).

**Note:** ♦All applications for new site locations and applications to add facilities to existing sites (e.g., additional antennas, transmitters) must include a statement concerning the availability of the site for the new or additional facilities.

- (1) If the site is owned by the applicant, a statement to that effect will be sufficient. Do not assume in cases where an antenna sketch shows the addition of the proposed antenna to the roof of a telephone company building that it is not necessary to make a site availability statement. Prepare a separate exhibit stating that the site is owned, and show the exhibit number and appropriate Rule section under Item 53.
- (2) If the site is not owned by the applicant, a letter signed by the lessor showing any

agreement for the use of the site or free access to the station facilities must be included with the application. In lieu of a letter, a copy of the lease may be submitted with the application. In cases where new facilities [additional channel(s)] are to be added to an existing location and the site is presently under lease, it must be demonstrated to the FCC that the lessor will permit the installation of the additional equipment.♦

**2.64 Certification:** Enter the official corporate name of the company (spelled out in full) in the space provided. The name entered must be identical to the company name shown in Item 1. The certification must be signed by an officer of the company or by a duly authorized employee. The date of signing and the printed name of the person signing and his title must be entered as shown in Fig. 36.

2.53

EXHIBIT NO.9  
FCC FORM 401

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
NEW BASE STATION, GROVER CITY, CALIFORNIA

Answer to Item 41:

Proposed Charges\*

Basic Service Charges per Mobile Unit

Establishment of Service Charge	\$11.75
Monthly Charge	5.80

Charge and Timing for Terminal Usage

Calls will be timed on a cumulative monthly radio link usage basis. A charge of \$ .30 per minute will be applied to the total time accumulated.

Radio equipment (including the transmitter, receiver, antenna, control unit, and associated wiring) when provided, installed, and maintained by the telephone company will be charged for as follows:

	Installation Charge	Monthly Charge
Manual Sets	\$80.00	\$55.00

\*Rates, terms, and conditions for this service will be filed with the California Public Utility Commission on (date). The above charges are the applicant's best estimate of those which will be filed for the proposed service.

Fig. 31—Exhibit 9—Answer to Item 41

2.56

EXHIBIT NO. 10  
FCC FORM 401

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
NEW BASE STATION GROVER CITY, CALIFORNIA

Answer to Item 44:

In addition to Common Carrier Activity the Pacific Telephone and Telegraph Company is also engaged in directory advertising, miscellaneous physical properties and other investments within the state of California. The annual hours devoted to these activities by company employees are estimated to be 2,850,000. This represents 1.5% of the total work hours of employees of this company.

Fig. 32—Exhibit 10—Answer to Item 44



EXHIBIT NO.11  
FCC FORM 401

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
NEW BASE STATION GROVER CITY, CALIFORNIA

2.59

Answer to Item 48:

Balance sheets (MR No. 2) of this company are filed monthly with the Commission. Annual operating revenues of one million dollars or more are demonstrated in the Annual Report Form M also filed with the Commission.

The Pacific Telephone and Telegraph Company maintains a credit rating equivalent to, or better than, a Standard & Poor's Rating of "BBB" or a Moody's Bond Rating of "Baa."

Fig. 34—Exhibit 11—Answer to Item 48

EXHIBIT NO. 12  
FCC FORM 401THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
NEW BASE STATION GROVER CITY, CALIFORNIA

2.60

Answer to Items 49 and 50:

Applicant proposes to provide manual mobile telephone service in Grover City, California and vicinity. Available channels will be selected manually by the customer and calls will be completed by a mobile service operator.

All maintenance and operation of this station will be performed by technically qualified personnel of this company and will be under its direct supervision. Three employees holding valid first-class and ten employees holding valid second-class radiotelephone operator licenses will normally be associated with maintenance and repair of this station. A sufficient number of these personnel will be on duty at the maintenance center located in San Luis Obispo, California, and will be available to be promptly dispatched to ensure proper station operation.

The control point to be associated with this station will be manned 24 hours a day, and a continuous surveillance of the station operation will be maintained. In case of any indication of equipment malfunction requiring correction, maintenance personnel, whose primary responsibility is the proper operation and maintenance of this station, will be promptly dispatched. Under normal conditions the maintenance personnel will arrive at the station within 2 hours.

Fig. 35—Exhibit 12—Answer to Items 49 and 50

51. Applicants not engaged in providing public wire line communication service shall attach as EXHIBIT \_\_\_\_\_ a statement showing the extent to which the applicant intends actively to participate in the day-to-day operation of the proposed facilities. In the event the applicant does not intend actively to participate in the day-to-day management and operation, he should state his reasons therefor and fully disclose the details of the proposed operations, including a showing of how control thereof will be retained by the applicant. The statement shall also set forth the names and addresses of any and all persons (except applicant) who have a substantial interest or responsibility in the supervision, operation, maintenance and/or control of proposed facilities, the relationship of each such person to the applicant and the extent of control to be exercised by such persons. DNA\* 2.61

52. Attach as EXHIBIT 13 a complete statement, setting forth facts which show how the instant proposal will be in the public interest and will satisfy specified needs for service, detailing the number and activities of prospective customers and disclosing all relationships, affiliations or connections between the applicant and prospective customers. If surveys or solicitations have been made, the nature and detailed results thereof should be submitted. The statement should contain the names of any common stockholders, officers, directors, employees or individuals closely related to the management or control of the facilities of the applicant or any subscriber. 2.62

53. Is applicant personally familiar with the provisions of Part 21 or 25, as applicable, of the Commission's Rules?  Yes  No 2.63

EXHIBITS AND APPLICABLE SEC. and/or ITEM NO. OF RULE OR FORM (See Instruction 7)					
Exhibit Number	Sec and or Item No. of Rule or Form	Exhibit Number	Sec and or Item No. of Rule or Form	Exhibit Number	Sec and or Item No. of Rule or Form
1	Rule Section 21.1	(e)	Environmental Statement		
2	Item 7				
3	Item 18	12	Item 49 and 50		
4	Item 19	13	Item 52		
5	Item 20	14	Rule Section 21.1	(a)	Site Availability
6	Item 25(a)				
7	Item 25(b)		FCC Form 714		
8	Item 27(a) and (b)				
9	Item 41				
10	Item 44				
11	Item 48				

CERTIFICATION

The APPLICANT waives any claim to the use of any particular frequency or of the ether as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests a construction permit in accordance with this application. All statements made in the attached exhibits are a material part thereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that the statements made in this application are true, complete and correct to the best of his (her) knowledge and belief, and are made in good faith.

Dated this 1st day of August, 1977.

**The Pacific Telephone and Telegraph Company**  
Applicant (must correspond with that shown on page 1)

By J. J. Jones J. J. Jones  
(printed) (signed)

Title Vice President  
(position held by person signing for applicant)

WILLFUL FALSE STATEMENTS MADE ON THIS APPLICATION ARE PUNISHABLE BY FINE AND IMPRISONMENT, U.S. Code, Title 18, Section 1001, AND OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT, U.S. Code, Title 47, Section 316(a)(1).

2.64

1/If application is for individual user mobile unit, or for mobile units other than those associated with a single permanently installed base station, this item need NOT be answered.  
2/If application is filed under Part 25 this question need NOT be answered.

\*DNA-Does Not Apply

Fig. 36—Form 401—Example of Page 6

EXHIBIT NO. 13  
FCC FORM 401  
Page 1 of 4

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY (2.62)  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
NEW BASE STATION GROVER CITY, CALIFORNIA

Answer to Item 52:

As covered in the transmittal letter, the applicant proposes to establish new facilities in the Domestic Public Land Mobile Radio Service in Grover City, California. Areas to be served by this system include San Luis Obispo and the beach communities of Pismo Beach, Grover City, and Arroyo Grande. The principal business activities of the people in these communities are farming, ranching, and providing recreational facilities for tourists. The towns and surrounding territory within the service area include a population of about 35,000 people.

In an effort to ascertain whether there is a market for this service in the Grover City area, the applicant hired an independent marketing research firm, Holmes Marketing Research Inc., to conduct a survey. Details of the survey are included on the following pages.

This survey clearly shows an initial demand of 25 mobile units with a potential of about 75 mobile subscribers over the next three years. In the opinion of the applicant, this proposed service will be in the public interest, convenience, and necessity.

Fig. 37—Exhibit 13—Answer to Item 52

**3. CONSTRUCTION PERMIT FOR ADDITIONS OR CHANGES TO EXISTING STATION**

**General Information**

**3.01** An application for a construction permit (CP) requesting authority to change facilities or to install additional radio facilities at an existing licensed Domestic Public Land Mobile (DPLM) radio station must be a formal application submitted on FCC Form 401. See Practice 400-521-100 and local instructions for information on the number of copies and to whom they should be sent.

**3.02** Since CP applications both for new stations and for changes or additions to existing stations must be submitted on Form 401, their preparation is quite similar. It may be helpful therefore to review Part 2 of this Practice as an aid to understanding why certain items (of Form 401) are answered in a particular way in the following paragraphs.

**3.03** The accompanying example was prepared for an existing DPLM station located at Stockton, California. The existing facilities at this station include two 150-MHz channels and one 450-MHz channel. The application used in the following example requests authority to add one additional 450-MHz DPLM channel. The proposed facilities are to consist of an added 450-MHz base station transmitter, the associated separate antenna system, and an additional frequency for the existing auxiliary test transmitter. The station is presently licensed for all available 150- and 450-MHz mobile frequencies and has a sufficient number of mobile units authorized for future growth. Accordingly, the following example application does not request an additional mobile frequency or an increase in the number of mobile units authorized. The proposed base and auxiliary test facilities are to be at the same location; therefore, both stations are covered on the same application form.

**3.04** A completed application will consist of Form 401 with responses made to all items, associated exhibits, and (if necessary) a completed FCC Form 714. Form 714 will be required in all cases in which a new antenna structure is necessary or in which any change is made to an existing antenna structure. See Practice 400-550-102 for instructions on preparing Form 714.

**3.05** Each application should be accompanied by a letter of transmittal. This letter should clearly summarize the nature of the proposed additions or changes to the existing station. It is advisable to provide a reference at the top of your letter identifying the radio service, the call sign, and the location of the station.

