ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

8400.13B

2/15/05

SUBJ: PROCEDURES FOR THE APPROVAL OF SPECIAL AUTHORIZATION CATEGORY II AND LOWEST STANDARD CATEGORY I OPERATIONS

1. PURPOSE. This order informs agency personnel of minimum requirements for approval of special authorization Category (CAT) II operations to qualifying runways which do not meet the performance or equipment requirements normally associated with a U.S. Standard or International Civil Aviation Organization (ICAO) compliant CAT II operation, e.g., touchdown zone lighting (TDZ), centerline lighting (CL), or CAT II approach lighting system with sequenced flashing lights (ALSF-2). It also provides the criteria to implement the harmonized Federal Aviation Administration (FAA) and the European Joint Aviation Authorities (JAA) lowest standard CAT I runway visual range (RVR) 1800 visibility.

2. DISTRIBUTION. This order is distributed to the branch level in the Office of Airport Safety and Standards, to the Flight Standards, Aircraft Certification, Air Traffic, Air Traffic System Requirements, and Airway Facilities Services; to the branch level in Aviation System Standards; to the branch level in the regional Flight Standards, Air Traffic, Airway Facilities and Airports Divisions; to all Flight Standards District Offices and Certificate Management Offices; to all Airports District Offices; to all Aircraft Certification Directorates and Aircraft Certification Offices; to all Airport Traffic Control Towers and Flight Service Stations; to Airway Facilities General National Airspace Sectors, and to all Air Route Traffic Control Center Sectors, and Sector Field Offices and Units.

3. CANCELLATION. This order cancels Order 8400.13A, Procedures for the Approval of Special Authorization Category II and Lowest Standard Category I Operations, dated October 18, 2002.

4. EXPLANATION OF CHANGES. This revision deletes the runway centerline lighting requirement for CAT II 1200 RVR operations. The checklists in Appendix 2 have also been updated in addition to editorial changes to clarify information. For a list of authorized CAT II airport runways approved by this order see the FAA Web site at: (**http://www2.faa.gov/avr/afs/afs410/index.cfm**).

5. BACKGROUND.

a. Technologies such as HGS (fail passive) and automatic landing systems (fail passive or fail operational) have resulted in additional operational capability of airborne avionics systems. These airborne systems, coupled with modern reliable Instrument Landing Systems (ILS) and more restrictive performance requirements associated with procedures developed for low visibility operations, now permit CAT II operations to runways which were originally programmed to specifically support basic CAT I operations.

b. The European Aviation Safety Agency (EASA), formerly JAA, have used 550 meters (1800 RVR) as a base visibility on ILS without the requirement for TDZ/CL lights. Recent harmonization efforts have resulted in an FAA/JAA agreement for ILS operations at 1800 RVR without TDZ/CL lights if the operator employs the use of aircraft flight director or autopilot or HGS equipment.

c. Operations authorized on Type I ILS facilities, by this order, are:

(1) CAT I approaches with 200’ decision altitude (DA), 1800 RVR minimums using aircraft flight director or autopilot or HGS systems, in lieu of runway TDZ, CL, and ALSF-2 lighting systems.

(2) CAT II approaches with 100’ DA, 1600 or 1200 RVR minimums using aircraft autoland or HGS systems to touchdown, in lieu of dual localizer and glide slope transmitters, runway TDZ, CL, and ALSF-2 lighting systems.

6. DEFINITIONS.

a. Type. It has been intentional, both in the FAA and internationally, that ground equipment designations correlate with operational designations. For example, in ICAOs annex 10, a Facility Performance CAT II ILS is associated with an Operational Performance CAT II procedure. Although the basic assumption that a certain level of equipment performance is necessary to support a corresponding operation is generally true, higher performance requirements imposed on the airborne equipment can mitigate the need for certain ground equipment or performance. The term “type” was introduced to make this distinction. The objective was to help eliminate the confusion caused when trying to approve an operation on a facility that did not match with its corresponding “category” operational designation. It attempts to clarify the fact that ground facility equipment hardware and performance requirements can vary in capability dependent upon aircraft type, airborne equipment, crew training, or other factors. The ILS Performance Classification System, described in attachment “C” to the ICAO annex 10 and in Order 6750.24, Instrument Landing System and Ancillary Electronic Component Configuration and Performance Requirements, has somewhat obviated the need for use of the type designations by focusing on performance rather than hardware.

b. Type I Facility. A Type I facility is defined as one having solid state equipment (Mark-1/D, Mark 20, or of a more recent design as designated by Airway Facilities) and a published straight-in course coincident with the centerline of the runway. The requirements in this order define a more restrictive subset of the Type I facilities described in Order 8400.8, Procedures for Approval of Facilities for FAR Part 121 and Part 135 CAT III Operations, current edition.

c. Controlling Region. Denotes the FAA region which is responsible for the regular inspection and surveillance of airports which are to be used or are being used by part 91, 121, 129,135, etc. operators.

