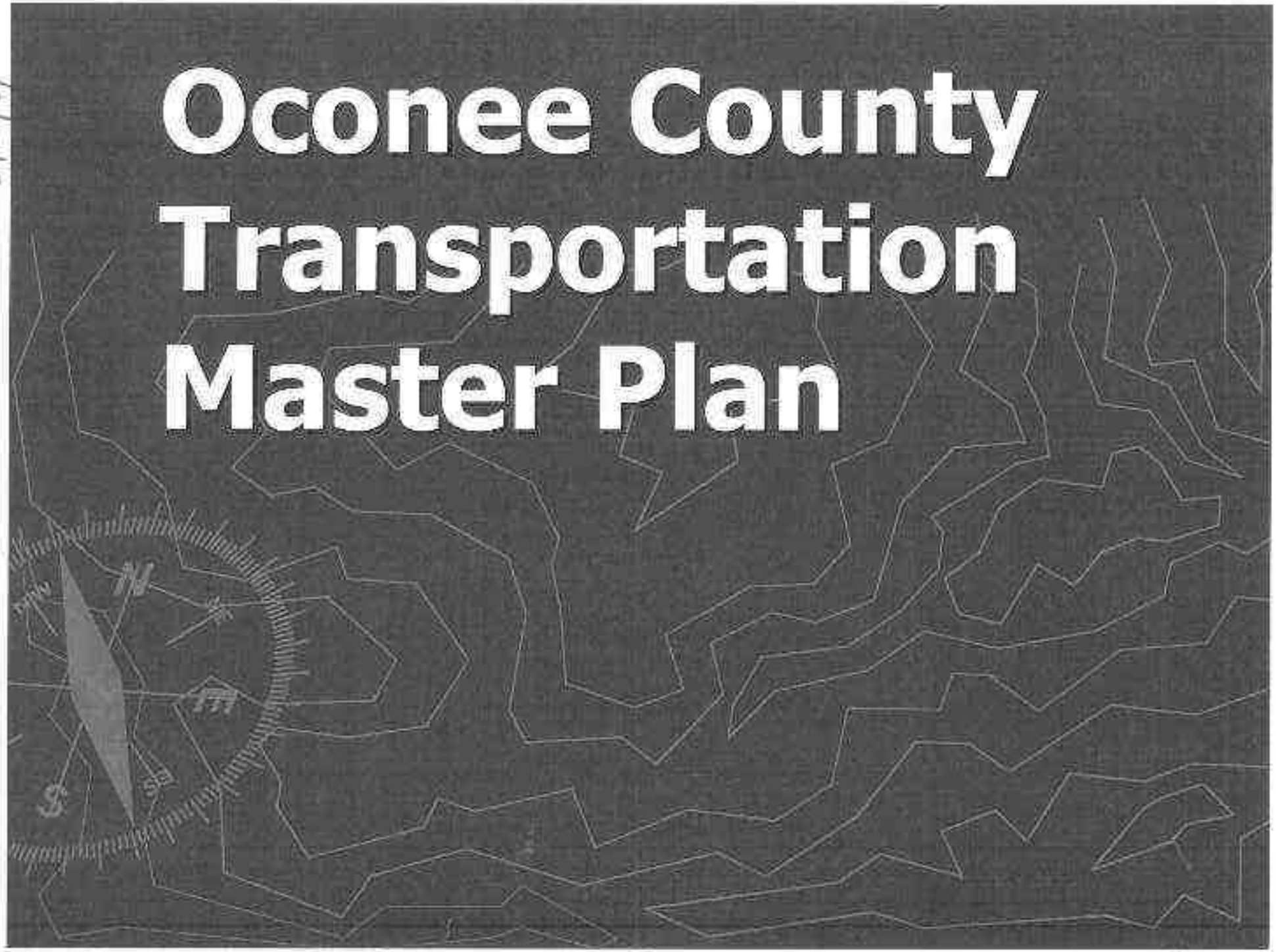
8/16/04

Oconee County Transportation Master Plan



Part 1. OPERATIONAL REQUIREMENTS

The following requirements must be met to operate a facility in the National Airspace System (NAS). Failure to comply with these requirements will result in withdrawal of approval for use of the facility.

1. LICENSING.

a. Facility. The Federal Communications Commission (FCC) license is to be conspicuously posted at the facility or if the facility cannot accommodate it, at a designated location. The normal period of the station license is 5 years, after which time it must be renewed. FCC Form 406 may be obtained from the FCC office. Each application must contain a statement indicating that the FAA has been notified and the date of notification. Renewal applications must be made at least 180 days prior to expiration. Copies of the application and the new license when received must be provided to the appropriate Airway Facilities (AF) office.

b. Maintenance Technician. The equipment shall be operated and maintained only by persons approved by the FAA and licensed by the FCC as required below. This person is hereafter referred to in this manual as the Non Federal Technician (NFT).

(1) An FCC license is required for all NFTs who maintain RF transmitting equipment. A general class radiotelephone operator license satisfies the FCC requirement. A copy of this license must be provided to the FAA regional/field office.

