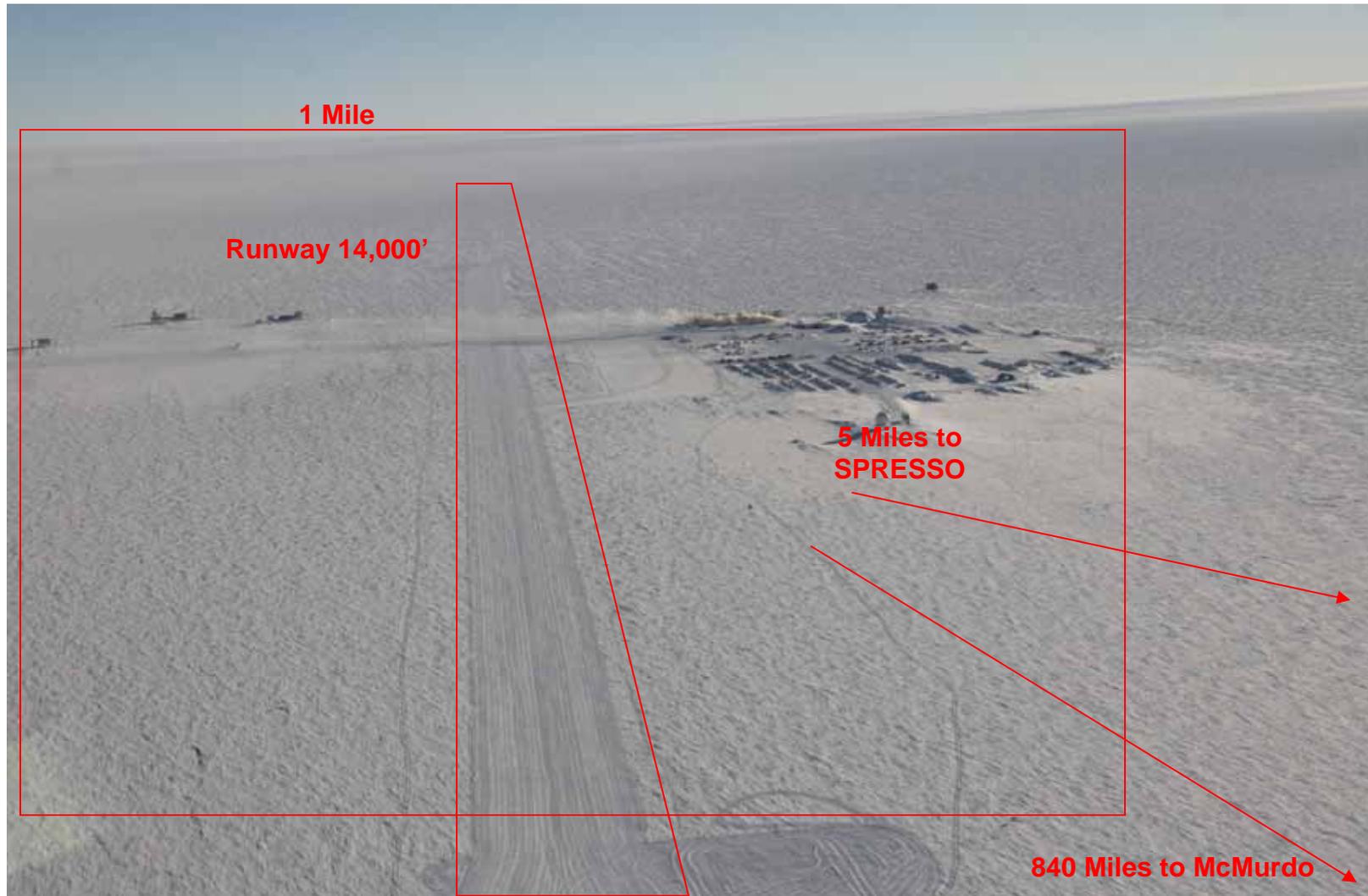




Amundsen – Scott South Pole Station – FY08



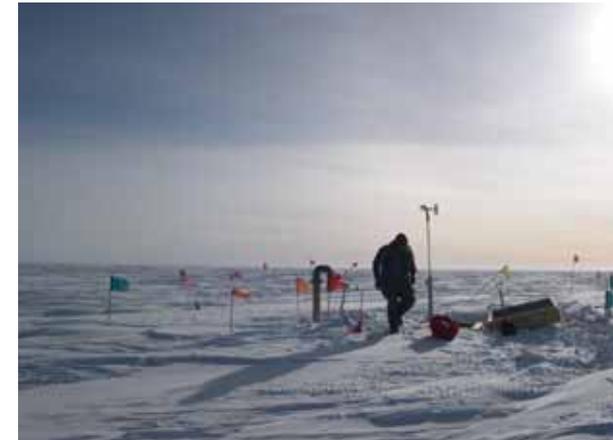
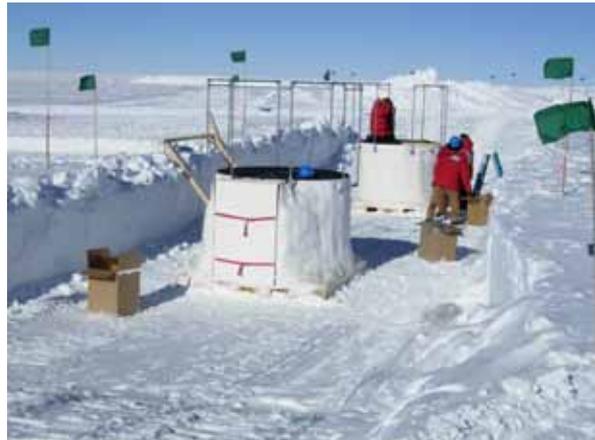