7. REQUIREMENTS.

a. Runways (Lighting and Ancillary Equipment).

(1) CAT I at 1800 RVR. To be eligible for CAT I approaches at 1800 RVR, runways must have or be qualified for a part 97 Standard Instrument Approach Procedure (SIAP) with an unrestricted (no obstacle interference, acceptable beam performance, required number and location of RVR sensors, etc.) CAT I minima of 200 ft. DA and a visibility minima not more than 2400 RVR, with at least the following ancillary components:

(a) A medium intensity approach lighting system with runway alignment indicator lights (MALSR), or better.

(b) High intensity runway lights (HIRL).

(c) A touchdown sensor of an RVR reporting system. (Automated surface intrusion monitor (ASOS)/Automated Weather Observing System (AWOS) not acceptable).

(2) CAT II at 1600 RVR. To be eligible for special authorization CAT II, 100’ DA/1600 RVR, runways must have the equipment stated in paragraph 7a(1).

(3) CAT II at 1200 RVR. To be eligible for special authorization CAT II, 100’ DA/1200 RVR, runways must have the equipment stated in paragraph 7a(1).

(4) Not less than 2 sensors of an RVR reporting system. (touchdown and either midpoint or rollout).

b. Instrument Landing System.

(1) CAT I Operations to 1800 RVR.

(a) The ILS must be certified to not less than performance classification I/T/1.

(b) Because a higher degree of reliance is being placed on the glide slope, it must be further certified and maintained to comply with CAT II flight inspection structure tolerances to point T, as specified in Order 8200.1, United States Standard Flight Inspection Manual.

(2) Special Authorization CAT II Operations to 1600 or 1200 RVR. The instrument landing system (ILS) must meet all requirements of a Category II ILS facility except for the items specifically identified as not required by this Order.

(a) The ILS must be unrestricted and certified and maintained to not less than performance classification II/D/3. Compared to a normal CAT I ILS ground facility, candidate sites must have their shutdown delay times and monitor alarm limits maintained to CAT II tolerances. Single transmitter facilities are acceptable provided they meet the level 3, mean time between outage, performance requirements contained in Order 6750.24.

(b) The ILS critical areas must be maintained in order to provide CAT II beam quality to ILS point D, the area 3,000 feet down the runway from the threshold toward the localizer. Critical areas associated with 8-element antenna arrays are larger than those associated with 14-element arrays and Order 6750.16, Siting Criteria for Instrument Landing Systems, current edition, defines localizer and glide slope critical area sizes. Additionally, in accordance with Order 6750.24, operational constraints may be used to accommodate excessively large critical areas.

(c) Runway and approach lighting systems must have standby power with a one second transfer and must be visually or remotely monitored so that aircraft can be notified immediately if they become inoperative.

(d) The localizer and glide slope can be remotely monitored via landlines, etc.

(e) If required by the approach procedure, marker beacons, compass locators, etc., can be remotely monitored via landlines, etc.

(f) Control lines (landline communications) are not required for the localizer and glide slope if they have only one transmitter.

(g) A localizer far field monitor is not required.

c. Instrument Approach Procedure.

(1) CAT I Operations to 1800 RVR. If the ILS facility performance is acceptable and maintained, any existing part 97 CAT I SIAP, which did not qualify for 1800 RVR due to the absence of TDZ and CL lighting systems, can be amended to include 1800 RVR visibility. Add a separate line of minima for the 1800 RVR, 200' height above touchdown (HAT), with the following notes: **"SPECIAL AIRCRAFT CERTIFICATION REQUIRED,"** and the procedural note **"Use of Flight Director or Autopilot or HGS required."**

- **Applicable Aircraft.** Those aircraft currently certified and operationally approved for CAT I operations, i.e., airplane flight manual (AFM), aircraft operator's manual, etc., may be considered eligible for these operations.

(2) Special Authorization CAT II Operations to 1600 or 1200 RVR.