(2) FAA approval will be granted following the successful completion of both of the following:

(a) FAA or FAA-approved manufacturer's school or satisfactory completion of a concept examination to be administered by a representative of the FAA. It is to be understood that the satisfactory completion of the concept examination precludes the necessity of the resident training.

(b) A performance examination to be given by a representative of the FAA.

(3) A letter of technical verification will be provided by the FAA stating that these requirements have been met.

2. NOTICE TO AIRMEN. A Notice to Airmen (NOTAM) contains the establishment condition, or change in any aeronautical facility, service, procedure, or hazard, the timely knowledge of which is essential to personnel concerned with flight operations. Deviation from normal operation or failure of this facility is to be promptly and accurately publicized by a NOTAM. The sponsor and the technician responsible for the equipment maintenance shall be notified immediately of reports concerning irregular operation of this facility by pilots or other persons detecting the irregularity. The sponsor or the authorized representative shall ensure that a NOTAM has been filed through the associated FAA Maintenance Control Center (MCC). The sponsor or the representative shall communicate NOTAM information and other matters related to the facility status to the MCC. The MCC telephone number is listed on Part IV, par. 3 e. (1) of this Operation and Maintenance Manual (OMM). Collect calls to the MCC are acceptable. The MCC will be responsible for coordinating with the Flight Service Station (FSS) and all other FAA offices on all matters pertaining to non-federal facilities. The sponsor or the authorized representative shall also ensure that the MCC is notified of any facility failure or abnormal facility condition exceeding or expected to exceed 24 hours. A NOTAM which has not been initiated by the sponsor or the representative but is issued by an FAA Non-Federal Facilities Inspector, MCC personnel or flight inspection personnel shall be canceled only by the issuer and shall not be canceled by

the facility sponsor or the representative. When a NOTAM has been issued showing a facility out of service, the facility shall be turned off or may radiate continuously only with the identification removed.

3. MONITORING.

a. Policy. It is FAA policy that all electronic navigational facilities used in support of instrument flight procedures be continuously monitored. Category 1 or Category 4 monitoring requires that a responsible observer check the remote status indicator at least once each half hour. FAA-approved monitoring equipment shall be provided to enable detection of any of the following conditions:

(1) A malfunction or failure of the transmitter equipment.

(2) A malfunction or failure of the monitor equipment itself.

b. Facility Classification. Navigational facilities are classified in accordance with the manner in which they are monitored. No change of monitoring status of the navigational aids shall be effected without prior FAA approval. The monitoring categories are as listed below:

(1) Category 1. Internal monitoring with a status indicator installed at a manned control point. Facilities can be used for instrument flight procedures without limitation. In the event of failure of the remote status indicator at the manned control point, a NOTAM must be issued that the facility is operating unmonitored (i.e. reverts to Category 2 status).

(2) Category 2. Internal monitoring with an inoperative status indicator at a control point, but pilot reports indicates that the facility is operating normally. This is a temporary condition and is not considered in procedures development. These facilities are taken out of service by issuing a NOTAM when two pilot reports indicate facility malfunction.

(3) Category 3. Internal monitoring only. A status indicator not installed at a control point or if a non-fail-safe condition exists. With the loss of internal monitoring, the facility is removed from service and a NOTAM issued. Facilities may be used in accordance with the following limitations:

(a) Alternate minima shall not be authorized if the facility provides a final approach course guidance, is required for procedure entry, is used to define the final approach fix, or is used to provide missed approach guidance.

(b) When the facility is used to designate a step-down fix, alternate minima shall be no lower than the circling minima required without the step-down fix.

(c) Dogleg airways or routes shall not be predicated on these facilities.

(d) Navigational fixes developed from crossing radials of category 3 facilities shall not be used to break a minimum en route altitude to a higher minimum en route altitude.

(4) Category 4. This category is applicable only to nondirectional beacons. Internal monitoring is not installed but a remote status indicator is provided at a control point. Failure of the status indicator will render the facility and the approach procedure unusable during the outage. Facilities may be used in accordance with the following limitations:

(a) Alternate minima may be authorized when the remote status indicator is located in an FAA traffic facility and then only during periods that the control point is attended.

(b) If the control point is other than an FAA facility, a written agreement shall exist whereby the MCC is notified of indicated changes in facility status.

c. Remote Status Indicator Failure. To issue a NOTAM permitting continued operation for a facility where the remote status indicator has failed, the following conditions must be met:

(1) The facility is equipped with a properly operating automatic shutdown feature.

(2) No reports of abnormal facility operation are received.

NOTE: If these conditions are not met, the MCC shall be notified to issue a NOTAM to place the facility out of service.

