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Civil Engineer

SNOW AND ICE CONTROL

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This instruction supplements information and procedures contained in AFI 32-1002 *Snow and Ice Control*. It implements AFD 32-10, *Air Force Installations and Facilities*. The commander and supervisor should ensure provisions are complied with. This publication applies to all units and organizations on Eielson AFB.

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Chapter 1

POLICIES

1.1. MISSION SUPPORT: Normally snow and ice control will be required at Eielson AFB from September through April to ensure continuing operations. The 354th Civil Engineer Squadron is required to conduct snow removal and ice control on surface at Eielson by priorities established by USAF mission precedence, alert requirements, and limitation imposed by aircraft and equipment availability.

1.1.1. SNOW REMOVAL PRIORITIES: AFI 32-1002 establishes three priorities for snow and ice control. Facilities are listed in priority order. The intent establishes priorities to permit the most efficient use of snow removal equipment in locations most important to the accomplishment of the mission. The highest priority is reserved for removal of snow from the runway. Operational requirements and availability of snow removal equipment may necessitate changes in other relative priorities listed in the attachment. Any changes to the priority for clearing of airfield areas will be coordinated with and approved by the Chief, Airfield Management or designated representative. For other than airfield clearing operations, changes in relative priorities will be approved by the Snow Control Officer or designated representative. The following priorities are reflected on color coded base maps located in the Snow Control Center, Bldg 4105 (per AFI 32-1002, para 1.6).

1.1.1.1. PRIORITY I: Includes primary runway and overruns, primary runway access taxiways and alert facilities, apron access taxiways, aircraft crash fire equipment lanes, access roads to and within the munitions storage areas (MSA). Approximately 836,000 SY.

- | | |
|-----|--|
| 101 | Runway |
| 102 | Open taxiway centerline on Taxiway Foxtrot, from Taxiway Alpha to Taxiway Echo and Lima. Clear hot gun pad as required. |
| 103 | West Side of Nose Dock 1 (Bldg 1120) for the search and rescue helicopter and higher headquarters taskings and west side of Nose Dock 2 (Bldg 1121). |
| 104 | Taxiway Bravo including arm/dearm (Romeo and Sierra rows, 11-17) and Guard alert aircraft spot as requested by MOC through Base Operations, including red restricted area lines. |
| 105 | Taxiway Alpha/Taxiway Echo including arm/dearm areas - priority will be given to Taxiway Echo when active Runway 31 (south end) and Taxiway Alpha when active runway is Runway 13 (north end). Dearm lines on Romeo will drop in priority until runway is changed to 31. |
| 106 | F-16 parking area, 8-bay area (Bldg 1338) and 4-bay area (Bldg 1335) to include rear of buildings and red restricted area lines. Alpha-Delta Rows, Bldgs 1306, 1307, 1340, 1348, and 1344. |

NOTE: SNOW REMOVAL WILL MAINTAIN LINES FOR TWO AIRCRAFT TO DEPART AND ENTER EACH BAY. A MINIMUM OF 15 FEET ON BOTH SIDES OF EACH TAXI LINE WILL BE MAINTAINED UP TO THE RED LINE.

- 107 A-10 parking area, 6-bay cold weather shelter (Bldgs 1227 and 1228) including red restricted area lines. *See Note
- 108 CAC (Bldg 1300-front and back of facility). *See Note

NOTE: *SNOW REMOVAL OPERATIONS WILL MAINTAIN LINES FOR ONE AIRCRAFT TO DEPART AND ENTER EACH BAY. A MINIMUM OF 15 FEET ON BOTH SIDES OF EACH TAXI LINE WILL BE MAINTAINED AS REQUIRED.

- 109 Taxiway Charlie including arm/dearm, and south shoulder leading off of the Runway (widen south shoulder and remove berms for wing tip clearance), also Spots 19-22 and Taxiway Gulf, centerline (north to south end), north-end (clear to south 600 feet) for hung flares on aircraft.
- 110 Access to Bldgs 2222 and 2224 (Security Forces) and Bldg 2270 (Transient Facility) parking lot at intersection of Central and North Street and out to the flight line.
- 111 Road into the Clinic up to the garage doors, from Clinic to Flightline (Central Ave to Division St, to Flightline Ave, to Fire Station 1).
- 112 Fire Station 1 (Bldg 1206), and Fire Station 2 (Bldg 4870).
- 113 BAK-12 pit accesses (north, south, and mid barriers).
- 114 Access roads to Engineer and Quarry Hill MSAs and Bldgs 6370 - 6385, primary explosives routes as identified by 354 FW/SEW including Cargain Road out to Bldg 1303 (Missile Shop) entrance and Mullins Pit Road, to include Polar Pad (new munitions holding area, Bldg 1312) both entrances to Pixie Pad and roads within the MSAs. Access road to Bldg 1326 (enclosed munitions holding area).
- 115 Bldgs 1118, 1139, 1170, 1210, 1235, 1250, 1301, and 1314 (pump houses which provide water for fire fighting on the flightline).

1.1.1.2. **PRIORITY II:** Includes secondary taxiways, aprons, maintenance, hardstands, and other aircraft operational areas, flight control facilities, access roads in POL areas, primary base roads and streets, and munitions storage areas. Approximately 2,732,000 SY.

- 201 Taxiway Foxtrot from Taxiway Echo to Nose Dock 7, including OSCAR 1-5 and E-4 hydrant system area and fillstand (Bldg 1240).
- 202 Taxiway Foxtrot from Taxiway Alpha to Nose Dock 7 (Bldg 1232) including north and south ends of Bldg 1140 for higher headquarters taskings and Bldg 1190 Air Freight Terminal.
- 203 Air National Guard maintenance hangar (Bldg 1176) to alert spot, Guard Fuel Cell (Bldg 1171) and Bldgs 1172 and 1173, a single pass.
- 204 Parking ramp Spots 10 thru 22 and Papa & Quebec rows as needed.

- 205 Widen loop area, Taxiway Lima and clear Gulf-Hotel and Echo-Foxtrot rows for A-10/F-16 parking as required.
- 206 Clear Mullins Pit Road again
- 207 Snow Barn operational areas (Bldgs 1133, 1134, 1138, 4105, 6209, and access to Bldgs 1120 and 1121).
- 208 Road from Snow Barn to Bldg 2171 (Heavy Equipment Maintenance)
- 209 Runway approach lights and ILS localizer (Pads 1111 and 1114, north end), and Bldg 1334 south end localizer.
- 210 Approach lights (south end)
- 211 PAPI lights (north and south) as required.
- 212 ILS glide slope (Pad 1258) south end of runway, and Pad 1110 north end of Runway, West Perimeter Road will be done on an on-call tasking.
- 213 POL truck parking area (Bldg 3240) and E-10 deicing fluid fill stand (Bldg 4480)
- 214 POL fill stands (E-2 area, Bldg 6232)
- 215 POL service roads to loop (Bldg 1305, 1321, and 1315)
- 216 POL tank farm area and road (Bldg 6221)
- 217 FPN-62 Radar Site (Bldg 1184 and 1181) as required
- 218 LOX storage (Bldg 3245) and AGE area (Bldg 1209)
- 219 Industrial Ave to Ravens Way, French Creek Dr to Child Development Center (Bldg 5282)
- 220 Taxiway Golf as required
- 221 Taxiway Delta
- 222 Main runway edge to 1000-ft markers entire length as required.
- 223 Military Quartermaster (base laundry, bldg 2206)
- 224 Fire Lanes and POL tank farm E-2 (Bldg 6224), E-6 (Bldg 6248), E-11 fuel receipt header access road (Bldg 6261), TK-522 access road to bulk fuel tank 522, Tank 22, and Senior Crown east of E-6.

NOTE: FIRE LANES WILL BE PLOWED WHENEVER DEPTH OF LOOSE SNOW EXCEEDS 6 INCHES AND WILL BE ONE LANE, APPROXIMATELY 10' WIDE. PRIMARY PURPOSE IS TO PROVIDE EMERGENCY ACCESS ROUTES TO CERTAIN BASE AREAS FOR FIRE FIGHTING EQUIPMENT.

- 225 Weapons Storage Pad (Bldg 1137)
- 226 Central Ave from Main Gate to Outer Loop Rd.
- 227 Quarry Road to Arctic Survival Training School (command post Bldg 6398 and the bus turnaround points)
- 228 Alternate explosive route

- 229 Clinic (Bldg 3213)
- 230 Flightline Ave, include road section to Bldg 4112 (T/A Facility)
- 231 Wabash Ave
- 232 CE shops access road, CEMAS (Bldg 2351), Sewage Treatment Plant, and Water Treatment Plant.
- 233 North St, and Bldg 2210 (OSI)
- 234 Warehouse court access to supply (Bldgs 3426 and 3425) or as requested by SUPS and CE BOM (Bldg 3422)
- 235 Weather instruments, north end Pads 1177, 1178, and 1179, south end Pads 1266 and 1267.
- 236 Access to Nose Docks 3 & 5, Bldg 1153, 1176, 3130, and Air National Guard supply complex.
- 237 TVOR (Bldg 100—not on map)
- 238 TACAN (Bldg 1117)
- 239 Cargain Road to middle marker (Bldgs 1339 and 1303)
- 240 Base Roads:
 - Arctic Ave
 - Broadway Ave
 - Coman Dr
 - Kodiak St
 - Moose Lake Dr
 - Quarry Rd (as required)
 - Tenakee St
 - Glacier Ave
 - Polaris St
- 241 Loop Access Road behind Hush House including utilidor turnouts
- 242 Central Heat and Power Plant to cooling ponds
- 243 Hazardous Material (Bldg 4380)
- 244 BX, Commissary, and School Age Care (Bldg 3303)
- 245 Access road to base radio (Bldg 4304), PAR reflectors to be cleared only when requested.
- 246 Johnson Road to B and C batteries, when requested by Det 460 Commander.
Det 460 will use snow machines when snow removal support is not available.

1.1.1.3. **PRIORITY III:** All other areas. Approximately 496,000 SY

- 301 Community Center (Bldg 5313)

- 302 Security Forces parking area
- 303 Bldg 2204, Alternate armory points, Bowling Center (Bldg 3301), and Fitness Center (Bldg 3343).
- 304 Vehicle Maintenance Shop (Bldg 3213)
- 305 Equipment Maintenance Shop (Bldg 2171)
- 306 Dog Kennels
- 307 Youth Center (Bldg 5313)
- 308 Base Ops parking (Bldg 1221) and T/A POV parking lot as needed
- 309 Maintenance shop parking along Flightline (north to south)
- 310 18 FS parking lots (Bldgs 1306, 1337, 1338, and 1349)
- 311 BX Gas Station
- 312 Bldg 1309 parking and TLQ (Bldg 3305), VOQ (Bldg 2270), VAQ (Bldg 2272), Eielson House (Bldg 5282), and TLF (Bldg 3305).
- 313 CE Vehicle Storage
- 314 Amber Hall (Bldg 3112)
- 315 Flightline parking (Bldg 1140), and areas adjacent to Bldgs 3126 and 3127.
- 316 Prime BEEF (Bldg 3460)
- 317 Kobuk Loop
- 318 Chapel and Two Seasons Dining facility (Bldg 2207)
- 319 Enlisted Club (Bldg 2225)
- 320 Officers Club (Bldg 5223)
- 321 Koyuk St and Birch St
- 322 Post Office and Shoppette (Bldg 2216)
- 323 801 housing and housing parking areas
- 324 Auto and Wood Hobby Shop (Bldg 3360)
- 325 Recreation Issue (Bldg 6214)
- 326 Ski Lodge (Bldg 6395)
- 327 Beaver Creek Rd and Transmitter Site Rd to Mystery Hole
- 328 Amaneta Rd from 5.8 mile Chena Hot Springs Rd to Alpha-D site when requested by Det 460 Commander
- 329 Camera Site I and Camera Site II (when authorized by Fighter Wing Commander or BCE)

1.1.1.3.1. Due to heavy snowfalls, the following areas will be plowed for general parking areas:

Commissary and BX parking lots
 Credit Union and Bowling Alley
 Enlisted Club
 Officers Club

1.1.1.3.2. Parking lots will be accomplished on as-needed basis. Building custodians on the industrial side of base may contact Snow Control at 377-3110 to coordinate barricading and removal of vehicles.

1.2. SNOW AND ICE CONTROL COMMITTEE: The commander, 354th Support Group, Eielson AFB will establish and direct all snow and ice control operations through the Snow and Ice Control Committee.

1.2.1. The Snow and Ice Control Committee consists of the following:

354 FW/CC	Chairman
354 SPTG/CC	Member
168 ARW/CC	Member
354 LG/CC	Member
354 OG/CC	Member
354 MDG/CC	Member
354 CES/CC (BCE)	Coordinator
354 CES/CEO	Recorder
354 CES/CEF	Member
354 CES/CEOH	Member
354 FW/SE	Member
354 TRNS/CC	Member
354 SUPS/CC	Member
354 SVS/CC	Member
354 SFS/CC	Member
18 FS/MA	Member
355 FS/MA	Member
354 MXS/CC	Member
354 CS/CC	Member
Det 460/CC	Member
354 FW/MO	Member

354 CONS/CC	Member
18 FS/CC	Member
353 CTS/CC	Member
354 MSS/CC	Member
355 FS/CC	Member
354 FW/CCE	Member
354 OG/DOT	Member
354 OSS/OSW	Member
354 OSS/OSA	Member

1.2.2. Responsibilities:

1.2.2.1. The Snow and Ice Control (S&IC) Committee will review policy, outline organizational responsibilities and jurisdiction of all personnel involved, establish priorities, and formulate flexible plans and schedules for snow and ice control. The chairman shall convene two mandatory general committee meetings each year. One meeting will be held the last week in May, and the other not later than the end of the first week in September. Other meetings may be called as necessary to resolve any serious problems which may arise. An information copy of the meeting minutes will be sent to HQ PACAF/CEO.

1.2.2.2. The Base Civil Engineer, as coordinator of the S&IC, will control all snow removal operations on Eielson AFB in accordance with this plan. Coordination of snow and ice control operations will be handled through the Snow Control Center established in Bldg 4105. The Snow Control Center will be operated on a 24-hour basis from 15 September through 30 April. Date may be adjusted by the BCE if weather conditions warrant.

1.2.2.3. Snow removal from sidewalks, steps, and within 5 feet of buildings and structures will be accomplished by the building manager(s) of facility OPR. Tools and equipment necessary for accomplishment of this task will be funded, obtained, and maintained by the activity concerned. Special requirements related to ice buildup will be handled on a case-by-case basis.

1.2.2.4. 354 FW units, attached units, staff units, and associates are authorized and encouraged to develop supplementing procedures and operating instructions as required in support of this S&IC plan.

1.2.2.5. 354th Civil Engineer Squadron (354 CES/CE) is overall OPR for this S&IC plan. Recommendations for improvements and changes should be submitted to 354 CES/CEO for necessary action.

1.2.3. SUPPORT UNITS:

354th Fighter Wing: 18 FS Chief of Maintenance

355 FS Chief of Maintenance

Safety

Supply Squadron

Transportation Squadron

Base Operations

Logistics Support Squadron

354 OSS Weather Flight

354th Support Group: Civil Engineer Squadron

Security Forces Squadron

Services Squadron

Communications Squadron

Associate Units: 168th Air Refueling Wing

Chapter 2

RESPONSIBILITIES

2.1. 354TH SUPPORT GROUP COMMANDER:

- 2.1.1. Direct all operations through the S&IC Committee.
- 2.1.2. Establish minimum standards for snow and ice removal for controlled operations.

2.2. 354TH CIVIL ENGINEER SQUADRON:

2.2.1. The Base Civil Engineer will:

- 2.2.1.1. Designate alternate parking lots for main base areas, as required.
- 2.2.1.2. Ensure the annual formation of an internal BCE S&IC working committee to ensure an effective snow and ice control (S&IC) program is established and the work responsibilities are clearly delineated.
- 2.2.1.3. Appoint a Snow Control Officer (SCO) to accomplish the mission as member of the S&IC working committee.
- 2.2.1.4. Coordinate all installation snow removal and ice control activities through the SCO (Chief of Operations) and the Chief of Horizontal Construction.
- 2.2.1.5. Ensure that adequate facilities, equipment, materials, and personnel (including seasonal employees) are provided for the implementation of the snow and ice control program.
- 2.2.1.6. Convene the S&IC working committee to discuss the remedial action for any serious problem which may arise.
- 2.2.1.7. Establish the Snow Control Center (SCC) in Bldg 4105.
- 2.2.1.8. Ensure that an adequate operator training program is in effect to ensure that qualified drivers are available throughout the snow season (15 September through 30 April).
- 2.2.1.9. Prepare the Base S&IC Plan.
- 2.2.1.10. Snow Force Composition: The S&IC force will normally consist of three shifts: first shift (0800 to 1630), second shift (1600 to 0030), third shift (2400 to 0830).
- 2.2.1.11. Notifying HQ PACAF/CEO by telephone anytime the in-commission rate falls below 80 percent or could affect the emergency war operation capability.

2.2.2. **Chief of Operations:** The supervisor in charge of all S&IC operations shall be responsible to the Base Civil Engineer for operation and supervision of personnel and equipment. Responsibilities include:

- 2.2.2.1. Assisting in the selection, testing, licensing, and on-the-job qualification of operators.
- 2.2.2.2. Ensuring availability of personnel and equipment as required by shift schedules and conditions.
- 2.2.2.3. Ensuring that the performance of job assignments are within time limits and priority as per local orders and instructions.

2.2.2.4. Ensuring effective and safe operation of equipment in accordance with current orders and instructions.

2.2.2.5. Maintaining close liaison with the weather office in order to keep abreast of the latest weather forecast, and ensuring that information is given to snow removal personnel to provide adequate response.

2.2.2.6. Reporting immediately any condition that may be hazardous to the operation of either aircraft or vehicles to Chief of Airfield Management.

2.2.2.7. Confirmation of out-of-service equipment reported by crew chiefs or operators and immediate reporting of same to maintenance crew.

2.2.2.8. Making recommendations for improvement of procedures and techniques of operation.

2.2.2.9. Completion and processing of operating records and maintenance of progress charts or maps.

2.2.2.10. Cleanliness of equipment and area allotted for storage.

2.2.2.11. Being fully cognizant of:

2.2.2.11.1. All orders and instructions applicable to the operation of equipment on airfield, road, and ground surfaces.

2.2.2.11.2. The latest procedures and techniques for snow and ice control of airfield, road, and ground surfaces.

2.2.2.11.3. The local geographical area of operation.

2.2.3. **Chief, Horizontal Construction:** The Chief of Horizontal Construction is responsible to the SCO for the entire installation S&IC operation. Responsibilities include:

2.2.3.1. Allocation of duties and tasks to crew chiefs.

2.2.3.2. Implementation of procedures for the protection of all areas requiring snow removal and ice control.

2.2.3.3. Maintaining and operating the SCC.

2.2.3.4. Ensuring that winter marking of airfield areas and roads is accomplished in accordance with current orders and instructions.

