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1. GENERAL

1.01 Wide Area Telecommunication Service (WATS) provides communication to or from the customer location within selected geographical areas. Outward WATS is designed for the customer who originates a large volume of calls outside his normal calling area. Inward WATS allows a customer to receive calls from within specified areas at no charge to the originator of the call.

1.02 WATS may be furnished on either an INTRASTATE or INTERSTATE basis. The customer has a choice of five progressively larger service areas under the INTERSTATE offering. The customer's home state is not included in INTERSTATE service. Service area one (band 1) generally includes all adjoining states. Service area two (band 2) includes band 1 plus certain other states and so on through bands 3, 4, and 5. Service area five, the largest service area, includes the entire United States except Alaska, Hawaii, and the customer's home state.

Customers may initiate calls to (Outward WATS) or receive calls from (Inward WATS) all locations within the designated area (or band) for which he has subscribed. Calls to or from bands not included in the subscribed to area will be screened and routed to intercept as "Out-of-Band" calls. Remember that due to the structure of this INTERSTATE numbering plan, calls to or from bands smaller in number than the subscribed to band are authorized calls.

INTRASTATE service calling is limited to within state boundaries with geographic boundaries established according to individual arrangements. Band numbers 7, 8, 9, and 0 are used to designate the INTRASTATE class of service.

1.03 The line between the serving office and the customer location is called the access line. The access line may terminate in a telephone set, switchboard, console, dial equipment, connecting arrangement for customer owned equipment, station key equipment, data set, or data access arrangements.

2. REGULATIONS

2.01 WATS lines may be used for voice, data or teletypewriter transmission.

2.02 In some cases WATS lines are trunked to Central Offices (COs) which do not normally serve the geographic area in which the customer is located because the local CO is not equipped to furnish the WATS service contracted. The customer is not charged for the foreign exchange service in these instances.

2.03 All outward WATS services are measured and utilized by Direct Distant Dialing (DDD) and Automatic Message Accounting (AMA). Inward WATS code "800" is screened (blocked) in the originating office to prevent calling from Outward to Inward WATS lines. This is done to avoid double billing as a result of allowing a call to be completed between two services, both of which have contracted for billing on all calls established.

2.04 All inward INTERSTATE and measured INTRASTATE WATS service must be equipped with registers and timers or Electronic Switching System (ESS) programs capable of:

- (a) Measuring total usage time on each line

- (b) Counting the total number of completed calls
- (c) Measuring the number of overflows encountered due to all lines in the group being busy.

Local procedures may also require this capability on full-time INTRAsate services as it provides a tool to determine the adequacy of the lines serving each customer group.

2.05 INTERstate inward WATS service is furnished upon the condition that the customer contracts for adequate lines to permit use of this service without interfering with this service or impairing it or without injurious effects upon it or any other service rendered by the Telephone Company. A minimum of two terminations is required for each service group. Only one WATS number is provided and when the first line is busy, the second line is selected automatically. The adequacy of the access lines will be determined through use of the aforementioned measuring devices.

2.06 All applicable meters or registers will be read upon completion of installation and associated tests or upon removal. Final readings will be recorded on the service order prior to being transmitted to accounting for billing.

3. OUTWARD WATS—DESCRIPTION

3.01 The number assigned for outward WATS is a distinct and unique 7-digit number.

- (a) The first digit will designate the type service with "0" for full business day service or "1" for measured time service. Full time service may be offered in some localities for INTRAsate service and would be designated "0."
- (b) The second digit provides district location identification or first digit of the rate center.
- (c) The third digit will designate the calling area subscribed for by the WATS customer. Numbers 1 through 5 indicate the INTERstate service areas. Numbers 7, 8, 9, and 0 are assigned to INTRAsate service areas.
- (d) The last four digits combine with the second digit to identify the rate center and complete the identification of the individual WATS line.

3.02 Serving offices must be equipped with screening capabilities and arrangements for accumulating billing information. The purpose of the screening is to assure that calls originated to terminal points outside the subscribed to bands will be directed to intercept.

3.03 Appropriate tests shall be conducted to verify that calls originated to terminal points within all subscribed to bands can be reached and calls to terminal points outside the band will be screened.

4. INWARD WATS—DESCRIPTION

4.01 Inward WATS is handled by means of special code assignments. These consist of a Special Area Code (SAC), specifically "800," followed by a specific NNX code (or codes) for each telephone Numbering Plan Area (NPA). Of the 640 NNX codes available, all "NN2" codes are reserved for INTRAsate, leaving the others available for INTERstate usage.

4.02 An inward WATS customer's telephone number is always 10 digits and has the following format—800 + NNX + XXXX. The information contained in this format is as follows:

- (a) **800—Special Area Code (SAC):** Identifies the call as inward WATS service.
- (b) **NNX—INTERstate:** This is a central office type code which represents the terminating WATS NPA for an inward WATS call and the specific principal city switching machine in that NPA arranged to handle this traffic. All INTERstate inward WATS lines in a WATS NPA are served by the same NNX code.
- (c) **NN2—INTRAsate:** This central office type code identifies the inward WATS number as INTRAsate service. These codes may be used to represent:
 - (1) The total state
 - (2) A WATS NPA in a multiple WATS NPA state
 - (3) A particular city within a state
 - (4) A particular terminating serving central office within the state.

(d) **XXX**: These digits represent the inward WATS customers' station digits. Inward WATS number series should be blocked to prevent call completion from normal local and toll telephone service. The first three digits of the series (XXX-) specify the following:

- (1) The number is an inward WATS number series
- (2) Indicates the "service area" of "band" subscribed to
- (3) Designates the local serving central office for this inward WATS line
- (4) Shows the outpulsing requirements for this serving central office.

The last digit of the series (---X) is used to designate the particular inward WATS customer and start of hunting series when more than one line is provided.

4.03 INTERstate inward WATS routing is illustrated in Exhibit 1. When a customer dials an inward WATS number, 800-NNX-XXXX, the call will be directly routed to an office which is capable of 6-digit (6D) translation. This Originating Screening Office (OSO) will, by 6D translation of the SAC and the NNX code, route the call direct or by alternate routing to a telephone NPA where the inward WATS subscriber is located. As the call is forwarded toward the terminating NPA, it must retain its identity of inward WATS and must also indicate the WATS band relationship of the originating WATS state to the terminating NPA where the inward WATS customer is located.

This inward WATS call must be directed to the principal city office for the NPA in which the customer is located. This Terminating Screening Office (TSO) must be capable of 6D translation and will determine:

- (a) The called number is in the inward WATS number series assignments
- (b) Whether or not the call is from an allowable rate band location
- (c) The routing to the customer's serving office if the call is from an in-band point.

Tests to verify routing and screening via the Toll Switching System are performed by switching forces at the time routing is established or changed. Test procedures and maintenance intervals are furnished in practices provided for the type Toll Office involved, eg, tests for No. 4A and 4M offices may be found in Section 212-115-501.

Tests to verify translation and screening by the terminating principal city office shall be performed by the WATS serving office prior to placing individual stations in service.

4.04 INTRAsate inward WATS routing differs from INTERstate routing. When the INTRAsate call arrives at the OSO, it is in the same format as an INTERstate inward WATS call. The call cannot be routed from the first three digits; therefore, 6-digit translation is required. The "2" in the sixth digit slot (800-NN2) indicates that the call is an INTRAsate call.

There are two ways of assigning NN2 codes for inward WATS. In one case, each serving office is provided with its own NN2 code. In the other instance, an NN2 code is assigned for several serving offices. Some areas use a combination of the two assignment methods. The routing that is necessary depends upon this assignment.

4.05 To route calls with an individual NN2 per serving office, the OSO does 6D translation and code converts the 800-NN2 to an identifying digit which the local serving office receives. The local central office uses the central office code digit and the hundreds block to determine whether to allow or deny the call. (See Exhibit 2.)

In the event tandem routing is required, the OSO converts the 800-NN2 to a 0XX code and forwards to the tandem office. The tandem office code converts the 0XX to the identifying digit for the serving office and outpulses this digit and the 4-digit line number to complete as previously described. (See Exhibit 2.)

4.06 To route calls when the NN2 is shared by more than one serving office, the 6D translation does not provide sufficient information to route the call. To overcome this obstacle, loop back or loop around trunks are used to take the outpulsed code and reenter the OSO. The OSO then translates the 1XX and the first three digits of the 4-digit line number to identify the local serving office

INWARD WATS ROUTING - INTERSTATE

LOCAL SUBSCRIBER IN ARKANSAS
USES HIS REGULAR TELEPHONE
SERVICE TO CALL INWATS
CUSTOMER LOCATED IN
INDIANA.

DIALS 800 - 428-4557

SAC - IDENTIFIES THIS AS
A WATS CALL.

IDENTIFIES THE WATS
NPA WHERE CALLED SUBSCRIBER
IS LOCATED.

COMPLETES IDENTIFICATION OF
SPECIFIC LINE CALLED.

TOLL OFFICE (ORIGINATING SCREENING OFFICE)
DETERMINES TERMINATING PRINCIPLE
CITY (INDPLS) FROM WATS NPA.
SELECTS EITHER A DIRECT (1) OR
ALTERNATE (2) ROUTE.

DOES 6-DIGIT TRANSLATION.
ON A DIRECT ROUTE SENDS

133-4557

INDICATES A WATS CALL

IDENTIFIES CALLING PARTY
LOCATION IN RESPECT TO
THE WATS CUSTOMER
(IN THIS CASE BAND 3).

ORIGINATING



LOCAL CO

TOLL
SWG
OFFICE

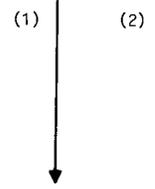


Exhibit 1—Inward WATS Routing—Interstate (Sheet 1 of 2)

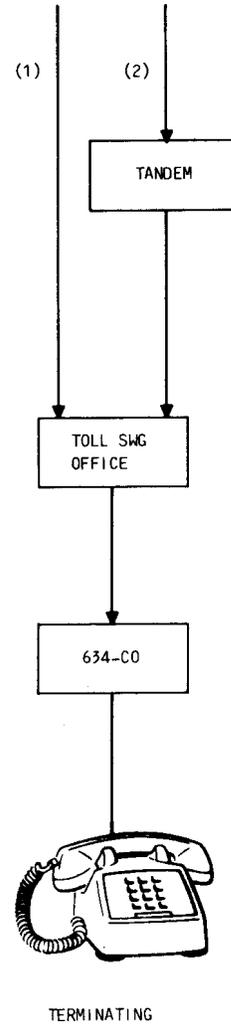
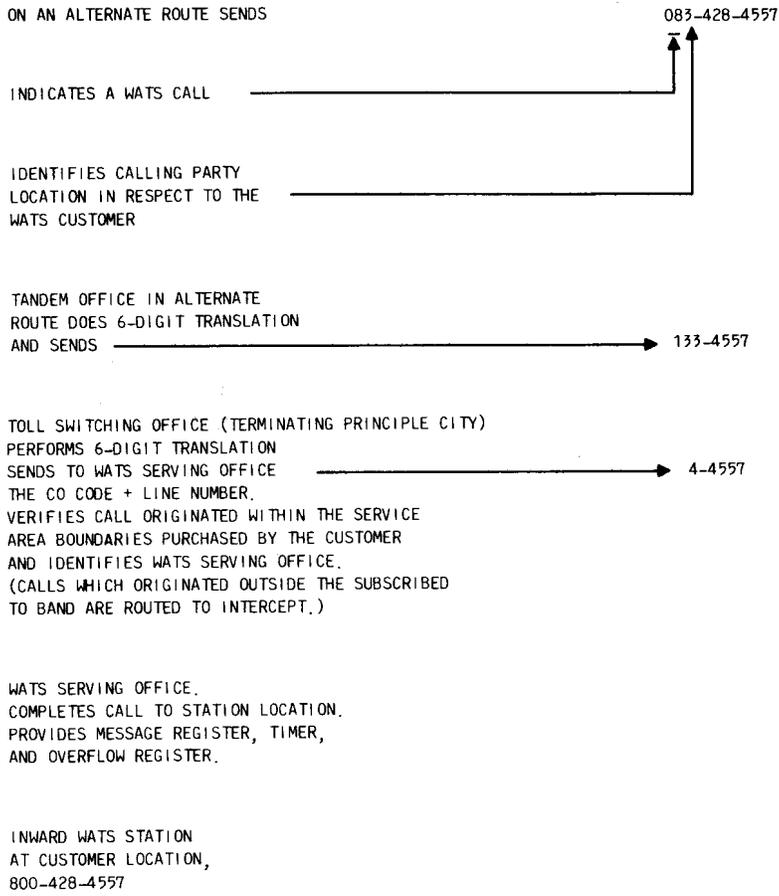
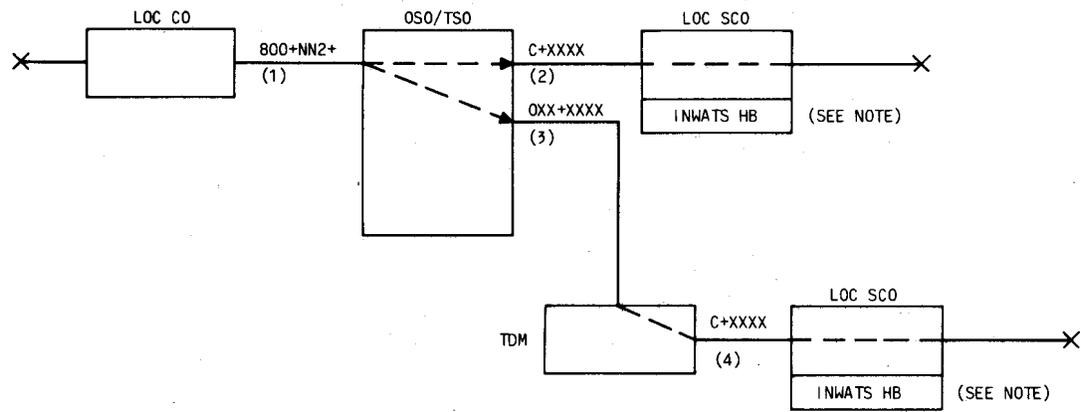


Exhibit 1—Inward WATS Routing—Interstate (Sheet 2 of 2)

INWARD WATS ROUTING - INTRASTATE

- 800 - NN2 PER LOCAL SERVING CENTRAL OFFICE
 - INWATS VALIDITY CHECK MADE AT SERVING CENTRAL



NOTE:

A SPECIFIC "HUNDREDS BLOCK" NUMBER SERIES IS MARKED INWATS ONLY AND MUST MATCH INWATS "CO CODE" FOR VALIDITY CHECK.