4. SHUTDOWN FOR ROUTINE MAINTENANCE. Maintenance shall be performed only when the following conditions exist:

a. Conditions. Scheduled interruptions shall be confined to visual flight rules (VFR) conditions, daylight hours, and periods of light traffic unless conditions are such that imminent facility failure requires immediate corrective action.

b. Coordination. The interruption of service shall be coordinated through the MCC. The MCC shall coordinate with other FAA offices to ensure NOTAMs are appropriately issued and canceled. Notification shall be made so that the notice of shutdown or interruption will be published in advance of the proposed interruption. At no time shall a request for shutdown be made less than one hour prior to the shutdown unless emergency conditions require a shorter notification time frame. Facilities shall not be shut down without MCC approval.

c. NOTAM. A NOTAM shall be in effect announcing the scheduled interruption and the facility will not be shutdown until that specified time has arrived. The advance notification of the interruption will state that the interruption will last for a specific period of time, or will indicate a starting time and an indication that the interruption will be until further notice (UFN) if the ending time of the interruption is unknown.

d. Facility Identification Signal. The facility identification signal shall be disabled while maintenance is being performed.

5. PILOT REPORT. The sponsor shall remove the facility from service immediately upon receipt of two successive pilot reports (PIREPS) of malfunctioning. The facility will remain out of service until the proper operation can be confirmed by the NFT and/or flight inspection aircraft if necessary.

6. REQUIRED SUPPORT ITEMS.

a. Test Equipment. The sponsor or sponsor's maintenance contractor shall provide FAA-approved test equipment needed for maintenance of the facility. Test equipment must be capable of accurately measuring to the appropriate technical standards and tolerances to be used for facility verification. This test equipment must be calibrated in accordance with this order and the appropriate operations and maintenance manual. All test equipment calibration shall be accomplished by a test equipment calibration shop or lab with standards traceable to the National Institute of Standards and Technology. A calibration tag/sticker indicating the last and next calibration date will be affixed to the calibrated test equipment.

b. Spare Parts. There shall be a stock of spare parts sufficient to make possible prompt replacement of components which fail or deteriorate in service.

7. EMERGENCIES.

a. Military. In a case of a national defense alert, the facility shall be shutdown in the shortest possible time after the alert is received from the MCC and shall remain off the air until official notice is received that the alert is over.

b. Aircraft Accident. Part III of this manual provides guidance in case of an aircraft accident.

8. ADJUSTMENT OF EQUIPMENT THROUGH REMOTE MAINTENANCE MONITORING (RMM). Any non-Federal facility having RMM uplink adjustment capability shall have an associated printer which documents all maintenance activities. This printer shall make a record for the review of visiting FAA personnel of all logons and equipment adjustment which may be initiated from a remote terminal. Printouts will be maintained a minimum of 2 years before being discarded.

PART II. MAINTENANCE REQUIREMENTS

9. GENERAL.

a. Facility Maintenance. The facility shall be maintained in accordance with the applicable subparts of FAR Part 171 and manufacturer's instruction books, maintenance technical handbooks, and/or other FAA-approved requirements. FAA standards and tolerances will be used. If they do not exist, then the manufacturer's handbook will be used.

NOTE: The maintenance schedules and requirements contained in these publications are to be considered the minimum level of maintenance in accordance with FAR Part 171 and this document.

b. FAA Responsibilities. The FAA shall be responsible for providing FAA forms and appropriate FAA publications or excerpts from FAA publications required for maintenance of the facility. These forms will be made available by the FAA office having inspection responsibility at no charge. The same office may be contacted for information on obtaining Orders and handbooks, in their entirety, if desired.

c. Maintenance Violations. If a certified maintenance technician is not assigned or if the maintenance schedules as set forth in FAA-approved maintenance procedures are not adhered to, the equipment shall be removed from service unless the sponsor or his/her designated representative has coordinated the exact circumstances with the FAA.

d. Facility Reference Data File. The facility reference data file FAA Form 6030-17 series (facility requirements performance and adjustment data forms, called Record of Meter Readings and Adjustments, Form FAA 198, in FAR Part 171) shall be completed by the owner or the owner's representative at the time of the facility commissioning. One copy must be kept in the permanent records of the facility and one copy must be sent to the FAA office having inspection responsibility. The sponsor or the sponsor's representative must revise the data after any major repair, modernization, or retuning to reflect an accurate record of facility operation and adjustment. In the event the data is revised the owner or the owner's representative shall notify the FAA office having inspection responsibility of such revisions and forward copies of the revisions to that FAA office within 10 working days.

e. Facility Maintenance Log. FAA Form 6030-1.