90 South Today



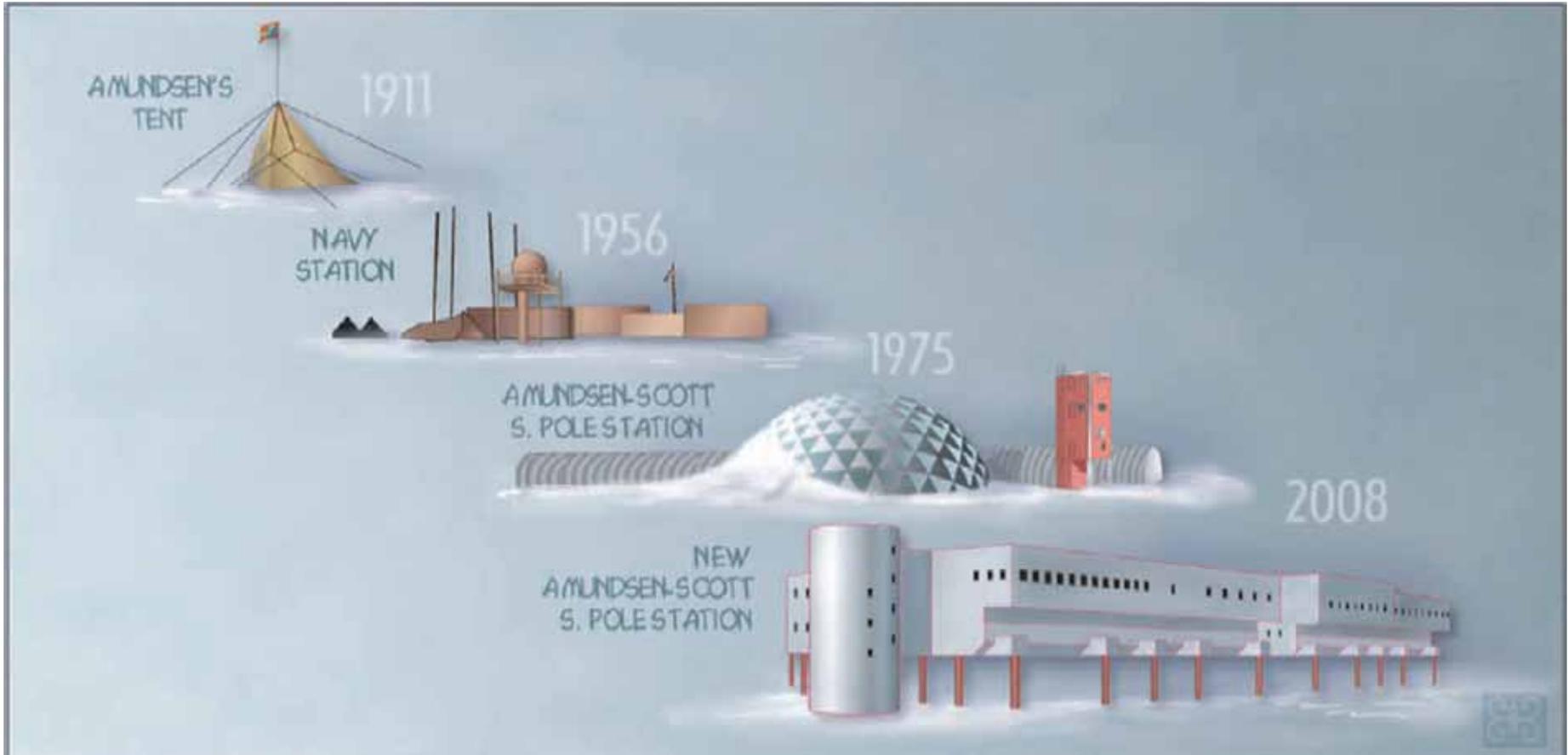
Scientific Research Facility

Supporting 21st Century Science





4 South Pole Stations

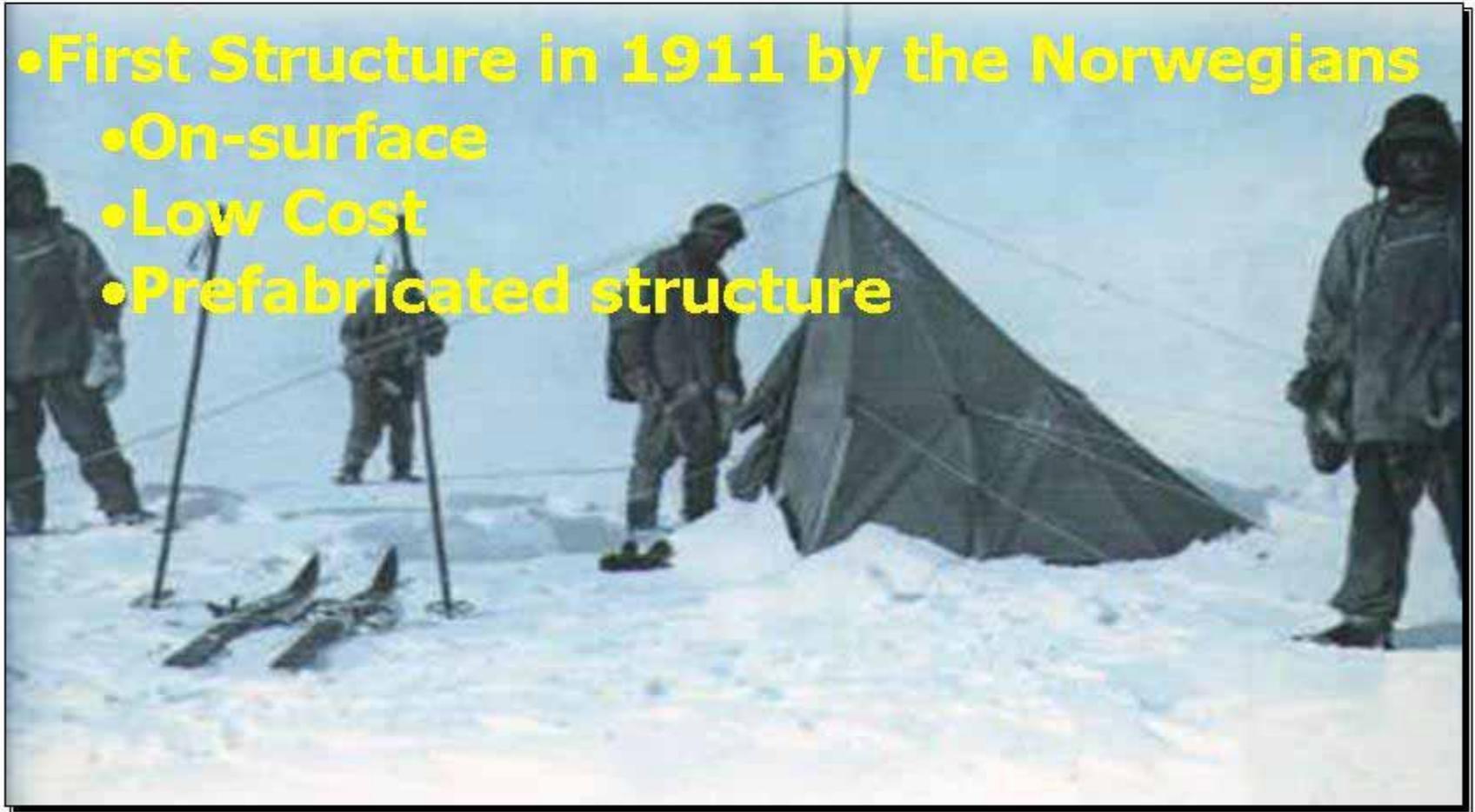