CALL SETUP . . .

- (1) 6-DIGIT TRANSLATE ON 800-NN2
- (2) SELECT DIRECT ROUTE TO SERVING CO AND CODE CONVERT TO INWATS "CENTRAL OFFICE CODE." -OUTPUTS TO CO- INWATS "CO CODE" AND "HUNDREDS BLOCK" MATCH MADE AT LOCAL CO TO ALLOW OR DENY COMPLETION.
- (3) TANDEM ROUTE SELECTED. CODES CONVERT TO OXX TYPE CODE REPRESENTING SERVING CENTRAL OFFICE AND OUTPUTS.
- (4) TANDEM OFFICE CODE CONVERTS OXX CODE TO INWATS "CO CODE" AND OUTPUTS TO CENTRAL OFFICE. INWATS "CO CODE" AND "HUNDREDS BLOCK" MATCH MADE AT LOCAL CO TO ALLOW OR DENY COMPLETION.

Exhibit 2—Inward WATS Routing—Intrastate

and determine whether to allow or deny completion. If verification is met, a route selected and a code digit plus the line number is outpulsed. (See Exhibit 3.)

If tandem routing is required, the OSO will code convert the reentered 1XX to a 0XX and forward to the tandem office along with the 4-digit line number. At the tandem office, the 0XX is code converted to the central office code digit and forwarded along with the 4-digit line number to the serving office. (See Exhibit 3.)

4.07 Tests are required prior to placing individual station in service to verify translation steps.

5. SERVICE ORDER/CIRCUIT ORDER PROCEDURES—GENERAL

5.01 The installation and test procedures in this section are designed to prevent the circuit irregularities caused by improper installation, thus improving customer service. Many of these tests are peculiar to WATS service and are required in addition to other tests/procedures common to special services. A list of the sections containing additional design, installation, and maintenance information can be found in Part 17.

5.02 Each equipment item should be checked to insure that it agrees with the service order/circuit order. Discrepancies between the installed equipment and information shown should be brought to the attention of the responsible engineering group.

5.03 Each office is responsible for PRESERVICE testing to verify that his cross-connects and equipment are installed as assigned and are operating properly.

5.04 On working circuits, it will be necessary to make arrangements for release of the line before making any changes, rearrangements, or tests. Contact the responsible Serving Plant Service Center (SPSC) who will be responsible for securing the release.

5.05 Test calls placed from out WATS service and test calls placed to an inward WATS service which would result in additional charges on the subscriber's bill must be identified for credit. See Part 17 for additional information.

6. SERVICE ORDER/CIRCUIT ORDER PROCEDURE—OUT WATS SERVICE OFFICE

6.01 No. 1 Crossbar—AMA: Verify telephone number and billing number by making a verification test at the miscellaneous frame. A special code and the telephone number to be verified is dialed on the line into the verification trunk.

6.02 No. 5 Crossbar—AMA: Verify telephone number, billing number, associated line equipment, and proper class of service for band specified on the request by making number group and AMA translator verification at the master test frame.

If a test number is not provided, visual inspection at the line link frame location should be made to determine the class of service furnished the assigned line terminal. Check office records to assure that class matches the band requested on the service order.

6.03 ESS-AMA—Noncentrex Service: Validation of the proper chart column shall be completed by personnel who establish service via service order teletype. This is accomplished by input messages to VFY-LEN and VFY-DN.

6.04 ESS-Centrex (CO) Service: Simulated Facility Groups (SFG) are available in several Generic Programs. This is a software device used to simulate physical hardware facilities in the No. 1 ESS program store memory. An SFG requires one directory number and one line equipment assignment to provide a Centrex CO customer with one or more lines of one type service. For example, if a customer has five out WATS lines in the same band, five stations can dial the access code for simultaneous service. Additional calls would receive a busy.

6.05 Validate the access code and SFG by memory interrogation.

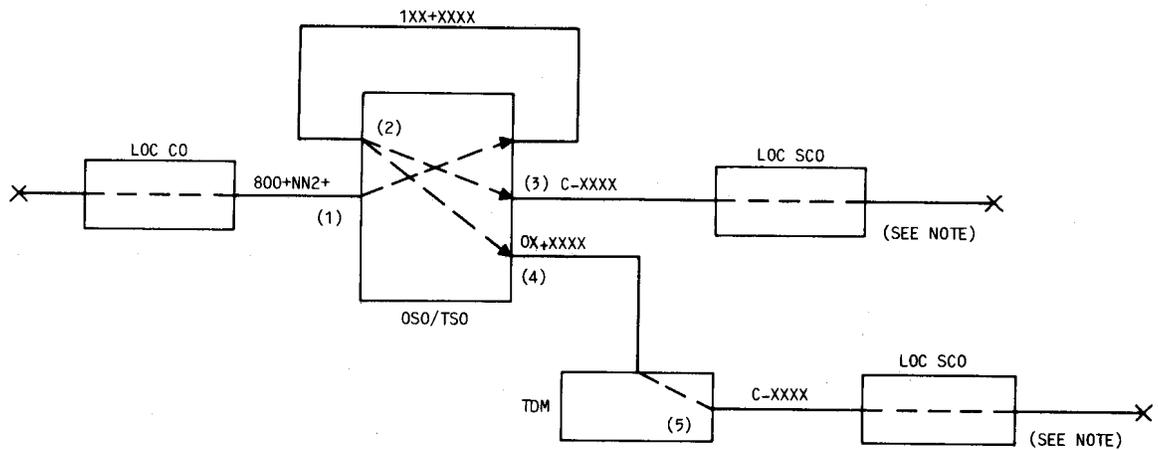
6.06 Confirm that chart column for screening LEN is proper for WATS band being established.

6.07 Confirm that correct quantity of "lines" is specified in the SFG translations.

6.08 Place actual test calls from CO line for this centrex group using access code and valid

INWARD WATS ROUTING - INTRASTATE

- 800 - NN2 FOR MULTIPLE LOCAL SERVING CENTRAL OFFICES.
 - INWATS VALIDITY CHECK MADE AT TERMINATING SCREENING OFFICE.



NOTE:

FOUR DIGITS MAY BE OUTPUTTED TO SOME SERVING CENTRAL OFFICES IF "HUNDREDS BLOCK" MATCH IS NOT POSSIBLE. HOWEVER, INWATS NUMBERS SHOULD NOT BE ACCESSIBLE BY NORMAL POTS TRAFFIC.

CALL SETUP...

- (1) 6-DIGIT TRANSLATE ON 800-NN2.
CONVERT TO 1XX AND OUTPUT WITH STATION DIGITS.
- (2) 6-DIGIT TRANSLATE ON 1XXX+XXX.
"TENS BLOCK" CHECK IS MADE FOR INWATS SERVICE AND SERVING CENTRAL OFFICE.
- (3) SELECT ROUTE TO SERVING CENTRAL OFFICE, CODE CONVERT 1XX TO INWATS "CO CODE" AND OUTPUT TO CO.
- (4) SELECT ROUTE TO TANDEM OFFICE. CODE CONVERT 1XX TO OXX TYPE CODE REPRESENTING THE SERVING CO OUTPUT TO TANDEM OFFICE.
- (5) AT TANDEM OFFICE, SELECTS SERVING CO ROUTE, CODE CONVERT OXX TO INWATS "CO CODE" AND OUTPUTS TO CO.

Exhibit 3—Inward WATS Routing—Intrastate

test number for WATS band. Place sufficient simultaneous calls to verify the quantity limitations indicated if the SFG are met.

6.09 Contact the SPSC and advise them that the service order work has been completed, tested, and is ready for customer use.

**7. SERVICE ORDER/CIRCUIT ORDER PROCEDURES—
INWARD WATS SERVING OFFICE**

7.01 Most inward WATS lines are equipped with clock, register, and overflow registers. Individual meter readings must be taken and

recorded before and after operating any message timer. Refer to Part 15 for details. No. 1 ESS with Centrex 6, Issue 7, and later generic programs may provide this billing feature requirement by recording the call information on AMA tape. Refer to Part 16 for details on crediting test calls.

7.02 The following steps outline the procedures for verifying cross-connects, meter assignment, and operation. ESS offices recording call information on AMA tape shall perform steps as outlined but disregard reference to meter operation and assignment:

INTERstate Service

STEP	PROCEDURE	EXAMPLE
1	Obtain the inward WATS telephone number.	From Service Order 800-428-0033
2	Determine band of service provided.	From Service Order band 3
3	Use conversion series to obtain 1YX series for assigned WATS NPA.	From Conversion Table Exhibit 4 428 = 133 (band 3)
4	Access a tandem line or trunk into the Terminating Screening Office and key or dial the conversion code plus the last four digits of the WATS number.	133-0033
5	The call will switch and ring the subscriber's inward WATS line. Establish an "off-hook" condition at the MDF.	
6	Note on completion of the call that the associated peg count meter and message timer meter operate. Message timers may require as much as 6 minutes running time before giving a visual indication of operation.	
7	While maintaining a busy condition on the subscriber WATS number, establish another call as outlined in steps 1 through 5 above to verify rotaries and meters associated with second WATS line. Repeat as required to test rotary and meter operation of all lines furnished in the group.	

STEP	PROCEDURE	EXAMPLE
8	After all lines are busy, establish one final call to the WATS number. Verify that this call returns a busy and operates the overflow meter.	
9	Release all test connections.	
10	Using a tandem line or trunk into the Terminating Screening Office, key or dial the conversion number for the next larger band plus the last four digits of the WATS number. The call will switch and a vacant code announcement shall be heard. (This step is not required if the customer has subscribed to band 5 service.)	134-0033
11	Release all test connections.	
12	Record meter readings on all lines tested.	
13.	Contact the SPSC and furnish final meter readings for recording on the service order.	

INTRASTATE Service

STEP	PROCEDURE	EXAMPLE
1	Record readings of meters associated with line(s) to be tested.	
2	Establish a call over the DDD network by dialing or keying the inward WATS telephone number.	800-382-5555
3	The call will switch and ring the subscriber's inward WATS line. Establish an "off-hook" condition at the MDF.	
4	Verify that upon completion of the call that associated peg count and message timer meters operate. Six minutes running time may be required before visual indication of timer operation is displayed.	
5	Establish additional calls, while maintaining a busy condition on the previous lines to verify rotary and meter operation of all lines in the group. The final call with all lines busy should return busy tone and cause operation of the overflow meter.	
6	Release all test connections.	
7	Record meter readings of all line(s) tested.	
8	Contact the SPSC and furnish final meter readings for recording on the service order.	

8. OVERALL LINEUP AND MAINTENANCE—GENERAL

8.01 Overall circuit order tests shall be performed on both in WATS and out WATS services. These tests are to be made before the circuits are placed in service and at prescribed maintenance intervals. The recommended testing intervals are covered in Table A.

8.02 The overall transmission measurements of special access circuits require several precautions to guard against erroneous results. In general, one must insure that a "seizure" or "off-hook" condition is provided at both terminals so as to remove signal tones, open idle circuit terminations, and cut through the transmission path. Test

equipment should present the correct impedance and be properly calibrated.