**3.06** Much of the information required in an application for changes or additions to an existing station will have been previously filed with the FCC on earlier applications. Of this, such items as station location, geographical coordinates, etc., are shown on the station's current license (or other authorization). The information shown in any subsequent applications either must agree with the previously filed information and the current license, or the erroneous part of such information must be corrected in the new application. When such corrections are required, an explanation of the changes should be given.

**3.07** All applicable items of Form 401 must be completed for each application. Only exhibits previously filed with the Commission which are more than one 8-1/2 by 11-inch page [FCC 21.13 (b)] and will not be affected by the proposed changes (i.e., topographic maps, profile graphs) may be properly referenced to a previously filed application. ***No item on Page 1 should ever be cross-referenced to a previous filing.***

**Preparation of Form 401**

**3.08** At the top center of each page (six pages), enter "STATION" followed by the station's call sign and location, including the state in which the station is located (Fig. 38). The location should agree with that shown on the current license. However, if the license shows the location in a manner similar to "4.5 miles WNW of Reno, Nevada," show the location in a manner similar to "Near Reno, Nevada."

**3.09** Near the top center of each attached exhibit, enter the official company name, "DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE," and "STATION" followed by the station's call sign and location as discussed in paragraph 3.08 (Fig. 39). An exhibit title and the station's street address may be added if helpful.

**3.10** Near the right-hand top corner (where possible) of each exhibit, place "FCC FORM



SECTION 400-521-101

401" and the exhibit number. If an exhibit consists of more than one page, add information about the number of pages such as "Page 1 of 2," "Page 3 of 3," etc. (Fig. 39).

**3.11** In general, exhibits must be numbered consecutively in the order in which the need for exhibits arises during the step-by-step preparation of Form 401. Polar diagrams, antenna sketches, and maps (prepared in response to Items 18, 20, and 24, respectively) must be submitted as separate exhibits, each bearing its own exhibit number.

**3.12** **Item 1:** Enter the official corporate name of the company (spelled out in full) and the address to which the FCC should mail the approved authorization (Fig. 40). In companies in which applications are filed by the company headquarters, the address of the company headquarters should be shown. In companies whose areas have been authorized to file applications, the address of the area headquarters should be used. (Refer to local instructions.)

**3.13** **Item 2:** Enter the "Name of radio service" and the "Class of station" as shown on the station's license (Fig. 40).

**3.14** **Item 3:** Since the application requests authority for additions or changes to an existing licensed station, check "Change in existing authorization" and enter the file number shown on the current license, renewal certificate, modification of license, etc. (whichever is latest) and the call sign (Fig. 40) of the station.

**3.15** **Item 4:** Place an "X" in the appropriate spaces for all changes and additions proposed in the application. When changes or additions other than those listed are proposed, place an "X"

in "Other changes (specify)" and show such changes in Item 4 (Fig. 40).

**3.16** **Item 5:** Enter the exact location of the antenna structure. The location and geographical coordinates will usually be those shown on the current license. However, if the existing antenna structure is moved 0.5 second or more in either longitude or latitude, a new antenna is placed more than about 1 second in longitude or latitude away from the existing antenna, or an error is discovered in previously filed location information, refer to local instructions to obtain assistance (Fig. 40).

**Note:** FCC 21.15(k) requires the geographical coordinates to be "accurate to the nearest second of latitude and longitude." One second in latitude is equal to about 100 feet in a north-south direction, and 1 second in longitude is equal to about 70 feet (depending on the latitude involved) in an east-west direction.

**3.17** **Item 6:** Enter "DNA\*" (Fig. 40).

**3.18** **Item 7:** Enter the particulars of operation for all proposed new facilities and/or any proposed changes in particulars for existing facilities as shown in Fig. 40. (Do not show existing frequencies unless they are affected by the proposed changes.) If additional space is required, enter "See Exhibit No. \_\_\_" in Item 7 and place the particulars on an exhibit. See paragraphs 2.12 through 2.18 for details about the individual column entries.

**Note:** At base stations where more than two channels are authorized, situations occasionally arise in which the simultaneous operation of two (or more) particular transmitters

EXHIBIT 1  
FCC FORM 401  
Page 3 of 3

3.10

3.09

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
STATION KMD984 STOCKTON, CALIFORNIA

Fig. 39—Exhibit Heading

<p>1. Name and Post Office address of Applicant (Give street, city, state and Zip Code) (See Instruction No. 6) <span style="float:right">3.12</span></p> <p>The Pacific Telephone and Telegraph Company 140 New Montgomery Street San Francisco, California 94105</p>	<p style="text-align: center;">3.13</p> <p>2. Name of radio service in which Domestic Public authorization is applied for: <b>Land Mobile</b></p> <p>Class of station <b>Base and Auxiliary Test</b></p>																																																									
<p>3. Application for: <input type="checkbox"/> New facility <span style="float:right">3.14</span></p> <p>and/or <input checked="" type="checkbox"/> Change in existing authorization:</p> <p>File No. <b>6125-CD-ML-75</b> all <b>KMD984</b>.....</p>																																																										
<p>4. Nature of Proposed Changes/Modifications:</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Change antenna system</td> <td><input type="checkbox"/> Add points of communication</td> <td><input type="checkbox"/> Change power</td> </tr> <tr> <td><input type="checkbox"/> Change antenna location</td> <td><input type="checkbox"/> Change points of communication</td> <td><input type="checkbox"/> Add control point</td> </tr> <tr> <td><input type="checkbox"/> Change frequency <span style="float:right">3.15</span></td> <td><input type="checkbox"/> Replace transmitter</td> <td><input type="checkbox"/> Change control point location</td> </tr> <tr> <td><input checked="" type="checkbox"/> Add frequency</td> <td><input checked="" type="checkbox"/> Add transmitter</td> <td><input type="checkbox"/> Change alarm center location</td> </tr> <tr> <td colspan="3"><input checked="" type="checkbox"/> Other changes (specify) <b>Add antenna system</b></td> </tr> </table>		<input type="checkbox"/> Change antenna system	<input type="checkbox"/> Add points of communication	<input type="checkbox"/> Change power	<input type="checkbox"/> Change antenna location	<input type="checkbox"/> Change points of communication	<input type="checkbox"/> Add control point	<input type="checkbox"/> Change frequency <span style="float:right">3.15</span>	<input type="checkbox"/> Replace transmitter	<input type="checkbox"/> Change control point location	<input checked="" type="checkbox"/> Add frequency	<input checked="" type="checkbox"/> Add transmitter	<input type="checkbox"/> Change alarm center location	<input checked="" type="checkbox"/> Other changes (specify) <b>Add antenna system</b>																																												
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<p>5. Location of transmitting antenna</p> <table style="width:100%;"> <tr> <td>City or Town <span style="float:right">3.16</span></td> <td>County</td> <td>State</td> </tr> <tr> <td><b>Stockton</b></td> <td><b>San Joaquin</b></td> <td><b>California</b></td> </tr> </table> <p>Exact antenna location (street address) (If in area not designated by street, give distance and direction from, and name of nearest town)</p> <p><b>345 North San Joaquin Street</b></p> <p>Geographic coordinates (to be determined in nearest second)</p> <table style="width:100%;"> <tr> <td>North Latitude</td> <td>West Longitude</td> </tr> <tr> <td><b>37 57 24</b></td> <td><b>121 17 15</b></td> </tr> </table>	City or Town <span style="float:right">3.16</span>	County	State	<b>Stockton</b>	<b>San Joaquin</b>	<b>California</b>	North Latitude	West Longitude	<b>37 57 24</b>	<b>121 17 15</b>	<p>6. If application is for individual mobile user unit, or for mobile units other than those associated with a single permanently installed base station, or for any other class of station at temporary locations, show area of operation. (See instruction 9-A(b)).</p> <p style="text-align: center;">DNA* <span style="float:right">3.17</span></p>																																															
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<p>9. By what means will the transmitter(s) be rendered inaccessible to unauthorized persons?</p> <p><b>3.20</b> Transmitters will be located in an attended telephone equipment building.</p>																																																										

\*DNA-Does not apply

\*\*Auxiliary test transmitter currently authorized. Authority is requested to operate on additional frequency at 459.55 MHz.

Fig. 40—Form 401—Items 1 Through 9

will produce intermodulation products which will appear on a third channel. It may therefore be desirable to quiet the third channel by operating its base transmitter at a low level with no modulation. In such cases, authority to employ FO emission, in addition to the normal types of emission, must be requested. In addition, the proposed operation and reason for it must be appropriately explained in a note, either in the transmittal letter or on an exhibit.

**3.19 Item 8:** Enter the number and type of transmitters to be added and/or the number and type involved in any change shown in Item 7. Use separate lines for different types. Enter the appropriate manufacturer's name, frequency stability, emission designator, and class of station for each type of transmitter (Fig. 40). With the exception of the "Number of Transmitters" and the "Class of Station," this information must normally agree with that shown in the Type Acceptance List for the type of transmitter involved. See paragraphs 2.19 through 2.23 for details on individual column entries.

**Note:** Indicate the total number of units presently authorized and the quantity of additional mobile units required.

**3.20 Item 9:** Enter a short description of the means that will be provided to prevent operation of proposed transmitters by unauthorized persons (Fig. 40) [FCC 21.118(a)].

**3.21 Item 10:** Enter the required information for the control point location. Since the control point must be able to place the transmitter in an inoperative condition (FCC 21.118), place an "X" in the "Yes" block. Also, since the control point must be at a location which is continuously staffed, place an "X" in the "Continuous" block. See Fig. 41 and refer to FCC 21.205, 21.208, and 21.515. Also refer to paragraph 2.25 of this Practice for additional information.

**3.22 Item 11:** Answer as shown in Fig. 41.

**3.23 Items 12 and 13:** Normally answer "DNA\*" (Fig. 41). However, if there are unique conditions where an alarm center is provided, enter the information as appropriate. See the FCC Form 401 Instruction Sheet, Part 9A(e), for the definition of an alarm center.

**3.24 Items 14 and 16:** Answer by placing an "X" in the appropriate box. This is generally answered "No." If the answer is "Yes," provide the required information (Fig. 41).