2.2.3.5. The location and erection of snow fences.

2.2.3.6. The selection of snow dump areas.

2.2.3.7. Ensuring that adequate drainage is provided and maintained for all areas.

2.2.3.8. The provision for materials such as sand, airfield and road deicing chemicals, wooden markers, snow fencing, signs, and maps or plans.

2.2.3.9. Ensuring that all S&IC equipment operators receive training (and refresher training) in all aspects of the S&IC programs.

2.2.3.10. The provision for personnel for snow removal in the immediate areas of approach runway and taxiway lights, arresting barriers, railway spurs, and gates.

2.2.3.11. Ensuring availability of personnel and equipment as required by shift schedules and conditions to provide a 24-hour operation.

2.2.3.12. Maintaining a daily snow equipment status board portraying serviceability status on all snow vehicles. This status board will be maintained in the SCC.

2.2.3.13. Maintaining a runway condition reading (RCR) chart and log, and a runway availability log.

2.2.4. **Snow Removal Crew Chief:** Crew chiefs shall be responsible for direct supervision of S&IC personnel and equipment. Responsibilities include:

2.2.4.1. Supervising implementation of S&IC operations in accordance with current orders and instructions.

2.2.4.2. Detailing of duties and assignment of equipment operators.

2.2.4.3. Keeping informed on the latest weather forecasts.

2.2.4.4. Ensuring that equipment is being utilized to the best advantage and that all safety precautions are being followed.

2.2.4.5. Ensuring that daily inspections and servicing of equipment are properly carried out prior to dispatch.

2.2.4.6. Completion of equipment records and maintenance of progress charts or maps.

2.2.4.7. Cleanliness and security of section and equipment.

2.2.4.8. Carrying in his/her vehicle, the tools and spare parts necessary for minor, on-the-spot repair of vehicles and equipment.

2.2.4.9. Reporting progress and trouble areas to the oncoming crew chief prior to going off shift.

2.2.4.10. Reporting progress of assigned work in writing to the supervisor in charge of S&IC prior to going off shift.

2.2.4.11. Being fully cognizant of:

2.2.4.11.1. All orders and instructions applicable to the operation of equipment on airfield, road, and ground surfaces.

2.2.4.11.2. The local geographical area of operations.

2.2.4.11.3. Keeping informed on the latest procedures and techniques for S&IC operations.

2.2.4.12. Making arrangements for meals in accordance with **Chapter 2**, para 2.2.11. of this plan.

2.2.4.13. Ensure that any conditions that may be hazardous to the operation of any aircraft or vehicle are reported to the control tower and Base Operations immediately.

2.2.5. **Vehicle Operators:** Each equipment vehicle operator shall be responsible for the following:

2.2.5.1. The operation of S&IC equipment on which he/she has been qualified and assigned in accordance with current orders and instructions.

2.2.5.2. Ensuring that he/she is in possession of a valid driver/operator permit, and where applicable, a civilian permit.

- 2.2.5.3. The completion of all forms relevant to his/her duties.
- 2.2.5.4. Performing the prescribed operator inspection, servicing, and minor repairs of S&IC equipment within his/her capability.
- 2.2.5.5. Reporting immediately any damage to, or malfunctioning of equipment prior to the start of, and during shift operations. Any incident or accident where an object is struck will be reported to snow control and annotated in the shift log book with time of incident, precise location, description of object hit, name of driver, and vehicle reg number. Security forces will be immediately notified when there is damage to the vehicle or personal injury is involved.
- 2.2.5.6. Carrying in his/her vehicle, the tools and spare parts necessary for on-the-spot operator repair within his/her capability.
- 2.2.5.7. Complying with all safety precautions applicable to the assigned vehicles.
- 2.2.5.8. Reporting immediately any condition noted that may be a hazard to the operation of either aircraft or vehicles. The snow removal runway controller (normally Snow-3) will immediately advise the control tower of potential hazards to aircraft when snow removal operations are interrupted for aircraft launches or recoveries.
- 2.2.5.9. Advising his/her replacement at the time of his/her relief on the condition and operation of assigned equipment.
- 2.2.5.10. Knowing and observing the latest procedures and techniques applicable to S&IC of airfields, roads, and other ground areas.
- 2.2.5.11. Knowing the local geographical area of S&IC operations.
- 2.2.5.12. Complying with the following special rules and precautions:
 - 2.2.5.12.1. During travel, when not removing snow, observe airfield speed limits and current directives per AFI 32-1002 and FWI 13-201.
 - 2.2.5.12.2. Prior to commencing operations, ensure that assigned vehicle or equipment is in good working condition, has sufficient fuel, oil, and fluids, and is equipped with the necessary tools and spares required for efficient operations (i.e., sharp pointed shovel, medium-sized crowbar, spare sheer pins, tire chains).
 - 2.2.5.12.3. Prior to proceeding to and from work areas, ensure that vehicle attachments, i.e., plows, sidewings, blowers, brooms are properly positioned and secured for traveling.
 - 2.2.5.12.4. Keep vehicle cab well ventilated at all times to prevent the accumulation of dangerous gases.
 - 2.2.5.12.5. USE SAFETY BELTS AT ALL TIMES.
 - 2.2.5.12.6. When working on a vehicle or equipment, do not permit anyone in the cab or at the controls.
 - 2.2.5.12.7. When vehicle or equipment is in motion, do not attempt to make adjustments other than those normally required for proper operations.
 - 2.2.5.12.8. Never leave vehicle or equipment unattended unless they are properly secured.

2.2.5.12.9. To prevent injury, keep vehicle's running boards, steps, and catwalks clear of snow and ice.

2.2.5.12.10. When parking equipment, always lower plow, blower, and dozer assemblies to the ground. If parking outdoors, support them with wooden blocks to prevent them both from freezing to the ground.

2.2.5.12.11. Always obtain access on the runway from the Snow Removal Runway Controller (normally Snow-3) via radio transmission or visual means prior to commencing operations on runway areas. Also obtain access onto runway as necessary during the course of operation and when departing from these areas. When a red rotating beacon is observed on the runway, this means "depart off the runway." Also, if runway lights are flashing bright to dim several times, this means "depart off the runway".

2.2.5.12.12. Operate snow removal equipment at proper speeds in accordance with AFI 32-1002. Supervisors may direct maximum speeds lower than those stated in AFI 32-1002, but not higher.

2.2.5.12.13. Operation of equipment below -35 degrees Fahrenheit will require the approval of the Base Civil Engineer. Approval should be requested through the Chief Horizontal Construction Section.

2.2.6. **Snow Control Center:** Responsible for directing and controlling all snow removal priorities with base operations and control tower to the NCOIC, Snow-3, and dispatched equipment.

2.3. CHIEF OF AIRFIELD MANAGEMENT: The Chief of Airfield Management shall be responsible to the installation commander for the coordination and interruption of airfield operations as required in support of S&IC operations. These responsibilities include:

2.3.1. Assuring that runway surface and condition readings are obtained IAW to 33-1-23, AFI 13-213, and 354 FWI 13-201.

2.3.2. Training and certifying the following individuals to obtain runway surface and condition readings: Base Operations Controller.

2.3.3. Effecting priority changes for clearing airfield surfaces if operational requirements dictate a deviation from the Civil Engineer S&IC Plan.

2.3.4. Advising Civil Engineer SCC of alternate requirements and recommended procedures to be used in the event of flying emergency.

2.3.5. Publication of orders and instructions with respect to :

2.3.5.1. Vehicular traffic and communications procedures on airfield areas, including emergency methods of clearing snow removal equipment from the runway in event of radio failure.

2.3.5.2. Parking of aircraft and restriction of unnecessary flying in order to facilitate S&IC operations.

2.3.6. The Chief, Airfield Management or designated representative may close portions of the airfield if necessary to facilitate safe snow removal operations and prevent aircraft movement into hazardous areas.

2.3.7. The Chief, Airfield Management or designated representative will advise the Civil Engineer Snow Removal Shift Leader of any changes to the priorities listed in the base S&IC Plan and also when the change is rescinded.

2.3.8. The Chief, Airfield Management or designated representative will direct the Civil Engineer Aircraft Arresting Barrier Maintenance Unit, or Ops-6, Ops-7, Ops on the Ground Services Net, to disconnect or reconnect the BAK-12 barrier when required for snow removal operations only after coordination with all affected agencies (primarily Base Ops).

2.4. 18 FS, CHIEF OF MAINTENANCE/355 FS, CHIEF OF MAINTENANCE:

2.4.1. Do not operate overhead doors with snow removal equipment within 50 feet of building.

2.4.2. Ensure all tools, stands, fire extinguishers, wheel chocks, and similar items are removed from the parking ramp and POL pit areas to a designated area when not in use.

2.4.3. Remove snow from 354th Fighter Wing aircraft surfaces and clear a sufficient distance from aircraft to allow safe operation of S&IC equipment.

2.4.4. Remove snow and clear the grounding points in the vicinity of 354th Fighter Wing aircraft.

2.4.5. Movement of aircraft from areas to be cleared. Remove all aircraft from A, B, C, and D rows on weekends when the weather forecasts snow.

2.4.6. Providing flying schedule to the SCC through the Chief, Airfield Management.

2.4.7. Equipment in para 2.4.2. above will be placed to best meet the needs of both maintenance personnel and snow removal operations. The decision will be a joint effort between the maintenance and snow removal supervisors.

2.4.8. Snow will be cleared a minimum of 25 feet from parked aircraft.

2.5. THE TRANSPORTATION COMMANDER WILL:

2.5.1. Complete the preseasonal preparation of all S&IC vehicles to ensure availability to the BCE by 1 September.

2.5.2. Conduct the timely maintenance and repair of all vehicular equipment utilized in S&IC operations.

2.5.3. Coordinate with the Chief of Supply to establish minimum essential levels (AF Forms 1996, Adjusted Stock Level) of vehicle parts to support S&IC equipment during the snow removal season and summer overhaul/repair period.

2.5.4. Provide on-the-job training for mechanics on S&IC vehicles.

NOTE: THIS WILL INCLUDE FAMILIARIZATION WITH NEWLY ASSIGNED EQUIPMENT AND TRAINING NEWLY ASSIGNED MECHANICS WHO ARE NOT FAMILIAR WITH SNOW REMOVAL EQUIPMENT.

2.5.5. Establish a 24-hours per day, 7-days per week vehicle maintenance capability during S&IC operations (15 September through 30 April).

2.5.6. Provide a 24-hours per day, 7-days per week wrecker and quick-start service during the snow removal season.

- 2.5.7. Provide on request, daily snow removal vehicle serviceability status to the SCC.
- 2.5.8. Have available adequate bench stocks and related parts supplies established to support S&IC equipment.

2.6. THE SUPPLY COMMANDER RESPONSIBILITIES INCLUDE:

- 2.6.1. The timely procurement of requested equipment and supplies in support of the entire S&IC plan.
- 2.6.2. The provision of facilities for issuing requested supplies on a 24-hour per day, 7-day per week basis (including fuel).
- 2.6.3. Establishing special levels and bench stocks to support maintenance of snow removal equipment as shown in Attachment 5.
- 2.6.4. Refueling of snow removal equipment: Providing 24-hour per day refueling for S&IC equipment during actual snow removal operations consistent with shifts and equipment fuel capacity. (IAW AFI 32-1002, para 2.2.5.2.).
- 2.6.5. Removal of snow from top of refueling pits and a sufficient distance (not less than one foot) from the sides of the pits to permit clear access by snow removal equipment.

2.7. 168TH AIR REFUELING WING WILL ENSURE:

- 2.7.1. All tools, stands, fire extinguishers, wheel chocks, and similar items are removed from the parking ramp and POL pit area to a designated area when not in use. Equipment will be placed as follows:
 - 2.7.1.1. Ramp fire bottles, chocks, and non-powered AGE will be removed from the parking ramp during snow removal operations and normally consolidated on the north side of the ARW hangar (Bldg 1176).
 - 2.7.1.2. Refueling pit fire bottles, chocks, and stands will normally be relocated to the south side of Nose Dock 7 during snow removal operations.
- 2.7.2. Snow is removed from ANG aircraft surfaces and cleared to a sufficient distance from aircraft to allow safe operation of S&IC equipment when aircraft cannot be moved.
- 2.7.3. Snow is cleared from grounding points in the vicinity of aircraft.
- 2.7.4. Aircraft are moved from areas to be cleared of snow.
- 2.7.5. Flying operations are restricted in order to facilitate S&IC operations.
- 2.7.6. Snow will be cleared a minimum of 25 feet from parked aircraft.
- 2.7.7. Aircraft: Snow control will contact base operations to coordinate movement timing with the 168 ARW job control who will, in-turn, coordinate security requirements with the 354th Security Forces.
- 2.7.8. Flying operations (especially taxi-backs) will be held to minimum when S&IC operations are being performed on the runway.
- 2.7.9. Flight schedules will be provided to the SCC, through the Chief, Airfield Management to assist in scheduling S&IC operations.

2.7.10. RCR will be obtained from Base Operations dispatcher.

2.7.11. Request for deviations from the priorities in the plan will be directed to the Chief, Airfield Management.

2.8. 354 OSS WEATHER FLIGHT

2.8.1. Will provide the SCC a detailed weather briefing or observation upon request of when weather is observed or forecasted which will require the employment of snow removal forces. The briefing will be oriented toward the forecast of snow and ice conditions, and will include the following:

2.8.1.1. Anticipated onset of precipitation.

2.8.1.2. Estimated duration.

2.8.1.3. Expected depth of accumulation.

2.8.1.4. Forecast wind direction and speed.

2.8.1.5. Equivalent chill temperature.

2.8.2. The SCC will call 354 OSS/OSW for current weather forecast when required and at least daily for the required weather briefing.

2.8.3. 354 OSS/OSW will issue weather warning for snow and freezing rain IAW FWI 15-101. Dissemination of weather warning and all changes or amendments thereto will be IAW

FWI 15-101.

2.8.4. 354 OSS/OSW will provide a climatological weather briefing to the Snow Removal Committee upon request of the 354 CES.

2.8.5. 354 OSS/OSW will annually update [Attachment 2](#), 10-Year Snowfall Record, and compute appropriate averages.

2.9. THE SECURITY FORCES COMMANDER:

2.9.1. Law enforcement desk will notify the SCC when roads/intersections become impassable or icy creating a safety hazard.

2.9.2. If available, Law Enforcement patrols render traffic control assistance when requested by SCC.

2.9.3. SCC obtains security access escort from OPR of security area involved.

2.9.4. When snow removal crews barricade a parking lot for snow removal, patrols will be dispatched to identify remaining vehicle owners.

2.9.5. Enforce notices pertaining to restricted parking and movement of ground vehicles in areas where S&IC operations are scheduled.

2.9.6. Identify vehicles which are inoperative, abandoned, or stored in parking lots and on base streets for an extended period of time, and make arrangements for removal or disposal.

2.9.7. Investigate all accidents or incidents involving damage to snow removal equipment or causing personal injury.

2.10. 354TH CONTRACTING SQUADRON COMMANDER WILL:

- 2.10.1. Provide contracts for emergency rental or repair of equipment to support snow removal.
- 2.10.2. Provide timely procurement of attachments, parts, and supplies to support S&IC operations.
- 2.10.3. Provide procedures for emergency procurement during other than normal duty hours.
- 2.10.4. Command Post shall be contacted for other than normal duty hours procurement.

2.11. 354TH SERVICES SQUADRON COMMANDER WILL:

- 2.11.1. Ensure dining halls will be utilized to feed all military S&IC personnel during normal hours of snow removal.
- 2.11.2. The SCC will contact the Chief of Services or designated representative at least an hour prior to the requirement for extended feeding hours due to abnormal S&IC operations. The meals will be provided at the Two Seasons dining facility (Bldg 2207) during extended feeding hours.
- 2.11.3. Box lunches may be ordered from the In-Flight Kitchen (Bldg 2207) in the event supervisors feel individuals cannot be relieved to obtain meals in the dining facility. The following procedures will apply:
 - 2.11.3.1. Contact the In-Flight Kitchen at least 2 hours prior to issuing of box meals.
 - 2.11.3.2. SCC prepares an AF Form 2039, Ground Support Meal Request. If personnel receive the basic allowance for subsistence, they are required to reimburse the government at the appropriate rate. If individuals subsist at government expense, the individuals SSANs will be annotated on the form.
 - 2.11.3.3. SCC crew chief or assistance certifies by signature that the information is correct.
 - 2.11.3.4. Prior to issuance of the box lunches, the form and appropriate money collected will be given to the In-Flight Kitchen personnel.

2.12. THE CHIEF OF SAFETY:

- 2.12.1. Will review S&IC Plan to make sure that operations are in the best interest of safety IAW AFI 32-1002, para 3.1.2.
- 2.12.2. Will ensure that base personnel are aware of the hazards of snow and ice and the precautions that must be taken IAW AFI 32-1002, para 3.1.2.
- 2.12.3. Will provide Local Conditions Orientation Course for personnel stationed or TDY for more than 30 days to Eielson AFB.

2.13. 354TH COMMUNICATIONS SQUADRON: Communications will provide repair service for radios. Radio outages which adversely affect performance of Priority I snow and ice control will be treated as emergencies and such repairs will be performed within 36 hours of notification. The Communications Officer will provide a 24-hour per day, 7-day per week contact for emergency repair service.

2.14. 354TH OPERATIONS SUPPORT SQUADRON:

- 2.14.1. The control tower will control the runway between 0700L-2300L and all other times when the control tower is operational. Base operations will control the runway between 2300L-0700L.

2.14.1.1. Normal control of S&IC equipment will be by radio (Ground Service Net) through Snow-3, S&IC runway controller. It must be noted that the tower uses an encoder/decoder feature that enables the receiver to be muted.

2.14.1.2. During snow removal season, snow removal outages will be priority outages. Priority outages will take precedence over all routine outages.

2.14.1.3. Report priority outages immediately to the BCE regardless of the time of occurrence. All reports of priority outage to the BCE must include a mission impact statement and any alternate measures taken to relieve the priority condition.

2.14.2. 354 OSS/OSA will disseminate weather warning to 354 CES IAW FWI 15-101.

2.15. ALL SQUADRONS: Personnel with snow removal equipment (snowplows, bobcats, etc.) will coordinate with 354 CES/CEOH prior to pushing or removing snow. Coordination with detailed maps must be completed prior to 1 October each year.