8.03 The preferred arrangement is to establish a connection through the serving central office switching equipment to the milliwatt supply, balance termination, or jack-ended test line as required for the type test being performed. Generally, it is not possible to complete calls from an INTERstate station location to the milliwatt supply, balance termination, or testboard located in its own serving office using the test numbers provided for regular telephone service. The reason this type call is not permitted is because INTERstate service does not include calls completed to or from locations in the customer's home state. To allow for "one-man" testing, special arrangements may be made at the WATS serving office such as providing special

INWATS TERMINATING OFFICE CONVERSION CODES

(Source: Dial Facilities Administrator)

WATS NPA	DDD AREA CODE	TERMINATING SCREENING OFFICE	1YX SERIES
221	212	New York City #10	14X
223	212	New York City #6	15X
225	617	Boston #2 & 9	13X
227	415	Oakland #3	12X
228	402	Omaha	12X
231	713	Houston #1	16X
233	717	Harrisburg	13X
235	805	Los Angeles #2	14X
237	813	Jacksonville	13X
238	901	Memphis	12X
241	404	Rockdale	14X
243	203	New Orleans #1	16X
245	412	Pittsburg #1	14X
247	515	Des Moines	12X
248	517	Detroit #1	16X
251	615	Nashville	12X
253	616	Grand Rapids #1	13X
255	913	Mission	15X
257	609	Camden #2	16X
258	603	Manchester	12X
321	216	Cleveland #2	13X
323	312	Chicago #6	13X
325	314	St. Louis #1	12X
327	305	Jacksonville (Ojus 5-17-75)	15X
328	612	Minneapolis	12X
331	918	Tulsa	16X
334	919	Greensboro	16X
336	703	Richmond	12X
338	906	Grand Rapids #1	14X
341	207	Portland #2 Me.	12X
344	209	Stockton #2	13X
346	218	Minneapolis	15X
348	219	South Bend #1	12X
351	915	Fort Worth	14X
354	606	Cincinnati	15X
356	608	Madison	14X
358	707	Santa Rosa (Santa Rosa #1, 5-3-75)	13X
368	202	Washington DC #3	14X
421	213	Los Angeles #3	12X
423	213	Los Angeles #3	13X
424	202	Washington DC #3	12X
426	206	Seattle #1	15X
428	317	Indianapolis	13X
431	914	White Plains #2	14X
433	817	Fort Worth	15X
435	815	Norway	12X

Exhibit 4—INWATS Terminating Office Conversion Codes (Sheet 1 of 3)

SECTION 311-200-001

WATS NPA	DDD AREA CODE	TERMINATING SCREENING OFFICE	1YX SERIES
437	701	Fargo	16X
438	704	Charlotte	15X
441	302	Wayne (Wilmington 8-16-75)	16X
443	307	Cheyenne	15X
445	308	Omaha	13X
446	804	Richmond	14X
447	309	Peoria #2	13X
448	315	Syracuse	16X
451	802	White River Junction	12X
453	801	Salt Lake City	12X
457	812	Indianapolis (Bloomington 7-19-75)	14X
458	814	Pittsburg #1	16X
521	313	Detroit #1	13X
523	215	Philadelphia #2	15X
525	303	Denver 1	13X
527	214	Dallas #1	16X
528	602	Phoenix #1	14X
531	512	San Antonio	16X
533	507	Minneapolis	13X
535	504	New Orleans #1	12X
537	419	Toledo	12X
538	408	San Jose #1	14X
541	509	Seattle #1	14X
543	513	Cincinnati	13X
545	505	Albuquerque	13X
547	503	Portland #1 Ore.	14X
548	406	Billings	12X
551	318	Jackson	13X
553	319	Des Moines	13X
556	401	Providence #4	15X
558	414	Milwaukee #1	12X
621	312	Chicago #6	12X
624	304	Charleston	12X
626	502	Louisville	15X
628	413	Springfield Mass.	12X
631	201	Newark #2	12X
633	205	Birmingham	15X
634	702	Las Vegas	13X
635	208	Salt Lake City (Boise #2, 4-5-75)	13X
637	217	Springfield Ill.	12X
638	301	Baltimore #2	12X
641	417	Kansas City	13X
643	501	Little Rock	15X
645	516	Hempstead	14X
647	601	Jackson	12X
648	702	Reno #3	13X
654	405	Oklahoma City	16X
821	816	Kansas City	13X
824	916	Sacramento #1	12X

Exhibit 4—INWATS Terminating Office Conversion Codes (Sheet 2 of 3)

WATS NPA	DDD AREA CODE	TERMINATING SCREENING OFFICE	1YX SERIES
826	715	Eau Claire	13X
828	716	Buffalo	15X
831	712	Omaha	14X
833	518	Albany #2	14X
835	316	Wichita	13X
841	912	Atlanta (Macon 5-17-75)	13X
843	605	Omaha	15X
845	803	Columbia	13X
847	607	Albany #2	13X
848	614	Columbus	12X
851	618	St. Louis #1 (Collinsville 10-18-75)	14X
854	714	San Bernadino	12X
858	806	Fort Worth	13X
874	904	Jacksonville	14X

X = 9 for band 1, 2 for band 2, 3 for band 3, 4 for band 4, and 5 for band 5.

Exhibit 4—INWATS Terminating Office Conversion Codes (Sheet 3 of 3)

access codes, special screening, and/or additional equipment for testing. These special test numbers should be furnished installation and maintenance personnel locally following established procedures for providing this type information.

8.04 Transmission and noise measurements on nongain and "E" repeatered circuits are required in one direction only. The preferred arrangements (because it permits "one-man" testing) for out WATS circuits is via dialing the WATS serving offices milliwatt and balance termination from the station location. An alternate method which may be used if a milliwatt and balance termination are not available or to sectionalize trouble is to dial the testboard or jack-ended test line located in the WATS serving office and request assistance in performing the measurements.

8.05 EML is defined as the Expected Measured Loss between specified test points. To calculate the EML specified on circuit layout record cards, these test points have been defined as the milliwatt or jack-ended test line in the serving central office and the station termination at the customer location (Exhibit 5A). WATS lines served by a toll central office will normally include a test pad in the testing condition which should have been accounted for in the specified EML (Exhibit 5B).

8.06 In addition to the tests specified in this practice, WATS lines arranged for data transmission are subject to requirements described in Sections 314-205-500 and 314-205-501.

8.07 WATS lines served from a toll office must meet terminal balance requirements. Requirements and test methods are furnished in Sections 660-470-500 and 660-471-100.

8.08 Transmission and noise measurements shall be made in both directions on access lines using 4-wire design. The out-WATS measurements for one direction may be made by dialing the milliwatt and balance termination at the WATS serving office as previously explained. To make measurements in the other direction, connections can be established from the station location by dialing the testboard or jack-ended testline located at the WATS serving office and requesting assistance in performing measurements.

8.09 Connections for making measurements on inward WATS access lines must be established from the serving office end. When the employee at the station end has completed the installation work, it shall be his responsibility to contact the special service testboard (if provided) or serving WATS office and advise him of the order being worked. The connection will then be established

TABLE A

TEST	TYPE	INTERVAL
1000 Hz	Nonrepeated	Installation or change order. Schedule routine as required by local practices. Transmission trouble reports.
	Repeated	Installation or change order. Transmission trouble reports. 6 months.
	Equipped with carrier facilities	Installation or change order. Transmission trouble reports. 3 months.
Message Noise	All	Installation and change order. Noise trouble reports. Special investigations. Routine at interval established for 1000 Hz.
Impulse Noise	Circuits arranged for data transmission	Installation or change order. Noise trouble reports. Noise trouble reports. Special investigations.
Pulsing Tests	As specified in Section 333-125-500	Installation or change order. Signaling trouble reports.
Call Through Tests	All	Installation or change order. As required for trouble location.

from the special service testboard or serving office test position by dialing the appropriate test number.

8.10 Some offices may not be equipped with a test number and the only available access point is at the MDF or 2-wire side of the access line. If it becomes necessary to make tests from this location, local arrangements may be required to insure proper relay operation in any equipment installed as part of the access line circuit.

8.11 Results of actual transmission, noise, and pulsing tests shall be recorded on the service/circuit order document by the installer. Additionally, all measurements will be furnished the Serving Plant Service Center for recording on the file copy of the circuit layout record card.

8.12 Approved test equipment and methodology for specific tests are covered in more detail in other sections of the practices. See Part 17 for a list of references.

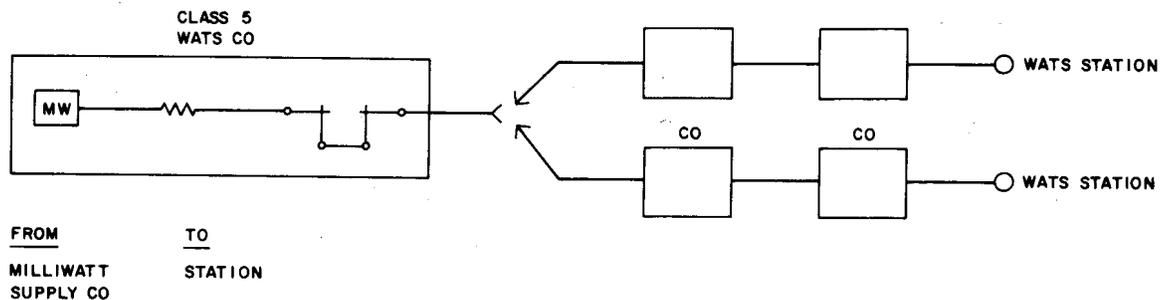


Exhibit 5A—WATS Lines—EML

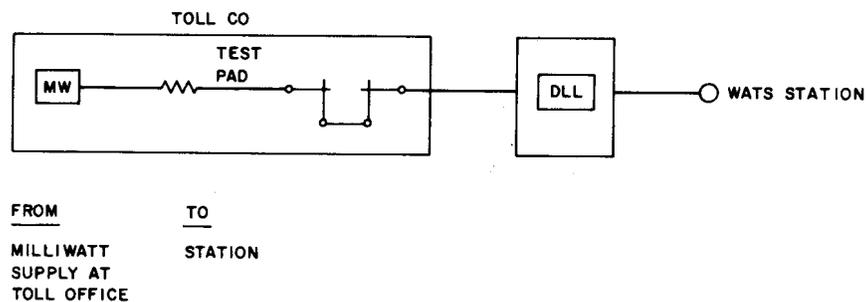


Exhibit 5B—WATS Lines to Toll Central Office—EML

8.13 Test calls which would cause operation of associated meters or calls recorded on tape for customer billing require credit adjustment. See Part 16 for handling credit charges.

9. OVERALL LINEUP AND MAINTENANCE—TRANSMISSION MEASUREMENTS

9.01 The access line should meet its 1000 Hz expected measured loss as specified on the service order or circuit layout record card with a variation of no more than 1 db. If this requirement cannot be met and no facility or equipment problems can be found, refer to supervisor for further action.

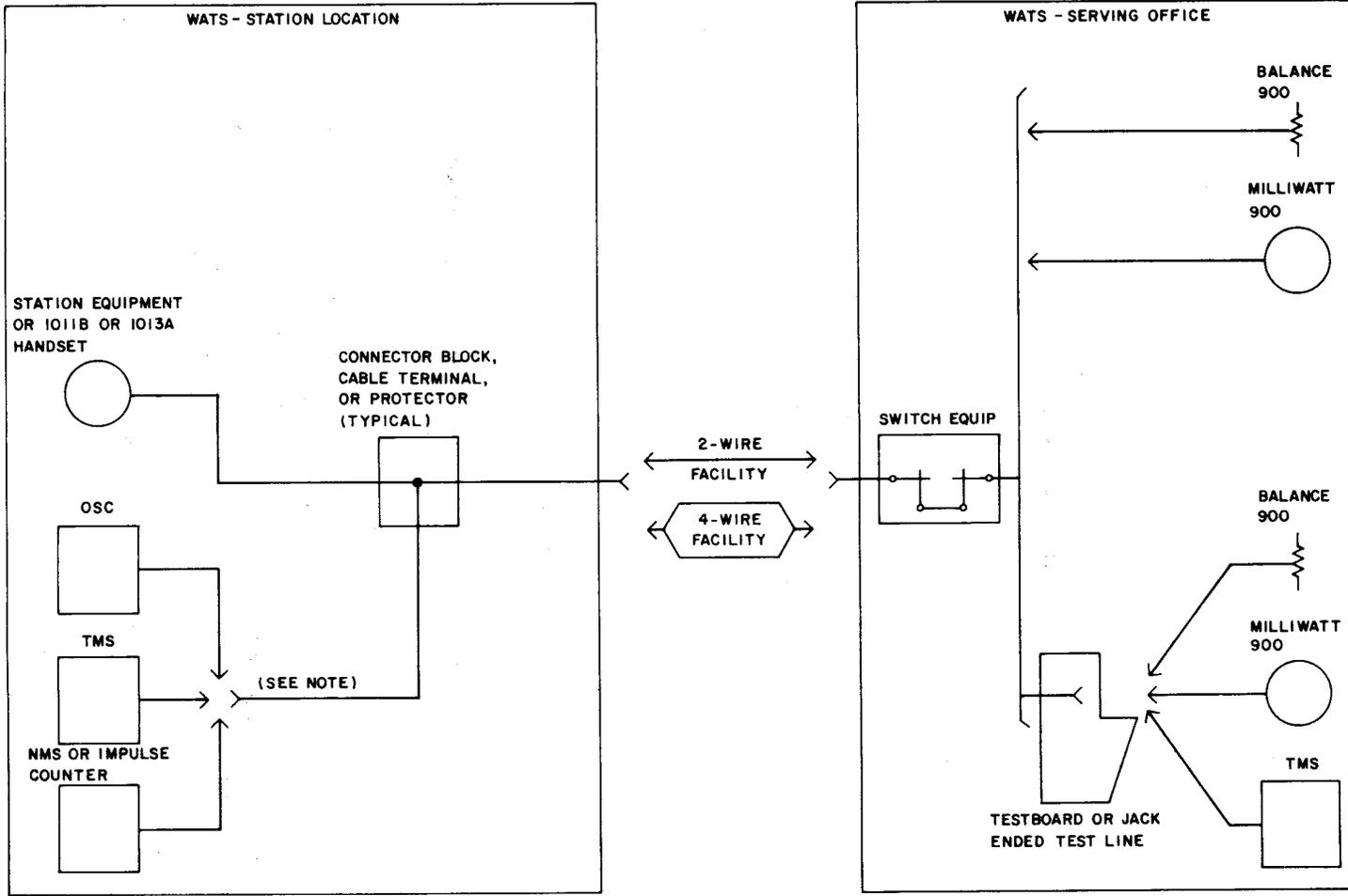
9.02 See Exhibits 6, 7, 8, and 9 for typical arrangements for making transmission measurements.

