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SISS ZULU SYSTEM

EQUIPMENT AND INSTALLATION COSTS



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14 January 1971

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The cost estimate for the [REDACTED] SSISS ZULU facility is presented in a format which separates fixed costs common to all SSISS ZULU installations from those variable costs dependent on the installation site. This format was chosen to allow one to easily determine a complete cost estimate on any SSISS ZULU facility by crediting or adding costs unique to any particular site. These variable costs generally consists only of transportation charges of personnel and equipment to the installation site. In the case of the [REDACTED] installation, however, because various pieces of equipment are available from existing systems and will not have to be purchased, the value of the equipment has been credited to the cost estimate for a net cost of the installation.

Two cost estimates have been determined for the [REDACTED] [REDACTED] installation, because of the unknown condition of equipment which has not been received yet from the [REDACTED] site. The lower cost estimate is based on the assumption that all the equipment arrives from [REDACTED] with no shipment damage. It should be noted that only 90% of the full new value of the equipment received from [REDACTED] is credited. Approximately 10% of the equipment value will be required to align and calibrate the used equipment by the NRL instrument repair facility before installation into the [REDACTED] system.

The higher cost estimate assumes worst case for the equipment not returned from [REDACTED]. This allows no credit for the equipment, as possibly could be the case if the shipment has been stored on a dock for any period of time.

The spare parts complement deployed with the system are those items necessary to maintain the system in an operational status at a remote location. It is considered to be the minimum inventory necessary on station at all times.

Spare parts are not itemized, but a 20% of equipment value is assumed based on previous deployment costs.

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I. ANALOG SYSTEM

A. Analog Primary Position

Rack 100

| | |
|---|------------|
| 1. Channel A converter | \$ 1,000 |
| 2. WWV/TM Coax. Switch | 70 |
| 3. Pre-amp Power Panel | 300 |
| 4. STU System Test Unit (total per site. 2 units and ant.) | 5,000 |
| 5. ACU Auto Control Unit | 3,000 |
| 6. Rec. "O" RS1-A | 10,000 |
| 7. Rec. "2" RS1-A | 10,000 |
| 8. Rec. "S" RS1-A | 10,000 |
| 9. Chalco Photo Elec. Tape Reader | <u>500</u> |

Rack 101

| | |
|-----------------------------|--------------|
| 1. FEL 1 MHZ Standard | \$ 9,000 |
| 2. 1 MHZ Driver | 2,000 |
| 3. MC-1 Multicoupler | 5,000 |
| 4. SCU System Calib. Unit | 4,000 |
| 5. Rec. "4" RS1-A | 10,000 |
| 6. Rec. "6" RS1-A | 10,000 |
| 7. Rec. "A" Polarity Switch | 70 |
| 8. RA Racal Receiver | <u>3,000</u> |

Rack 102

| | |
|---------------------------------|------------|
| 1. Speaker Unit | \$ 225 |
| 2. TCG Time Code Generator | 3,500 |
| 3. TCG Battery and Supply Unit | 900 |
| 4. S.A. Position Indicator Unit | 1,000 |
| 5. SMP Signal Monitor | 100 |
| 6. Model 561A Scope | 1,850 |
| 7. S.A. Servo Control Unit | 1,000 |
| 8. S.A. Manual Command Unit | 2,000 |
| 9. Audio Monitor | 650 |
| 10. NPL D to S converter | 2,000 |
| 11. S.A. DC Amp Unit | 1,000 |
| 12. S.A. Servo Amp Unit | 1,000 |
| 13. Model 3A74 Plug In | 695 |
| 14. Model 2B67 Plug In | <u>250</u> |