(1) This log (called Facility Maintenance Log, Form FAA 406e, in FAR Part 171) is a legal record of all of the activities required to maintain the facility. In the event of an aircraft accident/incident the log pages and other maintenance records may be subpoenaed for legal proceedings. Log entries shall be clear, complete, concise, and recorded in Universal Time, Coordinated (UTC). The entries must include all malfunctions encountered in maintaining the facility, including information on the kind of work and adjustments made, equipment failures, causes (if determined), and corrective action taken. In addition, the entries must include statements describing periodic maintenance activities required to maintain the facility, facility verification statements, and NOTAM information. The FAA Form 6030-1, Facility Maintenance Log shall be terminated (per Attachment 4, para. 2.b.(3)) following the periodic verification statement discussed below and the yellow pages, or copies of the log pages, shall be sent to the appropriate AF office (Part IV, 3.c.) within 10 working days. If these log pages are not received within 60 days after the scheduled verification date, a NOTAM may be issued (at the discretion of the FAA inspector) for the facility, indicating that the approach procedures are out of service until the required records are received. Unscheduled verification of the facility does not require submission of the log pages, unless the NFT changes the schedule based on the unscheduled verification. The log may be terminated and pages sent in more often, at the sponsor's discretion. The original white pages of the

maintenance logs shall be retained at the facility for a period of 3 years or longer, if there are unresolved claims against the owner with regard to the facility following an aircraft accident/incident.

(2) Among the most important entries in the facility maintenance log are those indicating the verification status of a system, subsystem or equipment. For the purpose of this OMM, the word "certification" used in FAA directives shall be synonymous with "verification." Verification statements shall be entered in the facility maintenance log (FAA Form 6030-1) in accordance with appropriate FAA directives and orders. A verification statement shall be made before returning a system, subsystem, or equipment to service after the system has been out of service due to hardware or software failure. A verification statement shall also be made whenever maintenance work has been performed which may have affected verification parameters and on a periodic basis not to exceed the maximum intervals as specified by Attachment 2 of this OMM.

(3) Remote Controlling Manual Log. Each remotely monitored non-Federal facility shall be listed on the cover of the remote controlling manual log ("manual log" refers to FAA Form 6030-1) in the space reserved for subsidiary logs. Each non-Federal facility shall be the subject of a manual log at the actual facility site. All logging events conducted from the remote location will be included in the remote controlling manual log. Log entries at the actual facility shall relate only to events that occur while the site is occupied. These entries need not be repeated in the remote controlling manual log. The remote facility log format shall be the same as the local facility log format as described in Attachment 4 of this OMM. At no time will entries made in the remote facility log contradict entries made in the local facility log. The remote controlling and site manual logs shall be terminated in accordance with the requirements for Facility Maintenance Logs in paragraph 9e(1), preceding, and copies of the remote controlling manual log and site log shall be collected by the FAA inspector, when terminated, in accordance with those same requirements.

f. Technical Performance Record (TPR). The Technical Performance Record FAA Form 6000 Series (called Radio Equipment Operation Record, Form FAA 418, in FAR Part 171), contains a record of system parameters recorded during each scheduled visit to the facility. Copies of the TPRs shall be submitted to the appropriate AF office with the log pages as described in paragraph 9.e.(1). TPRs shall be filled out and retained at the facility for a period of 3 years, or longer, if there are unresolved claims against the owner with regard to the facility following an aircraft accident/incident.

g. Incorporation of Improvements or Modifications. Improvement in maintenance procedures or equipment modifications shall be funded and incorporated by the sponsor following approval by the FAA. The sponsor shall submit any proposed modifications to the facility to the FAA for approval and shall not permit any modifications to be performed without specific FAA approval. Approved changes shall be appropriately recorded. An addendum to the OMM, approved by the FAA, shall be completed if necessary. Consult with the FAA office having inspection responsibility for information on current forms and procedures.

h. Replacement or Relocation of Equipment or Antenna. Neither the equipment nor antenna will be replaced or relocated without prior FAA approval. No construction is to be planned in the vicinity that may alter or affect the facility without first coordinating with the FAA. Storm monitor receivers shall not be removed or relocated without FAA approval.

i. Obstructions. Vegetation, snow depth, and other potential obstructions to accuracy of the facility operations shall be controlled in accordance with applicable FAA handbooks. Consult with the FAA office having inspection responsibility for information on current policy/practice.

10. PHYSICAL SECURITY. The facility shall be kept when unattended. Normal protection shall be provided to ensure that unauthorized personnel do not have access to the equipment.

11. FLIGHT INSPECTIONS. Flight inspections will be performed as stipulated in FAA Handbook OA P 8200.1, United States Standard Flight Inspection Manual. The sponsor shall provide ground-to-air communications on 135.85 or 135.95 megahertz for flight inspection when required. The NFT shall participate in this inspection if required by the FAA. Any activities, which might change the signal in space and cannot be verified by ground test equipment or the facility executive monitor, (either because the monitor does not check the parameter or because of concurrent changes to the monitor) require a confirming flight inspection.

a. Examples of these activities include, but are not limited to:

Replacement of one or more antennas, relocation or replacement of the antenna array or changing the length of one or more antenna feedlines.
Relocation or replacement of the transmitter/monitor.
Facility frequency change.
Permanent power reductions of more than 50%.
Permanent power increase to improve usable distance.
Changes to the environment around the antenna which could affect the radiation pattern.

b. Additional activities requiring flight inspection are outlined in the FAA maintenance technical handbooks and orders.

c. The MCC is responsible for coordinating the scheduling of all special flight checks that are requested from the field regardless of the nature of the request. The NFT shall make all requests for flight checks on non-federal facilities through the MCC. The MCC shall coordinate the flight check with SMO Non-Federal Program Coordinator and the FAA Flight Inspection Office and advise the NFT of the approval or disapproval of the request. The MCC shall also provide the NFT with the date and time information on approved flight checks requests.