Ferraro Civil Associates LTD

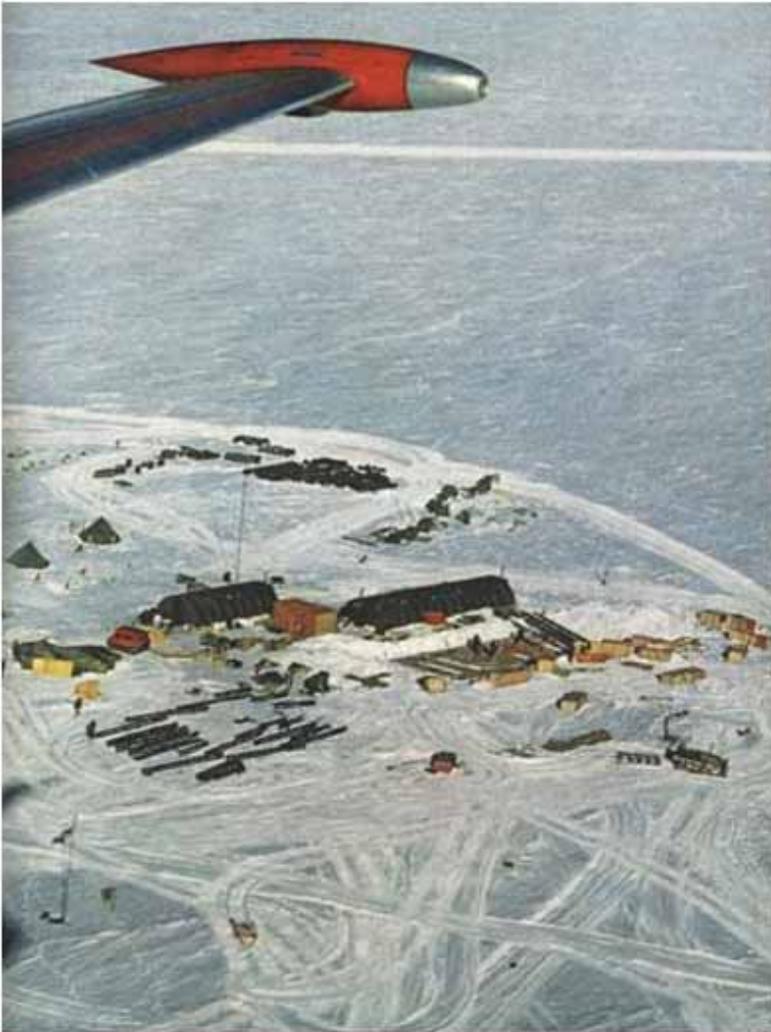


- **First Structure in 1911 by the Norwegians**
- **On-surface**
- **Low Cost**
- **Prefabricated structure**