10. OVERALL LINEUP AND MAINTENANCE—NOISE MEASUREMENTS

10.01 Noise test with "C" message-weighting shall be made at the station end of all nongain and "E" repeatered 2-wire access lines. Readings are to be taken at both ends of circuits utilizing 4-wire design. The methods used for making noise test and the requirements to be met are furnished in Section 311-100-501.

10.02 See Exhibits 6, 7, 8, and 9 for typical arrangements for performing noise measurements.

10.03 WATS lines furnished with DATA-PHONE® or data access arrangements must meet impulse noise requirements as specified in Section 314-205-501.



NOTE:
STATION SETS OR 1011B OR 1013A HANDSET MUST BE ON HOOK OR DISCONNECTED WHEN THE LINE IS UNDER TEST.

Exhibit 6—Typical Transmission Arrangement—1000 Hz and Noise Measurements—WATS Station Access Lines Served from a Class 5 Office

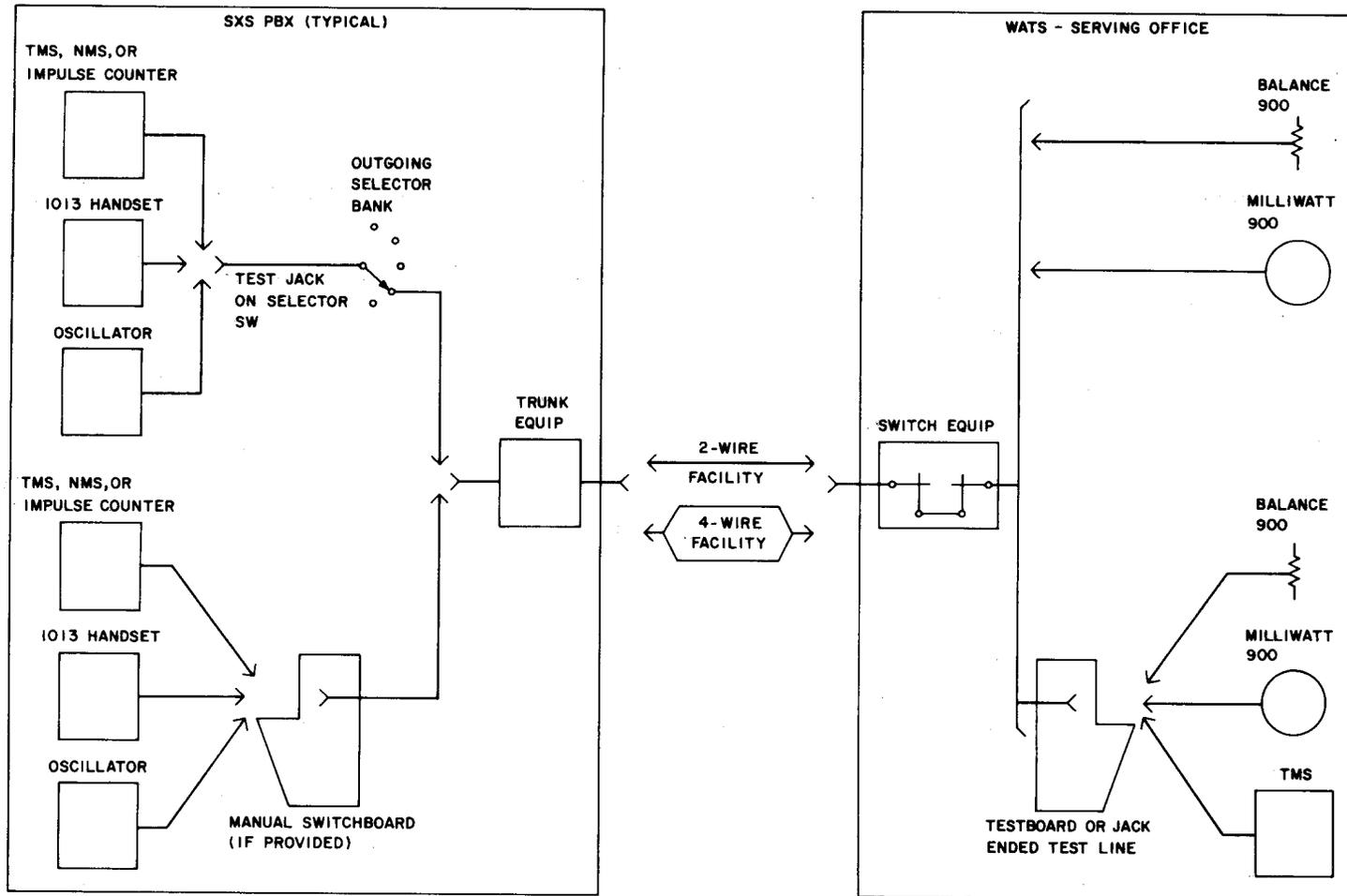


Exhibit 7—Typical Transmission Arrangement—1000 Hz and Noise Measurements—PBX WATS Trunks—PBX to Toll Office

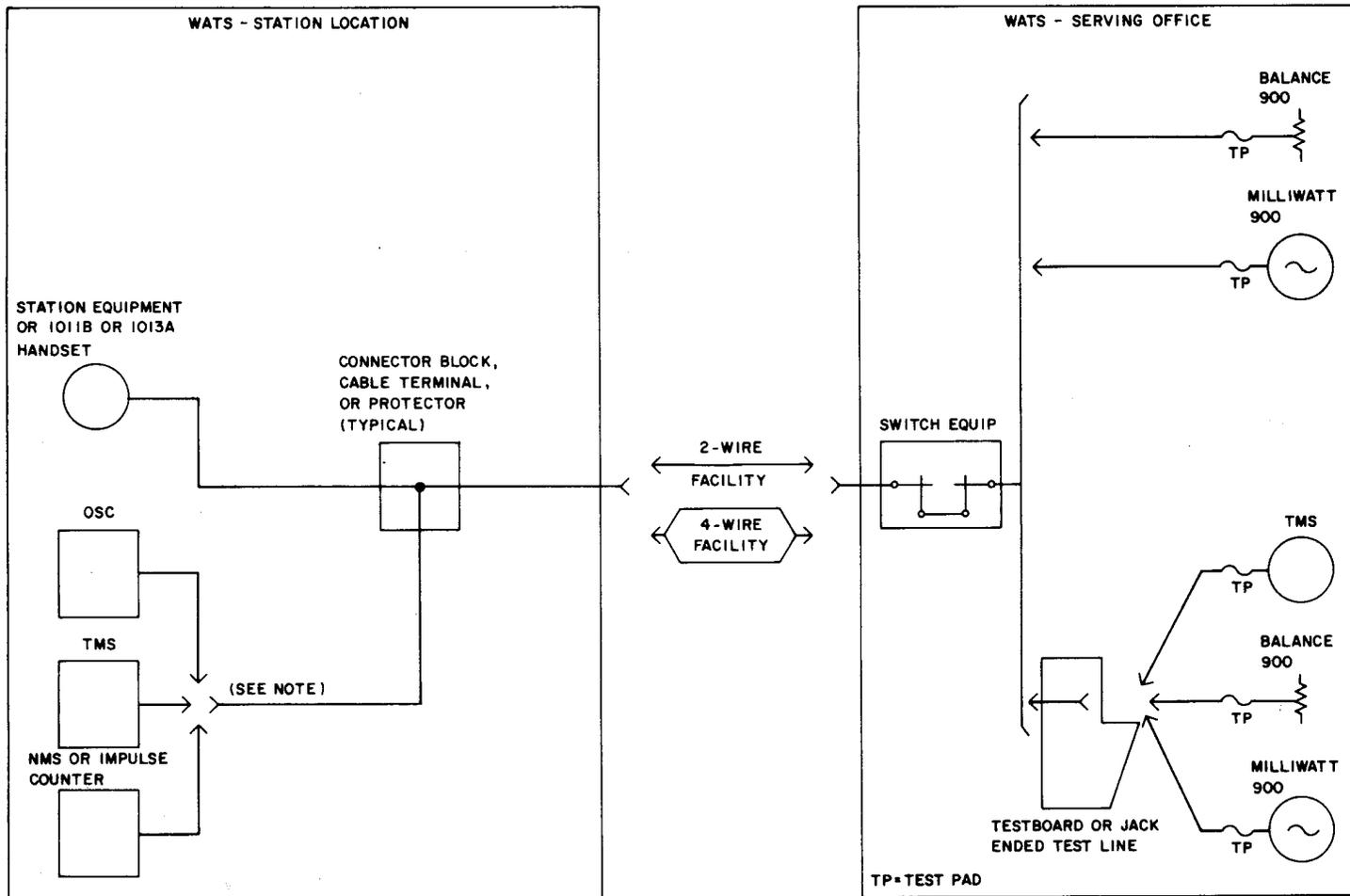


Exhibit 8—Typical Transmission Arrangement—1000 Hz and Noise Measurements—WATS Station Access Lines Served from a Toll Office

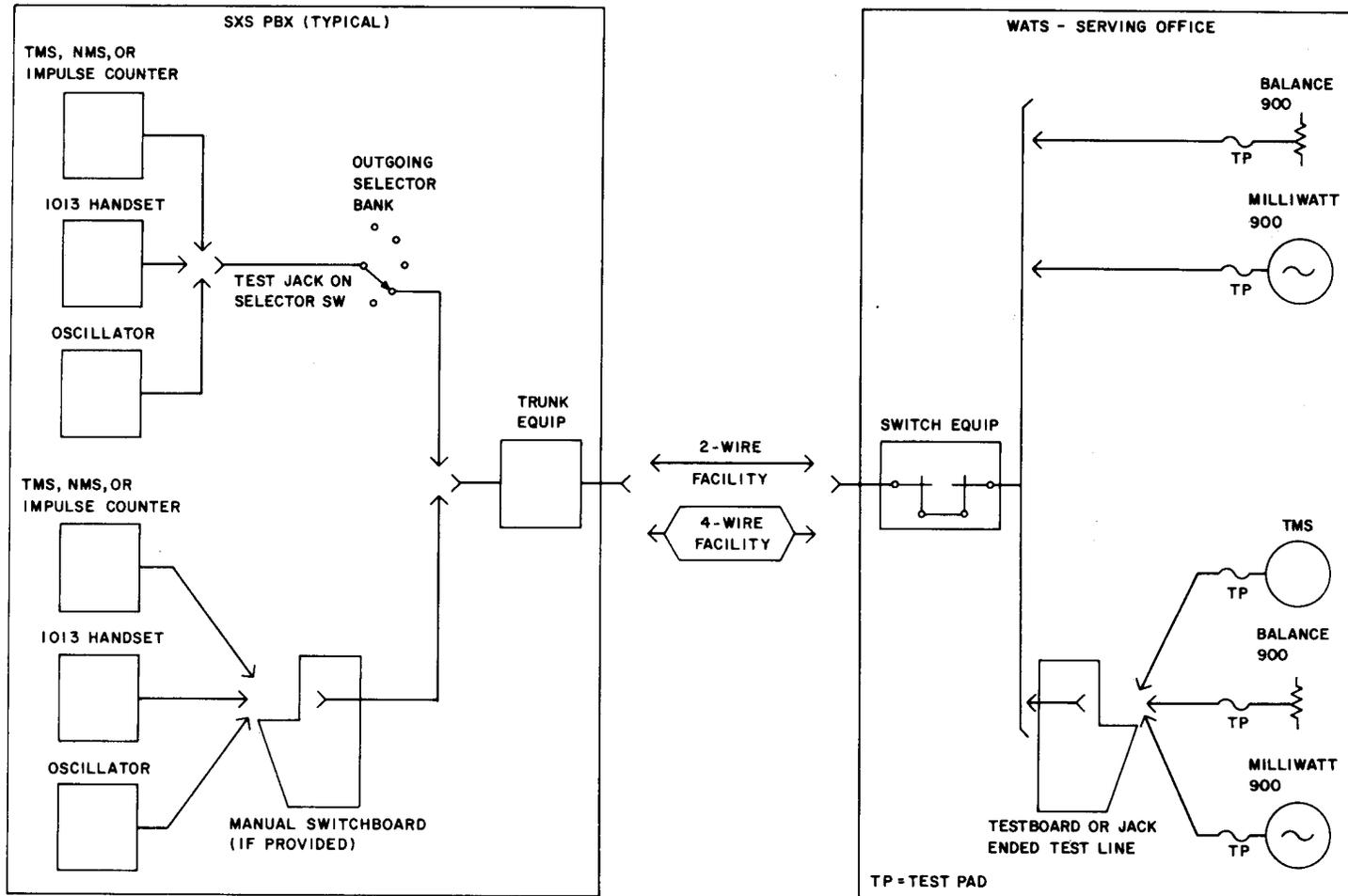


Exhibit 9—Typical Transmission Arrangement—1000 Hz and Noise Measurements—PBX WATS Trunks—PBX to Class 5 Office