Chapter 3

PREPARATION

3.1. PERSONNEL: Snow removal operator(s) training commences on or about 15 August (yearly). Initially, all operators will have 40 hours of academic and equipment operation training prior to snow removal season. Operators who have completed the initial course will receive 16 hours of refresher training prior to each snow removal season. Daily, the operators will be properly briefed before attempting to proceed to the work area. These briefings will cover subject matter pertaining to actual performance of the machine, winds, ice conditions, daylight or night conditions, and safety in plow operations. There must be no doubt in the operator's mind in regard to his/her qualifications as an operator.

3.2. MATERIALS AND PARTS: The BCE will make sure that adequate supplies are available for use by 15 September each year. **Minimum levels are listed in Attachment 4.** All materials and parts will be placed on order no later than 15 March. Materials and parts on order will be tracked on a regular basis to ensure timely delivery. Chief, Horizontal Construction, is responsible for supplies being on hand for the snow removal season. Runway sand and urea are located at Bldg 6209. Calcium chloride and street sand are located at the storage area behind the Outdoor Recreational Equipment Issue (Bldg 6214).

3.3. EQUIPMENT PREPARATION: Transportation receives all snow removal equipment at the end of the snow removal season, usually by 15 May, for summer rebuild. Summer rebuild will be accomplished and vehicles released to civil engineers by 1 September. Equipment not usually included in the summer rebuild but essential for snow removal is carefully inspected for needed maintenance and turned in for that maintenance to LGT.

3.3.1. Make dry runs, inspect equipment, and hold orientation meetings for operators before 30 September of each year:

3.3.1.1. Mount snowplow frames and make sure that parts are available for mounting plows and that operators are trained to make proper adjustments.

3.3.1.2. Run all equipment long enough to make sure that the equipment is in satisfactory operating condition.

3.3.1.3. Equip snowplows with tow cables, shovels, and ballasts as needed.

3.3.2. Calibrate spread density of chemical spreaders.

3.3.3. Provide heated storage.

3.4. AIRFIELD, ROAD SURFACES, AND FACILITIES: Pavement hazards on the airfield and base streets will be repaired by a dedicated crew to minimize damage to snow removal equipment. This work will be completed by 15 September. All obstructions, culverts, manholes, and fire hydrants will be marked by frangible or flexible markers. Airfield obstructions/hazards will be marked with international orange pylons with weighted bases. Snow fences are not required at Eielson AFB.

3.5. SNOW CONTROL CENTER: A central snow and ice control point is located in Bldg 4105. The control room is equipped with two Class A telephones, a radio transceiver, and office furniture. It is also

equipped with boards or charts showing vehicle status, priority areas, duty status of personnel, runway surface, ambient temperature, and weather forecast.

Chapter 4

SNOW AND ICE CONTROL OPERATIONS

4.1. GENERAL: All S&IC operations will be carried out in the priority order established in [Chapter 1](#), para [1.1.1](#). Slight deviations may be required occasionally due to unique situations or conditions.

4.2. AIRFIELD SNOW REMOVAL:

4.2.1. Start Operations: Snow removal operations will commence on Priority I areas immediately when precipitation begins to accumulate. The severity of a snowstorm and availability of equipment will determine the amount of area to be cleared. The scope of operations will be reduced in accordance with the priorities set forth in this plan.

4.2.2. Principles: The consideration in the snow removal operation will be clearing of the runway to a bare condition. In addition, all Priority I areas will be cleared as expeditiously as possible. Clearing of Priority I areas other than the runway will consist of plowing and blowing snow as is appropriate. Clearing of airfield operating areas will be coordinated with the Chief of Airfield Management or designated representative with the objective of maintaining all areas of operations.

4.2.3. Operating Techniques:

4.2.3.1. Clearing of the Main Runway: At the start of snowfall, airblast sweepers will be deployed to the main runway immediately. Sweepers will operate in the configuration shown in [Attachment 3](#), Figures 1 and 2. If snowfall continues and the accumulation caused by the airblast sweepers operation builds toward the sides of the runway, rollover plows will carry the accumulated snow to the sides as shown in [Attachment 3](#), Figures 3 and 4. Snow removal vehicles will not operate closer than 100 feet when passing in opposite directions except when removing residue from snow sweepers on the runway or taxiways. Blowers will be used to blow the windrow over the airfield lights. Airfield lights will be “backpass” plowed and cleared as shown in Figure 3.

4.2.3.2. Taxiway A: This taxiway will be plowed with rollover plows and the centerline kept clear by sweeping. (Refer to [Attachment 3](#), Figure 5).

4.2.3.3. Taxiway C: This taxiway will be plowed with rollover plows and special care will be taken not to cause windrows which might block either the taxiway, the runway, or the ramp taxi area. Incorporate plowing north end of Taxiway G, cleared 600 feet to the south (refer to [Attachment 3](#), Figure 6), to be utilized for removing hung flares on aircraft.

4.2.3.4. Taxiway E: Taxiway B and Taxiway E will be plowed to the extent necessary to allow aircraft movement from the main ramp to the runway and refueling loop.

4.2.3.5. Taxiway G: Taxiway G will be plowed to the extent necessary to accommodate aircraft movement and parking. This taxiway will plowed with rollover plows. All snow will be plowed from west to east to preclude excessive snow buildup between the runway and Taxiway G (Refer to [Attachment 3](#), Figure 6).

4.2.3.6. Main Taxiway: This taxiway will be plowed with rollover plows and the centerline will be kept clean or marked as appropriate. (Refer to [Attachment 3](#), Figure 9). Prior to plowing main ramp from Taxiway C to Taxiway E, the centerline on Taxiway G will be plowed and made visible to allow access to the runway.

4.2.3.7. F-16/A-10 Parking Area: The 18 FS and 355 FS production superintendents will coordinate with Base Operations through 354 Fighter Wing Command Center for the extent of snow removal required. For normal flying, snow removal at the request of Base Operations will sweep the main taxi line, and 15 feet either side of the line in the F-16/A-10 parking area as shown in Figures 12A and 12B. Snow removal in the F-16/A-10 parking area will be accomplished on an as-needed basis.

CAUTION: WHILE PERFORMING SNOW REMOVAL AROUND OR BEHIND THE LIGHTS OR PITS, REDUCE VEHICLE SPEED.

4.2.3.8. Clear snow and ice from taxi/tow lines within the pit areas. To facilitate the safe recovery of aircraft, the lines should be cleared on a priority basis. Subsequent snow removal in the pit areas to ensure sufficient wing tip clearance will be sequenced as established by the priorities of this plan.

4.2.3.9. POL Refueling Truck Parking Area: Due to the priority of the refueling operations of the base, it is essential the truck parking area be kept open so trucks are available for refueling, defueling, and topping operations. This lot will be plowed with rollover plows and graders as available and snowbanks and accumulations behind and beside the parking areas may be temporarily disregarded.

4.2.3.10. Runway Overrun: The overrun will be cleared only to the extent necessary to keep the approach lights unobstructed and the ILS operational.

4.2.3.11. Localizer: This area will not be cleared unless directed by the operational wing commander. Area will be cleared IAW [Attachment 3](#), Figures 10A and 10B.

4.2.3.12. Separation of Equipment: Due to the limitation of some types of equipment such as the slow speed of road graders, it may be feasible to initiate clearing operation of Priority II areas off the flightline before completion of all Priority I clearing. If the snow removal supervisor determines that the maximum number of personnel and pieces of equipment are being utilized on the flightline, he/she may commence snow removal on Priority II areas off the flightline.

4.2.4. **Wind:** Wind speed and direction normally govern the operation techniques that are to be used to remove snow. If a strong wind exists, snow clearing will commence on the windward side of the runway and the snow is either plowed, blown, or swept across the entire width to be cleared, taking full advantage of the wind to assist removal operations. Due to prevailing wind conditions, the use of snow fences is not feasible; however, temporary “fences” may be made by plowing a windrow 75 to 100 feet upwind from the runway.

4.2.5. Airfield Lighting: Runway and taxiway lights may be cleared by utilizing the airblast from the runway sweepers.

4.2.5.1. During light snowfall operations, a runway sweeper with the airblast chute, positioned and adjusted for this purpose, will be required to make the last pass along the rows of lights.

4.2.5.2. During severe snow conditions, one sweeper may be required to make continual passes to clear the lights.

4.2.5.3. The BCE Exterior Electric Shop will assist in clearing snow around the runway and taxiway lighting fixtures.

4.2.5.4. The airfield lighting crew will inspect all lighting fixtures at least daily and repair damaged units. Repeated damage—damage which is apparently a result of negligence or conditions or procedures which might result in damage—will be reported immediately to the Chief of Operations and Chief of Airfield Management.

4.2.6. BAK-12 Aircraft Arresting Barrier: Traffic permitting, the BAK-12 aircraft arresting barrier will be disconnected for snow removal operations. It will be the responsibility of the Chief, Airfield Management, or designated representative to notify the Barrier Maintenance Unit (Ops-6 or Ops-7) on the ground services net when it is necessary to disconnect or reconnect the arresting barrier. Ops-6 or Ops-7 will notify Base Operations and the control tower of the status of the barrier in accordance with AFI 32-1043, "Managing Aircraft Arresting Systems."

4.2.6.1. Snow will be removed to permit effective use of the barrier.

4.2.6.2. Manual labor and certain small snowblowers may be required to clear snow from the immediate vicinity of the barrier fixtures.

4.2.6.3. The cable, when disconnected, will be adequately marked so as to prevent damage by snow removal equipment.

4.2.6.4. Close coordination and cooperation between snow and ice control and barrier maintenance personnel will be required in order to facilitate an expeditious reconnection of the BAK-12 barriers.

4.2.7. Correcting Snow Effects on ILS Glideslopes:

4.2.7.1. General: To provide a uniform policy to govern the operation of ILS glideslopes under conditions of snow and ice, the following procedures will be followed. These procedures are predicted on analysis of results of field studies by the FAA under actual conditions and reflect action necessary to verify safe operation of the glideslope.

4.2.7.2. Ground Equipment Alarms Due to Snow or Ice Accumulations. When the near field monitor (NFM) alarms during or subsequent to snow or ice conditions and the monitoring air traffic control facility is unable to clear the alarms, the glideslope will be removed from service. Responsible personnel will remove any accumulation of snow or ice from the antennas, field detectors, and monitor reflection areas to clear the NFM alarm. (Refer to [Attachment 3](#), Figures 11A and 11B). The NFM reflection area is that trapezoid 50-foot side at the ILS glideslope mast expanding to 87.5-foot wide at the NFM. If the far field glideslope reflection area (the trapezoid area 87.5-foot wide at the NFM to 200-foot wide 1,000 feet from the glideslope mast) does not contain abrupt snowbanks or drifts, the facility will be restored to service under the conditions described in the following steps:

4.2.7.2.1. If the snow accumulation is less than 24 inches, the facility will be returned to normal service once the alarm is cleared.

4.2.7.2.2. If snow accumulation is greater the 24 inches in the far field, a special flight inspection will be repeated. The glideslope may remain in service pending the flight inspection if the monitor alarm is cleared and a satisfactory flyability check is accomplished by a local aircraft. The special flight inspection will verify glideslope angle and structure. If the results show no problems other than a high glideslope angle, the glideslope may remain in service at the discretion of the operational wing commander and the NOTAM will be published stating "Expect ILS glideslope angle to be higher than published due to accumulation of snow."

4.2.7.2.3. Whenever there are additional alarms or additional significant snow accumulation (6 inches) above the 24-inch level, the provisions of above will apply and the flyability check and special flight inspection will be accomplished.

4.2.7.2.4. Effect of Drifting. Whenever abrupt snowbanks or drifts exist in the far field. The glideslope structure may be affected. Under these conditions, even when the snow depth is less than 24 inches, a flyability check will be conducted before continuing operation of the glideslope. A special flight inspection will be requested if results of the flyability check are unacceptable.

4.2.7.2.5. Additional Caution. Although snow and ice removal from the area between the ILS glideslope antenna and the NFM may be necessary to clear the alarm, disturbing the snow in the far field may in fact cause unpredictable changes in glideslope performance. Any snow removal in this area should be completed without development of drifts or abrupt snowbanks.

4.2.8. **Towing Aircraft:** Procedure to be used towing aircraft during snow removal or ice control operations.

4.2.8.1. The maintenance tow vehicle operators will notify Ground Control or Base Operations by radio before beginning tow operations. The tow vehicle will advise/update as he/she passes designated reference points.

4.2.8.2. Reference points to be used will be as follows:

4.2.8.2.1. Taxiway E

4.2.8.2.2. Taxiway D

4.2.8.2.3. Taxiway C

4.2.8.2.4. Taxiway B

4.2.8.3. The Base Operations dispatcher will coordinate the towing and snow removal operations and will relay this information to the Airfield Snow Control vehicle operator, normally Snow-3.

4.2.9. **Security Procedures during Airfield Snow Removal Operations:**

4.2.9.1. SCC will obtain clearance through the Law Enforcement Desk to breach each restricted area boundary prior to initiating snow removal operations. Each breach must be coordinated via this procedure. Vehicles that are not pre-announced will be challenged. Recommend snow removal vehicle operator(s) coordinate with the on-duty SF upon entering the area to preclude confusion.

4.2.9.2. If the Snow Removal Crew Chief, normally Snow-3, inadvertently breaks the restricted area boundary and is challenged, he/she will remain in his/her vehicle on the radio to arrange immediate transfer of control of all airfield snow removal operations. The Crew Chief will be allowed to remain in the vehicle until the arrival of the assigned Security Response team (SRT). Once the SRT is on-scene, the Crew Chief will be required to exit the vehicle to ascertain his/her security status. During the waiting time for the arrival of the SRT, the Snow Removal Crew Chief will contact his/her subordinate units and SCC to ensure smooth transfer of control until his/her security status is ascertained. The following procedures will be accomplished by snow removal personnel to ensure smooth transfer of control:

4.2.9.2.1. The Crew Chief will immediately contact SCC and advise them of current situation. SCC will immediately contact the acting shift supervisor (Snow 4).

4.2.9.2.2. Shift Supervisor and Crew Chief will identify personnel to assume control of airfield snow removal operations until situation is resolved.

4.2.9.2.3. Crew Chief will provide name(s) of personnel, equipment and location of equipment operating on the airfield to SCC, Shift Supervisor and replacement Crew Chief.

NOTE: When the Crew Chief (Snow 3) has control of the runway during this situation, he/she must without delay arrange transfer of control of airfield snow removal operations.

4.2.9.2.4. SCC will document incident information in the shift log book to include but not limited to date, time, personnel notified and replacement Crew Chief.

4.2.10. Other Requirements:

4.2.10.1. Airfield Marking: Prior to 15 September, stakes will be used to mark all obstruction, particularly those on the airfield. Items to be marked will include culvert ends, protruding manholes, limits of areas to be cleared, and taxiway lights at the end of a string of lights. It will be the responsibility of the Chief of Horizontal Construction to survey the entire airfield and ensure that all obstructions are marked. This survey will be made at least weekly and during snow removal operations at least daily to ensure that all obstruction markings are in place. A map showing locations of obstructions will be maintained in the SCC and will be available to all crew chiefs. Only experienced, veteran equipment operators will be permitted to clear snow in areas with high amounts of obstructions.

4.2.10.2. Hold Clear Lines: When hold clear lines are no longer discernible on the taxiways, personnel will utilize the yellow taxiway lights as the existing hold line. In cases when the hold clear lines and yellow taxiway lights are no longer discernible on the taxiways, personnel will observe the runway hold signs as the existing hold clear line.

4.2.10.3. Hazard Markers: Snow stakes and other markings will be placed prior to snowfall to identify all obstructions. Hazards which cannot be marked by staking or which have occurred subsequent to ground freezing will be marked using whatever means are available, such as flags.

4.3. OTHER THAN AIRFIELD CLEARING OPERATIONS: Snow removal will be in accordance with priorities set forth in [Chapter 1](#). Any changes in priorities will be directed by the SCO.

4.3.1. Low-grade sand may be used on base streets to provide increased traction. Street sanding will be accomplished as required.

4.3.2. Clearing Parking Lots. The snow removal shift supervisor will post parking areas at least 24 hours in advance.

4.3.3. Clearing Base Streets: The snow removal shift supervisor will post temporary road closure signs at the entrances of roads to warn motorists and pedestrians of snow removal activities. Drivers and pedestrians should use an alternate route or form of transportation.

4.3.4. During heavy snowfalls, the Transportation Squadron will provide buses for mass transportation from large, consolidated parking areas to the duty sections.

4.3.5. Other Areas: Snow removal from the following areas is done by the facility occupant or OPR by hand shoveling, small rotary blowers, and small tractor-mounted plows.

4.3.5.1. Sidewalks

4.3.5.2. POL and communications compounds

4.3.5.3. Fire hydrants and hose reel houses

4.3.5.4. Entrances to buildings

4.3.5.5. Loading and ramp area

4.4. AIRFIELD ICE REMOVAL AND CONTROL:

4.4.1. Icing: During near-freezing rain conditions, airblast sweepers will be used to reduce standing water to a minimum. By monitoring surface temperatures, ice control personnel can determine the approximate time when freezing will begin. When ice is over one-quarter-inch thick, the use of underbody blades and scrapers will be required to reduce the ice to less than one-quarter-inch thickness prior to application of deicing material.

4.4.1.1. Isopropyl Alcohol: If it is determined that isopropyl alcohol must be used, it should be thoroughly coordinated with the Base Operations Officer or designated representative to ensure that sufficient time will be available to apply the alcohol and sweep before the snow removal crew is forced off the runway. Due to the complications which can arise from the use of isopropyl alcohol, it is preferable that it be used only when necessary and only to those areas where it is absolutely required.

4.4.1.2. Potassium Acetate (E-36): E-36 may be used for ice control but the following guidelines will be followed.

- a. Base Operations will request approval for each application from 354 OG/CC.
- b. Its use will be limited to the runway.
- c. Its use will be limited to times when at least 24 hours are available before aircraft will use the area.
- d. After E-36 application, the affected area will be swept and inspected by the snow removal supervisor to ensure no puddles exist.

4.4.1.3. Sand: May be used on the airfield if essential to increase the RCR to meet operational requirements or provide operational support. Sand will be used only upon the direction of the Chief of Airfield Management, except under unusual circumstances. High-grade sand meeting requirements of AFI 32-1002, para 4.2.9., will be used.

4.4.2. The entire length of the runway must be a 10 RCR. Additionally, the runway must be cleared a minimum of 75 feet on either side of the centerline.