Summer 1956 - 1957





South Pole Construction





The Early 1970's





Dome Construction

USN Seabees 71/72 & 72/73



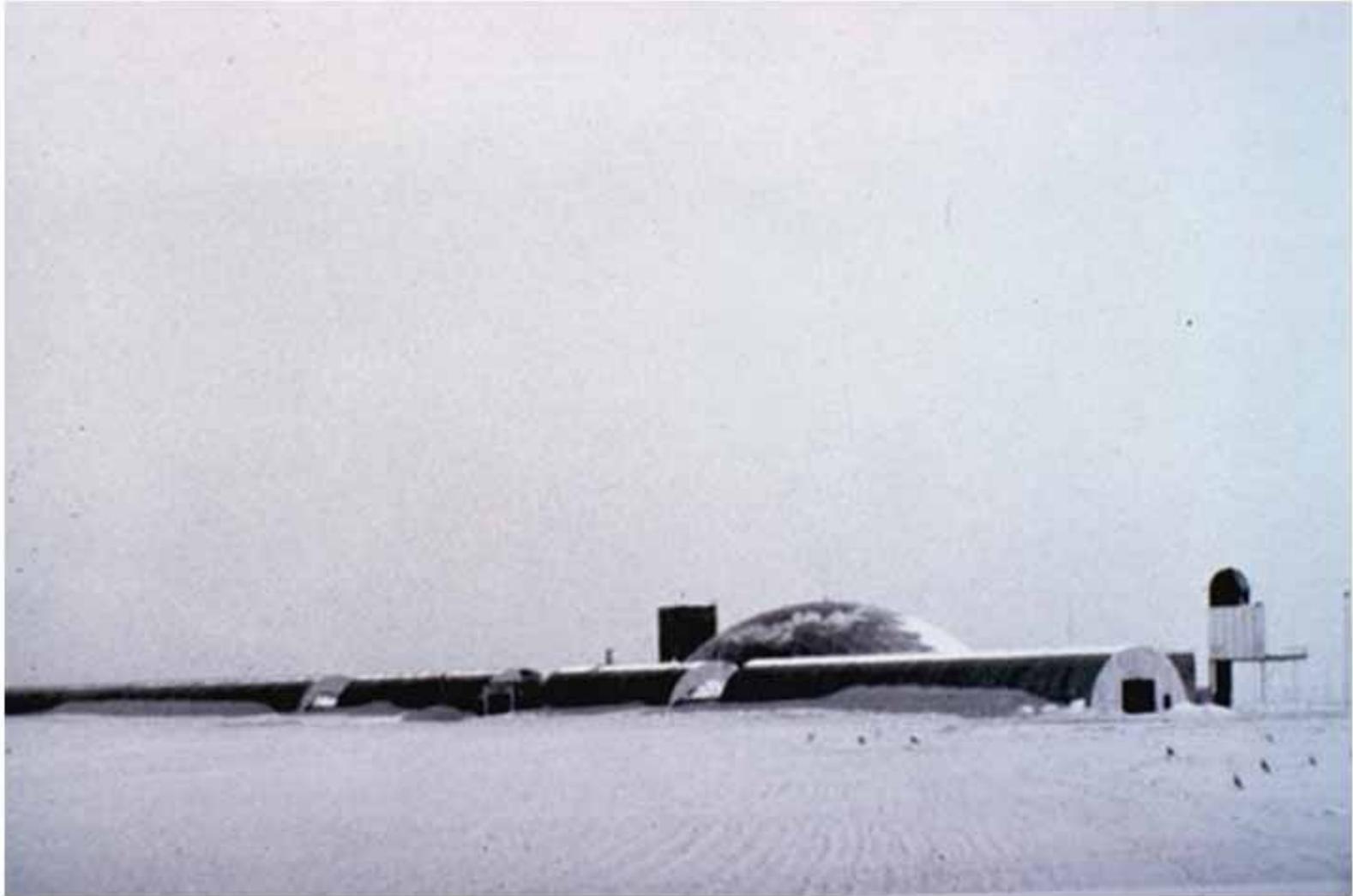


Arch & Buildings





Occupancy January 9, 1975



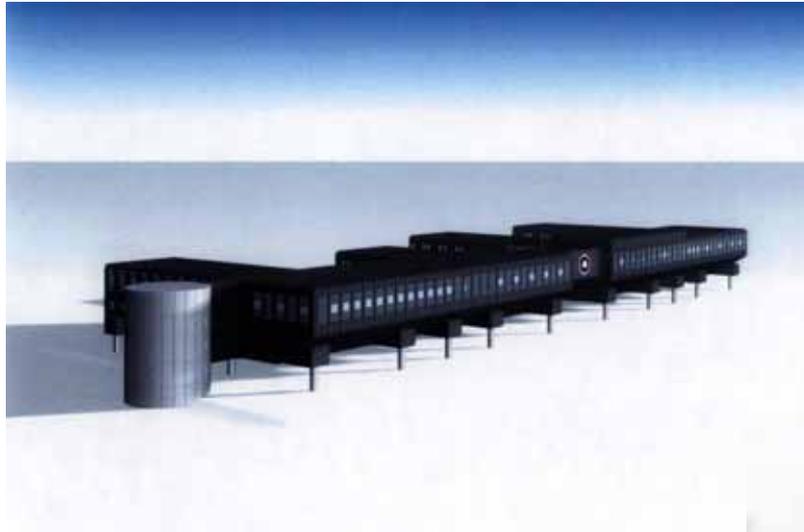


Outdated & Code Issues Early 1990's

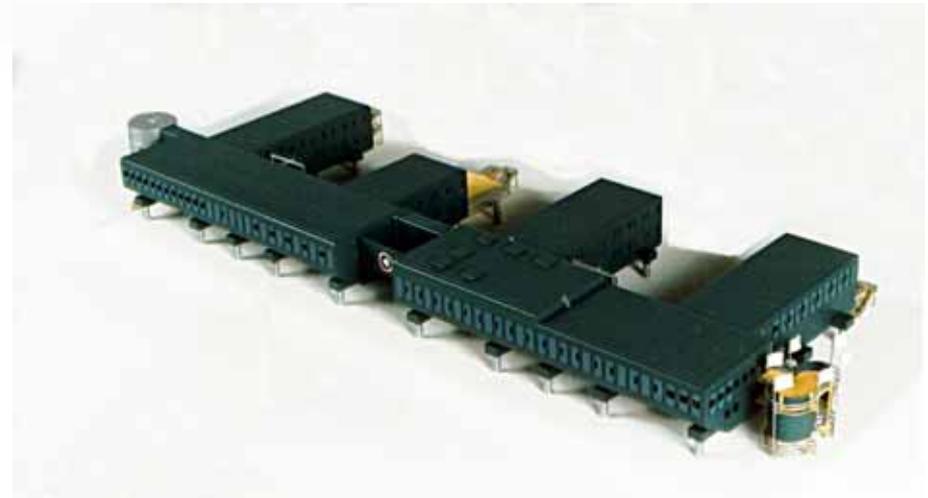




Current Station Computer Rendering & Artist's Model



- 154 Person Station
 - 154 Summer
 - 50 Winter





Elevated Station Dedication

January 12, 2008





Prime Contractor Provides Infrastructure & Management

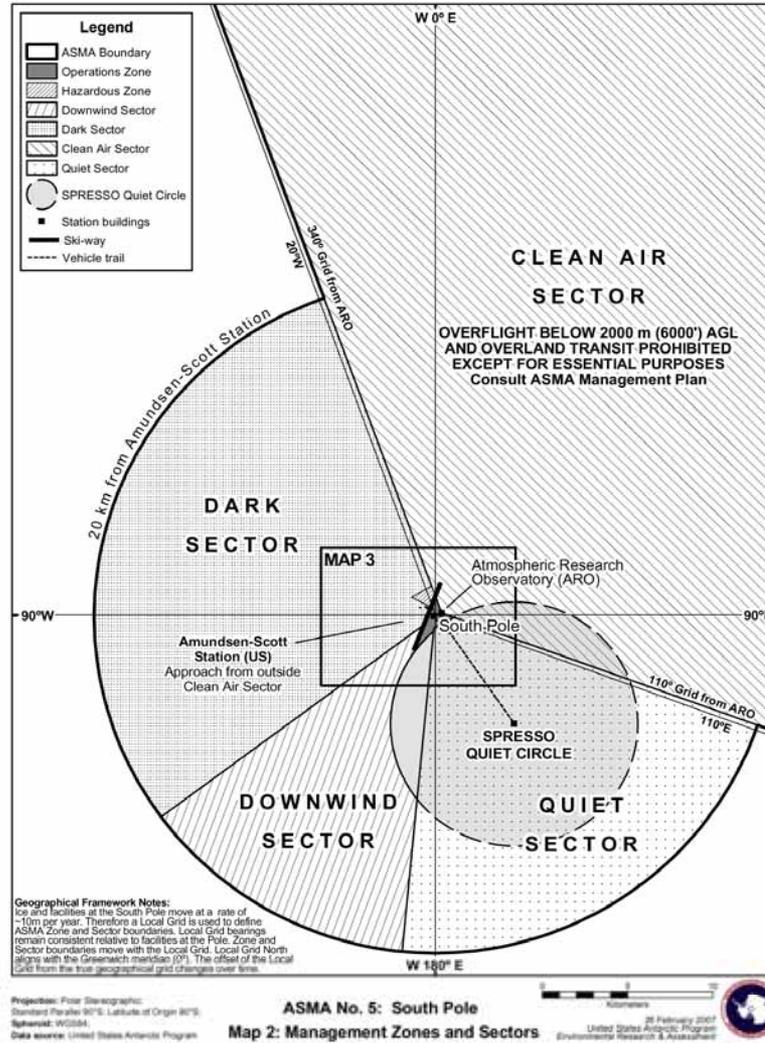


Currently Supporting a city of 250

- Housing/House Keeping
- Food Service
- Medical
- Cargo
- Public Works/O&M/Zoning
- Administration
- Construction
- Traverse
- Air Drops
- Communications
- Fuels
- Airport
- Waste Management
- Power Plant
- Recreation/Retail/Post Office
- Visitors
- Site Remediation
- Aerial Photo Missions