**3.25 Item 15:** Enter "DNA\*" (Fig. 41).

**3.26 Item 17:** For each base and test station antenna which is involved in the proposed addition and/or change of facilities at the location covered by the application, provide information as follows:

- (a) Enter the manufacturer's full name and antenna type number as shown in Fig. 42.
- (b) Enter the maximum gain of the antenna in dB with reference to a half-wave dipole as it is proposed to be used at this station. This value should be obtained from the latest manufacturer's data (Fig. 42 and 43).
- (c) If both base and test station antennas are involved and/or if separate antennas for more than one base transmitter are involved, clearly indicate which information applies to each station and each base transmitter.

**Note:** If a new antenna is installed in such a manner that it affects the radiation characteristics of an antenna currently associated with existing DPLM transmitting facilities, the new characteristics and all other pertinent information about the existing facilities must be covered in the application. If the existing antenna is associated with facilities authorized in a different radio service, a separate application may have to be filed for the existing facilities.

**3.27 Item 18:** For the antennas listed in Item 17:

- (a) Indicate whether each antenna is directional or nondirectional (Fig. 42 and 43).

**Note:** If an antenna which is normally nondirectional is so placed that it no longer radiates an equal amount of power in all directions (side-mounted on a metal tower), it must be shown as directional in the application, and all information normally required for a directional antenna must be provided.

FCC FORM 401		Page 2	
10. Location of Control Point(s) <u>1/ 2/</u>		16. Do Proposed radio facilities contemplate multiplex type of transmission? <u>1/</u>	
Number and Street <b>345 North San Joaquin Street</b> (3.21)		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (3.24)	
City or Town <b>Stockton</b>		If authorization for the channelizing equipment has previously been granted by the Commission, or is being requested under separate application, specific reference thereto should be made herein	
State <b>California</b>			
Can transmitter(s) be placed in an inoperative condition from this control point? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Specify hours control point will be staffed by operating personnel <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Limited hours (specify)			
11. Describe the means by which personnel at the control point can determine when there is a deviation from the terms of the station authorization or when operation is not in accordance with the Commission's rules governing the class of station involved. <u>1/ 2/</u>			
<b>Equipment in accordance with Sections 21.118 and 21.515 of the Rules.</b> (3.22)			
12. Location of Alarm Center <u>1/ 2/ 3/</u> <b>DNA*</b>			
Number and Street (3.23)			
City or Town		State	
Can transmitter(s) be placed in an inoperative condition from this alarm center? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Specify hours alarm center will be staffed by operating personnel <input type="checkbox"/> Continuous <input type="checkbox"/> Limited hours (specify)			
13. Describe the means by which personnel at the alarm center can determine when there is a deviation from the terms of the station authorization or when operation is not in accordance with the Commission's rules governing the class of station involved. A brief description of each automatic alarm proposed to be used should be included <u>1/ 2/ 3/</u>			
<b>DNA*</b> (3.23)			
14. Will radio facilities be used to connect either control point(s) or alarm center(s) to transmitter(s)? <u>1/ 2/</u>			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If "Yes", identify radio facilities: (3.24)			
15. Applicants for individual user units should attach as Exhibit _____ the showing required by Section 21.15(i) of Part 21 See Instruction 9.A(h), <u>2/ 3/</u> <b>DNA*</b> (3.25)			
<u>1/</u> If application is for individual user mobile unit, or for mobile units other this item need NOT be answered.			
<u>2/</u> If application is for temporary-fixed station facilities pursuant to Section			
<u>3/</u> If application is filed under Part 25 this question need NOT be answered			
<b>*DNA-Does not apply</b>			

Fig. 41—Form 401—Items 10 Through 16

**Fig. 41—Form 401—Items 10 Through 16**

(b) Show the azimuth of the center of the main lobe of radiation for each directional antenna in a manner similar to Fig. 43.

(c) For each new antenna and/or for each existing antenna (for the frequencies listed under Item 7), whether directional or nondirectional, provide an antenna radiation pattern (polar diagram) similar to Fig. 44 as an exhibit. The preparation of polar diagrams is covered in paragraph 2.31.

(d) When more than one antenna is involved, clearly indicate which information applies to each station and/or base transmitter.

**3.28 Item 19:** Enter the required information about the transmission line and transmission line equipment associated with each antenna listed in Item 17 (Fig. 42 and 43). This information

17. Transmitting antenna <u>1/</u>			
Make	Type No.		
<b>Communication Products, Inc</b>	<b>301-509</b>		
Maximum antenna power gain over reference half-wave dipole antenna (3.26) <b>8.5</b> decibels			
18. Radiation characteristics of installed antenna system <u>1/</u>			
<input type="checkbox"/> Non directional in horizontal plane			
<input checked="" type="checkbox"/> Directional in horizontal plane with center of main lobe of radiation directed _____ degrees _____ minutes clockwise from true North			
<b>Antenna pattern is multilobed.</b> (3.27)			
Directional antenna pattern (polar diagram) showing power distribution (expressed in decibels of power gain over a reference half-wave dipole antenna) of signal radiated in the horizontal plane is attached hereto as Exhibit No. <u>2</u>			
19. Antenna transmission line data <u>1/ 2/</u> See Exhibit No. <u>3</u>			
Make	Type No.	Length (feet)	Total Loss (decibels)
		(3.28)	

Fig. 42—Form 401—Items 17, 18, and 19

should be provided as covered in paragraph 2.32 of this Practice except for, or in addition to, the following (as appropriate):

When additional channels are multiplexed on existing antenna systems using connecting arrangements (such as duplexers) which were previously provided for this purpose, provide a block diagram of the entire transmission line arrangement as covered in paragraph 2.32. Indicate which line components are new and which are existing as shown in Fig. 45. In Item 19, list only those line components which are involved with the added channel(s).

**Note:** Figure 46 is an example of a block diagram which shows a transmitter and an associated receiver multiplexed onto the same antenna. Notice that Item 19 in Fig. 42 refers only to Exhibit No. 3 and the entire response to Item 19 has been placed on the exhibit (block diagram), Fig. 45.

**3.29 Item 20:** Provide the required information for the antenna structure(s) associated with the station as follows:

(a) In the spaces provided for height information for each structure associated with the antennas listed in Item 17, proceed as follows:

- (1) Enter the specified heights as shown in Fig. 43.
- (2) Indicate to which station (either base or auxiliary test) and/or base channel the information applies if more than one structure is involved.

**Note 1:** When more than one structure is involved and an antenna sketch will be provided, it may be preferable to place the height information on the sketch and to refer to the

17. Transmitting antenna <input checked="" type="checkbox"/>			
Make <u>Existing Scala</u>		Type No. <u>450 ant. to be multiplexed</u>	
Maximum antenna power gain over reference half-wave dipole antenna		<u>3.26</u>	
		7.0 decibels	
18. Radiation characteristics of installed antenna system <input checked="" type="checkbox"/>			
<input type="checkbox"/> Non directional in horizontal plane		<u>3.27</u>	
<input checked="" type="checkbox"/> Directional in horizontal plane with center of main lobe of radiation directed _____ degrees _____ minutes clockwise from true North			
<u>#0°00' and 180°00' to the extent permitted by antenna char. and alignment procedure.</u>			
Directional antenna pattern (polar diagram) showing power distribution (expressed in decibels of power gain over a reference half-wave dipole antenna) of signal radiated in the horizontal plane is attached hereto as Exhibit No. <u>2</u>			
19. Antenna transmission line data <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>			
Make	Type No.	Length (feet)	Total Loss (decibels)
<u>Melabs hybrids</u>	<u>H4105</u>	<u>-</u>	<u>6.4</u>
<u>Melabs Isolators</u>	<u>R347-666</u>	<u>3.28</u>	<u>1.0</u>
<u>Amphenol</u>	<u>RG-8A/U</u>	<u>10</u>	<u>0.5</u>
<u>Prodalin</u>	<u>64-875</u>	<u>50</u>	<u>0.5</u>
20. Description of transmitting antenna structure (Heights given should include obstruction light, if required, and any other summounting appurtenance) <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>			
Overall height in feet above ground		Overall height in feet above mean sea level	
<u>193</u>		<u>209</u>	
		<u>3.29(a)</u>	
Submit, as Exhibit No. <u>3.29(b)</u> , a vertical profile sketch of structure (including supporting building, if any) giving height in feet above ground for all significant features. Clearly indicate existing portion, noting particulars of aviation obstruction lighting already prescribed.			
21. Will proposed transmitting antenna be supported by the antenna structure of any other radio station? <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>			
		<u>3.30</u>	
22. Distance from transmitting antenna structure to nearest runway of nearest aircraft landing area <u>38,500</u> feet. <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>			
		<u>3.31</u>	
23. List any natural formation or existing man made structure (hills, trees, water tanks, tower, etc.) which applicant believes would tend to shield the antenna structure from aircraft and thereby minimize the aeronautical hazard of the antenna structure <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>			
		<u>None</u>	
		<u>3.32</u>	

Fig. 43—Form 401—Items 17 Through 23

Response to Item 18

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
RADIATION PATTERN IN HORIZONTAL PLANE OF PROPOSED COMMUNICATIONS PRODUCTS,  
TYPE 301-509 ANTENNA MOUNTED ON A 24" TRIANGULAR STEEL TOWER  
STATION KMD984 STOCKTON, CALIFORNIA