4.4.2.1. Minimum RCRs:

<u>AIRCRAFT</u>	<u>TAXI</u>	<u>TAKEOFF/LANDING</u>
A/ OA-10	06 (OG/CC may waive to 4)	12 (OG/CC may waive to 8)
KC-135	06	09
F-16	06	10

Attachment 1

SNOW REMOVAL EQUIPMENT AUTHORIZED

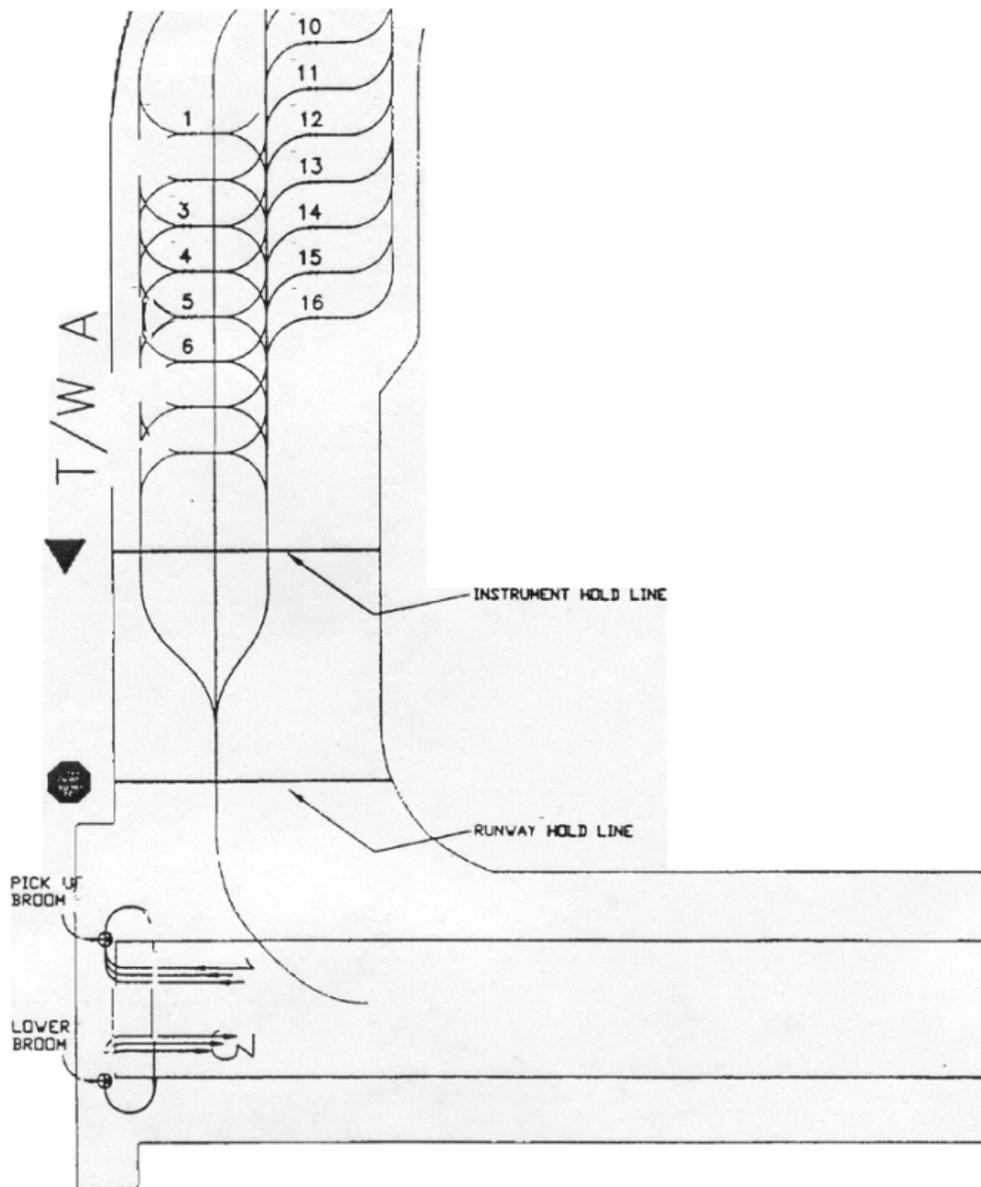
Rollovers:	14	13	5
Sanders		(3)	1
Blowers	10	10	5
Airblast Sweepers	11	11	5
Graders	6	6	1
Plain		(3)	
with Wing Blades		(2)	
Dump trucks	20	19	9
5-ton Dirt/Ash	(11)	(9)	
10-ton Snow Haulers	(9)	(11)	
Front-End Loaders	6	6	4
Dozers	4	3	2

Attachment 2

10-YEAR SNOWFALL RECORD

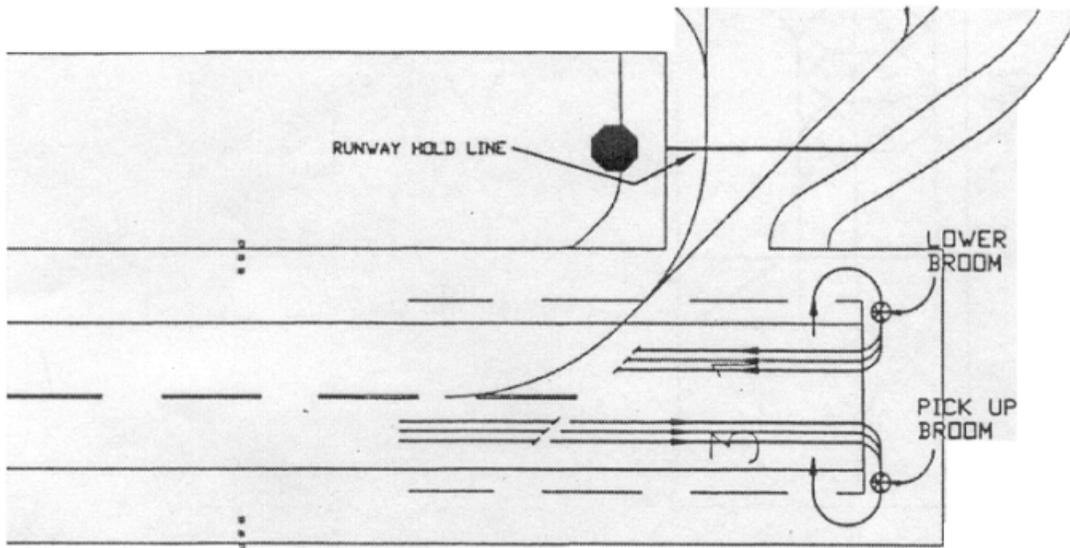
	<u>SNOWFALL IN INCHES</u>									
<u>YEAR</u>	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01
<u>MONTH</u>										
Sept	0	35.1	5.7	T	0	2.2	0	T	3.9	1.5
Oct	18.2	17.9	7.8	22.3	6.2	16.2	22.2	5.1	18.4	7.9
Nov	17.6	24.7	24.6	42.1	3.1	12.4	10.5	4.1	14.4	6.9
Dec	16.2	30.2	6.7	10.3	2.2	10.5	12.4	8.9	8.5	1.7
Jan	13.8	37.7	5.7	4.6	4.1	5.3	1	5.7	24.6	8
Feb	11.8	5.3	7.1	5.9	26.1	8.6	2.1	1.7	T	8.2
Mar	8.3	7.8	7.9	12.7	6.9	2	.9	2.4	9.8	4.8
Apr	30.4	T	.9	T	.8	1.1	2.3	0.6	T	3.9
May	17.4	T	T	0	0	T	0	5.2	T	5
<u>TOTAL:</u>	133.7	158.7	66.4	97.9	49.4	58.5	51.4	33.7	79.6	47.9

T = Trace of snow



1. AFTER CHECKING BROOM, WAIT AT THE HOLD LINE UNTIL SNOW 3 CLEARS YOU ON THE RUNWAY FOR SWEEPING OPERATION.
2. PROCEED TO THE WEST SIDE OF THE RUNWAY AROUND THE THRESHOLD LIGHTS. ONCE BEHIND THE LIGHTS, DROP YOUR BROOM AND START SPLITTING THE RUNWAY OFF CENTERLINE, OR AS DIRECTED.
3. ON YOUR RETURN TRIP, SWEEP UP TO THE REAR OF THE THRESHOLD LIGHTS. PICK UP BROOM AFTER MAKING A RIGHT HAND TURN. PROCEED OUT IN FRONT OF THE LIGHTS BACK TO THE OTHER SIDE OF THE RUNWAY AND START SWEEPING WHERE YOUR BROOM LEFT OFF ON THE FIRST RUN.

Fig 1



1. AFTER CHECKING BROOM, WAIT AT THE HOLD LINE UNTIL SNOW 3 CLEARS YOU ON THE RUNWAY FOR SWEEPING OPERATION.
2. PROCEED TO THE WEST SIDE OF THE RUNWAY AROUND THE THRESHOLD LIGHTS. ONCE BEHIND THE LIGHTS, DROP YOUR BROOM AND START SPLITTING THE RUNWAY OFF CENTERLINE, OR AS DIRECTED.
3. ON YOUR RETURN TRIP, SWEEP UP TO THE REAR OF THE THRESHOLD LIGHTS. PICK UP BROOM AFTER MAKING A RIGHT HAND TURN. PROCEED OUT IN FRONT OF THE LIGHTS BACK TO THE OTHER SIDE OF THE RUNWAY AND START SWEEPING WHERE YOUR BROOM LEFT OFF ON THE FIRST RUN.

Fig 2

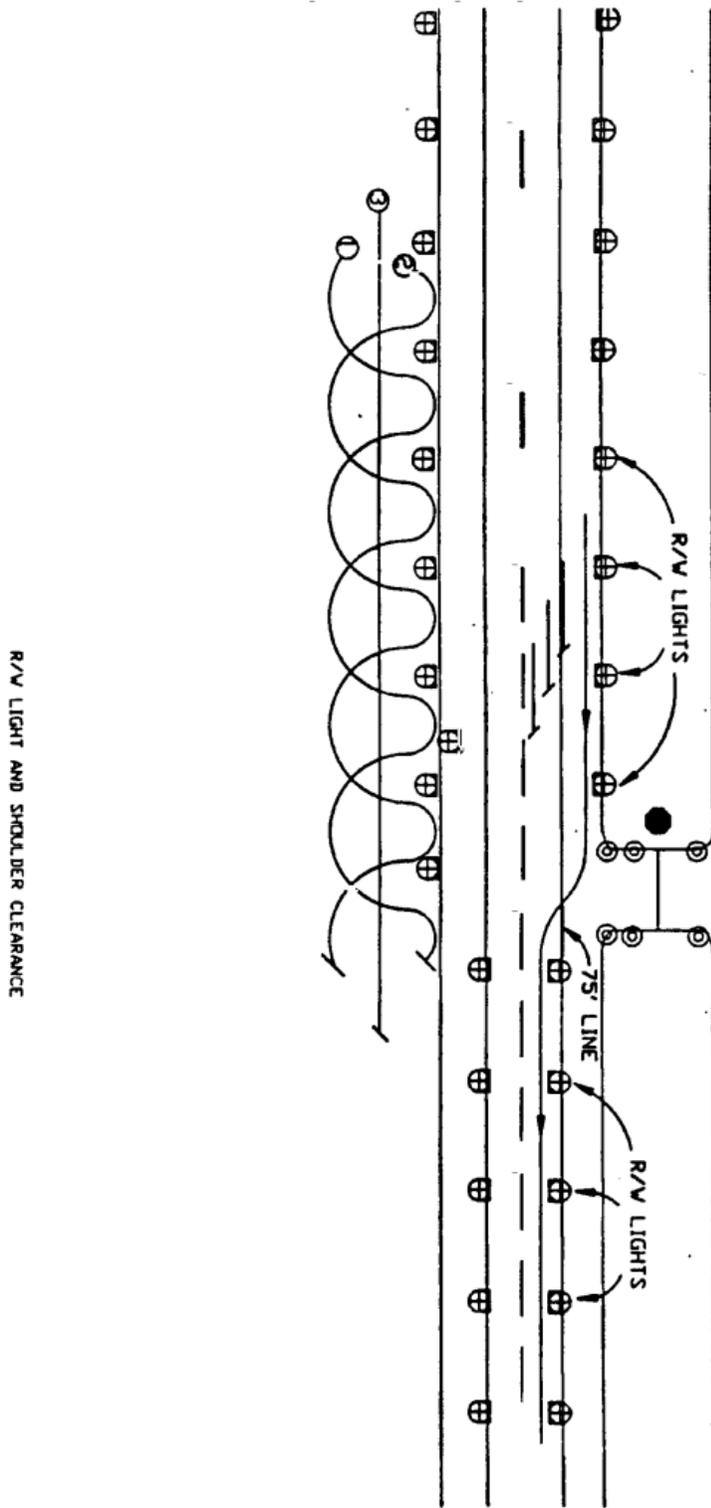
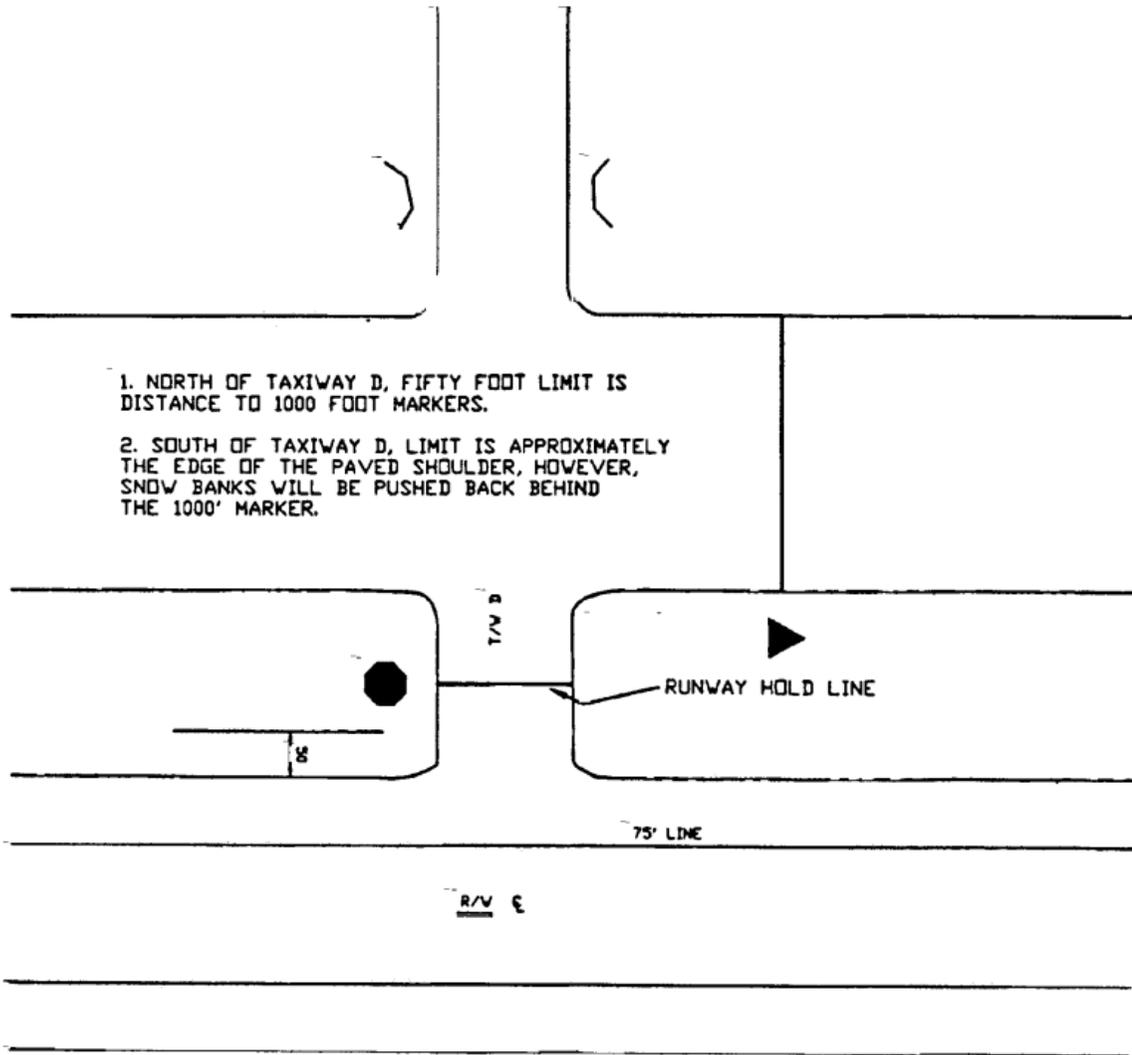


Fig 3

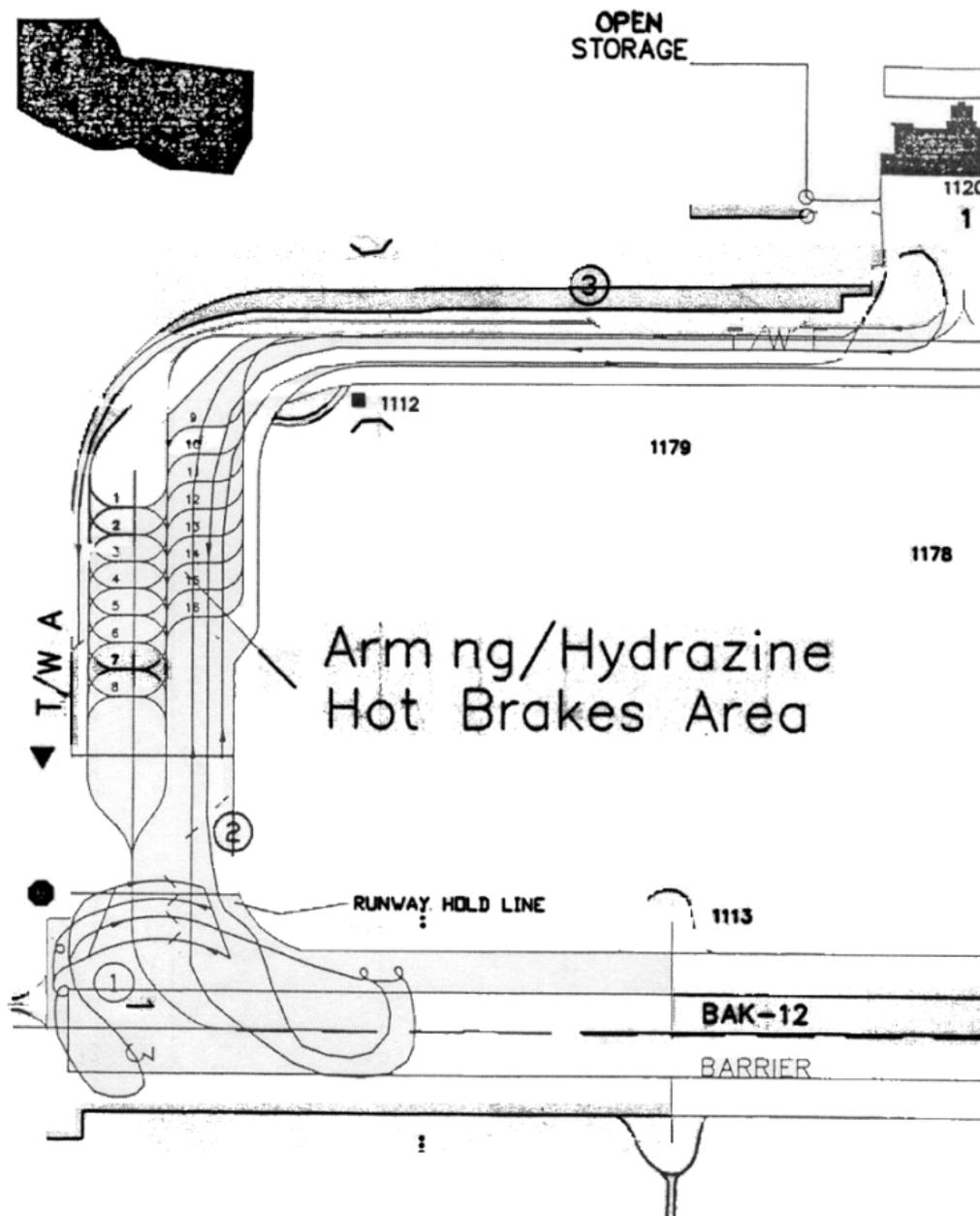


- 1. NORTH OF TAXIWAY D, FIFTY FOOT LIMIT IS DISTANCE TO 1000 FOOT MARKERS.
- 2. SOUTH OF TAXIWAY D, LIMIT IS APPROXIMATELY THE EDGE OF THE PAVED SHOULDER, HOWEVER, SNOW BANKS WILL BE PUSHED BACK BEHIND THE 1000' MARKER.