12. GROUND INSPECTIONS.

a. FAA Ground Inspection. FAA ground inspection will be accomplished on a periodic basis. Prior notification of ground inspection will be given to the facility technician after coordination with the sponsor. Failure to meet the technical standards for equipment maintenance or failure to perform a FAA ground inspection within the tolerance period (Attachment 4, Table 1) may be grounds for cancellation of the facility's instrument approach procedure. If one becomes necessary, a NOTAM will be issued showing the facility out of service and action initiated to remove the instrument approach from publication.

b. FAA Follow-Up Inspection. The FAA may conduct a follow-up inspection when a facility may have been a factor in an aircraft accident/incident. (see Part III). Other follow-up inspections may be required due to findings during the normally scheduled ground inspection or because of excessive reported facility discrepancies.

13. SAFETY. Occupational Safety and Health Administration requirements should be followed to ensure personnel safety. Vegetation shall be controlled to allow access to the facility.

14. NAPRS DATA. (To be provided.)

PART III. AIRCRAFT ACCIDENT PROCEDURES

15. GENERAL. This part has been provided to help expedite the certification/verification of facilities in the event of an aircraft accident and to help ensure that all required actions are accomplished. It contains the following:

a. General information checklist.

b. Facility evaluation checklist (completed for each facility evaluated by the certifying/verifying technician).

NOTE: The non-Federal technician completes original checklists. The original accident checklists shall be retained in owner/sponsor office with a copy to the FAA System Management Office (SMO).

16. INFORMATION AND INSTRUCTIONS.

a. There are a series of steps to be performed following an aircraft accident. These steps need to be performed in a very precise manner so that a true and accurate status of a facility is documented. The latest edition of FAA Order 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting, is the controlling directive and will take precedence over other instructions where there are conflicts. The MCC is the single point of contact. The MCC shall provide information to the AF Aircraft Accident Representative (AFAAR) and in turn notify all concerned parties of AFAAR instructions. In general, the steps to be performed are outlined below and will be performed in the following sequence:

(1) Coordination with the controlling MCC (refer to Part IV, para. 3.g.)

(2) Initial determination of facility status. (paragraph 17)

(3) Notification of the MCC of facility status. (paragraph 18)

(4) Technical evaluation of facility. (paragraph 19)

(5) Documentation of the condition of the facility. (paragraph 20)

(6) Notification to the MCC of "as-found" condition. (paragraph 21)

(7) Flight check if applicable. (paragraph 22)

b. When a facility has been identified as possibly being used by an aircraft involved in an accident, the NFT will be notified by the MCC. If notification comes from anyone other than the MCC, then the NFT shall contact the MCC for instructions. Generally, the SMO/Sector manager (or his/her designee as shown in Part IV 3g) will be the AFAAR and will provide the guidance through the MCC to the NFT as to who will do what and when. In accordance with FAA Order 8020.11, FAA Flight Standards (FS) will assign an FAA Investigator In Charge (FAAIIC) who will direct and control all FAA participation in the investigation. The FAAIIC will be in direct contact with the MCC and the AFAAR, and any instructions for the NFT shall come from the MCC.

NOTE: Complete the General Information Checklist.

17. INITIAL DETERMINATION OF FACILITY STATUS. This is important because it provides both AT and AF with information that is needed to make other decisions vital to public safety. Unless instructed to the contrary, an NFT shall not do this step alone. Another person shall accompany the NFT to ensure that there is no question in the future as to what took place at the facility. The NFT making the initial determination of the facility status must have current certification/verification authority on the facility. The person accompanying the technician should be an FAA technician but, if necessary, can be someone else in order to save time. Log entries shall be made indicating the purpose of the visit and the results of the initial determination. The type of information to be obtained during an initial determination visit to a facility are only those items that can visually be learned to ascertain whether a facility was or was not operating normally immediately preceding or at the time of the accident. No adjustments or control functions are to be performed; only that information which can be learned by looking at equipment indicator, meters, etc., shall be used.

NOTE: Complete paragraphs 1 through 2a(4)(d) of the Facility Evaluation Checklist.

18. NOTIFICATION TO MCC OF FACILITY STATUS. The information obtained on the facility status shall be communicated to the MCC as soon as possible. An entry stating the time of the call and the initials of the MCC person who was given this information shall be made in the facility log.

NOTE: Complete paragraphs 2a(4)(e) and 2b of the Facility Evaluation Checklist.