(a) Develop these procedures in accordance with the standard Terminal Instrument Procedures (TERPS) CAT II development criteria and process as a part 97 SIAP. In addition to the standard CAT II note **"SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED."**

(b) Applicable Aircraft. Only those aircraft currently certified and operationally approved for CAT III operations, i.e., autoland or HGS to touchdown capability may be considered eligible for these operations.

8. RESPONSIBILITIES.

a. Regional Flight Standards Division. All Weather Operations Program Manager (AWO/PM) will coordinate the procedure request with the Regional Airspace and Procedures Team (RAPT). The AWO/PM, having geographic responsibility for the area where the candidate airport is located, will review 1800 RVR proponent documentation and confirm the facility's compliance with this order. The AWO/PM will also be responsible for the distribution, collection, review, and approval of the CAT II checklists for completeness and required data, and maintenance of the regional list of approved locations authorized for CAT I 1800 RVR and CAT II on Type I facilities. The AWO/PM will notify AFS-400, Flight Technology and Procedures Division, to update the 8400.13 Web site list, whenever applicable CAT I or CAT II facilities are approved, modified, or deleted. The certificate management office/certificate-holding district office/Flight Standards District Office (CMO/CHDO/FSDO) evaluates proponent requests, approves training, and amends OpSpecs or issues an LOA.

b. RAPT. The RAPT evaluates and sets the priority for the procedure development in accordance with Order 8260.43, Prioritization for Development of Wide Area Augmentation System GPS Instrument Approach Procedures.

c. Regional Airway Facilities Division. Completes evaluation checklist to allow assessment of runways for CAT II operations. To support implementation of CAT II operations ensures localizer and glide slope beam performance, monitoring limits, and shutdown delays are maintained to CAT II tolerances. In lieu of suitable visual or remote monitoring, establishes backup power with 1-second transfer for HIRL and medium intensity approach lighting system with runway alignment indicator lights (MALSR).

d. Regional Air Traffic Division. Completes evaluation checklist to allow assessment of runways for CAT II operations. To support implementation of CAT II operations ensures applicable CAT II ILS procedures are adhered to and accomplished as per established guidelines. This may include protection of ILS critical areas and weather reporting requirements for operating air traffic control (ATC) towers, both federal and non-federal. Particular attention must be given to operations planned to runways utilizing an

8-element antenna array, as the ILS critical area will be quite large. In lieu of suitable backup power, establishes procedures to advise pilots of a HIRL or MALSR failure.

e. Regional Airports Division. Completes evaluation checklist to allow assessment of runways for CAT II operations. To support implementation of CAT II operations ensures coordination with airport operators to evaluate applicability of CAT II requirements such as lights, signs, markings, etc.

f. Aviation System Standards (AVN).

(1) The National Flight Procedures Office (NFPO). Supports implementation of CAT II operations by participating in the RAPT through the Flight Procedures Office (FPO). The FPO performs an environmental review, if required, and coordinates any changes to the procedure. The NFPO amends the current CAT I procedure to include 1800 RVR and/or develops the CAT II procedure in accordance with the guidelines established by this order. The procedure will be amended by the NFPO in accordance with the priority established by the regional RAPT.

(2) The Flight Inspection Operations Division (AVN-200). In conjunction with the Airway Facilities organization, accomplishes the following according to the operation:

(a) CAT I Operations to 1800 RVR. Certify that the ILS conforms to the applicable flight inspection related performance requirements stated in paragraph 7b(1) and verify these standards on subsequent flight inspections. If the facility cannot continue to maintain the required performance, take action to restrict the facility in accordance with the standard CAT I criteria in Order 8200.1.

(b) Special Authorization CAT II Operations to 1600 or 1200 RVR. Certify that the ILS conforms to the applicable flight inspection related performance requirements stated in paragraph 7b(2)(a) and verify these standards on subsequent flight inspections. The glide slope must meet the requirements of paragraph 7b(1)(b). If the facility cannot continue to maintain the required performance, take action to restrict the facility such as issuing Notices to Airman (NOTAM) if the ILS facility, or other required equipment, fails to meet its performance requirements, in accordance with the standard CAT II criteria in Order 8200.1. Also, completes evaluation checklist to allow assessment of runways for CAT II operations.

9. OPERATIONAL APPROVAL.

a. General.

(1) CAT I operations to 1800 RVR or CAT II operations to 1600 or 1200 RVR will be added to existing part 97 ILS SIAPS in accordance with a schedule established by the RAPT and AVN.