NOTE: SNOW BANKS WILL NOT BE HIGHER THAN 2 FEET WITHIN AREA SHOWN - (50' FROM R/W EDGE)

DISTANCE MARKER SNOW CLEARANCE

FIG 4



1. CUP T/W A THROAT IN SEVERAL PASSES TO REMOVE ALL SNOW FROM R/V 13 INTERSECTION
2. SNOW WILL BE PLOWED TO THE NORTH & EAST OF T/W A. BEGIN BY PLOWING SNOW AWAY FROM INSIDE PAVEMENT SHOULDER LOCATED AT INTERSECTION OF R/V 13 & T/W A. PLOW SNOW ACROSS T/W A TO NOSE DOCK 1.
3. MAKE A BACK PASS TO WINDROW SNOW FOR BLOWER OPERATIONS.
4. ROLL R/O CONE BEHIND LIGHTS OR ALONG PAVEMENT EDGES TO CONTROL SPILLAGE.

Fig 5

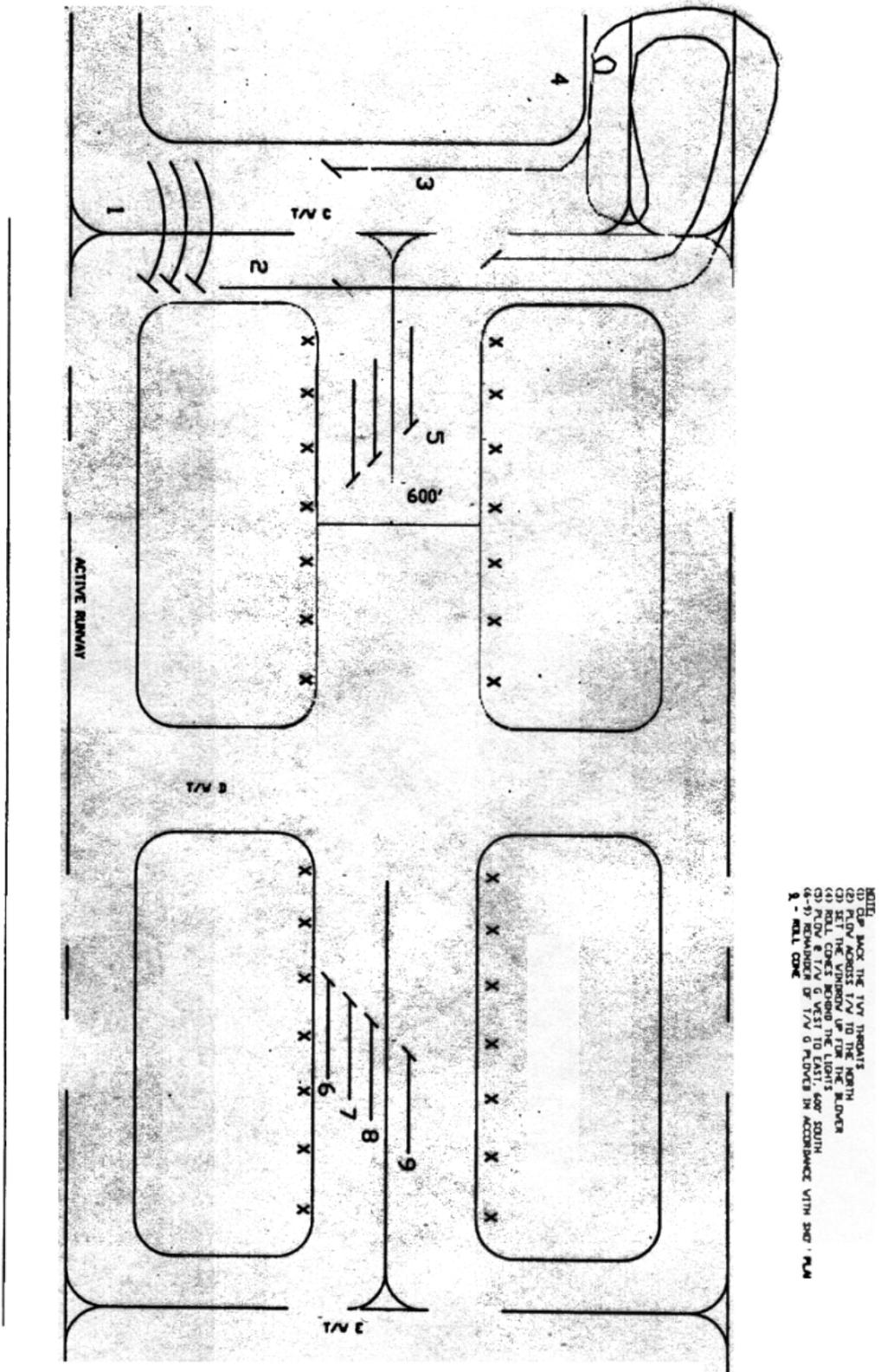
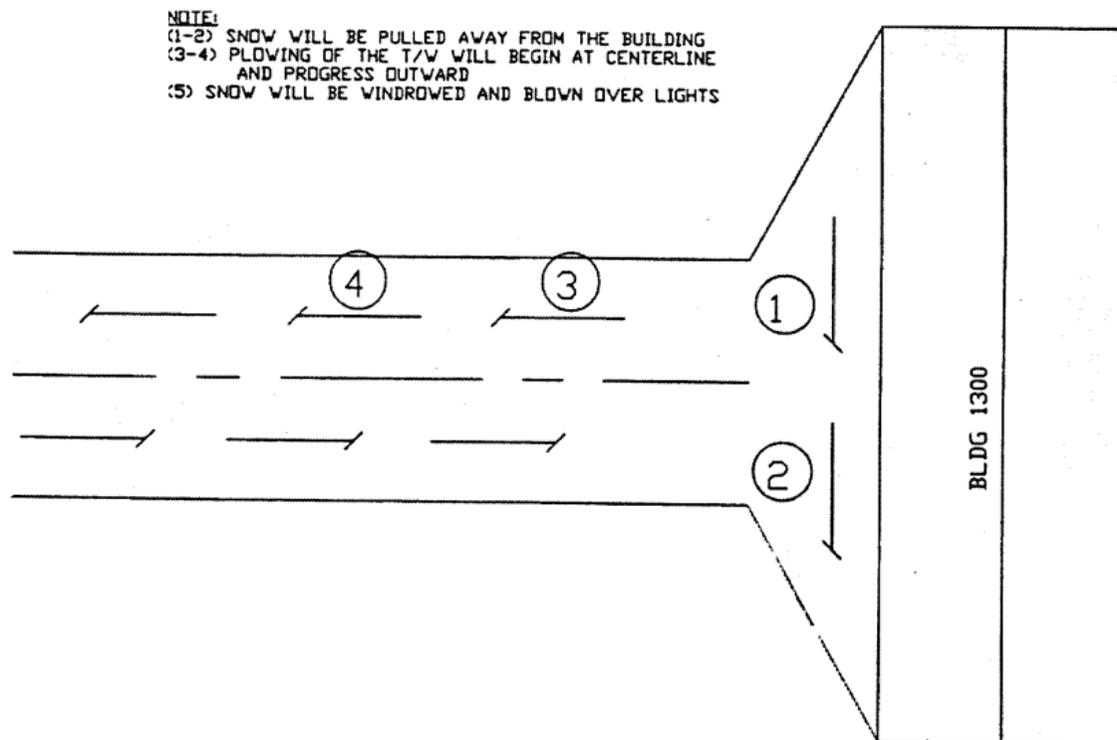
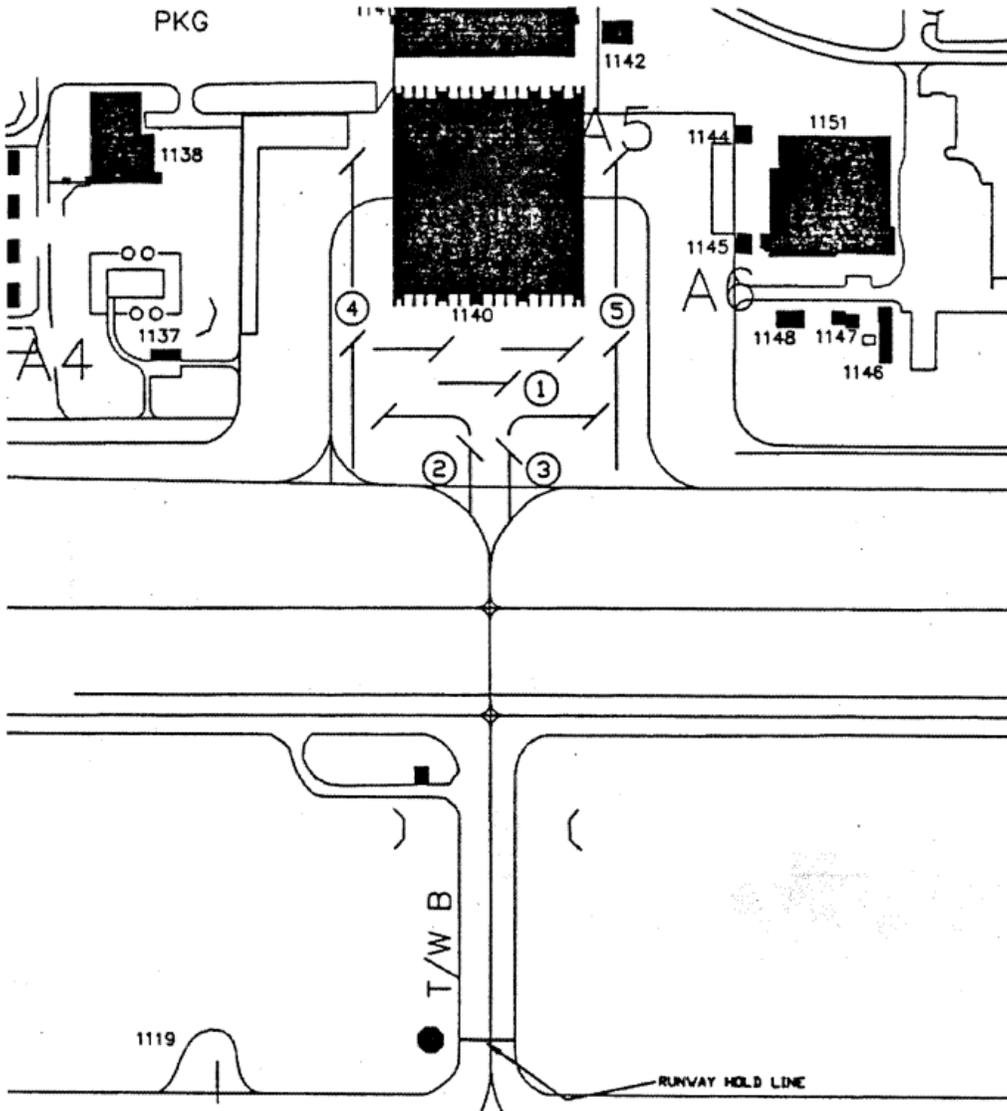


Fig 6



CLEARANCE OF HIGH SPEED T/W WITH GRADER

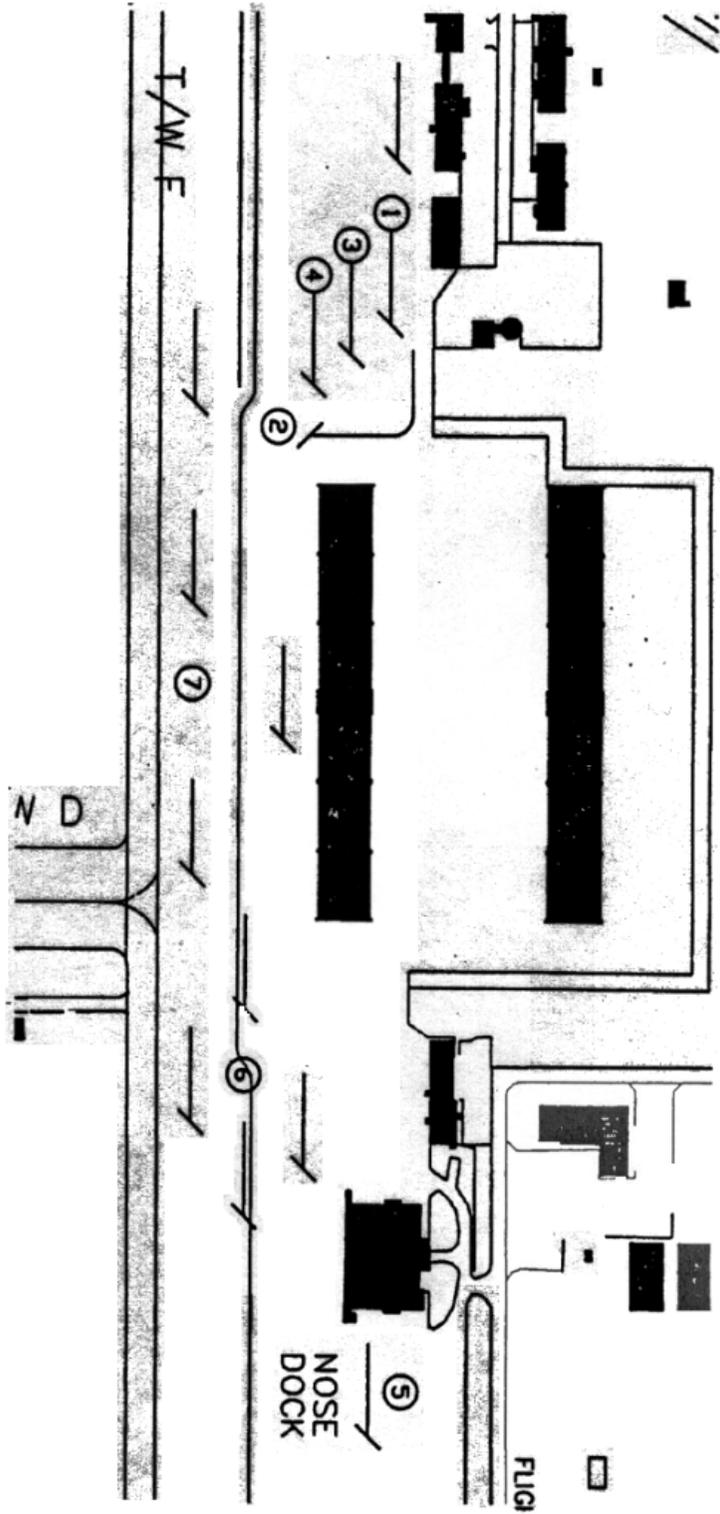
Fig 7



1. PLOW SNOW AWAY FROM WEST SIDE OF BLDG 1140 APPROXIMATELY FIVE PASSES WITH R/D's.
- 2-3. CUT PARKING AREA IN CENTER
- 4-5. CONTINUE PUSHING SNOW OUTWARD, EXTEND PASS TO INCLUDE THE ENTIRE APRON WHEN EDGE OF BLDG IS REACHED