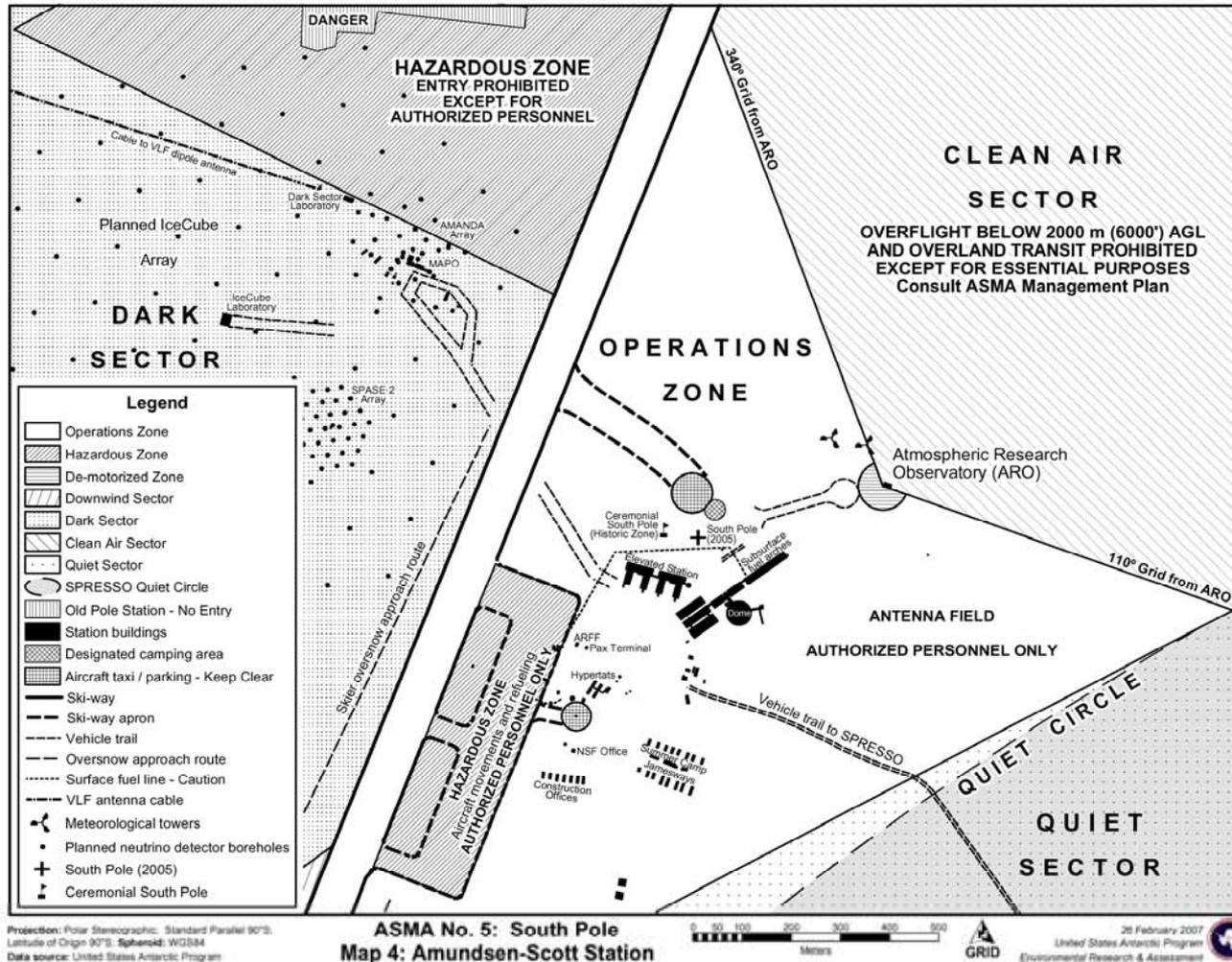


Zoning



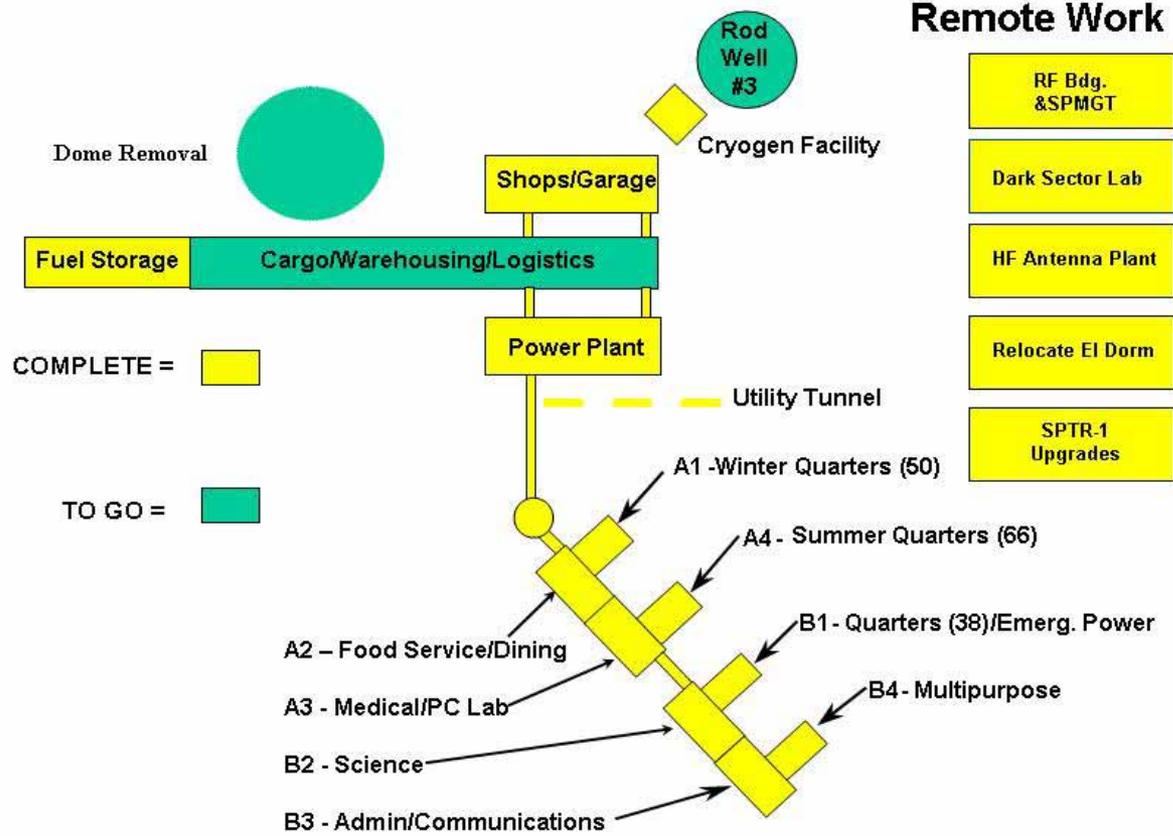


Zoning





Construction



SPSE/SM Construction Schedule

SP Const 2008



BOD Value Engineering

Subsurface Industrial Facilities



60,000 Square Feet



Fuel Storage Facility Subsurface





Fuel Storage



- 45 Steel Tanks @ 450,000 gallons – Subsurface
- 70,000 gallons – Surface tanks





Garage Shop Arch





Garage Shop Subsurface

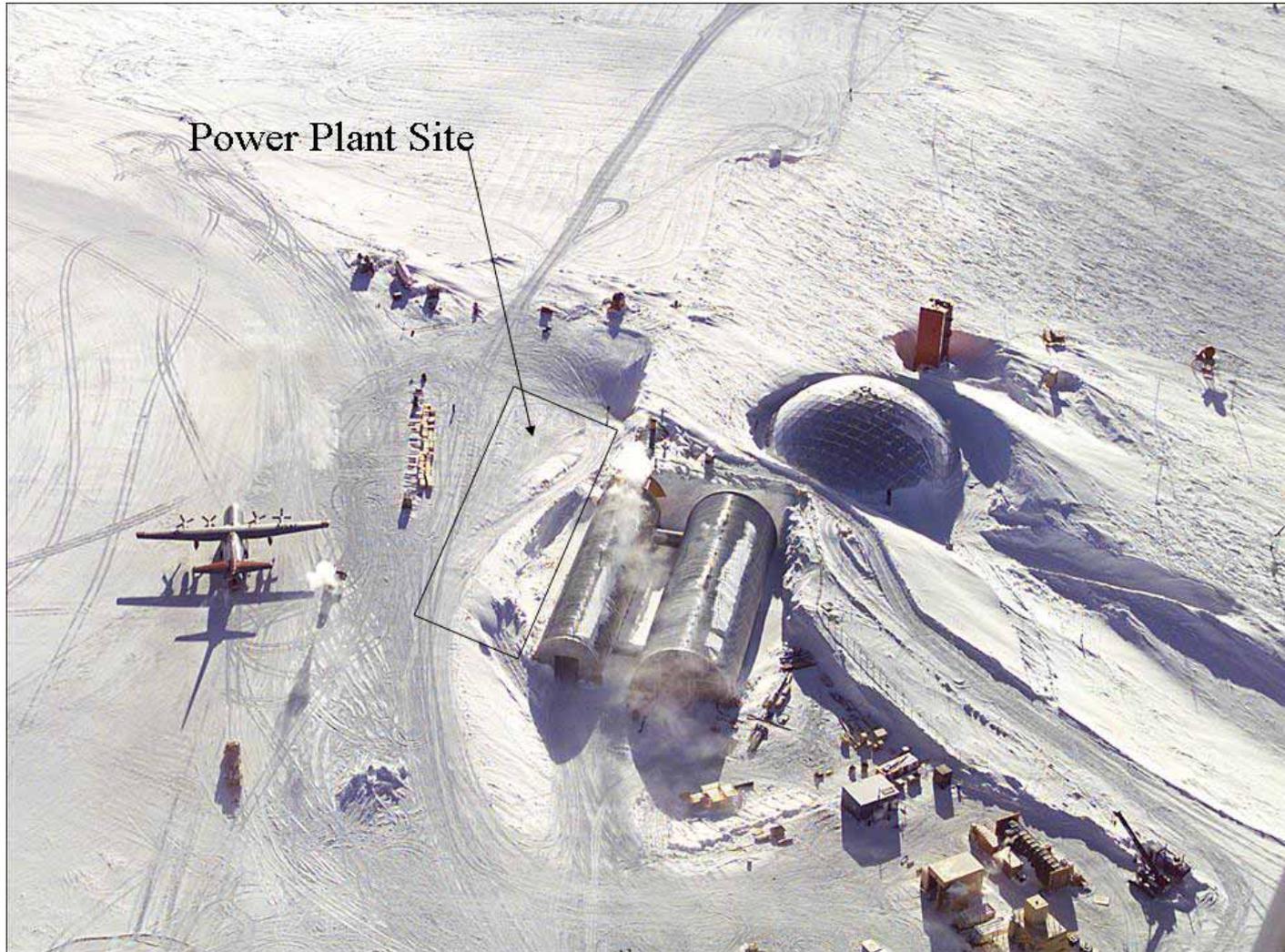


- Supporting Rolling Stock
 - Track vehicles @ 30
 - Wheeled vehicles @ 10
 - Snow Mobiles @ 20





New Power Plant Subsurface





Arch & Building





Power Plant



- Generator Capacity 1000 KW
 - Three 750 KW Main Generators
 - One 250 KW Peaking Generator
- Water Storage