11. OVERALL LINEUP AND MAINTENANCE—PULSING TESTS

11.01 Since no pulsing is used on inward WATS access lines, no pulsing tests are required.

11.02 Pulsing tests are required on out WATS access lines. Individual circuit requirements are furnished in Section 333-125-500. This section also includes diagrams which identify test points and test equipment for performance of either circuit order or trouble location tests. Specified tests are to be made before the circuit is placed in service and as required for trouble location.

12. OVERALL LINEUP AND MAINTENANCE—CALL THROUGH TESTS

12.01 The final test after all equipment and facilities are completed, including overall

transmission and signaling tests, is the call through test. This test will assure that out WATS customers can place calls to locations in the band for which they have subscribed and are routed to intercept on out-of-band calls. On inward WATS service, it will verify that the terminating screening office will perform the conversion necessary to direct the call to the WATS serving office and that calls can be completed to the specific in WATS customer station.

12.02 The calls established to make transmission and noise measurements are a part of the call through tests required for INTRASTATE out WATS classes of service. Additionally, the installer shall place a call to the band one (1) out WATS test number (Exhibit 10). This call should route to intercept. If results are not as indicated, refer to the Serving Plant Service Center for correction.

"COMPANY PRIVATE"

OUT WATS TEST NUMBERS

(See Note)

WATS CUSTOMER LOCATION	SERVICE AREA				
	BAND 1	BAND 2	BAND 3	BAND 4	BAND 5
Alabama	404-523-2222	502-372-5799	214-251-5868	717-342-0079	801-272-2237
Arizona	505-242-9902	806-373-0312	817-261-8124	217-422-9940	317-634-4911
Arkansas	601-237-4400	205-849-9211	319-393-3099	704-537-6261	801-277-2237
California	702-329-0020	307-632-9967	316-262-1876	314-445-6002	205-234-7700
Colorado	505-344-9902	806-622-0911	712-883-2011	812-476-4911	502-227-7200
Connecticut	914-887-9964	207-726-4440	304-344-9945	601-265-3301	915-967-2000
Delaware	202-232-9949	703-525-9949	615-622-1333	314-367-2300	402-371-0004
Dist. of Columbia	301-355-9987	919-299-5298	803-254-2270	205-322-3949	214-233-3111
Florida	912-746-2447	606-248-1222	314-383-2300	713-833-4000	316-684-1876
Georgia	803-577-2222	504-361-0000	314-383-2300	515-265-0790	316-522-1876
Idaho	503-284-1000	916-652-6111	602-791-9996	715-652-4595	219-282-1198
Illinois	319-338-0190	419-382-2370	304-622-9945	716-826-0000	802-222-4990
Indiana	513-321-1006	615-266-1333	704-537-6261	507-288-5111	303-422-0009
Iowa	507-847-9998	913-532-9983	701-227-2354	406-454-3943	208-375-9996
Kansas	402-422-0004	605-342-0010	507-288-5111	802-355-2237	703-522-9949
Kentucky	513-867-1106	404-634-2222	704-373-0013	716-895-0000	603-267-8188
Louisiana	601-644-3333	901-382-0078	904-355-0151	505-265-9902	602-248-9996
Maine	803-556-2222	717-342-0079	703-524-9949	615-877-1333	918-366-3707
Maryland	609-345-9971	919-755-4268	614-463-1470	205-788-3946	402-346-0004
Massachusetts	203-223-0960	717-342-0079	216-783-9883	501-664-1199	402-346-0004
Michigan	312-261-9996	217-224-9940	315-473-2299	918-234-9993	406-225-9902
Minnesota	616-451-9996	816-921-9983	307-632-9967	601-356-6090	817-277-2117
Mississippi	504-488-2589	904-355-0151	812-372-4002	414-332-0010	605-665-7500
Missouri	217-522-9940	608-271-0012	817-274-2939	303-366-0009	602-627-9996
Montana	509-328-0020	503-222-1000	916-342-0020	806-383-1151	319-938-9940
Nebraska	712-373-5500	701-944-2407	806-355-0641	502-265-2700	404-874-2222
Nevada	801-393-2237	509-244-2200	406-656-9902	317-636-4911	513-281-1006
New Hampshire	802-658-9988	201-243-9971	304-344-9945	615-524-2222	405-424-1798
New Jersey	301-488-9987	518-463-1000	317-638-4911	319-242-2601	605-225-9199
New Mexico	602-791-9996	817-277-2117	702-323-0020	503-282-1000	509-244-2200
New York	717-342-0079	614-221-1470	219-923-9940	319-242-2601	303-422-0009
North Carolina	803-253-2270	606-248-1222	904-768-1111	313-222-9996	713-222-1499
North Dakota	605-225-9199	712-623-9500	208-232-9996	503-284-1000	805-324-0000
Ohio	812-372-4002	717-342-0079	607-733-9998	319-323-4177	308-254-0050
Oklahoma	817-277-2117	512-648-1120	501-262-1003	801-399-2237	702-323-0020
Oregon	208-344-9996	714-460-1118	303-422-0009	806-335-1000	901-278-1078
Pennsylvania	607-722-1615	203-324-0960	207-774-0800	314-888-5101	303-422-0009
Rhode Island	203-324-0960	518-463-1000	304-343-9945	205-322-3949	303-422-0009
South Carolina	404-767-2222	904-724-4731	601-353-2206	314-888-5101	214-828-1799
South Dakota	701-223-0038	303-366-0009	208-343-9996	503-284-1000	916-775-0002
Tennessee	502-366-1778	812-275-5301	318-783-2111	716-684-0000	412-734-5911
Texas - NPA (214) (713) (817)	918-234-9993	205-322-3949	912-436-3000	803-254-2270	714-277-1118
Texas - NPA (512) (806) (915)	918-234-9993	417-623-2379	912-436-3000	803-254-2270	714-277-1118
Utah	208-344-9996	714-460-1118	503-288-1000	816-763-9983	901-278-1078
Vermont	803-796-2270	717-652-0079	304-344-9945	615-524-2222	316-262-1876
Virginia	304-344-9945	803-796-2270	404-767-2222	601-353-2206	214-828-1799
Washington	208-343-9996	801-393-2237	701-223-0038	715-341-0099	219-883-9940
West Virginia	703-525-9949	717-346-1317	615-588-2222	205-322-3949	402-345-0004
Wisconsin	616-454-9996	217-544-9940	502-366-1778	307-632-9967	406-656-9902
Wyoming	605-225-9199	701-227-2354	218-724-1234	715-834-2191	219-923-9940

Note: This material is prepared for Bell System purposes and is for use of Bell System employees only. See 301 series of the Bell System Practices for more detailed information on transmission test line directories.

Exhibit 10—Out WATS Test Numbers

SECTION 311-200-001

12.03 To test INTERstate out WATS classes of service, the installer shall make test calls as outlined below.

STEP	PROCEDURE	NOTES OR RESULTS
1	From the out WATS test numbers (Exhibit 10), select the test number of the calling area (band) for which the customer has subscribed.	Band can be identified by the 3rd digit of the WATS number. 135-XXXX - band 5
2	Place a call to the test number from the station location.	Call shall switch and complete. 1000 Hz tone will be returned.
3	Release the test call by placing station on hook.	Call will disconnect.
4	From the out WATS test numbers (Exhibit 10), select the test number of the next larger band.	Band 3 if the subscribed to band is 2.
5	Place a call to the test number.	Call will be screened and routed to intercept.
6	Place station on hook.	Call will disconnect.

If results are not as indicated, refer trouble to the Serving Plant Service Center for correction. The service order shall not be reported as complete until the results of these tests are satisfactory.

12.04 The installer shall advise the SPSC when he has completed his service/circuit order work on inward WATS services and request that the necessary call through tests be performed.

12.05 On INTRAstate in WATS service, the SPSC will originate a call by dialing the WATS telephone number (800-XXX-XXXX) shown on the service order. The call will switch and ring the subscriber's line. When the ringing signal is received at the customer location, the installer will answer, thereby establishing a communication path.

12.06 On INTERstate inward WATS, service calls shall be completed as outlined in the following steps:

STEP	PROCEDURE	NOTES OR RESULTS
1	Obtain the inward WATS telephone number from the service order.	
2		Determine band of service provided from service order.
3		Use the conversion table (Exhibit 4) to obtain the 1YX series for the assigned WATS NPA.
4		Access a tandem line into the WATS terminating office (Exhibit 4) and dial the conversion code plus the last four digits of the telephone number. If the SPSC is not equipped with the necessary tandem line, they should contact a location capable of performing the test and request that they place the call using the conversion code plus the last four digits. Alternate locations, which might be utilized to originate the call through test, are toll offices, WATS serving offices, DDD service bureau, and WATS terminating screening offices.
5		The call will switch through the terminating screening office and

STEP	PROCEDURE
6	ring the subscriber's in WATS line. When the ringing signal is received at the customer location, the installer will answer, thereby establishing a communication path.

If results are not as indicated, refer trouble to appropriate office for correction. The service order shall not be reported as complete until results of these tests are satisfactory.

13. ORDER COMPLETION PROCEDURES

13.01 Standard service order entries and completion procedures are contained in Universal Service Order Manuals and other sections of the Bell System Practices. See Part 17 for a list of related sections.

13.02 Most inward WATS services have associated meters for measuring number of calls completed, total usage time, and number of attempts not completed due to an all-busy condition. The CO personnel responsible for installing and/or testing these meters shall contact the SPSC when his tests are complete and provide the register readings to be recorded on the service order.

13.03 Enter the readings in the Service and Equipment (S&E) section of the associated service order. "CLN" will indicate the clock timer register number to be read. Enter the reading of the clock timer in the space after "CTR" clock reading. "RGN" will indicate the message counter number. Enter the reading of the message counter after "RGR" message counter reading. "OFN" will indicate overflow meter number. Enter the reading of the overflow meter after "OFR" overflow reading. (See Exhibit 11.)

13.04 The installer responsible for performing the work operation at the customer location shall, upon completion of tests to verify the service requested, furnish the SPSC pertinent completion information.

13.05 Completion reporting of service orders related to simulated Centrex CO WATS service is the responsibility of the serving office since they cannot be tested from the local testboard and no outside forces are involved. Upon completion

of tests to verify his work operations, the CO workman shall contact the SPSC and advise them that the service order work has been completed. The SPSC is then responsible for advising the customer that the requested service is ready for use.

13.06 The SPSC is responsible for assuring that the specified meter readings are recorded on the service order in addition to the normal completion information before it is forwarded on the completion network.

13.07 Orders requesting complete disconnect of WATS service shall not be left energized past midnight of the effective (due) date. Occasionally, the need arises to disconnect a WATS service prior to the normal offered interval. In these cases, Marketing will provide advance notification to the SPSC to assure time for handling. Notes concerning this request (Marketing contact, action taken, etc) should be attached to the line card to be transcribed to the service order which will follow through normal channels. The SPSC will be responsible for posting the disconnect order on the line card and contacting the central office forces to intercept service. Final work by central office and dispatch of outside forces can be completed with receipt of the service order.