3.27

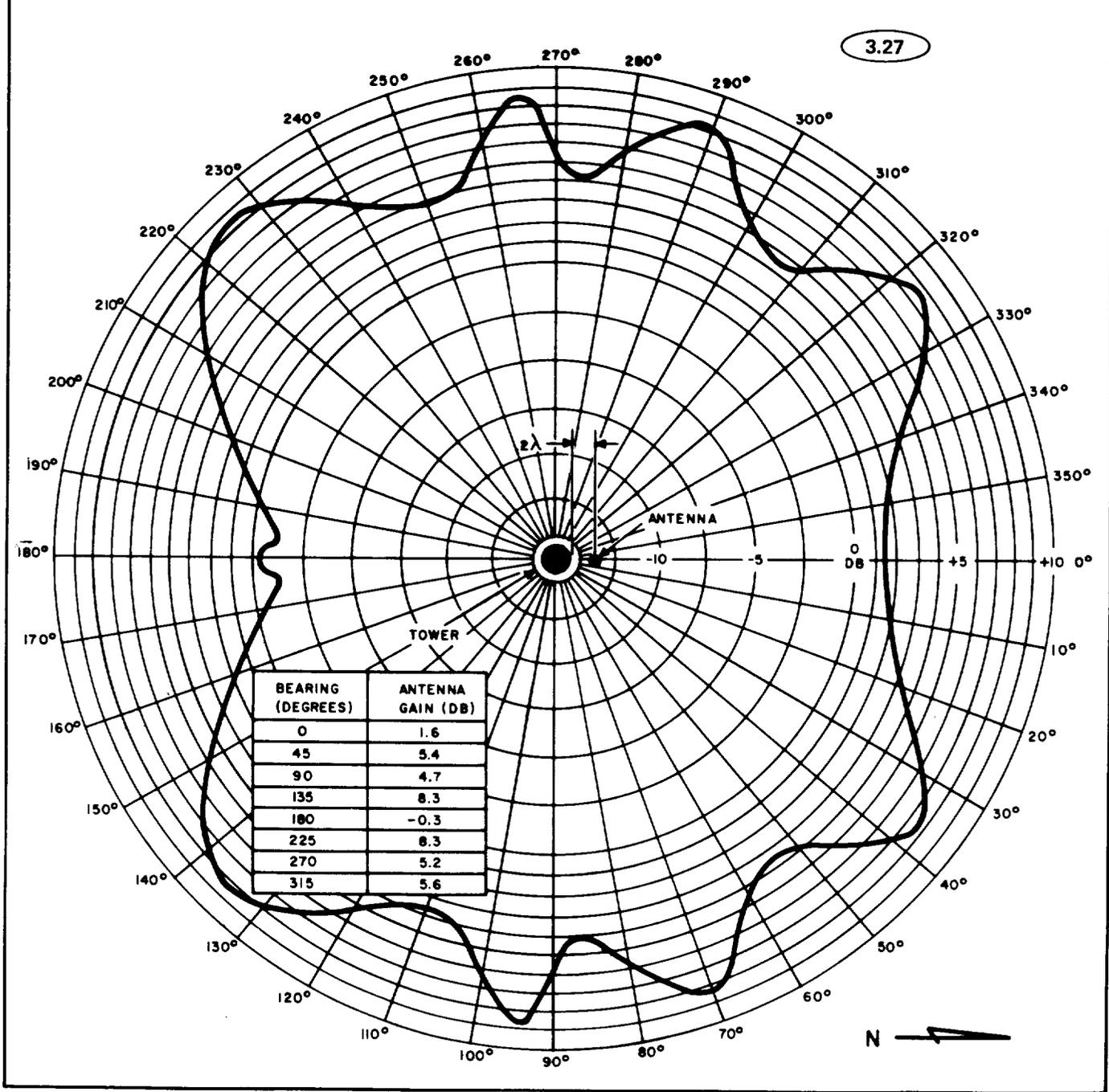


Fig. 44—Exhibit 2—Antenna Pattern

SUPPLEMENTARY ANSWER TO ITEM 19:

EXHIBIT NO. 3  
FCC FORM 401

BLOCK DIAGRAM OF PROPOSED TRANSMISSION LINE ARRANGEMENT

3.28

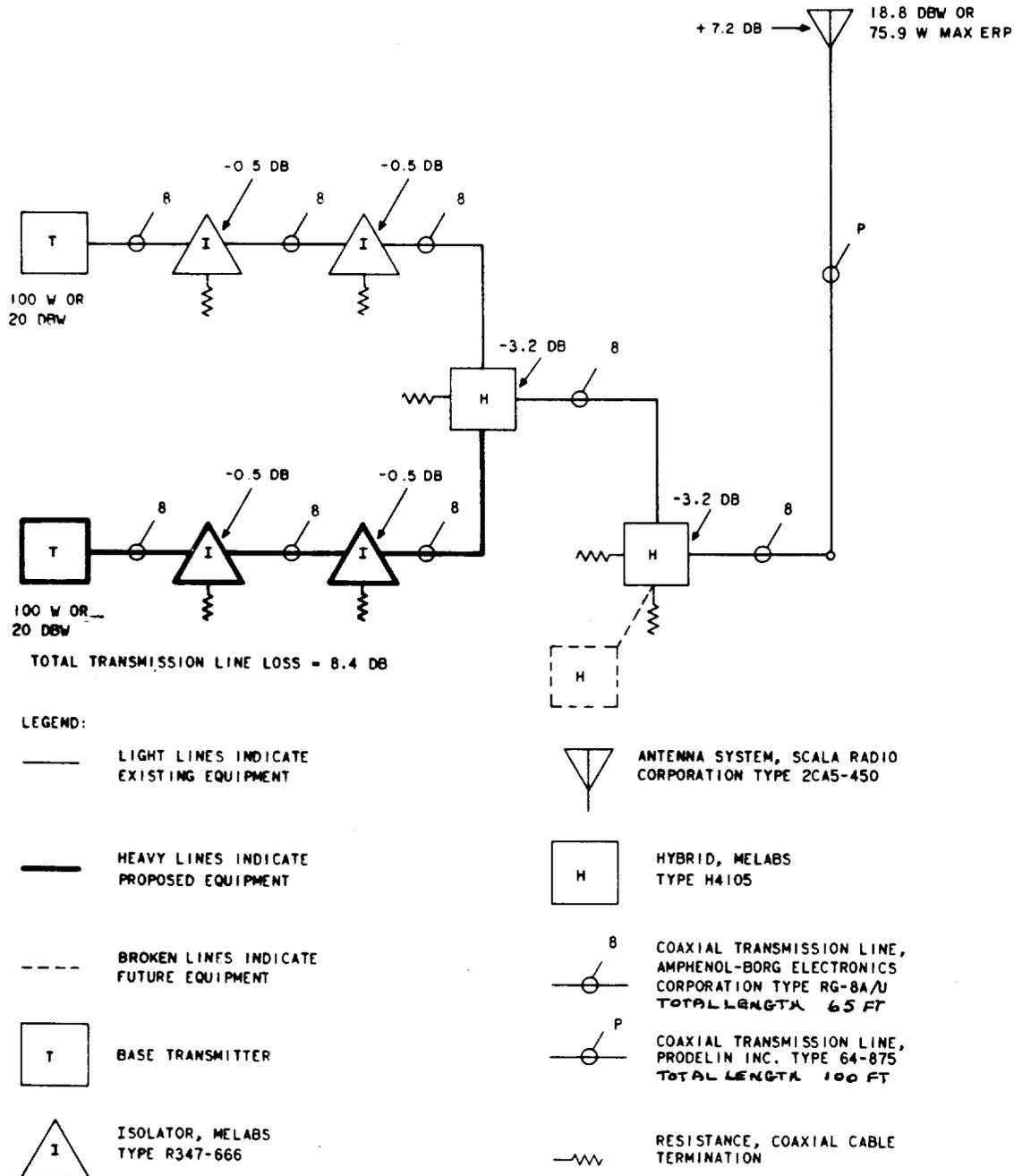


Fig. 45—Exhibit 3—Supplementary Answer to Item 19

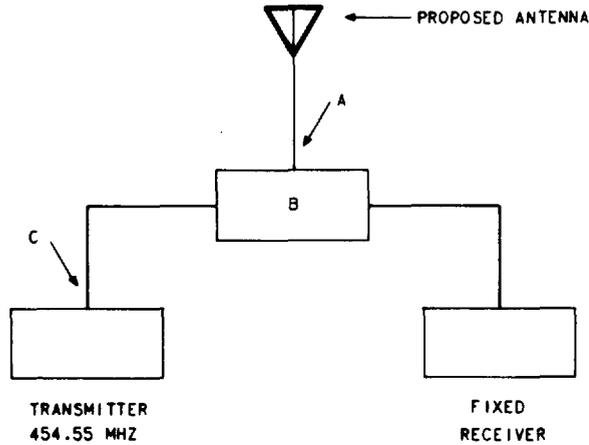
EXHIBIT NO. 3  
FCC FORM 401

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
STATION KMD984 STOCKTON, CALIFORNIA

3.28

ANSWER TO ITEM 19:

ANTENNA TRANSMISSION LINE DATA



<u>MAKE</u>	<u>LEGEND</u> <u>TYPE NO.</u>	<u>LENGTH (FEET)</u>	<u>LOSS (DECIBELS)</u>
A 3/8" ANDREW CORPORATION FOAM HELIAX	FHJ2	150	3.6
B FARINON ELECTRIC COMPANY DUPLXER	10270	—	0.5
C ANDREW CORPORATION COAXIAL CABLE	RG-8A/U	30	1.6
			TOTAL LOSS = 5.7

Fig. 46—Exhibit 3—Answer to Item 19

sketch's exhibit number by entering "See Exhibit No. \_\_\_" in the space provided for height information.

**Note 2:** If antennas associated with other radio services are mounted on the structure(s), make sure that the information includes any changes for which authority may have been requested in applications for these other services.

(b) Provide a vertical profile sketch similar to the exhibit in Fig. 48. Enter the exhibit's

number in the space provided in Item 20 as shown in Fig. 43. The sketch must include all information required by FCC 21.15(c) and should show and clearly identify:

- (1) All structures and antennas associated with the station
- (2) All antennas which are associated with other stations but are mounted on structures associated with the proposed facilities

(3) Any adjacent structures and antennas which are associated with other stations and which are either mounted on the same building or are near enough that they might affect the proposed facilities.

In addition, the sketch should indicate whether each antenna and/or structure shown is:

- Existing
- Proposed
- Authorized but not yet installed (identify the instrument of authorization by file number, service, date, etc.)
- Covered by another application (identify the application by date, service, and file number, if assigned).

**3.30 Item 21:** Place an "X" in the appropriate box. If the answer is "Yes," provide the radio service, call sign, and licensee (if other than the applicant) of each radio station using the structure(s). If a profile sketch has been included, refer to the sketch's exhibit number as shown in Fig. 47 and show the information on the sketch as shown in Fig. 48.