 - Storage of 6000 gallons of treated water – Filtered, Ph to neutral state, & chlorinate

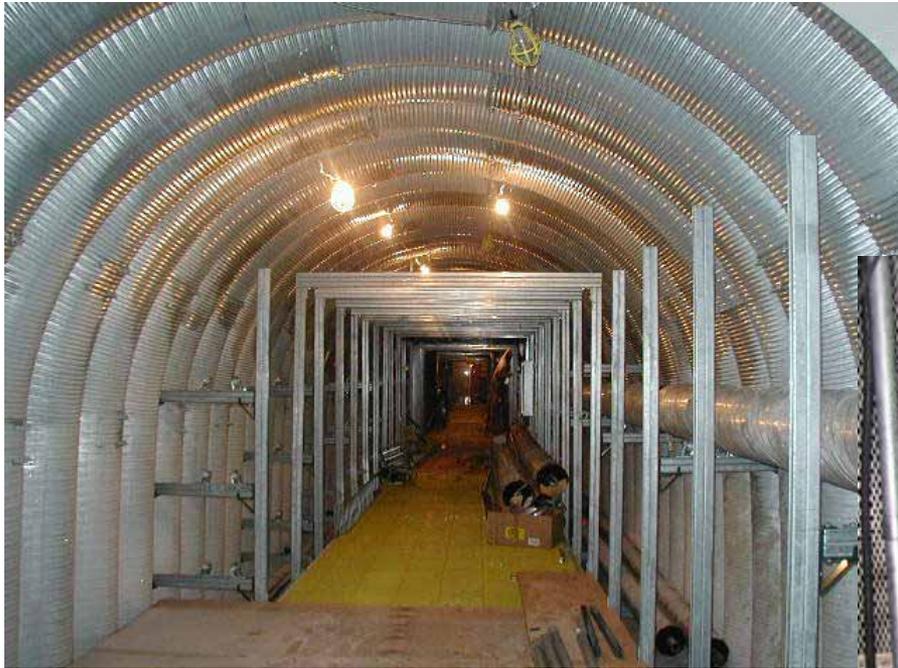


Vertical Tower Construction





Vertical Tower





Elevated Station Pad





New Station Construction

A-2





New Station Construction



A-1





New Station Construction

A-1 & A-2





A-2 Dining Facility

Seating Capacity of 96





Housing – 15 - Double Configuration Rooms





A-3 – Medical & Public Computer Room





New Medical Facility





B-2 Science





B-1 Emergency Power Plant & Quarters



- Two 250 kw Generators
- Emergency Communications & Kitchen
- Housing for 38 persons





B-3 Administration & Communications





B-3 Administration & Communications





Station Operations Center (SOC)