(2) Candidate runways and the associated facilities must be evaluated, and approved by the AWO/PM to ensure acceptability for lower minimums. If appropriate, conduct these evaluations in accordance with the criteria contained herein and in the checklist in Appendix 2.

(3) These operations are authorized by the FAA 8260-3 series forms and the OpSpecs or LOA for the specific runway to be approved. The OpSpecs or LOA must also include the special limitation requiring aircraft flight director or autopilot or HGS equipment use to no lower than 50 feet below DA, i.e., 150 HAT.

NOTE: Flight director use *not* authorized for single pilot operations.

(4) Approved standard CAT II and III facilities are also authorized for use if listed in the operator's OpSpec or LOA.

b. CAT I Operations to 1800 RVR.

(1) Completion of the checklists, in Appendix 2, is NOT required.

(2) 1800 RVR operations require OpSpec or LOA approval and become available by amending the part 97 CAT I SIAP.

c. Special Authorization CAT II Operations to 1600 or 12 RVR.

(1) Requests for special authorization CAT II SIAP for a specific runway can be initiated by any operator or organization.

(2) Confirmation of all items on the checklists is at the discretion of the regional AWO/PM.

(3) Airport sponsor involvement (letter of concurrence) IS required and must be submitted through the appropriate Airport District Office (ADO). This may include the willingness to remove obstacles, provide resources such as personnel and funding, and install additional equipment such as lights, markings, signage, etc.

(4) To mitigate the absence of runway TDZ, CL and ALSF-2 lighting systems, the operator must use autoland or HGS to touchdown as a condition of the minima.

(5) Airways Facilities must agree to adjust and maintain the facility to a CAT II Performance Classification standard and ensure that it meets at least Level 3 integrity, continuity, and Mean Time Between Outages (MTBO) requirements. (For classification system ratings, see Order 6750.24 or ICAO annex 10.)

(6) AVN (flight inspection) must certify the ILS to CAT II flight inspection tolerances including the localizer CAT III structure to Point D. AVN will publish the first two characters of the ILS Performance Classification system rating in the appropriate Airport/Facility Directory (A/FD).

(7) Any runway not previously approved for CAT II/III operations must be assessed for irregular pre-threshold terrain by Flight Standards, etc.

(8) Operational review and approval, by the AWO/PM, of a particular aircraft type and site specific performance, regarding "special terrain" airport runways, is necessary for CAT II minima approvals because it is predicated on autoland or other flight guidance systems (e.g., HGS) use to touchdown.

(a) If the approval is for a follow-on operator starting service at a location previously found suitable for a particular type aircraft (e.g., those not listed in the restricted section of the CAT II/III Status List), this review and approval process consists of verifying the operator's satisfactory experience with "line autolandings" in CAT I or better weather conditions.

(b) If the request is for the first of an aircraft type to base CAT II minima on having autoland at a "special terrain" airport runway, then a specific evaluation including an operational demonstration is necessary. Acceptable procedures for evaluation of use of these airports may be found in AC 120-28D, Criteria for Approval of Category III Landing Weather Minima for Takeoff, Landing and Rollout, appendix 8. See the FAA Web site for the Category II/III Status List, for Restricted (special terrain) airports: (http://www.faa.gov/avr/afs/afs410/index.cfm).

(c) Once these requirements are completed, including the required satisfactory landings, the AWO/PM will contact AFS-400, Flight Technology and Procedures Division, in order to add the subject runway to the list of approved airports.

(9) Appropriate training to accomplish this special authorization CAT II operation is required. Special emphasis needs to be placed on autoland and/or HGS operations to touchdown, as well as, the absence of runway TDZ and CL, and ALSF-2 lighting systems.

(10) This operation cannot be promulgated as an ICAO operational performance CAT II due to the lack of runway TDZ and CL and ALSF-2 lighting systems, as required by annex 14. However, with those exceptions, the ILS and ancillary components support CAT II operations and any failures that would normally downgrade the system, based on directive requirements such as Order 6750.24, etc., must be acted on in accordance with the standard procedures in effect for any CAT II authorization.

10. EXPLANATION OF APPENDICES.

a. Appendix 1. Contains a listing of relevant advisory circulars (AC) and FAA Orders.

b. Appendix 2. Contains a set of checklists for use by Airway Facilities, Air Traffic, Airports, Aviation System Standards, and Flight Standards personnel to evaluate potential for CAT II operations at airports that have Type I ILS ground facilities.