MAIN RAMP/THUNDERDOME

Fig 8

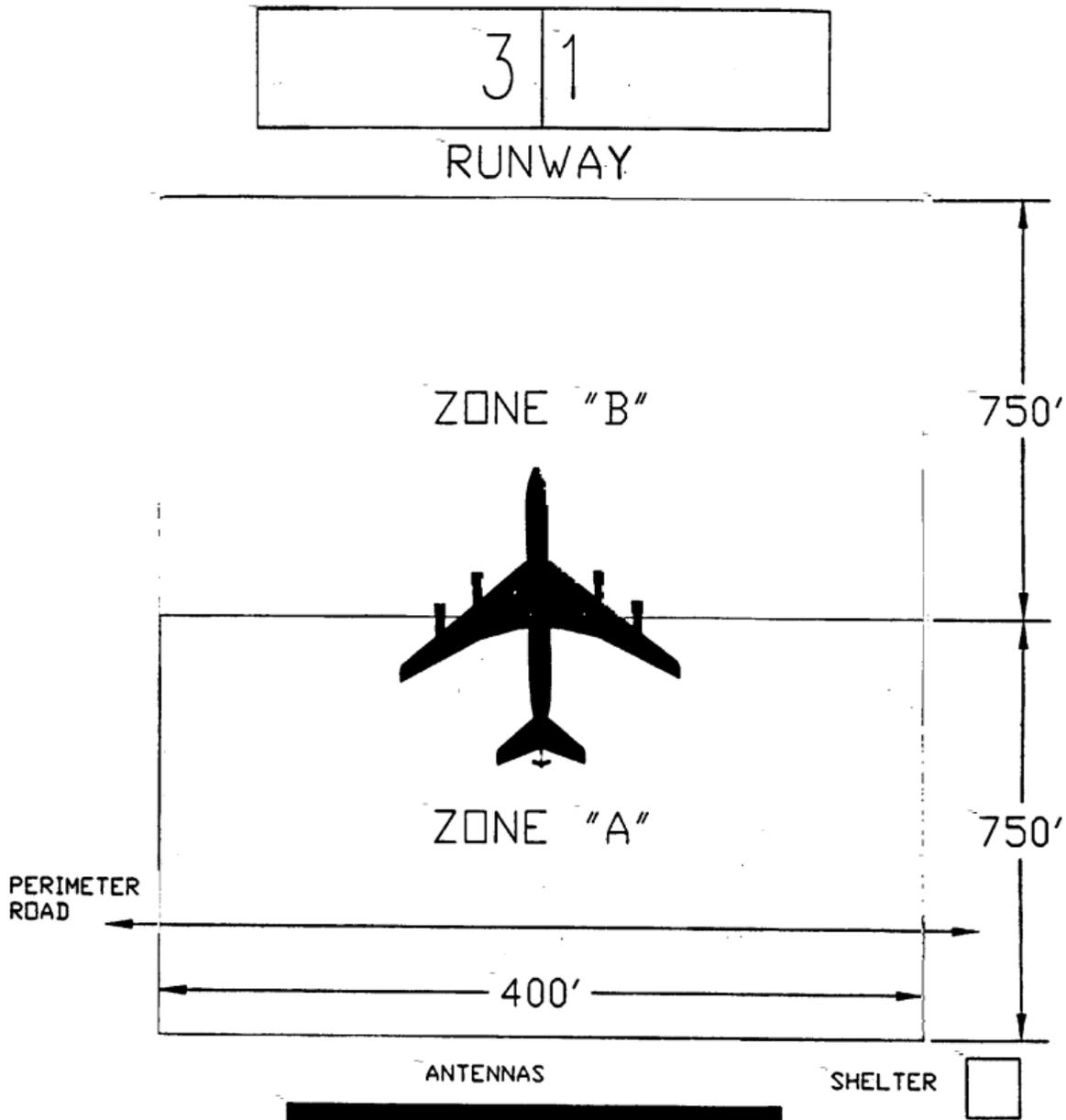


- 1-5. R/O's WILL PULL SNOW FROM RECESSED AREAS AND AWAY FROM BUILDINGS
- 6-7. SNOW WILL BE CARRIED ACROSS RAMP BY R/O's

BASE OPERATIONS & HDG PEN AREA (BLDGS 1227, 1228)

Fig 9

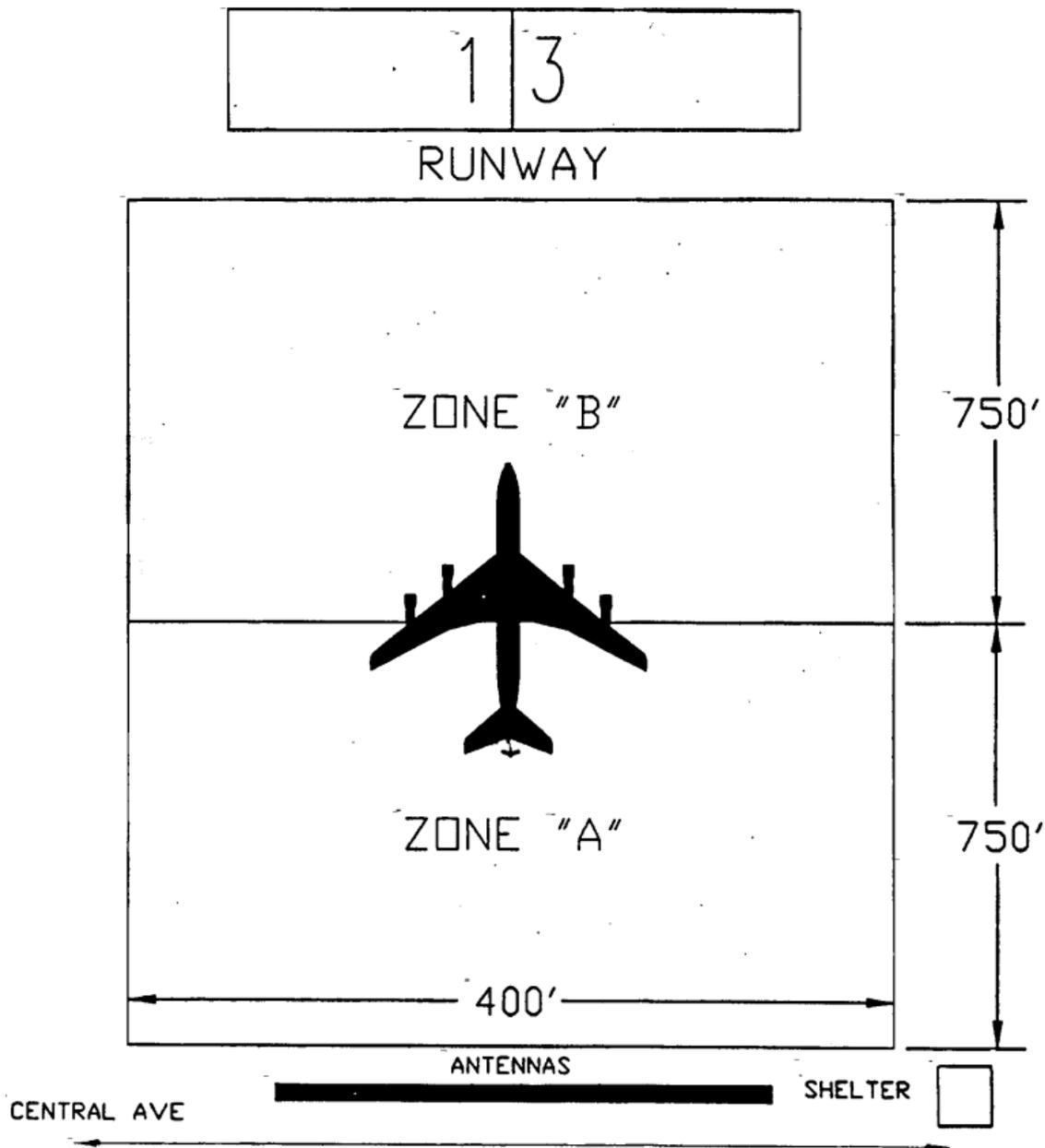
13 LOCALIZER SNOW REMOVAL CRITERIA



1. Max snow depth in Zone A is 36".
2. Max snow depth in Zone B is 48".
3. Area is considered to be ILS critical, must contact tower prior to entry or exit.

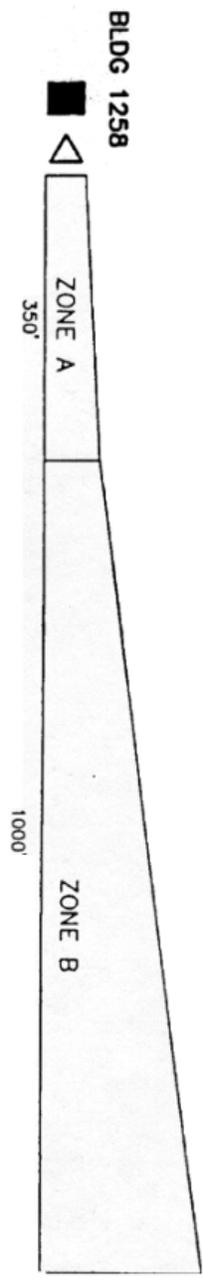
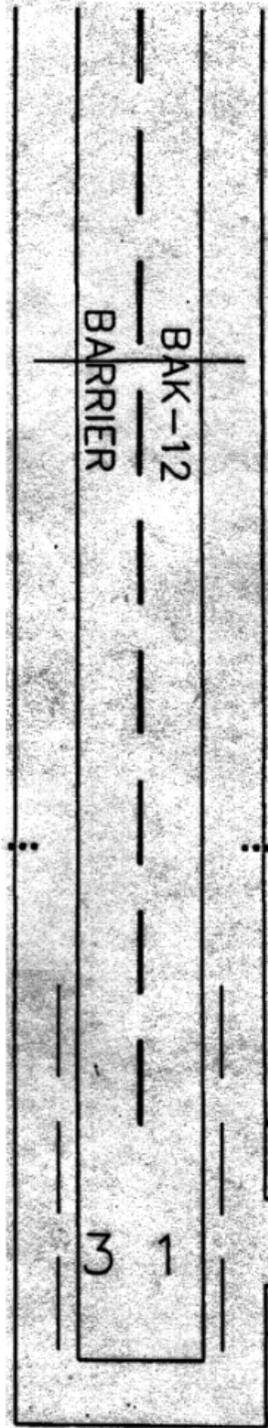
Fig 10-A

31 LOCALIZER SNOW REMOVAL CRITERIA



1. Max snow depth in Zone A is 36".
2. Max snow depth in Zone B is 48".
3. Area is considered to be ILS critical, must contact tower prior to entry or exit.

Fig 10-B



- 1. SNOW CANNOT EXCEED 24" IN DEPTH FROM THE OUTSIDE EDGE OF THE GLIDESLOPE TO THE EDGE OF THE RUNWAY.
- 2. AREA IS ILS CRITICAL, TOWER MUST BE NOTIFIED PRIOR TO ENTRY AND EXIT.

31 GLIDESLOPE SNOW REMOVAL CRITERIA

Fig 11-A

1. SNOW CANNOT EXCEED 24" IN DEPTH FROM THE OUTSIDE EDGE OF THE GLIDESLOPE TO THE EDGE OF THE RUNWAY
2. AREA IS ILS CRITICAL, TOWER MUST BE NOTIFIED PRIOR TO ENTRY AND EXIT.

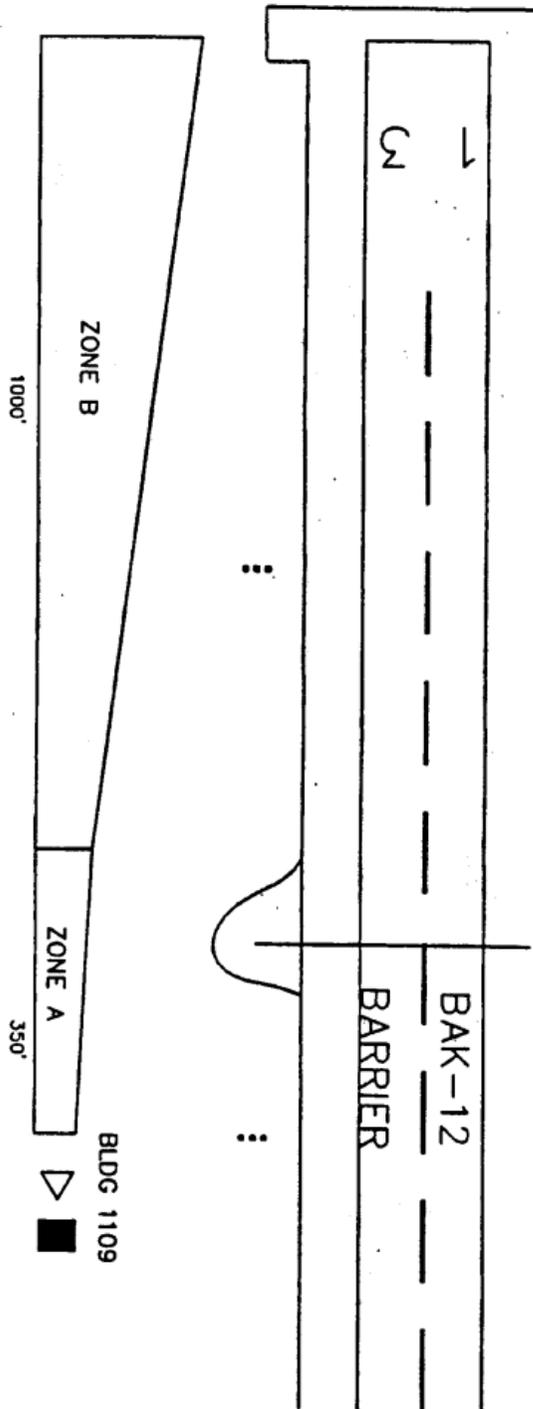
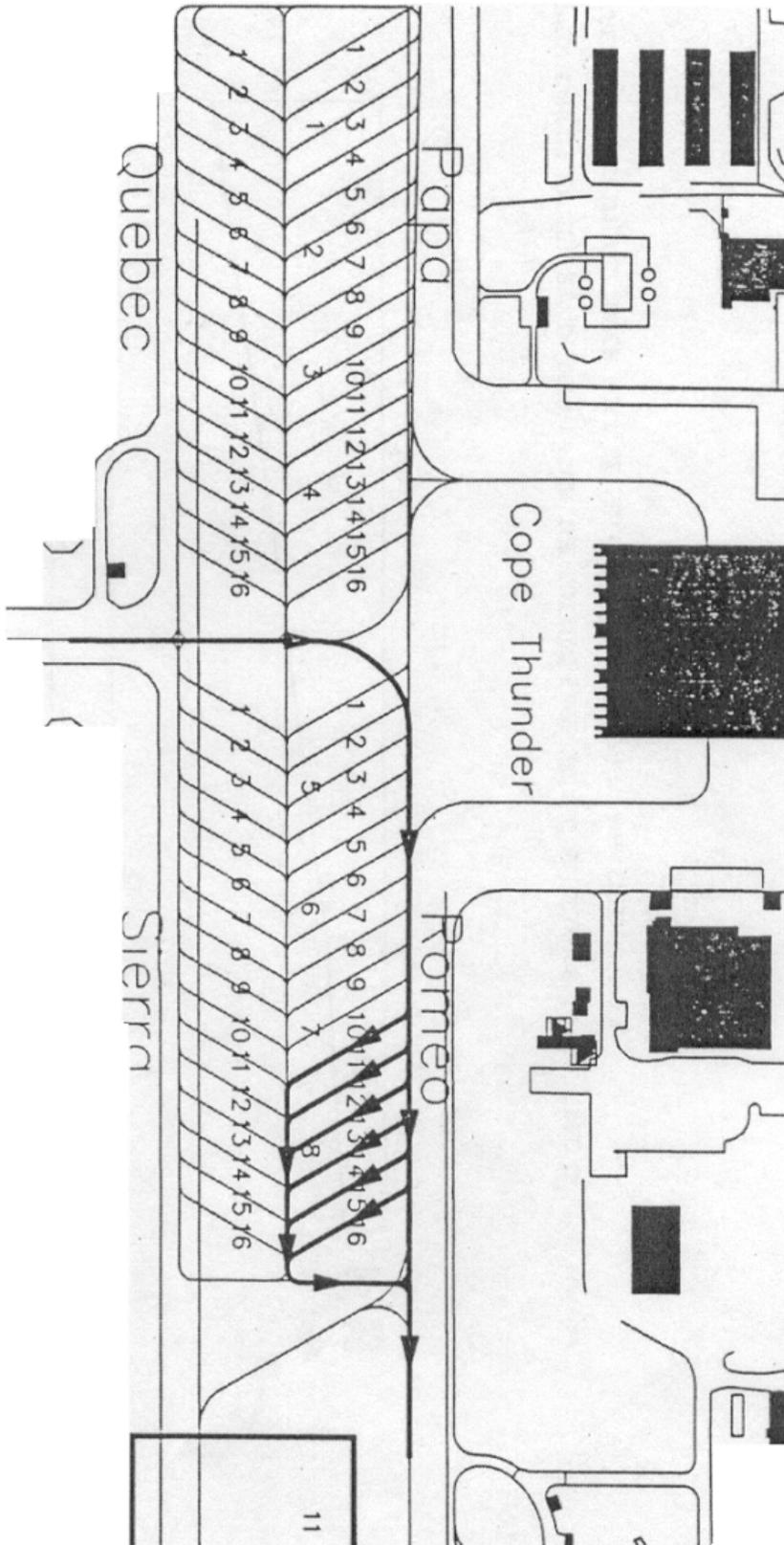
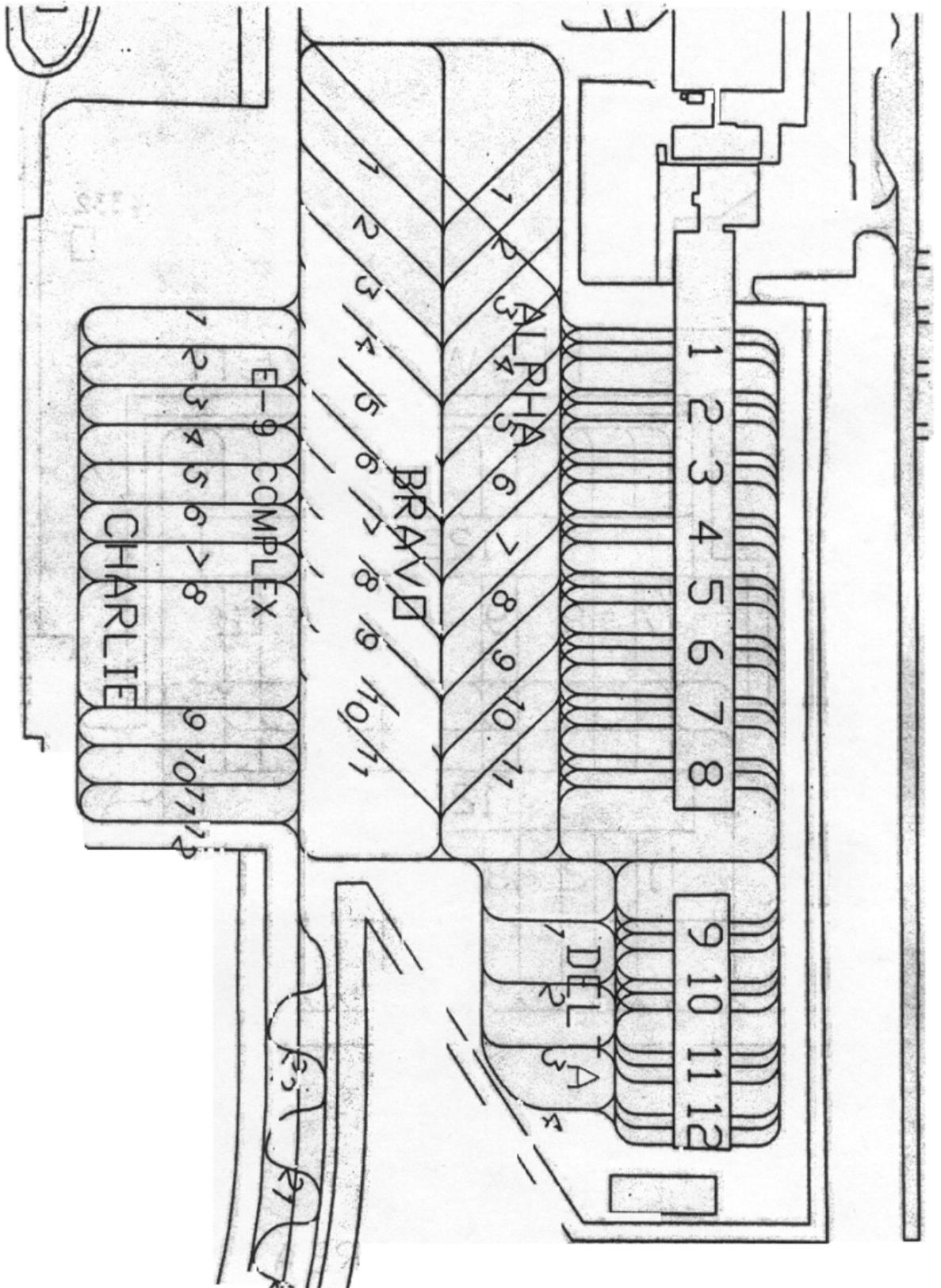