B-3 main Conference Room with Voice & Video Conferencing





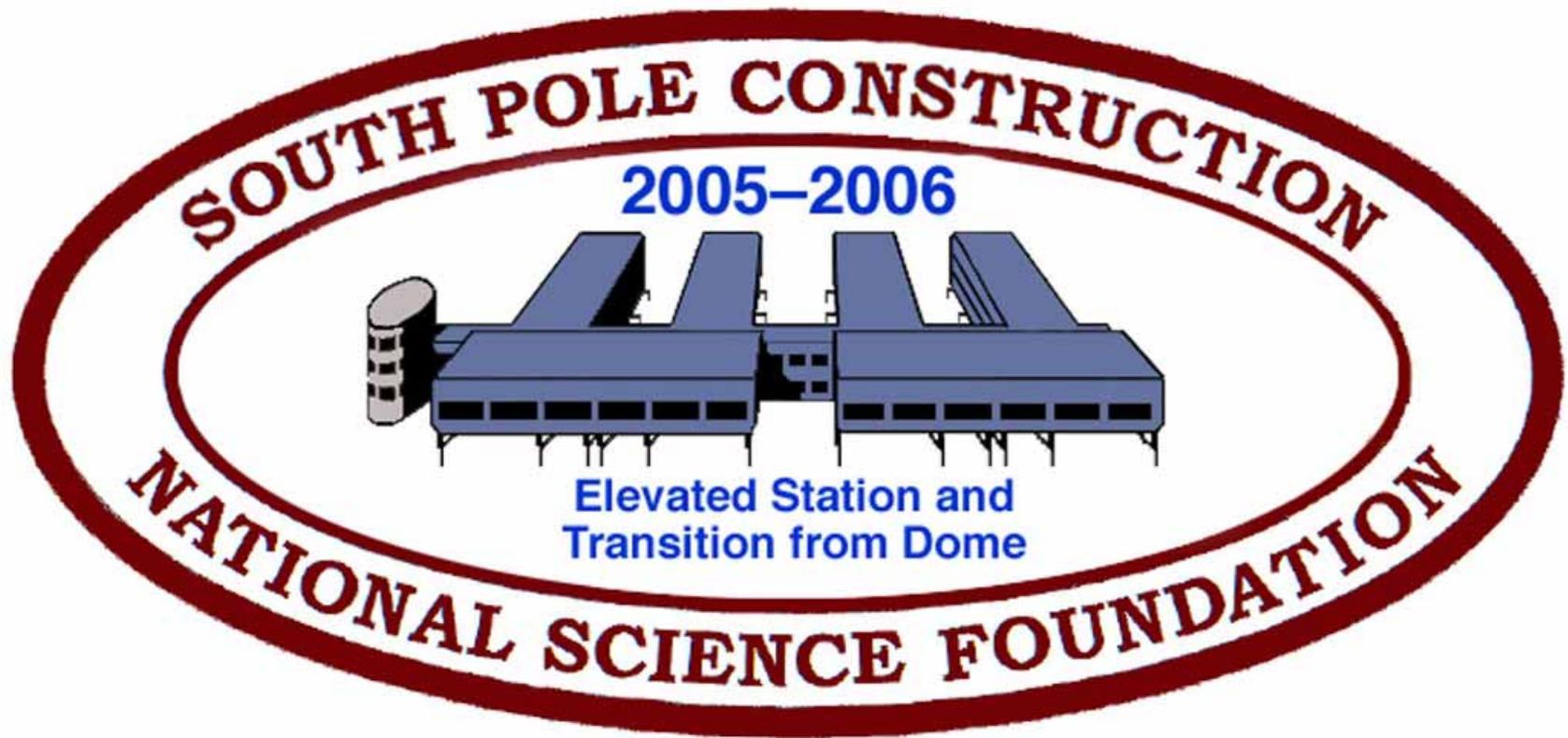
B-4 Multipurpose & Recreation





B-4 Gymnasium







Occupied Elevated Station



65,000 Square Feet



Dome Interior Buildings Before Demolition





Dome Interior Building Demolition



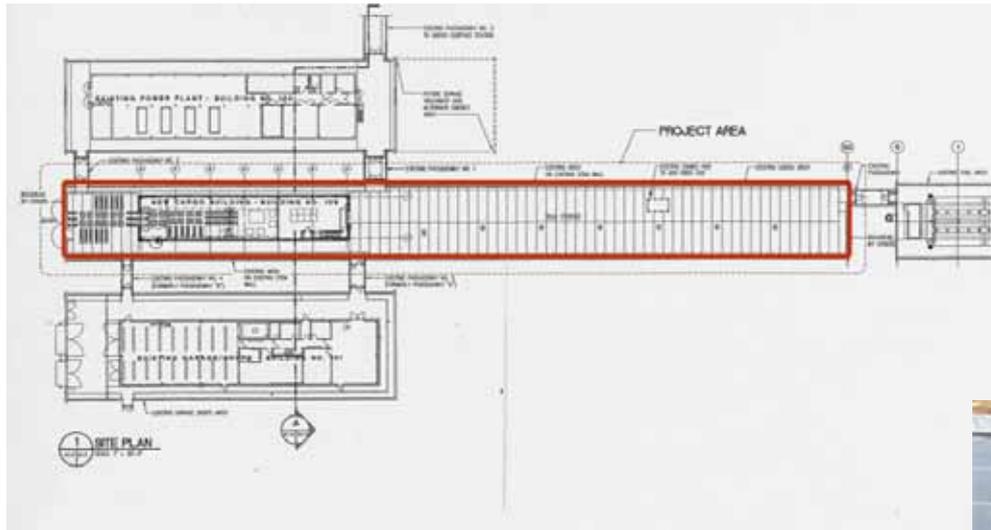


Dome & Skylab





Logistics Facility & Warehousing





Water & Sewer Tunnel



- Water & Sewer utility tunnel & distribution piping – 10' X 6' X 3000'