19. TECHNICAL EVALUATION OF FACILITY. When an NFT has been notified by the MCC that a complete technical evaluation of a facility is to take place, two people shall be involved in the evaluation process. One person will be the NFT responsible for performing the evaluation and is required to possess current verification authority on the facility involved. The other person shall be an FAA technician or an individual designated by the MCC, who will act as an observer and will normally possess current certification/verification authority. The requirement for an observer can only be waived by the AFAAR. The request for a waiver shall be made to the MCC. If no waiver has been granted, the technical evaluation is NOT to take place without an observer. If the observer requirement has been waived, then the person doing the evaluation shall not be the last person who verified the facility. When a waiver has been granted, the person doing the evaluation shall have the same verification authority on the facility as the last person who verified the facility.

NOTE: Complete paragraphs 3 and 4 of the Facility Evaluation Checklist.

20. DOCUMENTATION OF THE CONDITION OF THE FACILITY. This step is just as important as any other and needs to be done with attention to detail. This includes entries in technical performance records, facility maintenance logs, RMM screens, and ground check forms. The statements shown in the facility evaluation checklist have been established to provide a standard description that can be uniformly interpreted by everybody concerned with the accident. It is extremely important that all entries are accurate and complete.

21. NOTIFICATION TO THE MCC OF "AS-FOUND" CONDITION. This step needs to be completed as soon as possible so that decisions can be made regarding further actions, such as whether or not to call for a flight check. If the decision is made to call for a flight check of the facility, the MCC will communicate this to the NFT and will take the necessary action to request the flight check.

22. FLIGHT CHECK IF APPLICABLE. This is determined by the FAAIC.

NOTE: Do not write on these checklists. Use blank copies of checklists.

GENERAL INFORMATION CHECKLIST
(Aircraft Accident/Incident)

NOTE: This checklist is to be completed by the non-Federal technician (NFT). The original will be retained in the owner/sponsor office. A copy shall be sent to the FAA Regional AF Division; ATTN: AFAAR, through the SMO office having inspection responsibility. Only one General Information Checklist needs to be filled out for all facilities involved. Each facility involved, however, requires a separate Facility Evaluation Checklist.

1. Print below the name of the first Non-Federal person contacted by the MCC

_____

Print below the name of the MCC person who made the contact

_____

Write the time (in UTC) below that the contact was made by the MCC

_____

2. The non-Federal person in paragraph 1 above shall contact the facility owner/sponsor and others as required by these instructions.

Enter the time of completion of paragraph 2 (above) requirements.

Time completed _____

3. The AFAAR will determine with ATs help which facilities may have been or were used by the aircraft: the aircraft number and type and location of crash, time of crash, and the type of flight plan. The MCC will advise the NFT of which facilities require further action. All facilities requiring further action shall be listed below. Fill out a separate facility evaluation checklist for each facility requiring further action. All pages in the checklist shall be filled out for each facility involved.

FACILITIES IDENTIFIED BY AFAAR

_____	_____
Fac Ident./Fac. Type	Fac Ident./Fac. Type
_____	_____
Fac Ident./Fac. Type	Fac Ident./Fac. Type
_____	_____
Fac Ident./Fac. Type	Fac Ident./Fac. Type
_____	_____
Fac Ident./Fac. Type	Fac Ident./Fac. Type

7/26/2004

AIRCRAFT INFORMATION

Aircraft Type: _____ Aircraft ID _____

Date/Time of Accident: _____

Location of accident, if known: _____

Aircraft on: ___IFR ___ VFR ___ No flight plan

NET _____ _____

Print Name Signature

FACILITY EVALUATION CHECKLIST

Facility Ident./Type _____ Facility Location _____

Date of this Evaluation _____ Name of NFT _____

Name of Observer _____

NOTE: This checklist is to be completed by the non-Federal technician (NFT). The original will be retained in the owner/sponsor office. A copy shall be sent to the FAA Regional AF Division, ATTN: AFAAR, through the SMO office having inspection responsibility. Complete a separate facility evaluation checklist for each facility listed on the General Information checklist.

1. If the facility is remotely monitored, contact the facility responsible for monitoring and ask if there were any monitoring alarms or pilot reported problems. If the facility is remotely monitored by an FAA office, contact the MCC to obtain this information.

a. Remote monitor alarms prior to accident? Yes___ No___ N/A _____

b. Pilot reported facility malfunction of non-Federal equipment prior to accident?

Yes ___ No___ Unknown_____

2. The AFAAR, through the MCC, normally will direct the owner/sponsor to designate his NFT and the observer (if not waived) to complete an initial determination of facility status. The NFT may be contacted directly by the MCC, if the sponsor is not available, to accomplish this requirement.

a. Initial determination of facility status. If the facility has no remote monitoring or RMM, it will be necessary to get two pilot reports to confirm proper operation or go to the facility. If you go to the facility, enter required data in the facility log upon arrival at the facility. An observer will normally be required; however, under certain conditions, the observer requirement may be waived by the AFAAR. The MCC will advise the sponsor or NFT if the observer requirement will be waived.

(1) Observer requirement waived by the AFAAR? Yes ___ No ___

(2) If yes, record the name or initials of the MCC contact person reporting the waiver of the requirement to the NFT. _____

(3) If yes, record the name below of the NFT that last verified the facility.