Submit, as Exhibit No. _____, a vertical profile sketch of total structure (including supporting building, if any) giving heights in feet above ground for all significant features. Clearly indicate existing portion, noting particulars of aviation obstruction lighting already prescribed.	
21. Will proposed transmitting antenna be supported by antenna structure of any other radio station? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>3.30</b>
See Exhibit No. A	
22. Distance from transmitting antenna structure to nearest of nearest aircraft landing area: <u>13,500</u> feet. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>3.31</b>
23. List any natural formation or existing man made structure (hills, trees, water tanks, tower, etc.) which applicant believes would tend to shield the antenna structure from aircraft and thereby minimize the aeronautical hazard of the antenna structure <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>3.32</b>
<u>Merchants National Bank Building 300 ft. ANS! Approximately 1500 ft. East</u>	
Other than those associated with a single permanently installed base station, items 21.610 and 21.611 or 21.707 and 21.708, this item need NOT be answered.	

Fig. 47—Form 401—Items 21 Through 23

**3.31 Item 22:** Provide the information requested (Fig. 47). For the significance of this item, see the Federal Aviation Regulations, Part 77. Also refer to FCC Part 17.

**3.32 Item 23:** If no shielding objects exist, enter "None"; otherwise, enter the information requested as shown in Fig. 47.

**Note:** This may not be sufficient evidence of shielding as required by the Antenna Survey Branch of the FCC. FCC 17.14(a) requires applicants claiming an exemption from notification to the FAA to submit a detailed statement with the application explaining the request. Based on individual circumstances, it may be advisable to file FAA Form 7460-1 to avoid processing delays.

**3.33 Item 24:** This item must be completed only for:

- (a) An application for an auxiliary test station which will not be in the same location as the associated base station.
- (b) An application for a base station for which a composite map is submitted in response to Item 25(a).

Otherwise, enter "DNA\*" as shown in Fig. 49. When required, prepare a map as an exhibit as covered in paragraph 2.37 of this Practice.

**Note:** If a topographic map which shows the proposed station location has been previously filed, a new map need not be submitted provided that specific reference is made to the previously filed map (call sign, file number, date of filing).

**3.34 Items 25(a) and (b):** If the required data has not been previously supplied, prepare and submit the information as covered in paragraphs 2.38 and 2.39 of this Practice. Otherwise, answer in a manner similar to that shown in Fig. 49.

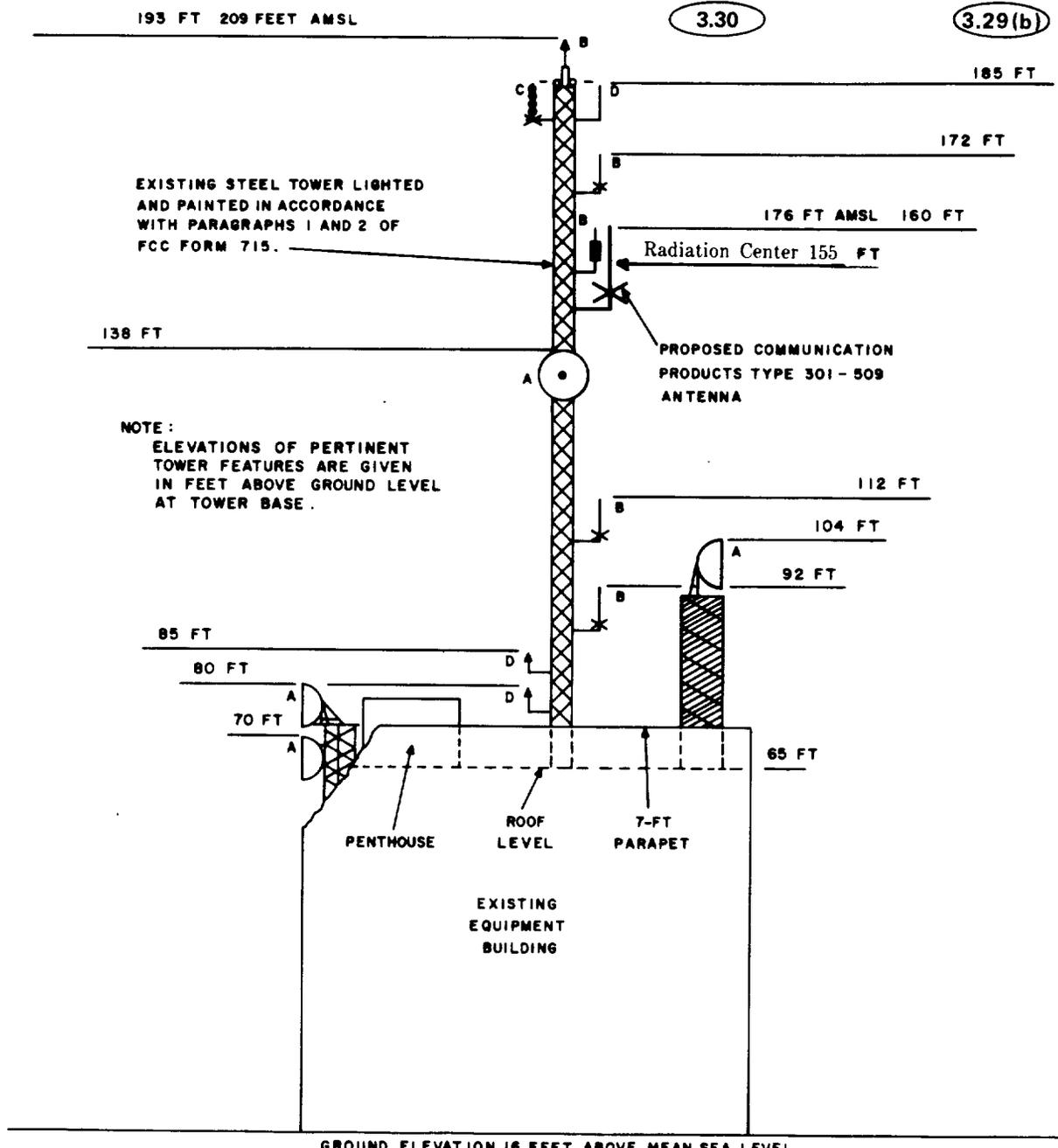
**3.35 Item 26(a):** Enter the specified information as follows:

- (a) From the data developed in Item 25(b) or from past engineering records associated with a previous application, enter the average elevation value for each of the eight radials in the first column. Subtract these values from the height of the antenna radiation center expressed in feet above mean sea level (as shown on the sketch prepared for Item 20), and insert the difference in the second column. Determine the collective average terrain elevation of all eight radials,

Response to Item 20

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
 DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
 EXISTING AND PROPOSED ANTENNA STRUCTURE  
 STATION KMD984 STOCKTON, CALIFORNIA

EXHIBIT NO. 4  
 FCC FORM 401



NOTE:  
 ELEVATIONS OF PERTINENT  
 TOWER FEATURES ARE GIVEN  
 IN FEET ABOVE GROUND LEVEL  
 AT TOWER BASE.

- GROUND ELEVATION 16 FEET ABOVE MEAN SEA LEVEL
- A - EXISTING ANTENNAS ASSOCIATED WITH POINT-TO-POINT MICROWAVE RADIO STATION KMN30.
  - B - EXISTING ANTENNAS ASSOCIATED WITH DOMESTIC PUBLIC LAND MOBILE RADIO STATION KMD984.
  - C - EXISTING ANTENNA ASSOCIATED WITH TELEPHONE MAINTENANCE RADIO STATION KDH788.
  - D - EXISTING ANTENNAS ASSOCIATED WITH U.S. GOVERNMENT AIR-GROUND SERVICE.

Fig. 48—Exhibit 4—Existing and Proposed Antenna Structure

FCC Form 401

24. Topographic data for fixed stations   **DNA** 3.33

Attach, in duplicate as Exhibit No. \_\_\_\_\_, a topographic map (a U.S. Geological Survey quadrangle or map of comparable detail and accuracy) with the exact location of the proposed station drawn and identified thereon. In cases where FCC Form 401-A, is required to be filed, such map must be furnished in triplicate and should be attached to such Form.

25. Topographic data for base and aeronautical ground stations   3.34

(a) Attach, in duplicate as Exhibit No. \_\_\_\_\_, topographic Map(s) (U.S. Geological Survey quadrangles or maps of comparable detail and accuracy) for the area within 10 miles of the proposed transmitter location and draw thereon the following:

(1) Proposed transmitting antenna location plotted accurately to the nearest second of Latitude and Longitude.

(2) Eight uniformly spaced radials each extending to a distance of ten or more miles from the proposed transmitting antenna location in addition to radials in direct line with each co-channel station within 75 miles.

(b) Attach, as Exhibit No. \_\_\_\_\_, profile graphs with reasonably large scales for the radials in (a) (2) above. Each graph shall show the ground elevation along the radial and the elevation of the antenna radiation center. Identify each graph by its azimuth bearing from the proposed antenna location. Direction of True North shall be zero azimuth; azimuths of other radials shall be measured clockwise from True North. Show source of topographical data on each graph.

26. (a) From the profile graphs in 25(b) for the eight mile distance between two and ten miles from the proposed transmitting antenna location, and in accordance with the procedure prescribed in the Commission's rules, supply the following tabulation of data:

Radial Bearing (Degrees True)	Average Elevation of Radial (2-10 mi.) in Feet Above Mean Sea Level	Height of Antenna Radiation Center in Feet Above Average Elevation of Radial (2-10 miles)	Effective Radiated Power in Radial Direction (watts)
0°	27	145	97
45°	47	125	234
90°	48	124	199
135°	32	140	455
180°	13	159	63
225°	3	169	455
270°	-4	176	223
315°	4	168	250
No cochannel station within 75 miles.			
(*)			
(*)			
Average Terrain Elev	21	Antenna Radiation Center Height in Feet Above Average Terrain:	151
(*) Radials in direction of each co-channel station within 75 miles. Do not include in determination of average terrain elevation.			

26. (b) For any antenna associated with a communication satellite earth station, show the minimum elevation proposed to be used: **DNA** degrees. 3.36

If application is for this Question need NOT be answered  
 If communication with one or more foreign countries is proposed, identify th

(b) Where supplemental radials have been drawn and profiles prepared in the direction of cochannel stations within 75 miles, give the information required for all columns as described in (a), but do not include this data in the calculations of average terrain elevation. **If there are no cochannel stations within 75 miles, include an entry to that effect** (Fig. 49).