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Rack 103

| | |
|--|------------|
| 1. View Data Record Monitor Scope (7 channel) | \$ 3,000 |
| 2. TCT Time Code Translator | 3,000 |
| 3. Record Monitor Panel | 3,000 |
| 4. Record Patch Panel | 100 |
| 5. Monitor Patch Panel | 650 |
| 6. Model 565 Scope | 1,775 |
| 7. Model 3A74 Plug in Unit for 565 Scope | 695 |
| 8. Model 5216A Counter | 3,000 |
| 9. Model 204C Osc. | 250 |
| 10. PS1 Ant. Polarity Switch | 4,500 |
| 11. Microphone Panel | 500 |
| 12. T/M Receiving System | 9,300 |
| 13. Model 3A74 Plug-in | <u>695</u> |

Other Primary Position Units

| | |
|---|---------------|
| 1. GR 2800 7 Channel Tape Recorder | \$20,000 |
| 2. Equipment racks (4) | 900 |
| 3. Equipment rack hardware | 1,000 |
| (Note: Item 3 includes rack table top, chassis brackets made at ESD, cable retractors, power strips, blank panels and cable ties) | |
| 4. S.A. Antenna Pedestal | 19,000 |
| 5. Tower (NRL shop made) | 2,000 |
| 6. Taco Antennas (8 per ant. @ \$250 each) | 2,000 |
| 7. Ant. Ped. Conical base and 4 crossarms (NRL shop made) | 2,500 |
| 8. Primary Position Spare Parts Complement. | <u>35,000</u> |

Primary Position Installation Items

| | |
|--|------------|
| 1. Ant. Control Cables (3-22 cond. @ \$1.10/ft. including conn. Ave. run of 250 ft.) | 1,000 |
| 2. Power Cable, 3Ø control, 5/12 @ 50¢/ft. | 150 |
| 3. Sound Powered Phone Cable. 2 cond. shielded @ 10¢/ft. | 25 |
| 4. Utility Power Cable to Ant. 2 runs Tyrex 3/14 | 50 |
| 5. RG-217 RF cable, 3 runs @ 25¢/ft | <u>200</u> |

Primary Position Total

\$213,400

Note: The above total does not include shipping, on site work, cable harness, etc. These items are listed separately)

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B. Analog Secondary Position

Rack 200

| | |
|---|---------------|
| 1. Channel A Converter | \$ 1,000 |
| 2. Pre-amp Power Panel | 300 |
| 3. STU System Test Unit - Priced under Primary Position | 5,000 |
| 4. ACU Auto Control Unit | 3,000 |
| 5. Rec. "1" RS1-A | 10,000 |
| 6. Rec. "3" RS1-A | 10,000 |
| 7. Rec. "S" RS1-A | <u>10,000</u> |

Rack 201

| | |
|-----------------------------|--------------|
| 1. 1 MHZ Driver | \$ 2,000 |
| 2. MC-1 Multicoupler | 5,000 |
| 3. Rec. "5" RS1-A | 10,000 |
| 4. Rec. "7" RS1-A | 10,000 |
| 5. Rec. "A" Polarity Switch | 70 |
| 6. RA Racal Receiver | <u>3,000</u> |

Rack 202

| | |
|-----------------------------|------------|
| 1. Speaker Unit | \$ 225 |
| 2. TCT Time Code Translator | 33,000 |
| 3. S.A. Position Indicator | 1,000 |
| 4. SMP Signal Monitor Patch | 100 |
| 5. Model 561A Scope | 1,850 |
| 6. S.A. Servo Control Unit | 1,000 |
| 7. S.A. Manual Command Unit | 2,000 |
| 8. Audio Monitor | 650 |
| 9. S.A. DC Amp. Unit | 1,000 |
| 10. S.A. Servo Amp Unit | 1,000 |
| 11. Model 37A4 Plug-In | 695 |
| 12. Model 2B67 Plug-In | <u>250</u> |

Rack 203

| | |
|---|------------|
| 1. View Data Record Monitor Scope (7 channel) | 3,000 |
| 2. TCT Time Code Translator | 3,000 |
| 3. Record Patch Panel | 100 |
| 4. Record Monitor Panel | 3,000 |
| 5. Monitor Patch Panel | 650 |
| 6. Model 565 Scope | 1,775 |
| 7. Model 3A1 Plug in for 565 Scope | 1,400 |
| 8. Model 5216A Counter | 3,000 |
| 9. Model 204C Osc. 1 | 250 |
| 10. PS1 Antenna Polarity Switch | 4,500 |
| 11. Model 3A74 Plug-In | <u>695</u> |