11. INQUIRIES. Questions or comments regarding minima reduction for operations conducted with an approved CAT III HGS or autoland equipped aircraft, should be directed to the Flight Operations Branch, AFS-410, at (202) 385-4586.

12. DIRECTIVE FEEDBACK. Note any deficiencies found, clarifications needed, or suggested improvements regarding the contents of this order on FAA Form 1320-19, Directive Feedback Information, and forward your comments to the originating office for consideration. If an interpretation is needed immediately, call the originating office for guidance. However, use FAA Form 1320-19 as a follow-up to verbal conversation.

/s/ Carol E. Giles for
James J. Ballough
Director, Flight Standards Service

APPENDIX 1. REFERENCES (current edition)

1. **AC 97-1,** Runway Visual Range (RVR).
2. **AC 120-28**, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout.
3. **AC 120-29**, Criteria for Approval of Category I and Category II Weather Minima for Approach.
4. **AC 150/5300-13,** Airport Design.
5. **AC 150/5340-1**, Standards for Airport Markings.
6. **AC 150/5340-18,** Standards for Airport Sign Systems.
7. **AC 150/5340-30**, Design and Installation Details for Airport Visual Aids.
8. **FAA Order 6560.10,** Runway Visual Range (RVR).
9. **FAA Order 6750.16,** Siting Criteria for Instrument Landing Systems.
10. **FAA Order 6750.24,** Instrument Landing System and Ancillary Electronic Component Configuration and Performance Requirements.
11. **FAA Order 6850.2,** Visual Guidance Lighting Systems.
12. **FAA Order 6950.2,** Electrical Power Policy Implementation at National Airspace System Facilities.
13. **FAA Order 7110.65,** Air Traffic Control.
14. **FAA Order 8200.1**, United States Standard Flight Inspection Manual.
15. **FAA Order 8260.3,** United States Standard for Terminal Instrument Procedures (TERPS).
16. **FAA Order 8260.19,** Flight Procedures and Airspace.
17. **FAA Order 8260.43,** Prioritization for Development of Wide Area Augmentation System GPS Instrument Approach Procedures.
18. **FAA Order 8400.8,** Procedures for Approval of Facilities for FAR Part 121 and Part 135 CAT III Operations.

APPENDIX 2. RECOMMENDED CHECKLISTS FOR EVALUATING TYPE I FACILITIES FOR CAT II OPERATIONS

The basis of approval for airports having Type I Instrument Landing System (ILS) ground facilities for Category (CAT) II operations is contained in the following checklists.

Coordination of checklists will be accomplished by the controlling regions All Weather Operations (AWO)/Program Manager (PM). Recommended checklists for Airway Facilities, Air Traffic, Airports, and Aviation System Standards (AVN)-200/(NFPO) are provided.

FLIGHT STANDARDS

Pre-Checklist

Coordinate the evaluation of the Type _____ equipment for Runway _____ at
_____, _____, _____
AIRPORT CITY STATE

to determine its capability to provide CAT II approach and landing minimums.

Date requested: _____/_____/_____

Requested by_____.

Environmental review completed (by AVN) ..... (yes/no) _____

Airport Manager's concurrence obtained. ..... (yes/no) _____

Post-Checklist

All checklists are attached and all discrepancies have been resolved. ..... (yes/no)_____

Procedure was coordinated with the RAPT ..... (yes/no)_____

Recommended minima: DH _____ MSL _____ HAT _____ RVR _____

Comments:_____
_____

_____ _____/_____/_____
Chairperson, RAPT Team **Date**

APPENDIX 2. COORDINATION WITH THE FOLLOWING OFFICES (continued)

DATE DATE			
OFFICE	**PROVIDED**	**RETURNED**	**OK?**
AIRWAY FACILITIES:	_____/_____/_____	_____/_____/_____	_____

Discrepancies:

Resolution:

AIR TRAFFIC: _____/_____/_____ _____/_____/_____ _____

Discrepancies:

Resolution:

AIRPORTS: _____/_____/_____ _____/_____/_____ _____

Discrepancies:

Resolution:

AVIATION SYSTEM STANDARDS:

AVN-200 (Flight Inspection): _____/_____/_____ _____/_____/_____ _____

Discrepancies:

Resolution:

NFPO (Flight Procedures): _____/_____/_____ _____/_____/_____ _____

Discrepancies:

Resolution:

APPENDIX 2. AIRWAY FACILITIES DIVISION CHECKLIST FOR CAT II OPERATIONS (continued)

Equipment for _____ Airport, Runway _____ is installed with capability to provide Class II/D/3 performance in support of CAT II approach and landing minimums.