(c) In the last column, insert the calculated effective radiated power for each radial. This value should be determined from, and should agree with, the information contained in Item 7(c) (transmitter output power); Item 18, the polar diagram exhibit (antenna radiation characteristics); and Item 19 (transmission line data). (See Fig. 49.) Also refer to FCC 21.505 and 21.506 for maximum power limitations.

**3.36 Item 26(b):** Enter "DNA\*" as shown in Fig. 49.

**3.37 Items 27(a) and (b):** Enter the location(s) of the base station receiver(s). If there is only one receiver location at the base transmitter site, enter "Same as base station." If there are two receiver locations, enter the information in rows (a) and (b). Use an exhibit if there are more than two fixed receiver locations (Fig. 50 and 51).

**3.38 Item 27(c):** Answer as shown in Fig. 50 and 51. Include all currently authorized and proposed mobile frequencies.

**3.39 Item 28(a):** Enter "A suitable frequency meter will be provided" (Fig. 52).

**3.40 Item 28(b):** Enter "DNA\*" (Fig. 52).

**3.41 Item 28(c):** Enter the make and model number of the frequency meter to be used; then add the words "or other suitable frequency meter," as shown in Fig. 52. The frequency measuring or calibrating device must have an accuracy of within one half of the allowed frequency tolerance of the transmitter being measured (i.e., one half of the tolerance shown in the type acceptance information for the transmitter). Also, this cannot exceed the requirements of FCC 21.101 for the type of station and frequency band involved.

**Note:** Since the frequency measuring equipment shown must be capable of the

Fig. 49—Form 401—Items 24, 25, and 26

and enter the value at the bottom of the first column. Subtract this value from the height of the antenna radiation center above mean sea level, and insert the difference at the bottom of the third column (Fig. 49).

Page 3		
27. Location of Fixed Antennas Receiving Signals of This Station <i>See Exhibit No. 5</i> <b>3.37</b>		
(a) City or Town	County	State
Geographic coordinates (to be determined to nearest second)		
North Latitude	West Longitude	
(b) City or Town	County	State
North Latitude	West Longitude	
(c) List frequencies, call letters, and location of stations to be regularly received by station described in Item 5		
28. Frequency measurements		
(a) What provisions are made for measurement and periodic		

Fig. 50—Form 401—Item 27

required accuracy for all proposed facilities, it may be necessary to list more than one type of meter when more than one station or more than one frequency band is involved. If so, indicate with which facilities each meter will be associated.

- 3.42 Item 28(d):** Enter the accuracy in percent for each frequency meter shown in Item 28(c). Immediately following the figure(s) add "or better" as shown in Fig. 52. When more than one meter is involved, indicate the facility with which the meter information is associated.
- 3.43 Item 28(e):** Enter "By comparison with other standards" (Fig. 52).
- 3.44 Item 28(f):** Enter "As required" (Fig. 52).
- 3.45 Engineering Certification:** The engineering certification (bottom of Page 3 of FCC Form 401) must be signed by the person having overall responsibility for the engineering data entered in Items 1 through 28. Normally, this will be the chief engineer of the company or of the area of the company which prepared the application. The mailing address of the person who signs this certification and the date of signing must be entered in the space provided (Fig. 53).
- 3.46 Items 29 Through 38:** Items 29 through 38 should be cross-referenced to the current

FCC Form 430 on file with the Commission as shown in Fig. 54.

- 3.47 Items 39 and 40:** Answer as shown in Fig. 54 and 55.
- 3.48 Item 41:** If the originally filed schedule of charges (or tariff) for this station has not changed and no new service is proposed in your application or if the applicable charges are on file for some other DPLM radio station, you may refer to the previously filed application which included this information as shown in Fig. 55.

**Note:** Never cross-reference a previously filed application for a 1-page exhibit, FCC 21.13(b). The information must be resubmitted with each application.

As tariffs for air-ground radio are on file with the FCC, respond as shown in Fig. 56 for air-ground applications.

- 3.49 Item 42:** For the majority of locations, this item will be answered as shown in Fig. 55. However, each company must determine whether this answer is appropriate for radio installations in its territory and develop an appropriate response, if necessary (see also paragraph 2.54).
- 3.50 Item 43:** Answer as shown in Fig. 55.
- 3.51 Item 44:** Enter the exhibit number in the space provided in Item 44 (Fig. 55). Provide an exhibit similar to Fig. 57 to demonstrate the amount of time spent on noncommon carrier activity. Each company must determine the values for Item 44. Refer to local instructions for completing this item.
- 3.52 Items 45 and 46:** Answer as shown in Fig. 55.
- 3.53 Item 47:** Show the estimated cost to establish the proposed facilities (Fig. 55). Do not include the cost of such items as telephone or power extensions, the control terminal, or other costs involving the connection of the radio installation to the general telephone network.
- 3.54 Item 48:** Normally provide an exhibit similar to Fig. 58 to demonstrate financial qualifications (Fig. 55). (If these requirements have not been met by your company, more specific

EXHIBIT NO. 5  
FCC FORM 401

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
STATION KMD984 STOCKTON, CALIFORNIA

Answer to Items 27(a) and (b):

3.37

Fixed Receiver Locations

Coordinates

345 North San Joaquin Street,  
Stockton (San Joaquin), California

37°57'24" N. Latitude  
121°17'15" W. Longitude

3 miles SE of Manteca  
(San Joaquin), California

37°46'06" N. Latitude  
121°10'06" W. Longitude

1.5 miles SE of Thornton  
(San Joaquin), California

38°12'23" N. Latitude  
121°24'28" W. Longitude

5.0 miles SW of Lockeford  
(San Joaquin), California

38°07'07" N. Latitude  
121°04'35" W. Longitude

Byron Hot Springs, 1.5 miles south of  
Byron (Contra Costa), California

37°51'00" N. Latitude  
121°37'53" W. Longitude

Answer to Item 27(c):

3.38

Mobile units and rural subscriber stations authorized by the Commission for this service and operating on frequencies 157.83, 157.98 and 459.55 MHz.

Fig. 51—Exhibit 5—Answers to Items 27(a), (b), and (c)

information must be submitted as requested by FCC 21.17).

**3.55** **Items 49 and 50.** Prepare an exhibit similar to Fig. 59 (example of system operation is for IMTS) giving the required information. Enter the exhibit number in Items 49 and 50 (Fig. 55). This exhibit should include a general

description of the type of service to be provided and the technical personnel responsible for the station. The particular description will of course depend on the individual characteristics of the proposed station. Included should be:

- (a) A description of the system operation (service characteristics)

28. Frequency measurements

(a) What provision will be made for measurement and periodic checking of the station frequency?  
**A suitable frequency meter will be provided** **3.39**

(b) If a frequency measuring device is not to be provided, give name and address of frequency checking agency to be employed by applicant  
**DNA\*** **3.40**

(If frequency checking agency is shown above, the succeeding subparagraphs of this question are not to be answered)

(c) What type of frequency measurement or calibration apparatus will be used? **Cushman Electronics MCM-5 or other suitable frequency meter** **3.41**

(d) Within how many cycles or within what percentage will this apparatus measure the frequency?  
**0.000125% or better** **3.42**

(e) What methods will be used to check calibration of this precision instrument?  
**By comparison with other standards** **3.43**

(f) How often will calibration of this instrument be checked?  
**As required** **3.44**

\*DNA - Does not apply

Fig. 52—Form 401—Items 28(a) Through (f)

- (b) A general description of the number of technical personnel available for maintenance and operation of this station
- (c) Class of licenses held by these technical people
- (d) Employer of these technical personnel
- (e) Normal location of these technical personnel
- (f) Number on call 24 hours per day
- (g) Estimated time for technical people to reach this station for maintenance and repairs.

3.56 **Item 51:** Enter "DNA\*" (Fig. 60).

3.57 **Item 52:** Information must be furnished justifying the need for the proposed facilities. Refer to FCC 21.516 and also to Practice 400-521-100 for detailed instructions on the preparation of the "showing of need." This information should be furnished on an exhibit (Fig. 61 and 62), and the exhibit number should be entered in Item 52 (Fig. 60).

3.58 **Item 53:** Answer "Yes" and enter the numbers of all attached exhibits in numerical

... show the minimum used: ... degrees.

CERTIFICATION OF PERSON RESPONSIBLE FOR PREPARING Engineering Information Submitted in this Application **3.45**

I hereby certify that I am the technically qualified person responsible for preparation of the engineering information contained in this application; that I am familiar with Parts 21 or 25 of the Commission's Rules; that I have either prepared or reviewed the engineering information submitted in this application; and, that it is complete and accurate to the best of my knowledge.

By J. J. Green (signed) J. J. Green (printed) Chief Engineer Dated this 17<sup>th</sup> day of October 1967

Address: 2700 Watt Avenue Number Sacramento, California City 95821 State

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT U.S. CODE, TITLE 18, SECTION 1001.

1/If application is for individual user mobile unit, or for mobile units other than those associated with a single permanently installed base station, this item need NOT be answered.  
 2/If application is for temporary-fixed station facilities pursuant to Sections 21.610 and 21.611 or 21.707 and 21.708, this item need NOT be answered.  
 3/If application is filed under Part 25 this question need NOT be answered.  
 4/If communication with one or more foreign countries is proposed, identify the country(ies) and complete applicable parts of Item 27.

Same as previously filed in application for construction permit for this station, File No. ... dated July 15, 1967, except that ant ... height of proposed ... average term ...