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C. Other Secondary Position Units

| | |
|--|---------------|
| 1. GR 2800 7 Channel Tape Recorder | \$ 20,000 |
| 2. Equipment Racks (4) | 900 |
| 3. Equipment Rack hardware | 1,000 |
| (Note: Item 3 includes rack table top, chassis brackets made at ESD, cable re-tractors, power strips, blank panels and cable ties) | |
| 4. S.A. Antenna Pedestal | 19,000 |
| 5. Tower (NRL shop made) | 2,000 |
| 6. Taco antennas (8 per ant.@ \$250 each) | 2,000 |
| 7. Ant. Ped. Conical base and 4 crossarms (NRL shop made) | 2,500 |
| 8. Secondary Position Spare Parts Complement | <u>30,000</u> |

C. Secondary Position Installation Items

| | |
|--|----------|
| 1. Ant. Control Cables (3 #22 cond.@\$1.10/ft. including conn.Ave. run of 250 ft.) | \$ 1,000 |
| 2. Power cable, 3Ø control, 5/12 @ 50¢/ft. | 150 |
| 3. Sound Powered Phone Cable. 2 cond. shielded @ 10¢/ft. | 25 |
| 4. Utility Power cable to Ant. 2 runs Tyres 3/14 | 50 |
| 5. RG-217 RF Cables, 3 runs @ 25¢/ft. | 200 |

Secondary Position Total

\$177,335

NOTE: The above total does not include shipping, on site work, cable harness, etc. These items are listed separately)

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D. Analog System Installation Hardware

| | | |
|--|------------|----------|
| 1. System Cable Harness (ESD, 240 manhours) | \$ 2,500. | |
| 2. RG 174 Cable (2,000 ft. @.04¢/ft) | 1,000 | |
| 3. Connectors for RG 174 cable (600 @ \$1.10 each) | 700 | |
| 4. UG 88 Connectors (50 @ 75¢ each) | 40 | |
| 5. Earphones (4 pair @ \$25 each) | <u>100</u> | \$ 4,430 |

E. Analog System Pre-Deployment

| | | |
|---|----------|----------|
| 1. System installation, cabling, de-bugging and disassembly | | |
| Estimate - 2 weeks per side for 2 men or 320 manhours @ \$10/hour | \$ 3,200 | \$ 3,200 |

F. Analog System Deployment Installation

| | | |
|---|---------------|-----------|
| 1. Packing (most is charged to overhead) Plywood | \$ 500 | |
| 2. On Site Installation Work Including Cabling, and de-bugging (4 men - 4 weeks - @ \$150/day per man | <u>12,000</u> | \$ 12,500 |

G. Analog System Spare Units

| | | |
|--|--------------|-----------|
| 1. S.A. Servo Control Unit - 1 ea | \$ 1,000 | |
| 2. S.A. Manual Command Unit - 1 ea | 2,000 | |
| 3. S.A. D.C. Amplifier - 1 ea | 1,000 | |
| 4. S.A. Servo Amplifier - 1 ea | 1,000 | |
| 5. S.A. Position Indicator Unit - 1 ea | 1,000 | |
| 6. Receiver RS1-A - 2 ea | 20,000 | |
| 7. Oscilloscope, Model 561A - 1 ea | 1,850 | |
| 8. Plug-In, Model 3A1 - 1 ea | 1,400 | |
| 9. Plug-In Model 2B67 - 1 ea | 250 | |
| 10. Oscilloscope, Model 565 - 1 ea | 1,775 | |
| 11. Plug-In Model 3A74 - 1 ea | 695 | |
| 12. S.A. SCR Power Amplifier - 1 ea | <u>2,000</u> | \$ 33,970 |