Fig 11-B

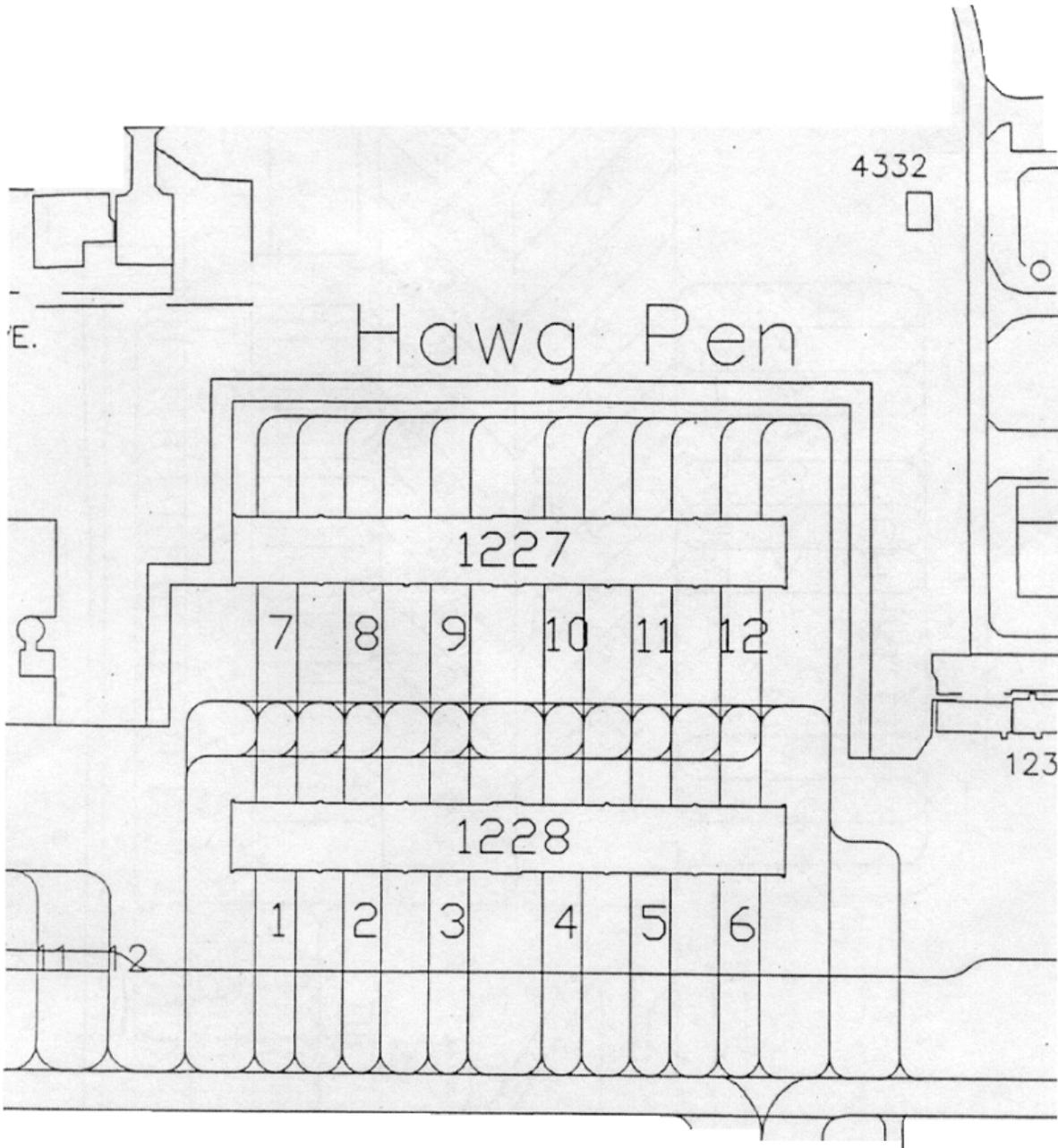
13 GLIDESLOPE SNOW REMOVAL CRITERIA



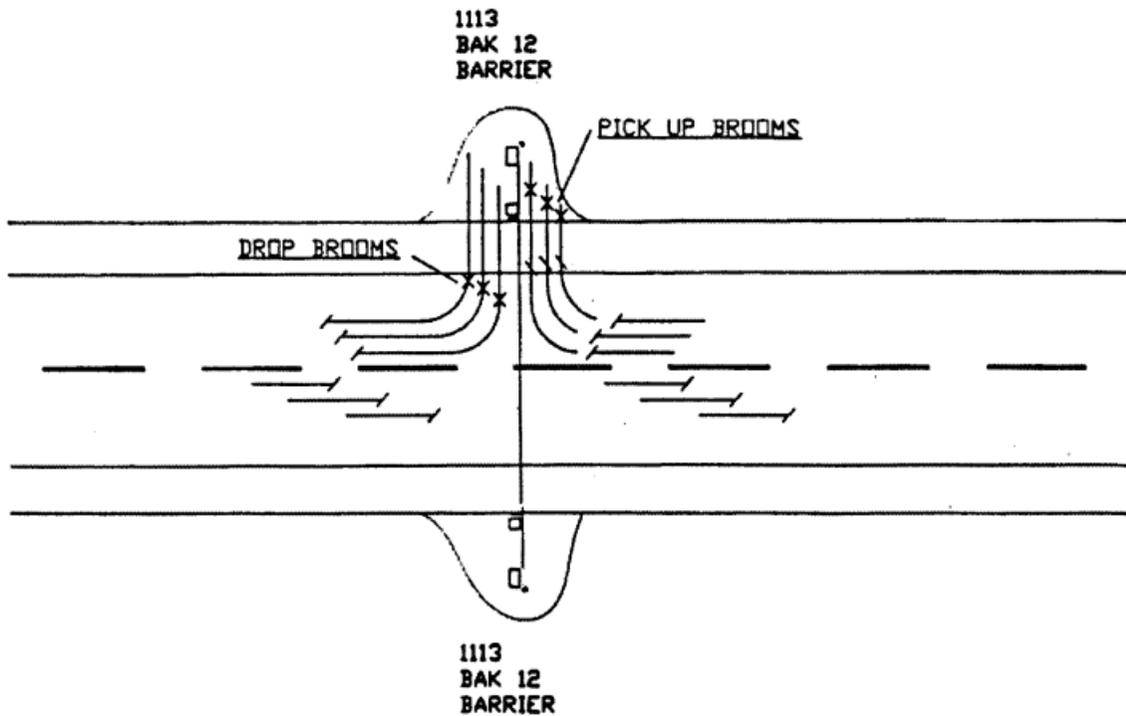
ARH AREA FOR ROMEL



F E ALPHA DELTA PARKING

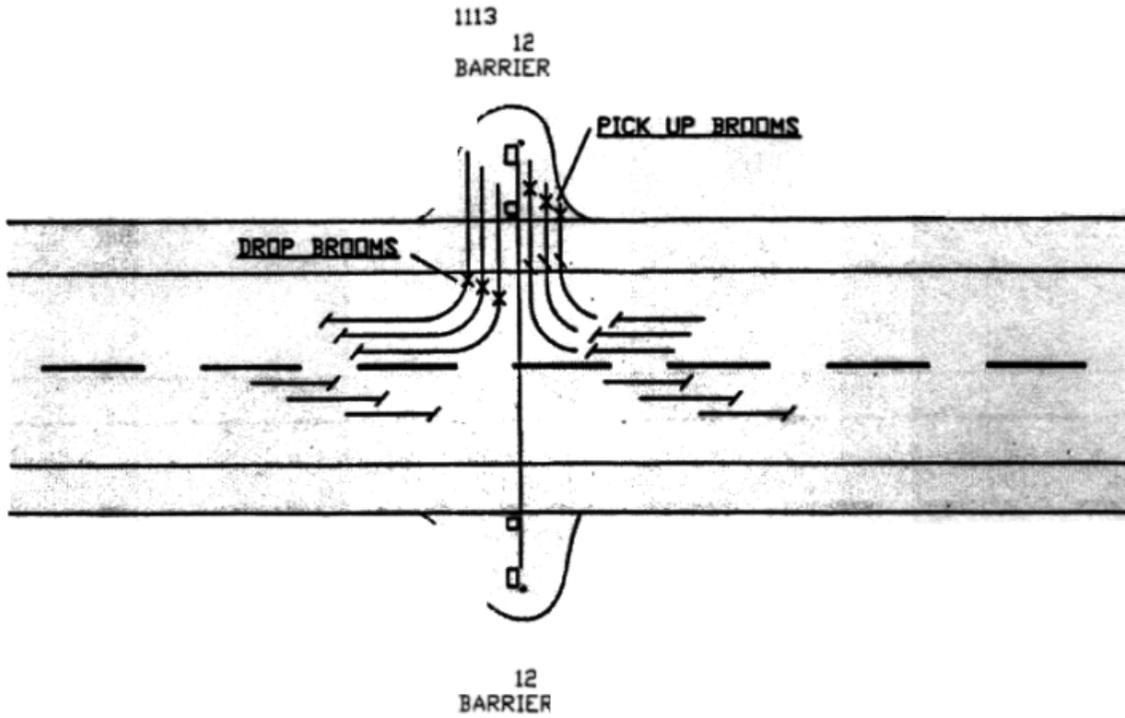


HOG PEN AREA



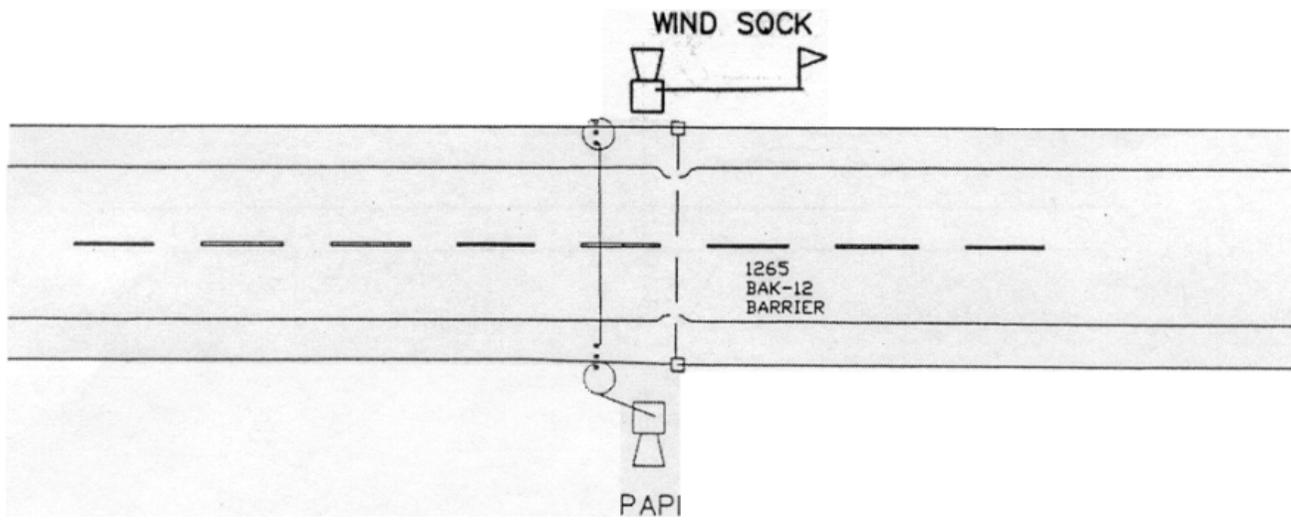
NORTH BARRIER SNOW REMOVAL

Fig 13



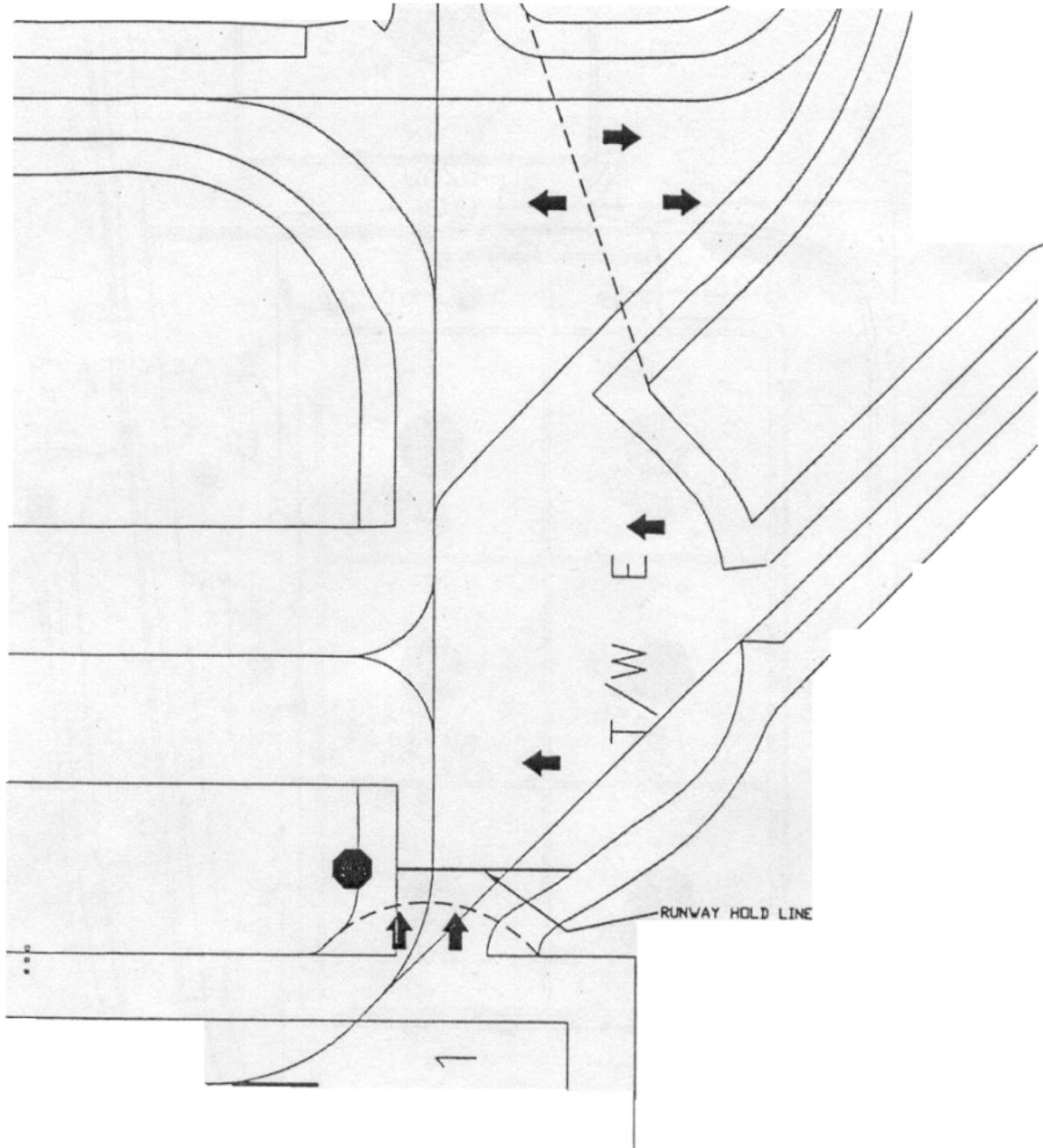
NORTH BARRIER SNOW REMOVAL

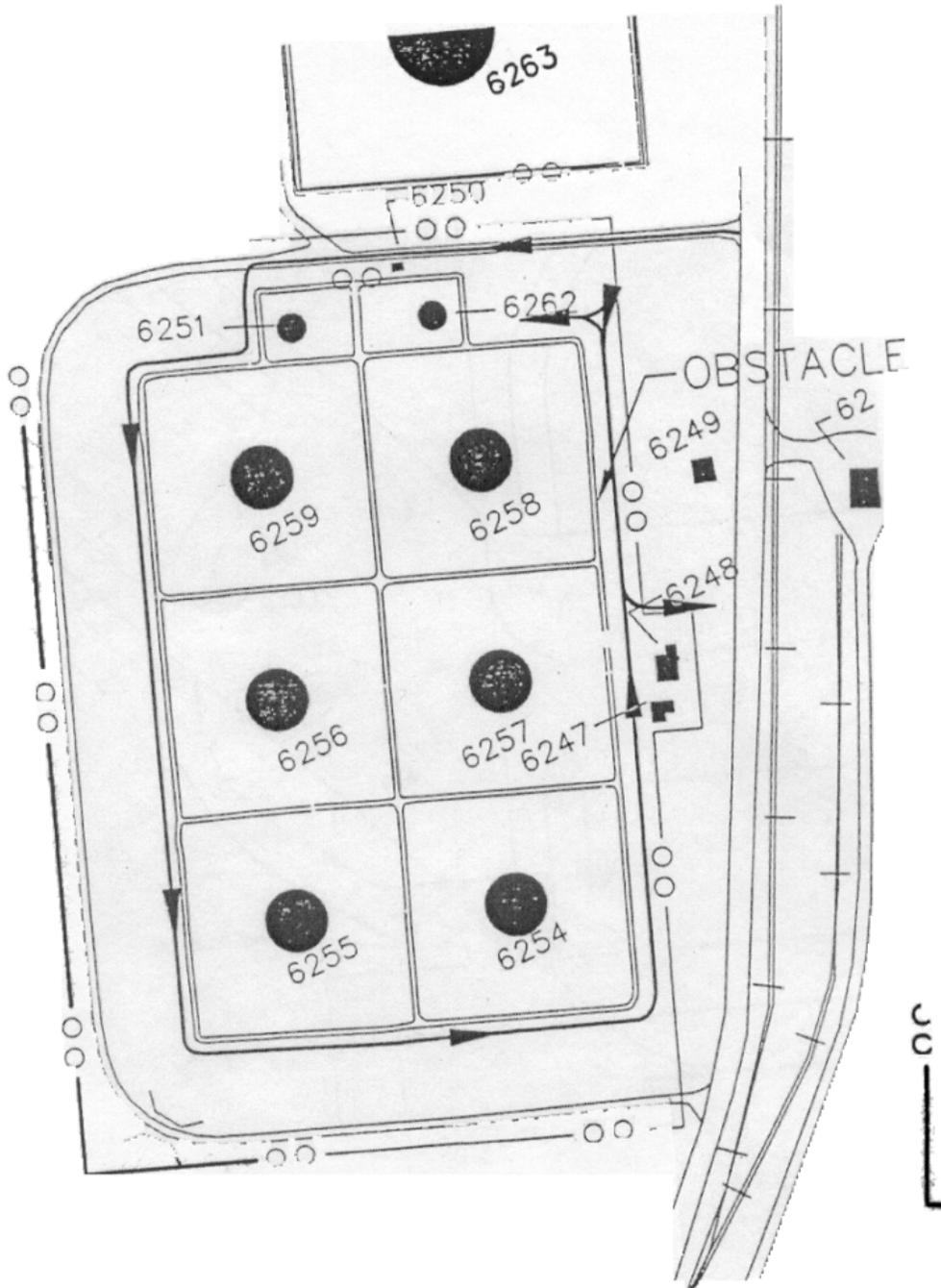
Fig 13



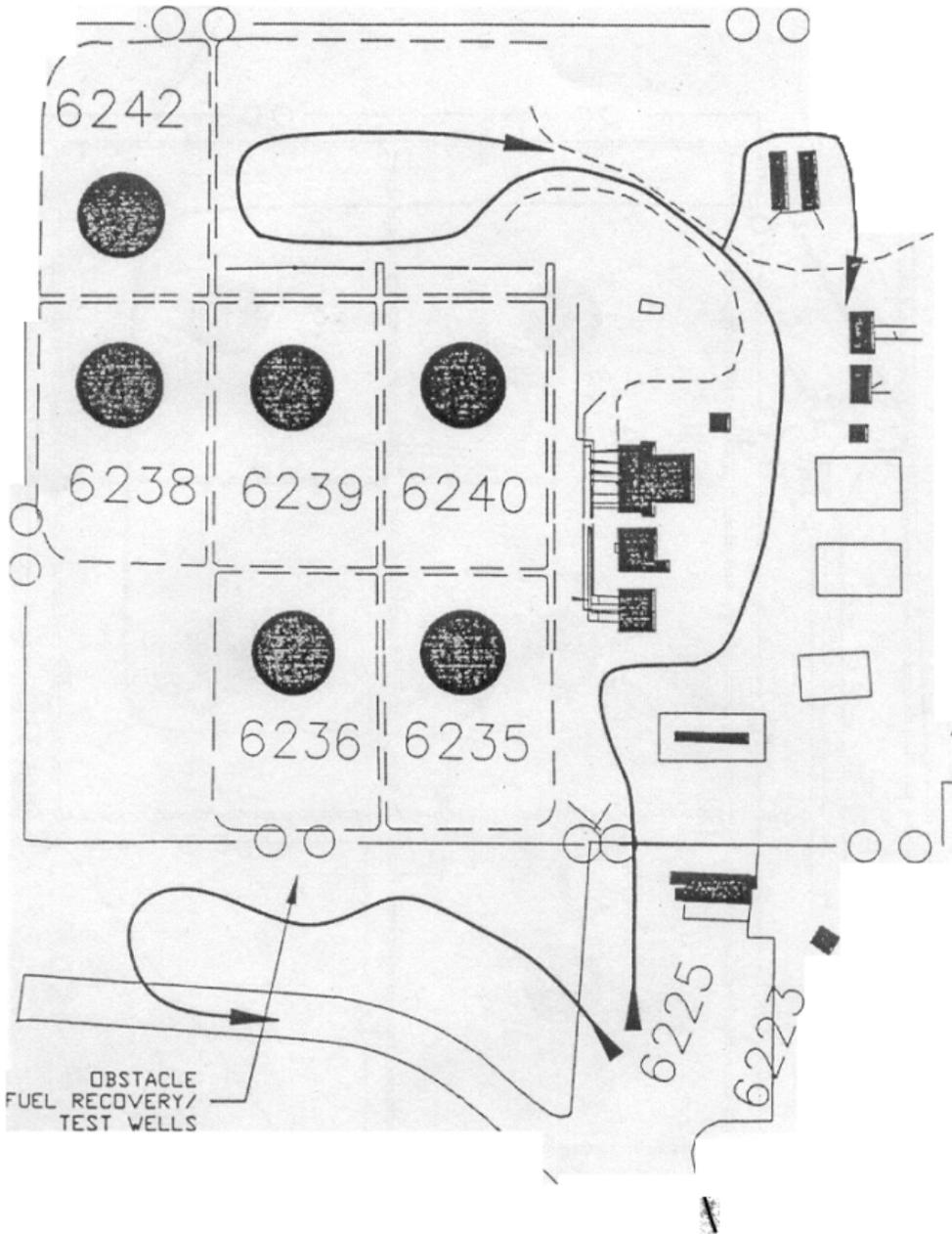
SOUTH BARRIER SNOW REMOVAL

Fig 14





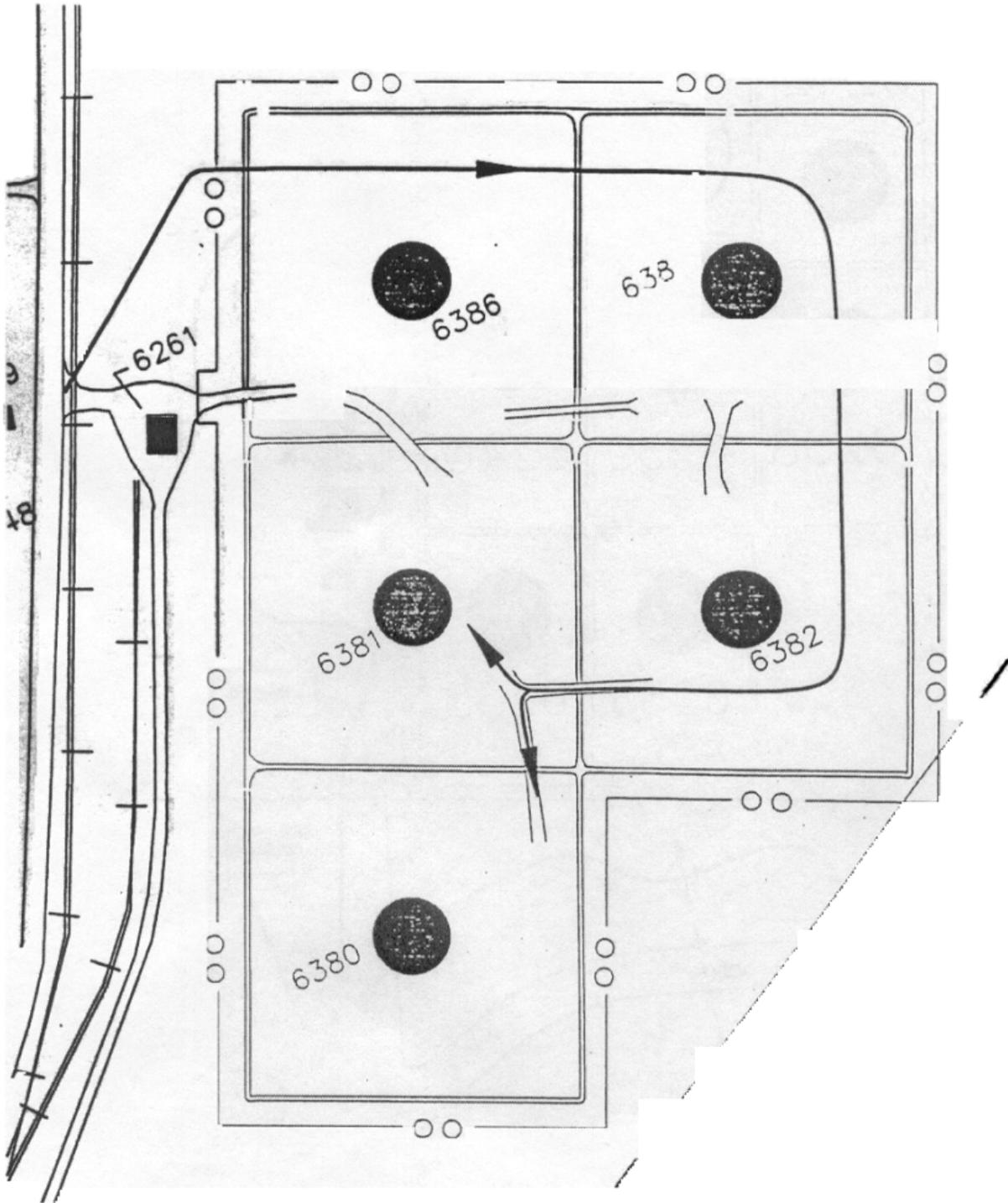
NOV	RFMOV	PLAN	IEL	COMPL
☐	☐	☐	☐	☐
☐	☐	☐	☐	☐
☐	☐	☐	☐	☐



SNOW REMOVAL PLAN - E 2 FUEL COMPLEX

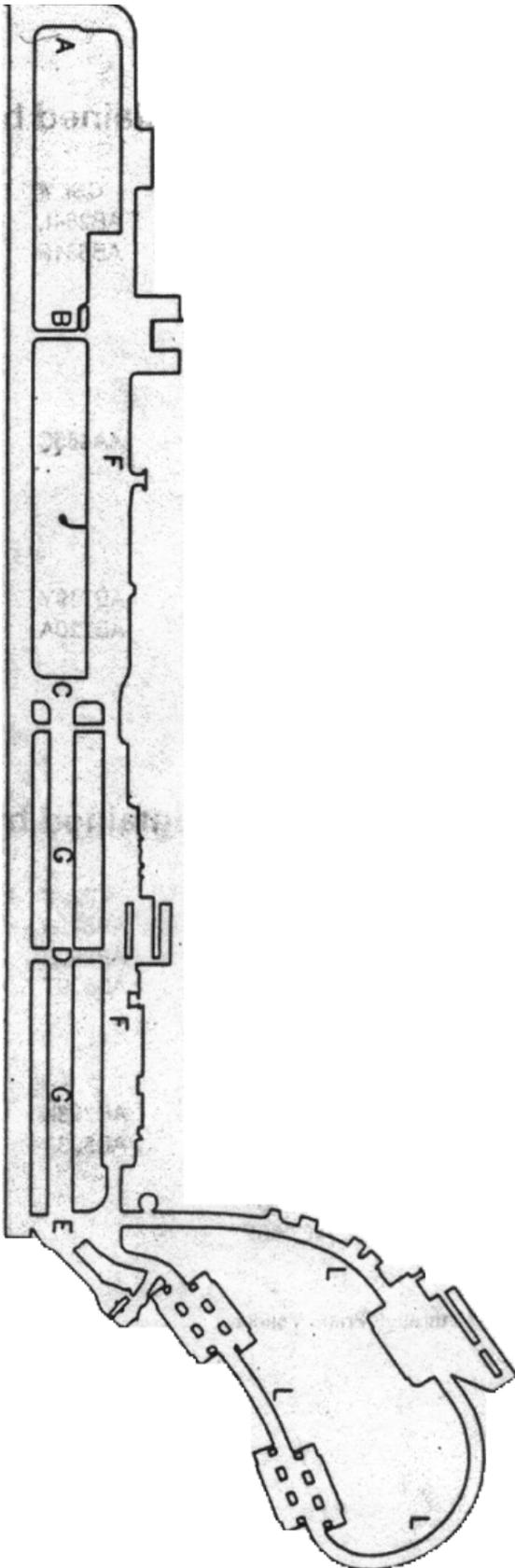
(FIREFIGHTING EQUIPMENT ROUTE - 20FT WIDE)

Fig 17



SN(EMC 'AL FUEL COMPLE
EFIGH IDE

TAX DES JNA N CHANGE
 EFFECTIVE 30 JAN 97



TAXIWAY	TAXIWAY	TAXIWAY	TA	AY 5	TAXIWAY	E
TAXIWAY 2	TAXIWAY	TAXIWAY	ALL	RAMP	T	AY F
TA AY 3	TAXIWAY	TAXIWAY	A	AY	TAXIWAY	AY G
TAXIWAY 4	T	AY D	OOF	TAXIWAY	TAXIWAY	AY

Operating Supply Levels Maintained by 354 SUPS

Sweepster 3100 High Speed Broom Parts

Item	Part #	CSL #	Level	R/O Level	Price Ea.	Ext. Cost
*Filler, steel	06-1914-60VWA130	AB264L	5000	2500	\$32.27	\$161,350.00
*Spacer, steel	15-spacer 1912	AB631P	625	150	\$1.58	\$987.50

Rollover Parts

Shoe, wear, moldboard	PF619	AA485S	100	25	\$31.50	\$3,150.00
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HB Blower Parts

Edge, cutting	3830-P1798-510	AB719Y	20	10	\$373.59	\$7,471.80
Shoe, wear	2510-01-4120-172	AB720A	30	15	\$95.67	\$2,870.10

Operating Supply Levels Maintained by 354 CES/CEOL

Sweepster 3100 High Speed Broom Parts

Item	Part #	CSL #	Level	R/O Level	Price Ea.	Ext. Cost
*Coupler, spline	05-0353	AB879R	2	1	\$1,714.01	\$3,428.02
*Shaft, axle output	07-3532	AB890E	2	1	\$1,400.00	\$2,800.00
*Bearing	08-0137	AB879T	2	1	\$501.15	\$1,002.30

MISC.

Bolts, curbrunner	BPL10C064P	AB298N	40	20	\$1.37	\$54.80
Bolt, plow, 5/8" x 2&1/2"L	4F3656	AB533P	50	20	\$0.60	\$30.00
Bolt, plow, 5/8" x 3&1/2"L	BPL10C056P		50	20	\$0.90	\$45.00
Bolt, plow, 3/4" x 3&1/2"L	BPL12C056P		50	20	\$1.43	\$71.50
Bolt, plow, 7/8" x 3&1/2"L	BPL14C056P		50	20	\$1.99	\$99.50

*Denotes item purchased through Prime Vendor.

Operating Supply Levels Maintained by 354 CES/CEOH

Sweepster 3100 High Speed Broom Parts

Item	Part #	CSL #	Level	R/O Level	Price Ea.	Ext. Cost
*Filler, steel	06-1914-60WWA130	AB264L	2500	500	\$32.27	\$80,675.00