_____

(4) Make the following entries in the facility log and check off when completed:

(a) Arrival time at facility (in UTC): _____

(b) Weather condition at facility: _____

(c) The completion of an initial evaluation of facility operational status. _____

(d) Which equipment is in service, if applicable (main or standby, #1 or #2); status of power (commercial, or standby gen); monitor alarms, transfers, etc. _____

(e) MCC notified of initial determination _____

(f) Initials of MCC person contacted _____

b. Initial determination of facility status Normal_____Abnormal____

In Service _____Out of service____

Time facility verification was completed, if applicable_____

3. If instructed by the MCC, the verifying NFT shall proceed with the technical evaluation and measurement of the facility performance and make appropriate entries in the facility log and technical performance records. Arrange for an observer with the MCC. Do not proceed with the technical evaluation until the observer is on-site. The technical performance of facilities, systems, or equipment shall be determined by checking all key performance parameters required by Attachment 1 of this OMM. Key performance parameters are indicated by an arrow (→) to the left of the parameter. The verification parameters are listed in Attachment 4 of this OMM in the verification statement page(s). With the observer at the facility, measure all required parameters or observe at the RMM positions as applicable.

a. Did the MCC inform the NFT that the observer requirement was waived by the AFAAR? Yes_____ No_____

b. If no, wait for the observer to arrive before beginning the evaluation.

c. If yes, record the name or initials below of the MCC contact person who reported the waiver of the observer requirement to the NFT.

_____

d. If yes, record below the name of the NFT who last verified the facility.

_____

NOTE: NO EQUIPMENT ADJUSTMENTS ARE TO BE MADE UNTIL THE "AS-FOUND" READINGS ARE RECORDED AND/OR AFTER THE FLIGHT CHECK (IF REQUIRED) IS ACCOMPLISHED.

b. If a transfer has occurred since the last facility visit, take the following action:

Checkoff

(1) If the facility is remotely monitored, contact the monitoring point and ask if there have been any short duration alarms or facility transfers indicated. Contact the MCC if the monitoring facility is an FAA office. _____

(2) If no transfers or intermittent alarms have occurred within a period beginning 1 hour prior to and ending 30 minutes after the accident, take the necessary action to verify only the equipment found in operation upon

arrival. If there is any question about whether the standby equipment was in operation at the time of the accident, verify it also. When in doubt, verify. _____

(3) If unable to determine if there were any transfers or alarms within the times specified in subparagraph (2) above, proceed to verify the equipment (main and standby, if applicable) and record the action with a verification statement log entry.

c. If the facility is not operational upon arrival, proceed as follows:

(1) Note the status of the monitor and transfer unit if such a unit is installed. Record the facility status in the log. (Verify monitor indications at the remote monitoring facility, if practical.) _____

(2) Dial or push the reset button; do not make any adjustments. _____

(3) If the facility returns to normal, make required meter readings and log entries, then notify the monitor location and the MCC. _____

(4) If the facility fails to restore to normal after resetting it, notify the MCC immediately for further instructions. _____

d. Facilities with published ground-check procedures shall have the ground-check performed. _____

6. Are any verification parameter out of tolerance? Yes ___ No ___

a. If no, proceed to checklist paragraph 5.

b. If yes, list below the verification parameter(s) found out of tolerance:

_____

_____

_____

c. Take appropriate action to remove the facility from service and advise the MCC of the out-of-tolerance condition(s) found. Measure and record all key performance parameters. _____

d. Was any key performance parameter listed in Attachment 1 of this OMM determined to be not "germane" (relevant) to the evaluation and thus not measured? Yes ___ No ___

NOTE: Determination of what parameters are not "germane" must be coordinated with the MCC.

If yes, were details of the unmeasured parameter(s) and initials of the

MCC person contacted logged in the facility log? Yes____ No____

5. Is a flight check required? Yes____ No____

NOTE: Coordinate with MCC for this determination.

6. Specific Documentation of Data and Adjustments.

a. Meter readings shall be recorded accurately on the appropriate FAA Form 6030 series, Technical Performance Record(s), or on FAA Form 6030-1, Facility Maintenance Log(s) if a block to enter the measurement is not provided in the 6030 series form(s). For RMM facilities, all required verification screens shall be taken and a hard copy retained if remotely verified. Each screen must be verified. If the equipment involved is operational, a set of "as-found" readings or screens shall be recorded prior to any preventive or corrective maintenance. Normally, no such maintenance will be accomplished at a facility subject to flight check until after the flight check crew has determined the "as-found" condition of the facility. However, if weather or other circumstances cause the flight check to be unduly delayed and there is an urgent need to restore a failed facility to normal operation prior to flight inspection in order to make it available to other users, the NFT shall make no adjustments until instructed to do so by the MCC. The decision to restore a facility to service under these circumstances will be made jointly by the air traffic, airway facilities, and flight standard FAA division managers and communicated to the NFT by the MCC.