Fig. 53—Form 401—Engineering Certification

3.46

STATION KND984 STOCKTON, CALIFORNIA

FCC Form 401		LEGAL AND OTHER DATA		Page 4	
29. Applicant is: (check one)					
<input type="checkbox"/> Individual		<input type="checkbox"/> Partnership		<input type="checkbox"/> Corporation	
<input type="checkbox"/> Unincorporated Association					
				(X yes or no)	
30. Is individual Applicant or each member of a partnership Applicant a citizen of the United States? *				YES	NO
31. Is Applicant or any party to this application a representative of an alien or of a foreign government? *					
32. If Applicant is a Partnership, attach as EXHIBIT _____, one copy, properly certified, of the partnership agreement, or if oral, complete details thereof. *					
33. If Applicant is a Corporation (Including Joint stock Companies) or Association, answer the following: *					
a. Under laws of what State or Country is it organized? <u>IL</u>					
(1) Attach as EXHIBIT(s) _____ a certified copy of the Articles of Incorporation (charter) and the By-Laws.					
(2) Attach as EXHIBIT _____ the names, addresses and percentages held of all stockholders owning and/or voting 10 percent or more of applicant's stock.					
b. Give address of applicant's principal office:					
c. Is any director or officer an alien?					
d. Is more than one-fifth of the capital stock or membership interest voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?					
e. Is Applicant directly or indirectly controlled by any other corporation? (If "Yes" give names and addresses of all such controlling corporations including organization having final control.)					
f. Is the Applicant directly or indirectly controlled by any other corporation of which any officer or more than one-fourth of the directors are aliens? (If "Yes", attach as EXHIBIT _____ a statement relating the facts)					
g. Is more than one-fourth of the capital stock of any controlling corporation owned of record, or may it be voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign government? (If "Yes", attach as EXHIBIT _____ a statement relating the facts)					
h. Under laws of what State or country is each such controlling corporation organized? _____					
(Attach as EXHIBIT(s) _____ a certified copy of the Articles of Incorporation (Charter) and the By-Laws)					
34. Has applicant or any party to this application had any FCC station license or permit revoked or had any application for permit, license or renewal denied by this Commission? *					
(If "Yes", attach as EXHIBIT _____ a statement giving call sign of license or permit revoked and relate circumstances)					
35. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or of unfair methods of competition? *					
(If "Yes", attach as EXHIBIT _____ a statement relating the facts)					
36. Has the applicant, or any party to this application, or any person directly or indirectly controlling the applicant ever been convicted of a crime for which the penalty imposed was a fine of \$500 or more, or an imprisonment of six months or more? *					
(If "Yes", attach as EXHIBIT _____ a statement relating the facts)					
37. Is applicant, or any person directly or indirectly controlling the applicant, presently a party in any matter referred to in Items 34, 35 and 36? *					
(If "Yes", attach as EXHIBIT _____ a statement relating the facts)					
38. Is applicant directly or indirectly, through stock ownership, contract, or otherwise currently interested in the ownership or control of any other radio stations licensed by this Commission? If "Yes", give: *					
Call Sign & Service	Location	Name of Licensee			
39. Has applicant ever been directly or indirectly interested in the ownership or control of any radio stations other than those stated in 38 above? If "Yes", give: *					
Call Sign & Service	Location	Name of Licensee			
Licensed radio stations formerly owned or operated by companies of the Bell System.					
		3.47			

1/If application is for individual user mobile unit, or for mobile units other than those associated with a single permanently installed base station, this item need NOT be answered.

\* Data on file with the Commission on current FCC Form 430 (as amended to date).

Fig. 54—Form 401—Example of Page 4

FCC Form 401	Page 5	
	YES	NO
40. Will applicant offer communication services to the public 24 hours every day? <u>1/2/</u> If "No", state hours and days during which station will be open for such service: Hours _____ Days _____	3.47	X
41. Are the charges for the proposed service contained in a tariff filed with the FCC? <u>1/2/</u> If "Yes", identify: _____ If "No", attach as EXHIBIT _____ a schedule of proposed charges. <u>See previously filed application 21737-CD-P-75 dated 10-15-74</u> (The statement of rates required herein does not constitute a filing of schedules of charges required by Section 203 of the Communications Act of 1934, as amended, prior to commencing service.)	3.48	X
42. Does local or state law require any franchise or other authorization to maintain or render the services proposed herein? <u>1/</u> (If "Yes", attach as EXHIBIT _____ a single certified copy of franchise or authorization)	3.49	X
43. If application is for modification of a construction permit: <u>1/</u> (a) The time required to complete construction after authority is granted is _____ months. <u>DNA</u> (b) Attach as EXHIBIT _____ a statement giving: (1) the extent of construction as of the date of this application, and (2) the justification for not having completed construction in accordance with outstanding construction permit.	3.50	
44. In what businesses, employment or activities, other than communications common carrier, are applicant and its principals engaged? <u>1/</u> (Attach as EXHIBIT _____ a statement giving the following for each such activity: (a) nature of activity (b) location of activity (c) hours devoted to each activity	3.51	
45. What is applicant's relation to station? <u>1/</u> <input checked="" type="checkbox"/> Owner <input type="checkbox"/> Lessee <input type="checkbox"/> Other (Attach as EXHIBIT _____ copies of all agreements affecting applicant's ownership, operation, use and/or control of the station facilities.)	3.52	
46. Is applicant directly or indirectly interested in or affiliated with any entity or person engaged in the business of providing a public land line message telephone service. <u>1/</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", and applicant is not a landline telephone carrier, attach as EXHIBIT _____ a statement relating the facts)	3.52	
47. Estimated cost to establish proposed facilities: a. Transmitter(s) and receiver(s)      \$ <u>25,500</u> b. Antenna(s) and waveguide or antenna transmission line(s)      \$ <u>800</u> c. Power plant, control, and common equipment      \$ _____ d. Land, buildings, towers, etc.      \$ _____ e. Channelizing equipment      \$ _____ f. Miscellaneous      \$ _____ Total cost      \$ <u>26,300</u>	3.53	
48. Attach as EXHIBIT _____ a statement showing applicant's financial ability to construct and operate this station. Include the most recent balance sheet of the applicant (must be as of a date at least within 90 days of the filing of this application.) If loans or other credit arrangements are contemplated, duplicate copies of written instruments, other than demand notes, must be submitted. (Copies of standard manufacturer's lease or sales agreements on file with the Commission need not be submitted but should be identified by manufacturer's name and form number, and the material terms and conditions should be outlined.) Names and addresses of all parties to financial agreements must be stated. Oral agreements must be summarized and details submitted with regard to all material terms thereto. <u>1/</u>	3.54	
49. Attach as EXHIBIT _____ a statement of the number and description of all technical personnel to be employed directly by licensee for maintaining and repairing the proposed facilities, and describing the specific arrangements for prompt maintenance or repair of the proposed facilities. <u>1/</u>	3.55	
50. Attach as EXHIBIT _____ a detailed statement covering the manner in which the proposed service will be operated, including number of persons to be so employed, division of work, and hours of physical supervision by applicant. If facilities are to be operated and/or maintained in conjunction with any other business, give name and address of owner of such business and submit copies of working agreements. <u>1/</u>	3.55	
1/If application is for individual user mobile unit, or for mobile units other than those associated with a single permanently installed base station, this item need NOT be answered. 2/If application is filed under Part 25 this question need NOT be answered.		

~~DNA - Does Not Apply~~

Fig. 55—Form 401—Items 40 Through 50

40. Will applicant offer _____ day? <u>1/2/</u> If "No", state hours and days during _____ open for such service: Hours _____ Days _____			
41. Are the charges for the proposed service contained in a tariff filed with the FCC? <u>1/2/</u> If "Yes", identify: <u>FCC Tariff 263</u> <b>3.48</b> If "No", attach as EXHIBIT _____ a schedule of proposed charges. (The statement of rates required herein does not constitute a filing of schedules of charges required by Section 203 of the Communications Act of 1934, as amended, prior to commencing service.)		X	
42. Does local or state law require any franchise or other authorization to maintain or render the services proposed herein? <u>1/</u> (If "Yes", attach as EXHIBIT _____ a single certified copy of franchise or authorization)			
43. If application is for modification of a construction permit: <u>1/</u> (a) The time required to complete construction after authority is granted is _____ months. (b) Attach as EXHIBIT _____ a statement giving: (1) the extent of construction as of the date of this application, and (2) the justification for not having completed construction in accordance with outstanding construction permit.			
44. In what businesses, employment or activities, other than _____ common carrier, are applicant and its principals engaged? <u>1/</u> EXHIBIT _____ a statement			

Fig. 56—Form 401—Item 41

EXHIBIT NO. 6  
FCC FORM 401

**3.51**

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
STATION KMD984 STOCKTON, CALIFORNIA

Answer to Item 44:

In addition to Common Carrier Activity the Pacific Telephone and Telegraph Company is also engaged in directory advertising, miscellaneous physical properties and other investments within the state of California. The annual hours devoted to these activities by company employees are estimated to be 2,850,000. This represents 1.5% of the total work hours of employees of this company.

Fig. 57—Exhibit 6—Answer to Item 44

order as shown in Fig. 60. Show the item number (of Form 401) or FCC Rule for which each exhibit was submitted. (Instructions are attached to Form 401.) Information not requested by a particular item on Form 401, but required to be submitted

with each application, should be on an exhibit and listed under Item 53. This information includes:

- (a) The environmental statement required by FCC 21.13(e)

EXHIBIT NO. 7  
FCC FORM 401

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
STATION KMD984 STOCKTON, CALIFORNIA

3.54

Answer to Item 48:

Balance sheets (MR No. 2) of this company are filed monthly with the Commission. Annual operating revenues of one million dollars or more are demonstrated in the Annual Report Form M also filed with the Commission.

The Pacific Telephone & Telegraph Company maintains a credit rating equivalent to, or better than, a Standard & Poors Rating of "BBB" or a Moody's Bond Rating of "Baa."

Fig. 58—Exhibit 7—Answer to Item 48

(b) Identification of any applications (in the DPLMR Service) pending at the FCC for new or additional facilities within the coverage area of the proposed facilities as required by FCC 21.15(i)(2)

(c) Site availability required by FCC 21.15(a).

**Note:** ♦All applications for new site locations and applications to add facilities to existing sites (e.g., additional antennas, transmitters) must include a statement concerning the availability of the site for the new or additional facilities.

(1) If the site is owned by the applicant, a statement to that effect will be sufficient. Do not assume in cases where an antenna sketch shows the addition of the proposed antenna to the roof of a telephone company building that it is not necessary to make a site availability statement. Prepare a separate exhibit stating that the site is owned, and show the exhibit number and appropriate Rule section under Item 53.