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II. DIGITAL SYSTEM

A. Digital Hardware

| | | |
|---------------------------------------|-------------------|-----------|
| 1. SEL 810-A Computer and Peripherals | \$310,000 | |
| 2. Spare parts complement | 72,000 | |
| 3. A/DDS Unit including TINS | 130,000 | |
| 4. Spare Parts complement | 10,600 | |
| 5. Buffered Tape System | 81,000 | |
| 6. Spare Parts complement | 16,000 | |
| 7. Calculator (2 ea) | 10,000 | |
| 8. Calculator spare parts | 1,000 | |
| 9. Paper shredder | 600 | |
| 10. Thermofax Copier | 300 | |
| | <u> </u> | \$631,500 |

B. Digital System Pre-Deployment

| | | |
|--|--|-------|
| 1. System installation, cabling, de-bugging and disassembly | | |
| Estimate: 4 weeks for 2 men @\$100/day | | 4,000 |

C. Digital System Deployment and Installation

| | | |
|--|---------------|-----------|
| 1. Packing | 1,000 | |
| 2. On site Installation Work Including Cabling, and de-bugging (4 men - 4 weeks @ 150/day per man) | <u>12,000</u> | \$ 13,000 |

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III. COMMAND SYSTEM

A. Command System Hardware

| | | |
|--|---|-----------|
| 1. Tower, pedestal, mast and arms | } | \$ 36,000 |
| 2. Antenna, TACO D-1640, 8 ea | | |
| 3. Stacking Lines | | |
| Y-SL3-132, 10 ea | | |
| Y-SL5-132 2 ea | | |
| Y-SL3-132 (RG-71) 2 ea | | |
| 4. Pedestal Junction Box, 1 ea | | 2,600 |
| 5. Racks (78") | | 1,375 |
| 6. Tabletop, 1 ea | | 125 |
| 7. Transmitter Panel #400, 1 ea | | 1,800 |
| 8. Trans. Remote Control Panel, 1 ea | | 1,100 |
| 9. Transmitter, 242F-9C, 2 ea | | 5,868 |
| 10. Converter, 2 ea | | 2,000 |
| 11. Programmed Tone Generator, 2 ea | | 9,200 |
| 12. Jack Panel, 12 positions, 2 ea | | 100 |
| 13. Receiver, DTS, 2 ea | | 11,000 |
| 14. Panel, Local Audio, 2 ea | | 200 |
| 15. Electronic Counter, 5244L, 1 ea | | 3,130 |
| 16. Electronic Head, 5253B, 1 ea | | 685 |
| 17. Electronic Head, 5265A, 1 ea | | 635 |
| 18. Speaker, CEI-S9903B, 1 ea | | 225 |
| 19. Discriminator, GFD-5, 6 ea | | 4,200 |
| 20. Filter, TU/L/, 6 ea | | 450 |
| 21. Module (Mod.), GMA-3, 1 ea | | 1,000 |
| 22. Time Code Translator, 3200-222, 1 ea | | 3,200 |
| 23. Recorder, HP-7702, 1 ea | | 1,800 |
| 24. Recorder, Preampl. 8801-A, 2 ea | | 550 |
| 25. Recorder, Paper, #651-52, 50 ea | | 700 |
| 26. Oscilloscope, RM564, 1 ea | | 1,300 |
| 27. Oscilloscope Head 3A6, 1 ea | | 650 |
| 28. Oscilloscope Head 3B3, 1 ea | | 680 |
| 29. Card Punch, 1 ea | | 125 |
| 30. Card File, 1 ea | | 20 |
| 31. Panel Coupler, 1 ea | | 300 |
| 32. Cables | | 1,000 |
| 33. Bi-Dir. Pwr. Monitor 43, 1 ea | | 80 |
| 34. Irig. Calibrator, SCF-21, 1 ea | | 2,450 |
| 35. Coax. Load Res., 8135, 1 ea | | 125 |
| 36. Sync. & Monitor, 4002A, 1 ea | } | 35,000 |
| 37. Simulator, 1 ea | | |
| 38. Display, 4528, 1 ea | | |
| 39. Word Selector, 4228, 1 ea | | |
| 40. Bit Synchronizer, GPS-5, 1 ea | | |
| 41. Lite Data Panel, 1 ea | | 4,000 |
| 42. Scaler | | 4,000 |