14. HANDLING TROUBLE REPORTS

14.01 Additional information related to handling trouble reports can be found in other sections of the Bell System Practices. See Part 17 for a list of related sections.

14.02 Test calls which would cause operation of associated meters or calls recorded on tape for customer billing require credit adjustment. After completing the test calls, the Telephone Company employee shall dial the operator, identify himself, and request a credit adjustment on a WATS call, giving the calling number, the length of the call, and the telephone number called.

14.03 Test arrangements in some locations are provided by furnishing maintenance test numbers. In these locations, local test facilities can access the WATS access line at the WATS serving office by dialing. This test number will be identified on the service order/circuit order if provided and **must not be disclosed to the public.**

**ILLUSTRATION OF A TYPICAL SERVICE ORDER TO NEW CONNECT
A MULTI-LINE HUNT GROUP WITH THREE LINES**

PreCompleted

--S& E

I1	WACBC	/CKT 800-241-0020/CLN 2100 /CTR /RGN 0012/RGR /DES (A) MLH 0064 TER 0001
I1	WACBC	/MLH 0064/CLN 2101/CTR /RGN 0013/RGR /DES (B) TER 0002
I1	WACBC	/MLH 0064/CLN 2102/CTR /RGN 001/RGR /OFN 2345 /OFR /DES (C) TER 0003

Completed

--S& E

I1	WACBC	/CKT 800-241-0020/CLN 2100 /CTR 1984/RGN 0012/RGR 07632 /DES (A) MLH 0064 TER 0001
I1	WACBC	/MLH 0064/CLN 2101/CTR 4316 /RGN 0013/RGR 66639/DES (B) TER 0002
I1	WACBC	/MLH 0064/CLN 2102/CTR 6592 /RGN 0014/RGR 43655/OFN 2345 /OFR 23500/DES (C) TER 0003

Exhibit 11—Typical Service Order to New Connect (A Multiline Hunt Group with Three Lines)

14.04 If no maintenance test number is shown on the service order/circuit order, access for testing of the WATS access line can be provided by having a test cord inserted at the main distributing frame.

14.05 Procedures for making call-through tests are explained in other parts of this practice

and can be used to verify screening and code conversion.

14.06 Test results combined with analysis of information received from the trouble report can be used to sectionalize the trouble. Guidelines for handling some of the possible troubles are as follows:

TROUBLE INDICATION	DISPOSITION
Fault locates in WATS access line or station equipment.	Refer to local maintenance force for correction.
No trouble in customer line or station equipment. WATS line specifies data usage.	Refer trouble to Data Test Center for assistance in testing and analysis.
Trouble locates in WATS serving office.	Refer to CO maintenance force for correction.
Test calls to in WATS will not complete—test OK using the Plant test number.	Refer to terminating screening office for correction.
No trouble found and analysis indicates trouble in DDD switching plan or far end plant.	Refer to Network Service Center.
Report calls to specific location from out WATS location failing.	Verify that the called location is within the band for which the customer has subscribed. (See Exhibit 12.) If not an authorized call, advise the customer. If within the subscribed to band, place test calls to the out WATS test number for that band. Refer failures to WATS serving office.
15. MAINTENANCE AND READING OF INWARD WATS METERS	(c) Indicated line usage decidedly under normal or customary usage
15.01 Request for line and equipment verification tests may be generated by Comptrollers, Commercial, or Traffic Departments due to:	(d) No registration on assigned meters indicating improper wiring or defective equipment.
(a) Unassigned meters registering, indicating an improper cross-connect, short circuit, or left-in equipment	15.02 Prior to starting tests, verify that a meter wire is connected to the assigned terminals and properly soldered. Meter assignment and operation may be verified as outlined in service order/circuit order procedures. (See Part 7.) Complete a minimum of two operations for verification.
(b) Indicated line usage decidedly above normal or customary usage	15.03 Maintenance checks and/or running time verifications shall be performed on any registers suspected of being defective, intermittent

WATS STATION LOCATION	SERVICE AREA (BAND) CHART																															
	ALABAMA	ARIZONA	ARKANSAS	CALIFORNIA NC.	CALIFORNIA SC.	COLORADO	CONNECTICUT	DELAWARE	DIST. OF COLUMBIA	FLORIDA	GEORGIA	IDAHO	ILLINOIS NC.	ILLINOIS SO.	INDIANA	IOWA	KANSAS	KENTUCKY	LOUISIANA	MAINE	MARYLAND	MASSACHUSETTS	MICHIGAN NC.	MICHIGAN SC.	MINNESOTA	MISSISSIPPI	MISSOURI	MONTANA	NEBRASKA	NEVADA	NEW HAMPSHIRE	NEW JERSEY
ALABAMA	X	5	2	5	5	5	5	4	3	1	1	5	3	2	2	3	4	1	1	5	3	5	4	4	5	1	2	5	5	5	5	4
ARIZONA	4	X	4	2	1	1	5	5	5	5	5	3	4	4	5	4	3	5	4	5	5	5	5	5	4	4	4	3	3	1	5	5
ARKANSAS	2	5	X	5	5	4	5	5	5	3	3	5	2	2	3	3	2	2	1	5	5	5	4	4	4	1	1	5	3	5	5	5
CALIFORNIA NC. (209) (408) (707) (916)	5	2	4	X	X	2	5	5	5	5	5	1	4	4	4	3	3	5	4	5	5	5	4	4	4	4	4	2	3	1	5	5
CALIFORNIA SC. (213) (714) (805)	5	1	4	X	X	2	5	5	5	5	5	2	4	4	4	3	3	5	4	5	5	5	4	4	4	4	4	3	3	1	5	5
COLORADO	5	1	3	4	4	X	5	5	5	5	5	3	4	4	4	3	1	5	4	5	5	5	5	5	3	4	3	2	1	3	5	5
CONNECTICUT	4	5	4	5	5	5	X	2	2	4	3	5	3	3	3	4	4	3	4	2	2	1	3	3	4	4	4	5	4	5	1	1
DELAWARE	4	5	4	5	5	5	2	X	1	4	3	5	3	3	3	4	4	3	4	3	1	2	3	3	4	4	4	5	5	5	3	1
DISTRICT OF COLUMBIA	4	5	4	5	5	5	2	1	X	4	3	5	3	3	3	4	4	3	4	3	1	3	3	3	4	4	4	5	5	5	3	1
FLORIDA	1	5	2	5	5	5	4	2	2	X	1	5	3	3	2	4	5	2	1	5	2	4	4	4	5	1	3	5	5	5	5	3
GEORGIA	1	5	2	5	5	5	4	3	3	1	X	5	3	2	2	4	5	1	2	5	3	4	3	3	5	1	3	5	5	5	5	3
IDAHO	5	3	4	2	3	2	5	5	5	5	5	X	4	4	5	3	3	5	5	5	5	5	4	4	3	5	4	1	3	1	5	5
ILLINOIS NC. (309) (312) (815)	3	5	3	5	5	5	5	4	4	5	3	5	X	X	1	1	3	2	4	5	4	5	2	1	2	3	2	5	3	5	5	4
ILLINOIS SC. (217) (618)	3	5	2	5	5	5	5	4	4	5	3	5	X	X	1	1	3	1	4	5	4	5	3	2	3	2	1	5	3	5	5	4
INDIANA	3	5	3	5	5	5	4	3	3	5	3	5	1	1	X	3	4	1	4	5	3	4	3	1	4	3	2	5	4	5	5	4
IOWA	3	5	3	5	5	3	5	5	5	5	4	5	1	1	2	X	2	3	4	5	5	5	2	2	1	3	1	4	1	5	5	5
KANSAS	4	4	2	5	5	1	5	5	5	5	4	4	3	3	3	1	X	4	3	5	5	5	4	4	3	3	1	4	1	5	5	5
KENTUCKY	2	5	3	5	5	5	4	3	3	4	2	5	2	1	1	3	4	X	3	5	3	4	3	3	4	3	1	5	4	5	5	3
LOUISIANA	1	5	1	5	5	4	5	5	4	3	2	5	3	2	3	3	3	2	X	5	4	5	4	4	4	1	2	5	3	5	5	5
MAINE	4	5	4	5	5	5	1	2	2	4	4	5	3	3	3	4	5	3	5	X	2	1	3	3	4	4	4	5	4	5	1	2
MARYLAND	4	5	4	5	5	5	2	1	1	4	3	5	3	3	3	4	4	3	4	3	X	3	3	3	4	4	4	5	5	5	3	1
MASSACHUSETTS	4	5	4	5	5	5	1	2	2	4	3	5	3	3	3	4	4	3	4	2	2	X	3	3	4	4	4	5	5	5	1	1
MICHIGAN NC. (906)	4	5	4	5	5	5	3	3	3	5	4	5	1	2	2	1	4	3	5	4	3	3	X	X	1	4	2	5	4	5	3	3

DETERMINE THE SERVICE AREA (BAND) BETWEEN A WATS STATION LOCATION AND ANOTHER POINT AS FOLLOWS:
 STEP 1: FIND WATS STATION LOCATION IN THE LEFT-HAND COLUMN.
 STEP 2: FIND THE OTHER LOCATION IN THE LISTING AT THE TOP OF THE CHART.
 STEP 3: THE NUMBER AT THE INTERSECTION OF THESE TWO COLUMNS IS THE BAND.

Exhibit 12—Service Area (Band) Chart (Sheet 1 of 6)

WATS STATION LOCATION	SERVICE AREA (BAND) CHART																											
	NEW MEXICO	NEW YORK N. E.	NEW YORK S. E.	NEW YORK W.	NORTH CAROLINA	NO. DAKOTA	OHIO NO.	OHIO SO.	OKLAHOMA	OREGON	PENNSYLVANIA E.	PENNSYLVANIA N.	RHODE ISLAND	SO. CAROLINA	SO. DAKOTA	TENNESSEE	TEXAS E.	TEXAS SO.	TEXAS W.	UTAH	VERMONT	VIRGINIA	WASHINGTON	W. VIRGINIA	WISCONSIN	WYOMING		
ALABAMA	5	4	4	4	2	5	3	2	3	5	4	4	5	1	5	1	3	3	3	5	5	3	5	3	4	5		
ARIZONA	1	5	5	5	5	4	5	5	3	3	5	5	5	5	3	5	3	3	2	1	5	5	3	5	4	2		
ARKANSAS	4	5	5	5	4	5	3	3	1	5	4	4	5	3	4	1	1	3	3	5	5	4	5	3	3	5		
CALIFORNIA NO. (209)(408)(707)(916)	3	5	5	5	5	3	5	5	3	1	5	5	5	5	3	5	3	3	3	1	5	5	1	5	4	2		
CALIFORNIA SO. (213)(714)(805)	1	5	5	5	5	3	5	5	3	1	5	5	5	5	3	5	3	3	2	1	5	5	2	5	4	2		
COLORADO	1	5	5	5	5	3	5	5	1	4	5	5	5	5	2	5	3	4	2	1	5	5	4	5	4	1		
CONNECTICUT	5	1	1	2	3	5	3	3	5	5	2	2	1	3	5	3	5	5	5	5	5	2	2	5	3	4	5	
DELAWARE	5	2	1	2	3	5	3	3	4	5	1	2	2	3	5	3	5	5	5	5	3	2	5	2	4	5		
DISTRICT OF COLUMBIA	5	3	2	2	2	5	3	2	4	5	1	1	3	3	5	3	5	5	5	5	3	1	5	1	4	5		
FLORIDA	5	4	4	4	1	5	3	2	3	5	3	3	4	1	5	1	4	4	4	5	5	2	5	2	5	5		
GEORGIA	5	4	4	4	1	5	3	2	4	5	3	3	4	1	5	1	4	4	4	5	5	2	5	2	4	5		
IDAHO	3	5	5	5	5	3	5	5	3	1	5	5	5	5	3	5	4	4	4	1	5	5	1	5	4	1		
ILLINOIS NO. (309)(312)(815)	5	4	4	4	3	4	2	2	3	5	3	3	5	4	4	2	5	5	5	5	5	3	5	3	1	5		
ILLINOIS SO. (217)(618)	5	4	4	4	3	4	2	1	3	5	3	3	5	4	4	1	5	5	5	5	5	3	5	3	2	5		
INDIANA	5	4	4	4	3	5	1	1	4	5	3	2	4	3	4	2	5	5	5	5	4	3	5	2	2	5		
IOWA	4	5	5	5	5	3	3	3	3	5	4	4	5	5	1	3	4	4	4	5	5	4	5	3	1	3		
KANSAS	2	5	5	5	5	3	4	4	1	5	5	5	5	5	2	3	2	3	2	4	5	5	5	4	3	3		
KENTUCKY	5	4	4	4	3	5	2	1	4	5	3	3	4	2	5	1	5	5	5	5	4	1	5	1	3	5		
LOUISIANA	4	5	5	5	3	5	3	3	1	5	4	4	5	3	4	2	1	1	2	5	5	4	5	3	4	5		
MAINE	5	1	1	2	3	4	2	3	5	5	2	2	1	3	4	4	5	5	5	5	1	3	5	3	3	5		
MARYLAND	5	2	2	2	2	5	3	3	4	5	1	1	2	3	5	3	5	5	5	5	3	1	5	1	4	5		
MASSACHUSETTS	5	1	1	2	3	5	3	3	5	5	2	2	1	3	4	3	5	5	5	5	1	2	5	2	4	5		
MICHIGAN NO. (906)	5	3	4	2	3	4	2	2	4	5	3	2	3	4	4	3	5	5	5	5	3	3	5	3	1	5		