(2) If the site is not owned by the applicant, a letter signed by the lessor showing any agreement for the use of the site or free access to the station facilities must be included with the application. In lieu of a letter, a copy of the lease may be submitted with the application. In cases where new facilities [additional channel(s)] are to be added to an existing location and the site is presently under lease, it must be demonstrated to the FCC that the lessor will permit the installation of the additional equipment.♦

**3.59 Certification:** Enter the official corporate name of the company (spelled out in full) in the space provided. The name entered must be identical to the company name shown in Item 1. The certification must be signed by an officer of the company or by a duly authorized employee. The date of signing and the printed name of the person signing and his title must be entered as shown in Fig. 63.

**3.60** An FCC Form 714 must be prepared and submitted as part of each construction permit application for a new DPLM station. Refer to

3.55

EXHIBIT NO. 8  
FCC FORM 401THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
STATION KMD984 STOCKTON, CALIFORNIAAnswer to Items 49 and 50:

Applicant is providing two-way dial Improved Mobile Telephone Service (IMTS) in the 150-MHz DPLMR band (sometimes referred to as MJ Mobile Radio Telephone Service) and also in the 450-MHz DPLMR band (sometimes called MK Mobile Radio Telephone Service). This service provides for customer dialing of calls to and from mobile telephones operating in their home service area. IMTS radio equipment operates in the full duplex mode permitting simultaneous voice transmission to and from the mobile telephone. This system is designed for automatic multichannel access. Mobile units associated with this system directly interconnect with the DDD network. Each mobile unit is equipped with automatic number identification (ANI) and is assigned a conventional telephone number in its serving central office. Calls are completed without the assistance of a mobile service operator. Calls placed by a roaming mobile unit, however, can only be completed through a mobile service operator.

All maintenance and operations of this station are performed by technically qualified personnel of this company and are under its direct supervision. There are two employees holding valid first-class and seven employees holding valid second-class radiotelephone operator licenses normally associated with the maintenance and repair of this station. A sufficient number of licensed personnel are available to be immediately assigned to correct any equipment malfunction.

The control point to be associated with this station will be manned 24 hours a day, and a continuous surveillance of the station operation will be maintained. In case of any indication of equipment malfunction requiring correction, maintenance personnel, whose primary responsibility is the proper operation and maintenance of this station, will be promptly dispatched. Under normal conditions the maintenance personnel will arrive at the station within two hours.

Fig. 59—Exhibit 8—Answer to Items 49 and 50

FCC Form 401 Page 6

51. Applicants not engaged in providing public wire line communication service shall attach as EXHIBIT \_\_\_\_\_ a statement showing the extent to which the applicant intends actively to participate in the day-to-day operation of the proposed facilities. In the event the applicant does not intend actively to participate in the day-to-day management and operation, he should state his reasons therefor and fully disclose the details of the proposed operations, including a showing of how control thereof will be retained by the applicant. The statement shall also set forth the names and addresses of any and all persons (except applicant) who have a substantial interest or responsibility in the supervision, operation, maintenance and or control of proposed facilities, the relationship of each such person to the applicant and the extent of control to be exercised by such persons. **DNA** 3.56

52. Attach as EXHIBIT \_\_\_\_\_ a complete statement, setting forth facts which show how the instant proposal will be in the public interest and will satisfy specified needs for service, detailing the number and activities of prospective customers and disclosing all relationships, affiliations or connections between the applicant and prospective customers. If surveys or solicitations have been made, the nature and detailed results thereof should be submitted. The statement should contain the names of any common stockholders, officers, directors, employees or individuals closely related to the management or control of the facilities of the applicant or any subscriber. 3.57

53. Is applicant personally familiar with the provisions of Part 21 or 25, as applicable, of the Commission's Rules?  Yes  No

EXHIBITS AND APPLICABLE SEC. and or ITEM NO. OF RULE OR FORM (See Instruction 7)					
Exhibit Number	Sec. and or Item No. of Rule or Form	Exhibit Number	Sec. and or Item No. of Rule or Form	Exhibit Number	Sec. and or Item No. of Rule or Form
1	Rule Section	21.13(e)	Environmental Statement		
2	Item 18				
3	Item 19				
4	Item 20				
5	Items 27(a), (b) and (c)			3.58	
6	Item 44				
7	Item 48				
8	Item 49 and 50				
9	Item 52				
	FCC Form 714 Rule Section	21.15(d)			

**\*DNA-Does Not Apply**

**CERTIFICATION**

The APPLICANT waives any claim to the use of any particular frequency or of the ether as against the regulatory power of the United States, the same, whether by license or otherwise, and requests that the attached exhibits are a part of the record.

Fig. 60—Form 401—Items 51, 52, and 53

Practice 400-550-102 for detailed instructions for the preparation of FCC Form 714. In addition, it may be necessary to file FAA Form 7460-1 with the Federal Aviation Administration. The proposed antenna structure(s) should be analyzed under Part 77 of the Federal Aviation Regulations to determine if FAA Form 7460-1 is required to be filed. Refer to Practice 400-550-101 for detailed instructions for the preparation of FAA Form 7460-1.

**4. AMENDMENTS AND MODIFICATIONS**

**4.01** Situations may be encountered in which it becomes necessary to amend an application which has been filed with the FCC and is still pending. An amendment is a type of informal application (letter) since there is no standard FCC form on which to prepare an amendment [FCC

21.13(c)(2) and 21.23]. However, individual pages of the forms may be used.

**4.02** An amendment must contain the following information:

- (a) The name and address of the applicant as shown in the application (Form 401 or 403) being amended
- (b) The call sign of the station involved (if assigned)
- (c) The file number (if known), date, and purpose of the application being amended (to identify that application)
- (d) A brief description of the purpose of the amendment and the reason it is required.

3.57

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
STATION KMD984 STOCKTON, CALIFORNIA

Answer to Item 52:

As covered in the transmittal letter, the applicant proposes to establish an additional channel at Domestic Public Land Mobile radio station KMD984 serving Stockton, California, and vicinity.

At present, station KMD984 has two channels authorized in the 150 through 160-MHz range and one channel authorized in the 450 through 460-MHz range and is serving a total of 112 mobile units. We currently have 15 held orders for service, and our present system is operating at a very high capacity.

Pages 2 through 4 of this exhibit show the traffic loading data as required by Section 21.516(b) of the Commission's Rules.

The applicant is a common carrier providing communication services to the general public. In the applicant's opinion, the construction proposal in this application is the most economical and practicable way of providing the required facilities and a grant thereof will be in the public interest.

Fig. 61—Exhibit 9—Answer to Item 52

**4.03** In addition to the information specified in paragraph 4.02, the amendment must show exactly what changes are desired in the application being amended. These changes may be listed by including statements such as "Under Item 4(1), add frequency 12345 MHz," etc. However, unless the desired changes are relatively simple, this method usually becomes cumbersome and difficult to understand. For other than simple changes, therefore, it is usually easier to replace entire pages which show information that must be amended. However, answers to all items must be given and "no change" **cannot** be used.

**4.04** To modify an outstanding construction permit, a complete Form 401 with responses to all

items (regardless of whether or not the information has changed) and all associated exhibits are required. Cross references to previously filed exhibits may be used only when such exhibits are more than one page and are properly identified [FCC 21.13(b)].

**4.05** ♦When responding to Item 52 for a modified construction permit, the need showing should address only the instant proposal. For example, if a construction permit granted authority for an additional channel and it became necessary to modify the construction permit to relocate the facilities, the need showing for the modified permit should address only why it is in the public interest to relocate the station.♦

EXHIBIT NO. 9  
FCC FORM 401  
Page 2 of 4

3.57

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
DOMESTIC PUBLIC LAND MOBILE RADIO SERVICE  
STATION KMD984 STOCKTON, CALIFORNIA

Traffic Loading Data for October 3, 1977

	152.57/157.83 MHz			454.65/459.65 MHz			152.72/157.98 MHz		
	Min Used	%	Calls	Min Used	%	Calls	Min Used	%	Calls
7-8 am	25.3	42.2	6	9.8	16.3	4	23.2	38.7	4
8-9 am	24.6	41.0	6	38.6	64.4	8	37.5	62.5	11
9-10 am	55.1	91.9	11	36.1	60.3	12	37.5	62.5	6
10-11 am	44.3	73.9	5	48.0	80.0	12	51.6	86.0	10
11-12 am	49.7	82.9	11	53.9	89.9	16	46.7	78.0	14
12-1 pm	12.8	21.3	4	18.2	30.4	5	19.6	32.7	5
1-2 pm	50.4	84.0	11	28.5	47.5	8	33.9	56.5	10
2-3 pm	33.6	56.0	13	10.5	17.5	5	45.5	75.9	8
3-4 pm	37.4	62.4	11	12.6	21.0	5	44.6	74.4	6
4-5 pm	36.3	60.5	7	25.9	43.2	4	35.7	59.5	7
5-6 pm	17.9	29.8	3	12.6	21.0	5	36.8	61.4	8
6-7 pm	19.8	33.0	4	9.2	15.3	2	35.4	59.0	6
12-hour total	407.2		92	303.9		86	448.0		95

Daily Users - 32      Daily Users - 35      Daily Users - 34  
Units in Service - 35      Units in Service - 40      Units in Service - 37

Fig. 62—Exhibit 9—Traffic Loading Data

CERTIFICATION

The APPLICANT waives any claim to the use of any particular frequency or of the ether as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests a construction permit in accordance with this application. All statements made in the attached exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that the statements made in this application are true, complete and correct to the best of his (her) knowledge and belief, and are made in good faith.

Dated this 21<sup>st</sup> day of October, 1977.

Applicant The Pacific Telephone and Telegraph Company  
(must correspond with that shown on page 1)

By J. J. Jones  
(printed) 

Title Vice President  
(position held by person signing for applicant)

WILLFUL FALSE STATEMENTS MADE ON THIS APPLICATION ARE PUNISHABLE BY FINE AND IMPRISONMENT (U.S. Code, Title 18, Section 1081) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(e)(1))

3.59

If application is for individual user mobile unit, or for mobile units other than those associated with a single permanently installed item need NOT be answered.

Fig. 63—Form 401—Certification