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III. COMMAND SYSTEM (Cont'd)

A. Command System Hardware (Cont'd)

| | | | |
|----------------------------------|----|---------------|-----------|
| 43. Permapaper-#651-52, 100 ea | \$ | 500 | |
| 44. Crystals - .1875, 1 ea | | | |
| .2000, 1 ea | | 60 | |
| .3250, 1 ea | | | |
| 45. Hybrid, HEW-50, 1 ea | | 405 | |
| 46. Probe P6028, 2 ea | | 35 | |
| 47. Spare Parts Complement, 1 ea | | <u>27,000</u> | |
| | | | \$165,673 |

B. Command System Predeployment

| | | | |
|--|--|--|----------|
| 1. System installation, cabling, debugging and disassembly. Estimate 1 man 2 weeks @ \$100/day | | | \$ 1,000 |
|--|--|--|----------|

C. Command System Deployment and Installation

| | | | |
|---|-----------------|-----|----------|
| 1. Packing | 500 | 300 | |
| 2. On site Installation (including cabling, and debugging - estimate 5 men - 2 weeks @ \$150/day per man) | \$ <u>7,500</u> | | \$ 8,000 |

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IV. Q. C. SYSTEM

A. Q. C. Hardware

| | | |
|--|---------------|----------|
| 1. Table & Mod., 1 ea | \$ 150 | |
| 2. Table, 5 cabinets, panels, 5 + 6 P. | 1,100 | |
| 3. Distribution AMP | 2,000 | |
| 4. Disc Input Control, 1 ea | 1,000 | |
| 5. Audio Monitor, 1 ea | 500 | |
| 6. IDR Disc Recorder, 1 ea | 18,000 | |
| 7. HP Counter, 5233, 1 ea | 2,300 | |
| 8. ESL Synthesizer, 1 ea | 8,900 | |
| 9. Brusher Recorder, 1 ea | 8,525. | |
| 10. Speaker, 1 ea | 250 | |
| 11. Time Code Trans, 1 ea | 2,935 | |
| 12. Tek. Time Mark Gen, 1 ea | 720 | |
| 13. VR 2800 Tape Recorder, 1 ea | 20,000 | |
| 14. Sharp Calculator, 1 ea | 350 | |
| 15. Tek 565 Oscilloscope, 1 ea | 1,750 | |
| 16. 3A1 Plug-In, 2 ea | 1,500. | |
| 17. Cable Assembly, 1 set | 2,365 | |
| 18. Panel Engraving, 1 set | 150 | |
| 19. BNC Connectors, 100 ea | 300 | |
| 20. Synthesizer Ref. INRT, 1 ea | 100 | |
| 21. Remote Control, 1 ea | 150 | |
| 22. AC Power Outlet, 1 ea | 25 | |
| 23. 565 Modification, 1 ea | 25 | |
| 24. Ear phones, 1 ea | 25 | |
| 25. HP Counter, 1 ea | 2,300 | |
| 26. HP Oscillator, 1 ea | 345 | |
| 27. HP Plug-In, 1 ea | 625 | |
| 28. Camera, Polaroid, CU5, | 435 | |
| 29. De-gasser | 1,200 | |
| 30. Spare Parts Complement | <u>15,000</u> | |
| | | \$93,025 |

B. Q.C. System Predeployment

| | | |
|---|--|--------|
| 1. System Assembly, cabling, debugging and disassembly - Estimate 4 days, 2 men @ \$100/man day | | \$ 800 |
|---|--|--------|

C. Q.C. System Deployment

| | | |
|---|------------|----------|
| 1. Packing | \$ 500 | |
| 2. On Site Installation (including cabling and debugging - estimate 2 days, 2 men @ \$150/man day | <u>600</u> | \$ 1,100 |