Confirm that all ground system requirements (applicable to those Federal Aviation Administration (FAA) ground systems maintained by Airway Facilities) contained in Advisory Circular (AC) 120-29, current edition, are met. Completion of this checklist must reflect achieved/completed status, not planned actions. When all portions of this checklist are complete, please return the checklist expeditiously to the regional AWO/PM in order to preclude delay of CAT II service to the users. Once approval is granted, the regional Flight Standards Division will issue authorization for CAT II operations.

Immediately upon initiation of this checklist, please provide the regional AWO/PM with the name and telephone number of your CAT II coordinator for monitoring the accomplishment of your checklist.

I. General Data.

A. Glide slope (GS) angle: ___.___ degrees.

B. Published Threshold Crossing Height _____ feet.

C. National Airspace System Change Proposals (NCP). List all approved and pending NCPs applicable to the facilities in this checklist (ILS, approach lights, RVR, etc.).

II. <u>ILS Systems</u>. (Ref. AC 120-29 and Order 6750.24.)

A. Localizer (LOC) and array type, e.g., 8-element, 14-element, etc./GS equipment installed, e.g., "Manf. name" Mk 1F.

LOC/array type:_____
(Type)

GS: _____
(Type)

Far Field Monitor installed: (not required).....(yes/no)_____

B. Performance Classification of at least Class II/D/3 (Ref. Order 6750.24);
Facility certified and maintained to CAT II……..(yes/no)_____
Integrity/continuity rated and maintained at Level 3……(yes/no)_____
(advised AVN of Level 3 performance)……..(yes/no)_____

C. Remote Status Monitors (LOC/GS) (Ref. Order 6750.16): (yes/no)_____

D. Marker Beacons: (Ref. Order 6750.16)
Outer Marker installed:.....(yes/no)_____
monitored: .....(yes/no)_____
Inner Marker: (for "RA NA" operations) .....(yes/no)_____

APPENDIX 2. (continued)

E. Remote Control/Status Indicator Equipment (Ref. Order 6750.24.): ..... (yes/no)_____

F. Approach Light System (MALSR or better; Ref. Order 6850.2 installed and monitored (ref. Order 6750.24): .....(yes/no)_____

III. Runway Visual Range Equipment. (RVR 1600, one sensor required; RVR 1200, two sensors required, Ref. Orders 6750.24 and 6560.10.) Installed in accordance with AC 97-1 and FAA Standard-008: .....(yes/no)_____

Type equipment:_____
(Make/Model)

Touchdown:_____ ft.
(Baseline)

Midpoint:_____ ft.
(Baseline)

Rollout:_____ ft.
(Baseline)

IV. Electrical Power Requirements. (Ref. Order 6950.2)

Component	Power Source Code	
Localizer	D*	(yes/no)_____
Glide Slope	D*	(yes/no)_____
Outer Marker	D*	(yes/no)_____
Middle Marker	D*	(yes/no)_____
RVR (Touchdown)	D#	(yes/no)_____
RVR (Midpoint)	D#	(yes/no)_____
RVR (Rollout)	D#	(yes/no)_____

NOTE: *--Requires uninterrupted transfer
#--Requires one (1) second transfer

_____ _____/_____/_____
Manager, Airway Facilities System Management Office (SMO) Date

_____ _____/_____/_____
CAT II Coordinator Date

_____ _____/_____/_____
Manager, Airway Facilities Division Date

APPENDIX 2. AIR TRAFFIC DIVISION CHECKLIST FOR CAT II OPERATIONS (continued)

Equipment for _____ Airport, Runway _____ is installed with capability to provide Class II/D/3 performance in support of CAT II approach and landing minimums.

Completion of this checklist must reflect achieved/completed status, not planned actions. When all portions of this checklist are complete, please return the checklist expeditiously to the regional AWO/PM in order to preclude delay of CAT II service to the users. Once approval is granted, the regional Flight Standards Division will issue authorization for CAT II operations.

Immediately upon initiation of this checklist, please provide the regional AWO/PM with the name and telephone number of your CAT II coordinator for monitoring the accomplishment of your checklist.