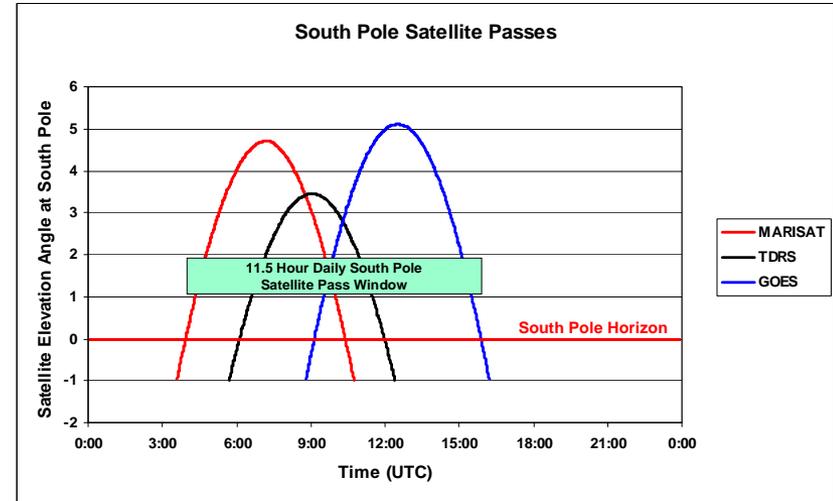
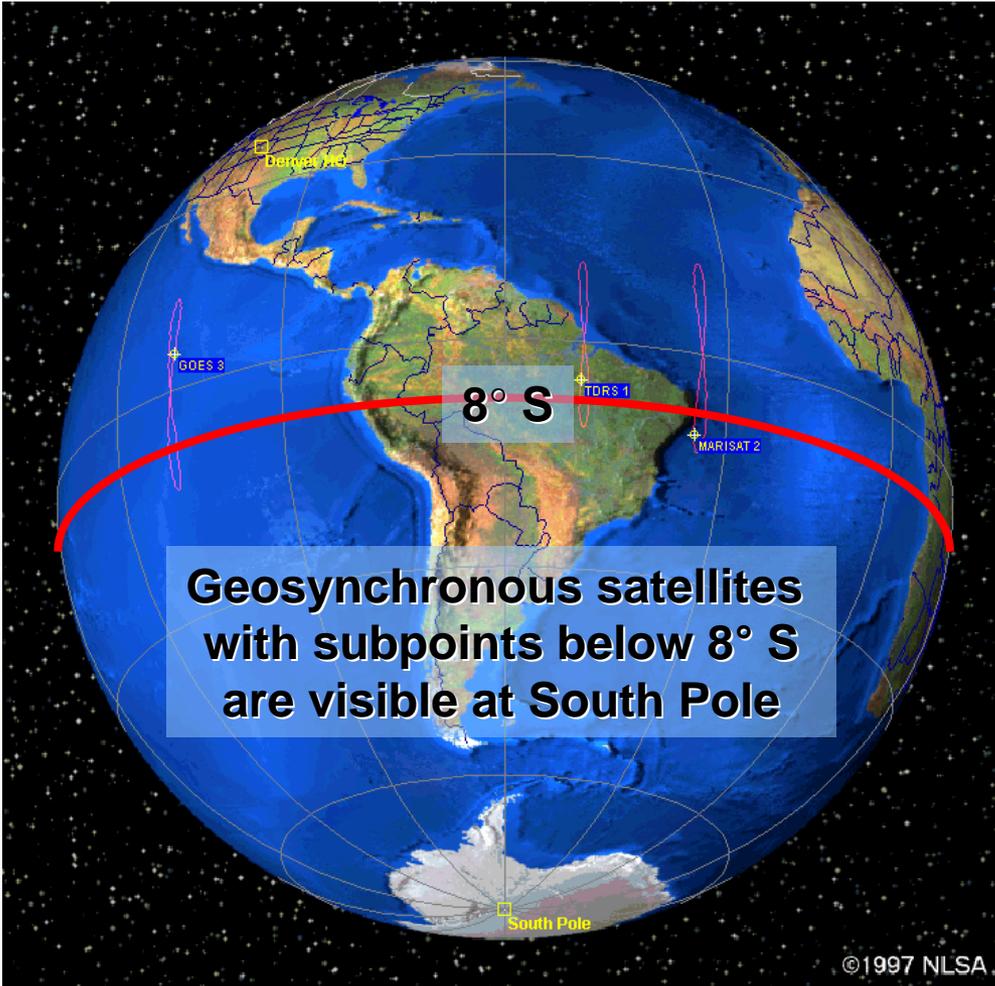


South Pole Information Technology





South Pole Satellite Coverage



MARISAT F2

TDRS F1

GOES-3





Ancillary Science Building Dark Sector Lab





Cryogen Facility



- USAP owns:
 - One 3000 gallon LHe Dewar
 - One 4000 gallon LHe Dewar
- Total storage capacity
 - 10,000 gallons LHe

Ancillary Facilities – 30,000 Square Feet



Logistics

800 – 900 LC-130 Passengers (Core Support, Grantees & other)



South Pole Station FY08	ROS	South Pole Flights	Personnel / PAX	Science Construction	Power Improvements	SPSE/SM Construction	SCIENCE / CRYO	Field Science	ICE CUBE	10 Meter Telescope	Station Operations & Facilities Maintenance	Mail/SPAWAR/DU3, DN3	TDE	FUEL -pounds	Total	
Week 1	7293	4	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	Basler
Week 2	7300	3	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	Basler
Week 3	7307	11	1.7	0.5	0.0	0.3	0.3	0.0	1.0	0.3	4.2	0.1	0.7	1.9	11.0	
Week 4	7314	26	0.7	0.2	0.0	0.5	0.1	0.0	0.8	0.0	4.4	0.0	0.7	18.5	26.0	
Week 5	7321	20	0.3	0.2	0.2	0.2	1.1	0.0	3.1	1.0	5.8	0.0	1.2	6.9	20.0	
Week 6	7328	21	0.3	0.2	0.0	1.3	0.3	0.0	3.7	0.0	1.5	0.0	0.7	13.1	21.0	
Week 7	7335	22	0.4	0.2	0.0	0.0	0.8	0.0	1.4	0.0	1.4	0.0	0.4	17.4	22.0	
Week 8	7342	21	0.5	0.2	0.0	0.0	0.0	0.0	1.4	1.6	0.7	0.0	0.4	16.1	21.0	
Week 9	7349	20	0.3	0.0	0.0	0.0	0.1	0.0	0.8	1.2	0.9	0.0	0.3	16.4	20.0	
Week 10	7356	16	0.4	0.0	0.0	0.0	0.0	0.0	2.0	1.3	2.1	0.0	0.6	9.6	16.0	
Week 11	7363	5	0.2	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.7	0.0	0.2	2.2	5.0	
Week 12	8005	16	0.6	0.1	0.0	0.2	0.0	0.0	1.3	0.0	1.7	0.0	0.4	11.6	16.0	
Week 13	8012	26	1.7	0.1	0.0	0.2	1.2	0.0	1.3	0.7	2.0	0.0	0.6	18.0	26.0	
Week 14	8019	24	1.2	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.4	0.0	0.2	20.6	24.0	
Week 15	8026	24	0.9	0.0	0.0	0.0	1.1	0.0	0.0	0.0	2.1	0.0	0.3	19.6	24.0	
Week 16	8033	27	0.5	0.0	0.0	1.2	1.1	0.0	0.0	0.0	2.3	0.0	0.5	21.4	27.0	
Week 17	8040	24	0.3	0.0	0.0	0.5	1.7	0.0	0.0	0.0	4.6	0.0	0.7	16.2	24.0	
Week 18	8047	16	0.2	0.0	0.2	0.0	0.1	0.0	0.9	0.0	4.7	0.0	0.6	9.3	16.0	
Week 19	8054	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.2	2.0	Basler
Total LC-130:	Total	319	10	2	0	4	8	0	19	7	40	1	9	219	319	



Air Drop





Traverses





Distinguished Visitors





Station Aerials





Summer Camp





Site Remediation





Airport & Passenger Terminal



- 6 Day Operations
- No Hangers
- No De-Icing
- No Spare Parts nor Mechanics





Prime Contractor Provides - Other



- NGO Activity
- Base Camp for other USAP Science
- Historical Preservation



NGO Activity

FY08, 40 Flights & 165 Visitors





NGO Activity





NGO Activity





Science Hub

Subsurface Lake 10 KM from Station





IGY Time Capsule

1957





SPSM Time Capsule For 2050 Opening





Questions?