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V. MAINTENANCE EQUIPMENT

A. Analog Maintenance Equipment

| | |
|--|--------------|
| 1. Oscilloscope, H-P Model 180A, 1 ea | \$ 895.00 |
| 2. Vert. Amp Plug-In H-P Model 1801A, 1 ea | 695.00 |
| 3. Time base Plug-In H-P Model 1821A, 1 ea | 800 |
| 4. VHF Signal Generator H-P Model 608D, 1 ea | 1,500 |
| 5. Frequency Counter, H-P Model 5245L, 1 ea | 2,480 |
| 6. Prescaler Plug-In H-P, Model 5252A, 1 ea | 685 |
| 7. Digital Voltmeter, H-P, Model 3430A, 1 ea | 595 |
| 8. AC Voltmeter, H-P, 400E, 1 ea | 335 |
| 9. Pulse Generator, Antekna Model 1210, 1 ea | 1,225 |
| 10. Mixer H-P Model 10514A, 1 ea | 100 |
| 11. Receiver Test Unit, NRL TB-1B, 1 ea | 3,000 |
| 12. Micro Watt Meter, Boonton Elect. 41A-R, 1 ea | 750 |
| 13. RF Sweep Generator, Telonic HD-3, 1 ea | 1,010 |
| 14. Attenuator, Telonic, Model TAD-50A, 1 ea | 400 |
| 15. RF Amplifier, HP-461A, 1 ea | 350 |
| 16. Power Supply, Power Designs Model 2005, 1 ea | 330 |
| 17. Power Supply, HP Model 6215A, 1 ea | 90 |
| 18. Boonton FM Generator, 202H, 1 ea | 1,500 |
| 19. Miscellaneous Tools, equipment, facilities | 5,000 |
| 20. Spare Parts Complement | <u>3,000</u> |
| | \$ 24,740 |

B. Digital Maintenance Equipment

| | |
|---|--------|
| 21. Oscilloscope, HP Model 180A, 1 ea | \$ 895 |
| 22. Vertical Amplifier HP Model 1801A, 1 ea | 695 |
| 23. Differential Comparator, HP Model 1803A, 1 ea | 950 |
| 24. 4 Channel Amplifier, HP Model 1804A, 1 ea | 1,050 |
| 25. Time Base, HP Model 1821A, 1 ea | 800 |
| 26. Probe, Miniature, HP Model 10004A, 2 ea | |
| @40 | 80 |
| 27. Probe, Miniature, HP Model 10006A, 4 ea | |
| @ 40 | 160 |
| 28. Probe, Miniature, HP Model 10005A, 2 ea | |
| @ 40 | 80 |
| 29. Probe, Current, HP Model 1110A, 1 ea | 100 |
| 30. Extender, Plug-In, HP Model 10407A, 1 ea | 75 |
| 31. Hood, Viewing, HP Model 10176A, 1 ea | 10 |
| 32. Testmobile, HP Model 1117B, 1 ea | 200 |
| 33. Drawer, HP Model 10475A, 1 ea | 40 |
| 34. Oscillator, HP Model 651B, 1 ea | 590 |
| 35. Voltmeter, digital, HP Model 3430A, 1 ea | 595 |
| 36. Counter, Electronic, HP Model 5216A, 1 ea | 985 |
| 37. Vacuum Cleaner, GE Model P3MU-1, 1 ea | 45 |
| 38. Vacuum cleaner, FSN 7910-720-5541, 1 ea | 200 |
| 39. Strobotac, GR Type 1531-AB, 1 ea | 325 |

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V. MAINTENANCE EQUIPMENT (Cont'd)

B. Digital Maintenance Equipment (Cont'd)

| | | |
|--|--------------|----------|
| 40. Variac, GR Type W10WT3A, 1 ea | \$ 136 | |
| 41. Punching Machine, GBC Model #121KM, 1 ea | 250 | |
| 42. Pulse Generator, Antekna Model 1210, 1 ea | 1,225 | |
| 43. Books | 500 | |
| 44. Miscellaneous tools, equipment, facilities | 5,000 | |
| 45. Oscilloscope and cart, Tektronix 454 | 3,100 | |
| 46. Spare parts complement | <u>2,000</u> | |
| | | \$20,086 |