DETERMINE THE SERVICE AREA (BAND) BETWEEN A WATS STATION LOCATION AND ANOTHER POINT AS FOLLOWS:
 STEP 1: FIND WATS STATION LOCATION IN THE LEFT-HAND COLUMN.
 STEP 2: FIND THE OTHER LOCATION IN THE LISTING AT THE TOP OF THE CHART.
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Exhibit 12—Service Area (Band) Chart (Sheet 2 of 6)

WATS STATION LOCATION	SERVICE AREA (BAND) CHART																																
	ALABAMA	ARIZONA	ARKANSAS	CALIFORNIA NO.	CALIFORNIA SO.	COLORADO	CONNECTICUT	DELAWARE	DIST. OF COLUMBIA	FLORIDA	GEORGIA	IDAHO	ILLINOIS NO.	ILLINOIS SO.	INDIANA	IOWA	KANSAS	KENTUCKY	LOUISIANA	MAINE	MARYLAND	MASSACHUSETTS	MICHIGAN NO.	MICHIGAN SO.	MINNESOTA	MISSISSIPPI	MISSOURI	MONTANA	NEBRASKA	NEVADA	NEW HAMPSHIRE	NEW JERSEY	
MICHIGAN SO. (313)(517)(616)	4	5	4	5	5	5	3	3	3	5	4	5	1	2	1	2	4	2	5	4	3	4	X	X	3	4	3	5	4	5	4	3	
MINNESOTA	4	5	3	5	5	3	5	5	4	5	5	4	2	2	3	1	2	3	5	5	5	5	1	2	X	4	2	3	1	5	5	5	
MISSISSIPPI	1	5	1	5	5	5	5	4	4	2	1	5	3	2	3	3	3	2	1	5	4	5	4	4	4	X	2	5	4	5	5	4	
MISSOURI	3	5	1	5	5	4	5	5	4	5	4	5	1	1	2	1	1	1	3	5	4	5	3	3	3	2	X	5	1	5	5	5	
MONTANA	5	3	4	3	3	2	5	5	5	5	5	1	4	4	5	3	3	5	5	5	5	5	4	4	2	5	4	X	2	2	5	5	
NEBRASKA	4	4	3	5	5	1	5	5	5	5	5	4	3	3	3	1	1	4	4	5	5	5	4	4	2	4	1	3	X	4	5	5	
NEVADA	5	1	4	1	1	3	5	5	5	5	5	1	4	4	4	4	3	5	4	5	5	5	5	5	4	4	4	3	3	X	5	5	
NEW HAMPSHIRE	4	5	4	5	5	5	1	2	2	4	4	5	3	3	3	4	5	3	4	1	2	1	3	3	4	4	4	5	5	5	X	2	
NEW JERSEY	4	5	4	5	5	5	1	1	1	4	3	5	3	3	3	4	4	3	4	3	1	2	3	3	4	4	4	5	5	5	2	X	
NEW MEXICO	4	1	3	3	3	1	5	5	5	5	5	3	4	4	5	3	2	5	3	5	5	5	5	5	4	4	3	4	2	3	5	5	
NEW YORK N.E. (315)(518)(607)	4	5	4	5	5	5	1	2	2	4	3	5	3	3	3	4	4	3	4	2	2	1	3	3	4	4	4	5	4	5	1	1	
NEW YORK S.E. (914)	4	5	4	5	5	5	1	1	2	4	3	5	3	3	3	4	4	3	4	2	2	1	3	3	4	4	4	5	4	5	1	1	
NEW YORK W. (716)	4	5	4	5	5	5	2	2	1	4	3	5	3	3	3	4	4	3	4	2	2	1	3	3	4	4	4	5	4	5	3	1	
NORTH CAROLINA	3	5	4	5	5	5	3	1	1	3	1	5	3	3	3	4	4	2	4	4	1	3	4	4	4	3	4	5	5	5	4	2	
NORTH DAKOTA	5	4	3	5	5	2	5	5	5	5	5	3	2	3	3	2	2	4	5	5	5	5	2	3	1	5	3	1	1	4	5	5	
OHIO NO. (216)(419)	4	5	4	5	5	5	3	3	2	4	3	5	2	2	1	4	4	1	4	4	2	4	3	1	4	4	3	5	5	5	4	3	
OHIO SO. (513)(614)	4	5	4	5	5	5	3	3	2	4	3	5	3	2	1	4	4	1	4	4	2	4	3	1	4	4	3	5	5	5	4	3	
OKLAHOMA	3	4	1	5	5	1	5	5	5	4	4	5	3	3	3	3	1	3	2	5	5	5	4	4	3	3	1	5	2	5	5	5	
OREGON	5	3	4	1	2	3	5	5	5	5	5	1	4	4	5	3	3	5	5	5	5	5	5	4	4	3	5	4	2	3	1	5	5
PENNSYLVANIA E. (215)(717)	4	5	4	5	5	5	2	1	2	4	3	5	3	3	3	4	4	3	4	3	1	2	3	3	4	4	4	5	5	5	2	1	
PENNSYLVANIA W. (412)(814)	4	5	4	5	5	5	2	1	1	4	3	5	3	3	3	4	4	3	4	3	1	2	3	3	4	4	4	5	5	5	3	2	

DETERMINE THE SERVICE AREA (BAND) BETWEEN A WATS STATION LOCATION AND ANOTHER POINT AS FOLLOWS:
 STEP 1: FIND WATS STATION LOCATION IN THE LEFT-HAND COLUMN.
 STEP 2: FIND THE OTHER LOCATION IN THE LISTING AT THE TOP OF THE CHART.
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Exhibit 12—Service Area (Band) Chart (Sheet 3 of 6)

WATS STATION LOCATION	SERVICE AREA (BAND) CHART																											
	NEW MEXICO	NEW YORK N. E.	NEW YORK S. E.	NEW YORK W.	NORTH CAROLINA	NO. DAKOTA	OHIO NO.	OHIO SO.	OKLAHOMA	OREGON	PENNSYLVANIA E.	PENNSYLVANIA W.	RHODE ISLAND	SO. CAROLINA	SO. DAKOTA	TENNESSEE	TEXAS E.	TEXAS SO.	TEXAS W.	UTAH	VERMONT	VIRGINIA	WASHINGTON	W. VIRGINIA	WISCONSIN	WYOMING		
MICHIGAN SO. (313)(517)(616)	5	3	3	2	4	4	1	1	4	5	2	2	4	4	4	3	5	5	5	5	3	3	5	2	1	5		
MINNESOTA	4	4	4	4	5	1	3	3	3	5	4	4	5	5	1	3	5	5	5	4	5	4	5	3	1	3		
MISSISSIPPI	4	5	5	5	3	5	3	3	2	5	4	4	5	2	5	1	1	3	3	5	5	3	5	3	4	5		
MISSOURI	4	5	5	5	4	4	3	3	1	5	4	4	5	4	3	1	3	3	3	5	5	4	5	4	2	5		
MONTANA	3	5	5	5	5	1	5	5	4	2	5	5	5	5	1	5	4	4	4	1	5	5	1	5	3	1		
NEBRASKA	3	5	5	5	5	2	4	4	2	5	5	5	5	5	1	4	3	3	3	3	5	5	5	4	2	1		
NEVADA	3	5	5	5	5	3	5	5	3	1	5	5	5	5	3	5	3	3	3	1	5	5	2	5	4	2		
NEW HAMPSHIRE	5	1	1	2	3	4	3	3	5	5	2	2	1	3	4	4	5	5	5	5	1	2	5	3	3	5		
NEW JERSEY	5	2	1	2	3	5	3	3	4	5	1	2	2	3	5	3	5	5	5	5	2	2	5	2	4	5		
NEW MEXICO	X	5	5	5	5	4	5	5	1	4	5	5	5	5	3	4	2	2	1	1	5	5	5	4	2			
NEW YORK N. E. (315)(518)(607)	5	X	X	X	3	5	2	2	5	5	1	1	1	3	4	3	5	5	5	5	1	2	5	2	3	5		
NEW YORK S. E. (914)	5	X	X	X	3	5	2	2	5	5	1	2	1	3	4	3	5	5	5	5	1	2	5	2	3	5		
NEW YORK W. (716)	5	X	X	X	3	5	1	2	5	5	1	1	3	3	4	3	5	5	5	5	2	3	5	2	3	5		
NORTH CAROLINA	5	3	3	3	X	5	2	1	4	5	2	2	3	1	5	1	5	5	5	5	4	1	5	1	4	5		
NORTH DAKOTA	3	5	5	5	5	X	4	4	3	4	5	5	5	5	1	4	4	4	4	3	5	5	3	5	2	1		
OHIO NO. (216)(419)	5	3	3	1	3	5	X	X	4	5	2	1	4	3	5	3	5	5	5	5	4	2	5	1	3	5		
OHIO SO. (513)(614)	5	3	3	2	2	5	X	X	4	5	2	1	4	3	5	2	5	5	5	5	4	1	5	1	3	5		
OKLAHOMA	1	5	5	5	5	4	4	4	X	5	5	5	5	4	3	3	1	2	1	4	5	5	5	4	3	4		
OREGON	3	5	5	5	5	3	5	5	3	X	5	5	5	5	3	5	4	4	4	1	5	5	1	5	4	2		
PENNSYLVANIA E. (215)(717)	5	1	1	2	3	5	2	3	4	5	X	X	2	3	5	3	5	5	5	5	2	2	5	2	4	5		
PENNSYLVANIA W. (412)(814)	5	1	1	1	3	5	1	1	4	5	X	X	3	3	5	3	5	5	5	5	3	1	5	1	4	5		

DETERMINE THE SERVICE AREA (BAND) BETWEEN A WATS STATION LOCATION AND ANOTHER POINT AS FOLLOWS:
 STEP 1: FIND WATS STATION LOCATION IN THE LEFT-HAND COLUMN.
 STEP 2: FIND THE OTHER LOCATION IN THE LISTING AT THE TOP OF THE CHART.
 STEP 3: THE NUMBER AT THE INTERSECTION OF THESE TWO COLUMNS IS THE BAND.

Exhibit 12—Service Area (Band) Chart (Sheet 4 of 6)

WATS STATION LOCATION	SERVICE AREA (BAND) CHART																															
	ALABAMA	ARIZONA	ARKANSAS	CALIFORNIA NO.	CALIFORNIA SO.	COLORADO	CONNECTICUT	DELAWARE	DIST. OF COLUMBIA	FLORIDA	GEORGIA	IDAHO	ILLINOIS NO.	ILLINOIS SO.	INDIANA	IOWA	KANSAS	KENTUCKY	LOUISIANA	MAINE	MARYLAND	MASSACHUSETTS	MICHIGAN NO.	MICHIGAN SO.	MINNESOTA	MISSISSIPPI	MISSOURI	MONTANA	NEBRASKA	NEVADA	NEW HAMPSHIRE	NEW JERSEY
RHODE ISLAND	4	5	4	5	5	5	1	2	2	4	3	5	3	3	3	4	4	3	4	2	2	1	3	3	4	4	4	5	4	5	1	1
SOUTH CAROLINA	1	5	3	5	5	5	4	2	2	2	1	5	3	3	3	4	4	1	3	4	2	4	4	4	5	3	4	5	5	5	4	3
SOUTH DAKOTA	5	4	3	5	5	2	5	5	5	5	5	3	3	3	3	1	2	4	5	5	5	5	3	3	1	4	2	1	1	4	5	5
TENNESSEE	1	5	1	5	5	5	5	4	3	3	1	5	2	2	2	3	4	1	3	5	3	5	3	3	5	1	1	5	5	5	5	4
TEXAS E. (214) (713) (817)	2	3	1	5	5	3	5	5	5	4	3	5	3	2	3	3	1	3	1	5	5	5	4	4	4	1	1	5	2	4	5	5
TEXAS SO. (512)	2	2	1	5	5	2	5	5	5	4	3	5	3	3	3	3	1	3	1	5	5	5	4	4	4	1	2	5	3	4	5	5
TEXAS W. (806) (915)	3	2	1	5	5	1	5	5	5	4	3	5	3	3	3	3	1	3	2	5	5	5	4	4	4	2	2	5	2	4	5	5
UTAH	5	1	4	2	2	1	5	5	5	5	5	1	4	4	4	4	3	5	4	5	5	5	5	5	4	4	4	3	3	1	5	5
VERMONT	4	5	4	5	5	5	1	2	2	4	4	5	3	3	3	4	5	3	5	1	2	1	3	3	4	4	4	5	4	5	1	2
VIRGINIA	3	5	4	5	5	5	3	1	1	4	3	5	3	3	3	4	4	1	4	4	1	3	3	3	4	4	4	5	5	5	3	2
WASHINGTON	5	3	4	1	2	3	5	5	5	5	5	1	4	4	5	3	3	5	5	5	5	5	4	4	3	5	4	1	3	2	5	5
WEST VIRGINIA	4	5	4	5	5	5	3	2	1	4	3	5	3	3	2	4	4	1	4	4	1	3	3	3	4	4	4	5	5	5	4	2
WISCONSIN	4	5	3	5	5	4	5	4	4	5	4	5	1	2	2	1	3	3	5	5	4	5	1	1	1	4	2	5	3	5	5	4
WYOMING	5	3	4	3	3	1	5	5	5	5	5	1	4	4	5	3	2	5	5	5	5	5	4	4	3	5	4	1	1	2	5	5