I. Monitor Capability. (AC 120-29):

Verify that monitoring capability exists in the Air Traffic Control Tower (ATCT) for:

Localizer: ..... (yes/no) _____
Glide Slope: ..... (yes/no) _____
Outer Marker/Facility providing final approach fix: ..... (yes/no) _____
Engine Generators: ..... (yes/no) _____
RVR: ..... (yes/no) _____
Runway Lights (Edge): ..... (yes/no) _____
Integrity and Continuity Test Circuits: ..... (yes/no) _____

II. Coordination. (AC 120-29):

A. Arrangements exist for airport personnel to advise ATCT whenever the runway lighting system does not meet CAT II requirements……...(yes/no) _____

B. Arrangements exist to start engine generators at Approach Light System and power vault, or an approved electrical monitoring system installed in the ATCT…….. (yes/no) _____

III. Communications. (Order 7110.65):

A. Positive Control of Aircraft and Ground Vehicles on Runway ..... (yes/no) _____

B. ILS Critical Areas defined and protected (AC 150/5340-1, Standards for Airport Markings, current edition; and Order 7110.65)..... (yes/no) _____

C. Facility Outages/Airport Conditions (Order 7110.65) reported by Voice or Notices to Airmen (NOTAM)…….(yes/no) _____

_____ _____/_____/_____
Manager, ATCT Date

_____ _____/_____/_____
CAT II Coordinator Date

_____ _____/_____/_____
Manager, Air Traffic Division Date

APPENDIX 2. AIRPORTS DIVISION CHECKLIST FOR CAT II OPERATIONS (continued)

Equipment for _____ Airport, Runway _____is installed with capability to provide CAT II approach and landing minimums.

Confirm that all ground systems and obstacle clearance requirements are met. Completion of this checklist must reflect achieved/completed status, not planned actions. When all portions of this checklist are complete, please return the checklist expeditiously to the regional AWO/PM in order to preclude delay of CAT II service to the users. Once approval is granted, the regional Flight Standards Division will issue authorization for CAT II operations.

Immediately upon initiation of this checklist, please provide the regional AWO/PM with the name and telephone number of your CAT II coordinator for monitoring the accomplishment of the checklist.

I. Lighting Equipment Installed.

A. High Intensity Runway Edge Lights (HIRL) (Ref AC 150/5340-24, Runway and Taxiway Edge Lighting System, current edition):.....(yes/no)_____

B. Threshold/Runway End Lights (in addition to threshold lights which are integral to the approach light system) (Ref AC 150/5340-24):.....(yes/no)_____

C. Runway Centerline Lights (not required) (Ref AC 150/5340-4, Installation Details for Runway Centerline Touchdown Zone Lighting Systems, current edition):.....(yes/no)_____

D. Runway Touchdown Zone Lights (not required) (Ref AC 150/5340-4):…(yes/no)_____

E. Approach Lights (MALSR or better) (Ref AC 150/5340-14, Economy Approach Lighting Aids, current edition):…….....(yes/no)_____

II. Monitoring of Lighting Aids.

A. Arrangements for airport personnel to advise ATCT whenever the runway lighting system does not meet CAT II requirements.....(yes/no)_____

B. Specify whether each of the following lighting aids, if installed, are remotely monitored or visually inspected.

(if installed)

(1) Runway Edge Lights: [ ] remotely monitored; [ ] visually inspected.

(2) Runway Centerline Lights: [ ] remotely monitored; [ ] visually inspected.

(3) Runway Touchdown Zone Lights: [ ] remotely monitored; [ ] visually inspected.

(4) Approach Lights: [ ] remotely monitored; [ ] visually inspected.

III. Surface Markings and Signs Installed.

A. Precision Instrument Runway Markings (see AC 150/5340-1):.....(yes/no)_____

APPENDIX 2. (continued)

B. Runway Holding Position Markings and Signs (see AC 150/5340-1 and AC 150/5340-18, Standards for Airport Sign Systems, current edition): (yes/no)_____

C. CAT II and touchdown zone ILS Critical Areas Identified. ILS Critical Area Holding Position Markings and Signs (see Order 6750.16, AC 150/5340-1; Order 7110.65, and AC 150/5340-18): (yes/no)_____

IV. Obstruction Clearance. Certification may be obtained from the airport sponsor.

A. Final Approach Surface (Review only if waiver exists for current CAT I operations): Inner Section:

(1) Describe any penetrations of the 50:1 surface out to 10,000 ft.:

_____

(2) Describe any penetrations of the 34:1 surface out to 10,000 ft.:

_____

(3) Describe any penetrations of the 7:1 transitional surfaces:

_____

B. Approach Light Area:

(1) Describe any penetrations of the 50:1 surface:

_____

(2) Light lane clear: (yes/no)_____

C. "Standard" Runway Safety Area. Clear of objects not required for ILS CAT II or fixed by their functional purpose (Ref Order 5200.8):……..(yes/no)_____

D. Touchdown Area Transitional Surfaces. Describe any penetrations of the 7:1 transitional surfaces:_____

V. Electrical Power Requirements. See Order 6950.2. Verify that the following power source code requirements are met, if installed:

Component	Power Source Code	
Threshold and Runway Edge Lights	#1.....	(yes/no)_____
Runway Centerline Lights	#1(not req'd)....	(yes/no)_____
Touchdown Zone Lights	#1(not req'd)....	(yes/no)_____
Approach Lights	#1.....	(yes/no)_____

Requires one (1) second transfer.

VI. National Standards. List all approved and planned modifications to airport national design standards regarding the proposed runway.

_____

_____

_____, _____ _____/_____/_____
Manager, _____ Airports District Office (Division), AXX-XXX Date

_____ _____/_____/_____
CAT II Coordinator Date

_____ _____/_____/_____
Manager, Airports Division Date

APPENDIX 2. AVIATION SYSTEM STANDARDS CHECKLIST FOR CAT II OPERATIONS (continued)

Equipment for _____ Airport, Runway _____ is installed with capability to provide Class II/D/3 performance in support of CAT II approach and landing minimums.

Confirm that all ground system and obstacle clearance requirements are met. Completion of this checklist must reflect achieved/completed status, not planned actions. When all portions of this checklist are complete, please return the checklist expeditiously to appropriate regional AWO/PM in order to preclude delay of CAT II service to the users. Once approval is granted, the regional Flight Standards Division will issue authorization for CAT II operations.

Immediately upon initiation of this checklist, please provide the regional AWO/PM with the name and telephone number of your CAT II coordinator for monitoring the accomplishment of your checklist.

1. AVN-200 Checklist.

A. Indicate results of the following flight inspection parameters. If results conform to CAT II tolerances in accordance with (IAW) Order 8200.1, United States Standard Flight Inspection Manual (current edition) and Order 8240.47, Determination of ILS Glidepath Angle, Reference Datum Height (RDH), and Ground Point of Intercept (GPI), indicate results are satisfactory by placing an "X" under the "SAT" column. If not satisfactory, enter an "X" under the "UNSAT" column and explain in "Remarks."

	SAT	**UNSAT**
LOCALIZER		
Alignment		
Vertical Polarization		
Structure:		
Zone 3		
Zone 4		
Zone 5		
GLIDE SLOPE		
Angle Alignment		
Structure		
Rate of Change/Slope Reversals		
Clearances		
Symmetry		
Enter actual results for RDH, ARDH & RA under "SAT" "UNSAT"		
Reference Datum Height (RDH) (4 NM to Pt. B)		
Achieved Reference Datum Height (ARDH) (6000' to 1000')		
CAT II Radio Altimeter at Decision Height		

Remarks: _____

APPENDIX 2. (continued)

B. CAT II ILS Standard Instrument Approach Procedure (SIAP).

Flight checked to ILS zone 3 (point T) SAT/UNSAT_____
Flight checked to ILS zone 4 (point D) SAT/UNSAT_____
Flight checked to ILS zone 5 (point E) SAT/UNSAT_____

NOTE: Point "T" – A point at specified height located vertically above the intersection of the runway centerline and the runway threshold through which the downward extended straight line portion of the ILS glidepath passes.
Point "D" – A point 12 feet above the runway centerline and 3,000 feet from the runway threshold in the direction of the localizer.
Point "E"—A point 12 feet above the runway centerline and 2,000 feet from the stop end of the runway in the direction of the localizer.

C. CAT II Performance Classification. AVN 200 will evaluate the first two characters of a facility's "Performance Classification" IAW Order 6750. 24, appendix 2, paragraphs 2a and 2b.

Indicate facility Performance Classification: _____

2. CAT II Performance Classification. (Minimum Performance Classification II/D/3; Ref Order 6750.24)

Flight checked to CAT II standards…….. ..... (yes/no)

Localizer CAT III structure to point _____

Airway Facilities has notified AVN of the integrity and continuity for Level 3 ..... (yes/no)

_____ _____/_____/_____
Supervisor, Flight Inspection Activity Date