C. Maintenance Equipment Predeployment

| | |
|---|--------|
| 1. Inventory and packing of all spare parts - 1 man 5 days @ 100/day | \$ 500 |
|---|--------|

D. Maintenance Equipment Deployment and Installation

| | | |
|---|------------|----------|
| 1. Packing | \$ 500 | |
| 2. On Site Installation Work Including Installation and de-bugging (1 man 5 days @ \$150/day) | <u>250</u> | \$ 1,250 |

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VI. TOTAL FIXED COSTS

| | | |
|----------------------------------|---------------|-----------|
| Primary Position Hardware | \$213,400 | |
| Secondary Position Hardware | 177,335 | |
| Spare Units | 33,970 | |
| Installation Hardware | 4,340 | |
| Pre-deployment Costs | 3,200 | |
| Deployment and Installation | <u>12,500</u> | |
| Total Analog System Fixed Costs | | \$444,745 |
| Digital System Hardware | \$631,500 | |
| Pre-deployment Costs | 4,000 | |
| Deployment and Installation | <u>13,000</u> | |
| Total Digital System Fixed Costs | | \$648,500 |
| Command System Hardware | \$165,673 | |
| Pre-deployment Costs | 1,000 | |
| Deployment and Installation | <u>8,000</u> | |
| Total Command System Fixed Costs | | \$174,673 |
| Q.C. System Hardware | \$ 93,025 | |
| Pre-deployment Costs | 800 | |
| Deployment and Installation | <u>1,100</u> | |
| Total QC System Fixed Costs | | \$ 94,925 |
| Digital Maintenance Hardware | \$ 20,086 | |
| Analog Maintenance Hardware | 24,740 | |
| Pre-deployment Costs | 500 | |
| Deployment and Installation | <u>1,250</u> | |
| Total Maintenance Fixed Costs | | \$ 46,576 |
| TOTAL SYSTEM FIXED COSTS | \$1,409,419 | |

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VII. VARIABLE COSTS

A. Transportation to

| | | | | | |
|--------------|---------------|--|--|-----|----------------|
| 1. Personnel | - Digital | \$150/man | | \$ | 750 |
| | - Analog | \$150/man | | | 750 |
| | - Q.C. | } included in Digital and Analog | | | |
| | - Maintenance | | | | |
| | - Command | | | | |
| 2. Equipment | - Digital | } Air ride van exclusive use flat rate | | | |
| | - Analog | | | | |
| | - Q.C. | | | | |
| | - Maintenance | | | 700 | |
| | - Command | | | | |
| | | | | | <hr/> \$ 2,200 |

B. Equipment Available from

| | Equipment | Full Value | Qty | Ext Cost | Credit Value |
|-----|-----------------------------|------------|------|----------|--------------|
| 1. | Speaker Unit | 225 | 4 ea | 900 | 810 |
| 2. | Time Code Gen. | 3,500 | 1 ea | 3,500 | 3,150 |
| 3. | TCG Battery & Sup. | 900 | 1 ea | 900 | 810 |
| 4. | S.A. Position Ind. | 1,000 | 2 ea | 2,000 | 1,800 |
| 5. | Oscilloscope, Mod. RM561 | 1,850 | 3 ea | 5,558 | 5,002 |
| 6. | S.A. Cont. Unit, Servo | 1,000 | 3 ea | 3,000 | 2,700 |
| 7. | S.A. Cmd. Unit, Manual | 2,000 | 3 ea | 6,000 | 5,400 |
| 8. | S.A. DC Amp. Unit | 1,000 | 3 ea | 3,000 | 2,700 |
| 9. | S.A. Servo Amp Unit | 1,000 | 3 ea | 3,000 | 2,700 |
| 10. | Mod. 3A1 Plug-In | 1,400 | 4 ea | 5,600 | 5,040 |
| 11. | Mod. 2B67 Plug-In | 250 | 3 ea | 750 | 675 |
| 12. | Record Monitor Scope | 3,000 | 2 ea | 6,000 | 5,400 |
| 13. | Time Code Trans- lator | 3,000 | 5 ea | 15,000 | 13,500 |
| 14. | Scope, Mod 565 | 1,775 | 3 ea | 3,550 | 3,195 |
| 15. | Recorder, CEC 2800 | 20,000 | 3 ea | 60,000 | 54,000 |
| 16. | S.A. Antenna Pedestal | 19,000 | 2 ea | 38,000 | 34,200 |
| 17. | S.A. SCR Power Amp. | 2,000 | 1 ea | 2,000 | 1,800 |
| 18. | Plug-In, Mod 3A74 | 695 | 6 ea | 4,170 | 3,753 |