DETERMINE THE SERVICE AREA (BAND) BETWEEN A WATS STATION LOCATION AND ANOTHER POINT AS FOLLOWS:
 STEP 1: FIND WATS STATION LOCATION IN THE LEFT-HAND COLUMN.
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Exhibit 12—Service Area (Band) Chart (Sheet 5 of 6)

WATS STATION LOCATION	SERVICE AREA (BAND) CHART																											
	NEW MEXICO	NEW YORK N.E.	NEW YORK S.E.	NEW YORK W.	NO. CAROLINA	NO. DAKOTA	OHIO NO.	OHIO SO.	OKLAHOMA	OREGON	PENNSYLVANIA E.	PENNSYLVANIA W.	RHODE ISLAND	SO. CAROLINA	SO. DAKOTA	TENNESSEE	TEXAS E.	TEXAS SO.	TEXAS W.	UTAH	VERMONT	VIRGINIA	WASHINGTON	W. VIRGINIA	WISCONSIN	WYOMING		
RHODE ISLAND	5	2	1	2	3	5	3	3	5	5	2	2	X	3	5	3	5	5	5	5	1	2	5	3	4	5		
SOUTH CAROLINA	5	3	3	3	1	5	2	2	4	5	3	2	4	X	5	1	5	5	5	5	4	1	5	1	4	5		
SOUTH DAKOTA	3	5	5	5	5	1	4	4	3	4	5	5	5	5	X	4	4	4	4	3	5	5	4	5	2	1		
TENNESSEE	5	4	4	4	1	5	2	2	4	5	3	3	5	2	5	X	4	4	4	5	5	1	5	2	3	5		
TEXAS E. (214)(713)(817)	2	5	5	5	4	4	4	4	1	5	5	5	5	4	3	2	X	X	X	3	5	5	5	4	4	3		
TEXAS SO. (512)	1	5	5	5	4	4	4	4	1	5	5	5	5	4	3	3	X	X	X	3	5	5	5	4	4	3		
TEXAS W. (806)(915)	1	5	5	5	4	4	4	4	1	5	5	5	5	4	3	3	X	X	X	3	5	5	5	4	4	3		
UTAH	1	5	5	5	5	3	5	5	3	3	5	5	5	5	3	5	3	3	3	X	5	5	3	5	4	1		
VERMONT	5	1	1	2	3	4	2	3	5	5	2	2	1	3	4	4	5	5	5	5	X	3	5	3	3	5		
VIRGINIA	5	3	3	2	1	5	2	1	4	5	2	1	3	2	5	1	5	5	5	5	3	X	5	1	4	5		
WASHINGTON	3	5	5	5	5	3	5	5	3	1	5	5	5	5	3	5	4	4	4	2	5	5	X	5	4	2		
WEST VIRGINIA	5	3	3	2	2	5	1	1	4	5	2	1	3	2	5	3	5	5	5	5	4	1	5	X	4	5		
WISCONSIN	5	3	3	3	4	3	2	2	4	5	3	3	5	4	3	3	5	5	5	5	4	4	5	3	X	4		
WYOMING	2	5	5	5	5	2	5	5	3	3	5	5	5	5	1	5	4	4	4	1	5	5	3	5	4	X		

DETERMINE THE SERVICE AREA (BAND) BETWEEN A WATS STATION LOCATION AND ANOTHER POINT AS FOLLOWS:
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Exhibit 12—Service Area (Band) Chart (Sheet 6 of 6)

or as scheduled under the Central Office Controlled Maintenance Plan. If the meter fails to operate under these tests, a defective meter is indicated.

15.04 In those cases where the assignment and operation tests do not verify but the meter passes the maintenance check test, it may be necessary for the central office worker to make a complete trace of both the meter and the telephone number to identify the problem.

15.05 Correct band access and screening can be verified as outlined in Part 7 for inward WATS and Part 12 for out WATS.

15.06 Departmental responsibility and methods for recording the monthly meter readings associated with inward WATS service have been established according to local policy. This practice is not furnished to change these responsibilities or methods but to specify procedures and provide a form for use in those locations where Central Office forces are responsible for monthly readings.

15.07 Some of the methods presently in use to provide regular register readings are:

- (a) Cameras are used to record a picture of the register and its reading.
- (b) A list identifying register numbers to be read for the billing period is developed by personnel responsible for maintaining meter assignments. Readings are then entered manually.
- (c) Readings of all registers both assigned and unassigned are recorded on a form. Readings of assigned meters are then selected for use in tabulating customer billing.

15.08 To assure accurate billing to the customer, inward WATS meters must be read at regular intervals. In attended offices, meters should be read promptly at 0001 hours on the first day of the billing period. In unattended offices or where the billing period falls on a weekend, special arrangements may be necessary. For these cases, a definite time should be established as near 0001 hours on the first day of the billing period as possible but in no case may it extend beyond 0800 hours the following Monday morning.

15.09 Form E-6577 (Exhibit 13) may be used for recording current monthly readings

(Exhibit 14), maintenance readings (Exhibit 15), or readings associated with service order (Exhibit 16) activity. Copies of the readings shall be retained by the central office for a period of 6 months. Originals of monthly and maintenance readings shall be forwarded the same day readings are made to the proper Revenue Accounting Office.

15.10 Normally, Field Forces will receive all meter assignments via a service order or other written document. Central office forces shall be responsible for notifying the records group any time they find that the authorized assignment and the actual working assignment do not agree. Should a change of assignment for maintenance reasons be required, contact the group responsible for keeping meter assignments, explain the problem, and request a new assignment. During the hours when there is no access to the assignment records, select a meter from the nonworking units and notify assignment on the next working day. At the time of the change, record readings of the "FROM" meter in addition to readings of the "TO" meter and forward to the proper Revenue Accounting Office (Exhibit 15). The assignment group shall be responsible for taking the necessary steps to assure that the groups furnished the original assignments are informed of the change.

16. CREDITING CHARGES ON TEST CALLS

16.01 Primary factors in the billing of WATS services are the calling area provided, the total usage time, and the number of completed calls. To render accurate billing for WATS services, it is necessary that test calls made by telephone personnel to or from WATS services be identified so they can be excluded from the customer's bill.

16.02 Test numbers that can be called without resulting in a charge on the customer's bill may be obtained from Section 010-250-001 or other local instructions. Test calls placed from an out WATS service to other numbers and test calls placed to an inward WATS service are to be handled in the same manner as wrong number calls. After making a test call, the telephone employee shall dial the operator, identify himself, and request a credit adjustment on an in WATS or out WATS call, giving the calling number, the length of the call, and the telephone number called. (The WATS telephone number should be given for the calling or called number rather than the converted or test

NOTES ON EXHIBIT 13 (E-6577)

1. Indicate type meter reading being recorded.
2. Identify if meters are used for inward or out WATS service.
3. Show the NPA where the WATS serving office is located.
4. Identify office where meters are located.
5. Enter month, day, and year readings are taken.
6. Show time monthly readings were made.
7. The customer's WATS number shall be entered on maintenance or service order readings. Areas which furnish Plant a list showing the meters to be read each month may prefer to enter the WATS number. It is not required in those offices that originate the form by reading all WATS meters, both assigned and unassigned.
8. Timer meter assignment and timer reading are recorded on the same line under meter number and meter reading.
9. Counter meter assignment and counter meter readings are recorded on the same line under meter number and meter reading.
10. Overflow meter assignment and overflow meter reading are recorded on the same line under meter number and meter reading.
11. This column may be used to record the amount of time (in tenths) and the number of messages to deduct for test calls. These figures are derived by subtracting the before start of test (timer or counter) reading from the after completion of test reading (timer or counter).
12. This space is provided for recording pertinent information or instructions.
13. Name and telephone number of the person who records meter assignments.
14. Telephone number of the person who records meter assignments.
15. Name and telephone number of the person that records meter readings.
16. Telephone number of the person that records meter readings.

Exhibit 13—WATS Meter Readings Blank (Sheet 1 of 2)

WATS METER READINGS

E6577
3/75

- MONTHLY
- MAINTENANCE
- SERVICE ORDER

- IN
- OUT

3117 NPA

PAGE 1 OF 1
CENTRAL OFFICE IPLSIN01634
DATE 1-28-75
TIME

CUSTOMER'S NUMBER			TIMER		COUNTER		OVERFLOW		PLANT TEST		REMARKS
NNX	LINE	(ESS ONLY) SUFFIX	METER NUMBER	METER READING	METER NUMBER	METER READING	METER NUMBER	METER READING	TIMER 1/10 OF HR.	COUNT OF MSGS.	
428	7777		01110	5318	0003	11995					SPI-1234 Before Test
			0110	5320	0003	11996					SPI-1234 After Test
428	7778		0111	9925	0004	73288	0007	00032			SPI-1234 Before Test
			0111	9928	0004	73290	0007	00033			SPI-1234 After Test
428	5554		0033	7328	0211	00946					SPG-2345 Remove
428	5555		0034	3298	0212	10877	0008	00005			SPG-2345 Remove
428	6431		0059	3877	0088	00011					SPG-2345 Before Test
			0059	3879	0088	00013					SPG-2345 After Test
428	6432		0060	3325	0089	19223	0101	00100			SPG-2345 Before Test
			0060	3327	0089	19225	0101	00101			SPG-2345 After Test
											After test & removal readings
											called to SPSC

PREPARED BY Judy South TEL. NO. 630-5589 READINGS BY R. D. Cragen TEL. NO. 630-4557

SECTION 311-200-001

number.) Section 010-250-001 covers these procedures in greater detail.

16.03 Work forces in WATS serving offices testing WATS services equipped with meters are instructed to record meter readings before starting and again after completing tests. These readings are forwarded to the Revenue Accounting Office where the billing is adjusted. Calls that are included in these readings should not be reported to the operator for credit adjustment.

17. REFERENCES

SECTION	TITLE
010-250-001	Crediting Charges on Test Calls
201-826-501	Auxiliary Line Circuit SD 99439-01—Arranged for Measured Rate Inwats Service—Operation Tests
302-000-000	Transmission Test Line Directories
311-100-551	Special Service Link Lineup—PBX to Central Office—2-Wire Link Using E-6 Repeaters
311-100-552	Special Service Link Lineup—Central Office to Central Office—2-Wire Link Using E-6 Repeaters
311-200-180	Description of Circuit Arrangements for Providing Foreign Exchange and Other Special Access Services
311-240-502	Overall Lineup—2-Wire Repeater Nonloaded PBX-CO and Local WATS
314-205-501	Data Systems—"DATA-PHONE" Service and Data Access Arrangements on Direct Distance Dialing Network—Test Requirements for Subscriber, Foreign Exchange, and Remote Exchange Lines

SECTION	TITLE
332-000-000	Voice Frequency Telephone Repeaters, Composite Sets, and Associated Equipment
333-125-500	Dial Pulsing Tests on FX and WATS Circuits
660-005-011	Office Responsibilities—Special Services
660-100-010	Customer Trouble Report Analysis Plan—General
660-101-300	General Routine for Handling Trouble Reports in the Repair Service Bureau
660-101-304	Handling Customer Trouble Reports on TWX and Wide Area Services
660-201-010	Toll Telephone Facility Maintenance—Office Responsibility
660-456-505	Circuit Order or Trunk Order Tests—Testing Methods—Channel Net Gain and Frequency Response Characteristics
660-470-500	Methods of Making Terminal Balance Tests in Toll Switching Offices—General Information
660-471-100	Crossbar Tandem Offices—Through and Terminal Balance—General Information
662-000-000	Local Test Desk and Local Test Cabinet—Operation and Test Procedures
680-511-010	Wide Area Telecommunications Service (WATS) Assignment Procedures
851-300-100	Transmission Design Considerations and Objectives
AB 22.310.00	Switched Special Services and PBX Services