

## **VIII. Transportation & Comms**

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*Section VIII details the number and type transportation facilities and communications equipment for use within the Antarctic treaty area.*

### **Surface, Marine, and Air Transportation Vehicles**

#### **McMurdo Station**

Truck, (light and heavy)	106
Carrier, Personnel and Cargo (tracked and wheeled)	43
Trailer, (tracked and wheeled)	39
Front-end loader, bucket and forklift	45
Forklift, warehouse	20
Motor toboggans	90
Crane	2
Road grader	4
Roller	4
Tractor, crawler	25
Tractor, wheeled	2
Sweeper, magnet	1
Snow plane	6
Truck, fire, pumper	8
Trencher	2
Aircraft, LC-130	6
Helicopters, Aerospatiale AS-350B-2	3
Helicopters, Bell 212	1
Scraper	2
Backhoe	2

### **Amundsen-Scott South Pole Station**

Cranes	3
Front Loader, tracked	7
Motor Toboggans	2
Personnel Carrier	5
Snow Plane	2
Tractor Crawler	3
Truck, light and heavy	2

### **Palmer Station**

Front-loader (wheeled)	2
Motor toboggans	2
Crane, wheel mounted	1
Boats, rubber (Zodiac)	16
Forklift, all terrain	1
Telescopic material handler	1
Vehicle, all terrain, 4-wheel	2

## **Description of Communications Facilities**

**Note:** For information of frequencies see attached Comms forms. The following projects are contemplated for the FY98-99 season in Antarctica.

### **McMurdo Station**

1. Implement modifications to portable repeater power systems.
2. Install Base radio at T-site for ANG requirements.
3. Install new Helo Flight Following station for ATS in Bldg. 165.
4. Install VHF base radio in Crary Lab Rm. 213.
5. Install Microwave radio equipment for MRSF and LDB.

6. Install CoastCom channel banks and signal conditioning equipment for MRSF ANG HF remote control to T-site.
7. Install Pairgain equipment at Williams Field for AB-145-0 support.
8. Install and configure new DEC Prioris file server to replace MCM2.
9. Install and implement new SIMS e-mail system to replace DaVinci and Unix e-mail accounts.
10. Install 10 GPS units in Sprites for BFC.
11. Receive and install 2 refurbished AN/FRT-83 transmitters for T-site.
12. Stage, install, and test prototype GOES-3 satellite communications system for field camp use.
13. Install remote HF radio equipment for ANG at Ice Tower.
14. Erect 3 antenna towers at big Razorback for S-009.
15. Install, configure, and support the NYANG's new computer equipment and meet their operational requirements.
16. Terminate 36-MM fiber optic cable for MGS-AH/CRARY.
17. Install 24/12 composite fiber optic cable for MGS-AH/CRARY.
18. Install 24/12 composite fiber optic cable for MGS-AH/AH B-197.
19. Install SW56 terminal selection switch in AFRTS studio.
20. Install 2 DEC Prioris Servers to complete the server life cycle replacement.

## **South Pole Station**

1. Replace the GOES-3 antenna controller, and upgrade the antenna systems.
2. Relocate the GOES-3 and LES-9 controller and preamplifiers from the first floor communications closet to the second floor TDRSS satellite operations room.
3. Install new 12 pair telephone cables from the new TACAN location to Building 68 IDF.
4. Install telephone and LAN landlines from the NSF office to the Construction Office network concentrator and the telephone IDF.
5. Install backup Windows NT Exchange server.
6. Complete all LAN, telephone, fire alarm, and CCTV installations required for the new Garage facility, and the new fuel arch upgrades.

## **Palmer Station**

1. Replace HF transceivers.
2. Replace ATS-3 communications system.
3. Install backup Windows NT Exchange server.
4. Upgrade communication and data system equipment space.
5. Install the necessary telephone and network hardware, cabling, and terminal connections to BIOMED and GWR spaces.

## **Description of Airfields**

### **McMurdo Station**

#### ***Air Facilities***

1. Williams Field - 10,000 ft. and 8,000 ft. skiways on ice shelf.
2. 10,000 ft. and 8,000 ft. ice runways (on annual sea ice)
3. Helicopter landing pad.

#### ***Crash Equipment***

1. Two Canadian Foremost Chieftains, 1200 gallons AFFF (ea)
2. Two Nodwell Flex-Trac equipped with 1350 lb. PKP, 200 gallon AFFF
3. One Nodwell Flex-Trac equipped with 3,000 lb. PKP
4. Seven 150 lb. PKP sled-mounted extinguisher on the flight line
5. Two 3,000 lb. PKP sled-mounted extinguishers at the heli-pad
6. One Pumper/Tanker, 3,400 gallons of water.
7. Two Pumpers, 750 gallons (H<sub>2</sub>O), 1000 GPM

#### ***Navigation Aids***

1. Precision (course & glide slope) Approach Radar (PAR) and Approach Surveillance Radar (ASR) on primary landing runways, AN/FPN-36 radar.
2. AN/TRN-26 TACAN.
3. AN/URN-25 TACAN
4. T-1109/GRT-22 UHF radio beacon.
5. Terminal Approach Control Radar (GPN-27)

6. Precision Approach Path Indicator (PAPI)
7. A Mobile Microwave Landing System (MMLS) will be installed for testing during the early Austral Summer.

## **Amundsen-Scott South Pole Station**

### ***Air Facilities***

14,000 ft. skiway

### ***Crash Equipment***

Three 350 lb. dry chemical units

### ***Navigation Aids***

1. PAR and ASR radar, AN/FPN-36.
2. AN/URN-25 TACAN.
3. T-1109/GRT-22 UHF beacon.

## **Palmer Station**

### ***Air Facilities***

None. Open field landings on glacier possible.

### ***Crash Equipment***

None

### ***Navigation Aids***

T-1109/GRT-22 UHF beacon.

## **Marble Point Camp**

### ***Air Facilities***

One helicopter landing pad.

### ***Crash Equipment***

1. One 350 lb. dry chemical unit.
2. One 150 lb. dry chemical unit (PKP).

### ***Navigation Aids***

None.