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VII. VARIABLE COSTS (Cont'd)

B. Equipment Available from [] (Cont'd)

| Equipment | Full Value | Qty | Ext Cost | Credit Value |
|-----------------------------------|------------|------|----------|--------------|
| 19. Frequency Counter | | | | |
| HP 5245L | 2,480 | 2 ea | 4,960 | 4,464 |
| 20. Sweep Gen. | | | | |
| Telonic HD3 | 1,010 | 1 ea | 1,010 | 909 |
| 21. Power Supply | | | | |
| HP 6215A | 90 | 1 ea | 90 | 81 |
| 22. Oscillator, HP | | | | |
| 651B | 590 | 1 ea | 590 | 531 |
| 23. Vacuum Cleaner | | | | |
| FSN 7910-720-5541 | 200 | 1 ea | 200 | 180 |
| 24. Degausser | 1,200 | 1 ea | 1,200 | 1,080 |
| 25. Camera | 435 | 1 ea | | 392 |
| 26. Counter, HP 5233 | 2,300 | 1 ea | 2,300 | 2,070 |
| 27. Oscillograph, brush, 16-2300 | 8,525 | 1 ea | 8,525 | 7,763 |
| 28. Generator, Time Mark | 720 | 1 ea | 720 | 648 |
| 29. Converter, Frequency HP 5253B | 635 | 1 ea | 635 | <u>572</u> |
| | | | | \$165,235 |

C. Equipment Available from []

| | | | | |
|--------------------------------------|---------|------|---------|---------|
| 1. SEL 810A Computer and Peripherals | 310,000 | 1 ea | 310,000 | 300,000 |
| 2. Spare parts complement | 10,000 | 1 ea | 10,000 | 10,000 |

D. Transportation of Equipment from [] 4,500

E. Project Director - Includes coordinating all ordering, receiving, inventory checking, assembly, disassembly, deployment, coordinating with station - 1 man 2 mos. 6,000

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VIII. TOTAL INSTALLED SISS ZULU SYSTEM COST -

(Full credit for outstanding equipment)

| | | |
|--|-------------|-----------|
| Total System Fixed Costs | \$1,409,419 | |
| Transportation to | 2,200 | |
| Equipment value available from (credit) | -165,235 | |
| Equipment value available from (credit) | -310,000 | |
| Transportation of Equipment from | 4,500 | |
| Project Director/Management | 6,000 | |
| Total Net SISS ZULU System Deployment Cost | | \$946,884 |
| (No damage to returned equipment) | | |

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IX. TOTAL INSTALLED SISS ZULU SYSTEM COST - [REDACTED]

(No credit for outstanding equipment from [REDACTED])

| | |
|--|-------------|
| Total System Fixed Costs | \$1,409,419 |
| Transportation to [REDACTED] | 2,200 |
| Equipment value available from [REDACTED] (credit) | =20,000 |
| Equipment value available from [REDACTED] (credit) | -310,000 |
| Transportation of equipment from [REDACTED] | 4,500 |
| Project Director/Management | 6,000 |
| Total Net SISS ZULU System Deployment Cost | \$1,092,119 |
| (No credit for outstanding equipment) | |

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