*Spacer, steel	15-spacer 1912	AB631P	1500	500	\$1.58	\$2,370.00
Core, right, 9 foot	12-4019	AB890D	2	1	\$3,018.28	\$6,036.56
Core, left, 9 foot	12-4012	AB890C	2	1	\$3,018.28	\$6,036.56
Core, right, 8 foot	12-4018	AB890B	3	2	\$2,933.84	\$8,801.52
Core, left, 8 foot	12-4011	AB890A	3	2	\$2,933.84	\$8,801.52
*Coupler, spline	05-0353	AB879R	4	2	\$1,714.01	\$6,856.04
*Shaft, axle output	07-3532	AB890E	4	2	\$1,400.00	\$5,600.00
*Bearing	08-0137	AB879T	10	4	\$501.15	\$5,011.50

Rollover Parts

Reinforcing angle R/S (Frink)	0040-2-2	AA741P	10	5	\$472.00	\$4,720.00
Reinforcing angle L/S (Frink)	0040-2-3	AA844O	10	5	\$472.00	\$4,720.00
Reinforcing angle R/S (Wausau)	2W09720	AB891E	10	5	\$489.00	\$4,890.00
Reinforcing angle L/S (Wausau)	2W09719	AB891F	10	5	\$489.00	\$4,890.00
Shoe, moldboard	PF619	AA485S	60	20	\$31.50	\$1,890.00
Edge, cutting, cone	3448-23A	AA485Y	400	100	\$58.68	\$23,472.00
Shoe, nose, R/S	3442-32A	AA485R	20	10	\$55.98	\$1,119.60
Shoe, nose, L/S	3442-32B	AA485K	20	10	\$55.98	\$1,119.60
Edge, cutting, underbody	5D9558	AB549L	150	50	\$68.34	\$10,251.00

Blower Parts

Edge, cutting	1798510	AB719Y	20	10	\$373.59	\$7,471.80
Shoe, wear	1835160W	AB720A	40	20	\$95.67	\$3,826.80
Pin, shear	5/8" x 3"		80	40	\$.85	\$68.00
Nut, 5/8" x 11			80	40	\$.25	\$20.00

* Denotes item purchased through Prime Vendor.

Operating Levels Maintained by 354 CES/CEOH

Loader Parts

Item	Part #	CSL #	Min.Level	R/O Level	Price Ea.	Ext. Cost
Edge, cutting, outside, JD	T101940	AB164W	10	4	\$80.84	\$808.40
Edge, cutting, inside, JD	T101939	AB164U	5	2	\$162.03	\$810.15
Wear plate, JD	T101634	AB164V	10	4	\$65.83	\$658.30
Edge, cutting, Dresser	4605020H1	AB873T	4	2	\$677.83	\$2,711.32

Grader Parts

Edge, cutting, 6'	5D9558	AB549L	400	200	\$54.00	\$21,600.00
Bolt, plow, 5/8"x2&1/2" L	4F3656	AB533P	100	50	\$0.60	\$60.00
Bolt, plow, 5/8"x 4"L	BPL10C064P	AB298N	100	50	\$1.37	\$137.00
Curbrunner	V45	AB842U	50	25	\$78.00	\$3,900.00
Edge, cutting, 1" X 7'L	4T2233		100	24	\$163.80	\$16,380.00
Edge, cutting, wingblade	BB20291	AB890P	4	2	\$118.99	\$475.96

MISC.

*E-36 (Potassium Acetate)	E-36	AB885G	34,000	17,000	\$3.75	\$127,500.00
IPA (Isopropanol Alcohol)	TT1735	AA307H	34,000	17,000	\$3.52	\$119,680.00
*Sand, Airfield		AB865Q	600	300	\$139.75	\$83,850.00
Sand, Street		AA093G	600	300	\$58.64	\$35,184.00
Chain, crosslink	375mm	AA562V	1000'	500'	\$2.25	\$2,250.00

*Denotes item purchased through Prime Vendor.