(1) This decision should be based upon the recommendations of the responsible AF SMO manager and the ATF facility manager and if it occurs, the NFT will be advised by the MCC. If a facility subject to flight check is restored to operation preceding the start of the flight check, a set of "as-left" readings or screens shall be recorded and so identified following any maintenance action(s). A statement that the system, subsystem, equipment, or facility is NOT verified for user use shall be entered following the "as-left" statement on the facility maintenance log. The MCC shall be advised of this action.

(2) If the system, subsystem, equipment, or facility cannot be restored or is considered unreliable (in the judgment of the NFT), the verification shall be removed and the facility will be left off the air.

(3) A statement shall be entered immediately below each set of readings or each screen identifying whether they are "as found" or "as left" following. . . (specify exactly what preventive or corrective action was taken). If no adjustments or other maintenance were accomplished, a single statement will suffice, followed by a verification statement if the entries were made on the facility maintenance log. The statement to be used on the technical performance record is shown below:

FAA FORM 6030 SERIES AND RMM SCREENS

"I verify that the above is a true record of the

_____ meter readings

(Enter facility location identifier and facility type)

_____

(Enter "as found" or "as left" or "as found and left" or "screens")

at the date and time indicated.

Check Off

NFT: _____ Done: ____
(Signature)

_____
(Printed name)

Observer: _____ Done: ____
(Signature)

_____
(Printed name)

Observer: _____
(Title)

b. Facility maintenance log entries shall describe conditions as found in clear, concise language. A typical entry covering an instrument landing system (ILS) glide slope post-accident evaluation visit wherein no out-of-tolerance conditions were found might be as follows:

"08/1020 - The operation of the ILS glide slope on runway 09 was checked at 0930 this date and found to be normal. Verification performance parameters or screens are within established standards and tolerances and verified."

For RMM facilities, all facility maintenance log verification entries shall be entered in the appropriate remote facility log.

c. Each entry covering checks made as a result of an aircraft accident shall be verified. The statements to be used for facility log entries are shown below:

FAA Form 6030-1 Log

"I verify that this is a true and complete statement of my findings with regard to the

_____
(Enter facility ident./facility type)

for the date and time indicated."

NOTE: The word "verify" above refers to the statement in paragraph 6c above, not facility verification.

"The following corrective action(s) were accomplished (if applicable)."

_____

_____

"The following key performance parameters were not germane to this evaluation and are omitted (if applicable)."

_____

"The ____ is
(Enter Facility ident./Facility type)

____."
(Enter verified, or out-of-service, or unreliable, and verification is removed in accordance with Attachment 4, par. 4, a. of this OMM).

Check Off

NFT: ______________________________ Done____
(Signature)

Observer: ______________________________ Done____
(Signature)

Observer Title ______________________________

Requirement for Observer Waived Yes___ No___

Ground Check Performed: Yes____ Not Applicable_____

d. In the event that a facility flight inspection is to be performed as a result of an accident, the NFT shall record on the FAA Form 6000 series, screens (if applicable) and the FAA Form 6030-1 using the above format, the following:

(1) Conditions "as found" before the flight check.

(2) Concise description of all adjustments or other maintenance performed subsequent to the accident and the reason therefore.

Note: No adjustments shall be made on facilities that were determined to require a flight check, prior to the flight check except as indicated in par. 6 a. and 6. a. (1) on of this checklist. See subpart. (3) below for action associated with adjustments required during the flight check.

(3) Concise description of all adjustments made during the flight inspection.

(4) Conditions "as left" following the flight inspection.

PART IV NON-FEDERAL FACILITY DATA

1. FACILITY

a. Type: Nondirectional Radiobeacon

b. Identifier: CEU/NDB

c. Facility Name: Clemson NDB

d. Airport Name: Clemson-Oconee County

e. Location (City & State): Clemson, SC

f. Directions to Facility: On the airport

g. Site Elevation (MSL): 891 feet

h. Antenna Elevation (AGL): 55 feet

i. Latitude: N 34° 40' 18.9"

j. Longitude: W 082° 53' 12.5"

k. Frequency: 257 Khz

l. FCC Licensed Power: 25 watts Modulation Class: N/A

m. License Number: WRLB2662

n. License Expiration Date: 4/21/2007

2. EQUIPMENT

a. Transmitter Manufacturer: Southern Avionics

b. Transmitter Model: SS-250

c. Internal Monitor/Shutdown: Yes_X_ No___

d. External Monitor/Status: Yes_X_ No___

e. Receiver Manufacturer: Southern Avionics

f. Receiver Model: MR-7A

g. Transmitter Antenna Type/Model: Twin 'T' (55'x350')

h. Standby Power (Type): None

3. CONTACTS.

a. Sponsor:

Name: County of Oconee

b. Sponsor's Representative:

(1) Name/Title: Harry Hamilton, County Administrator

(2) Telephone: (864) 638-4244

(3) Address: 415 South Pine Street

Walhalla, SC 29691

c. Verified Maintenance Technician:

(1) Name: Doug Hammond

(2) Telephone: (803) 968-6192

(3) Address: 2685 Circleview Drive

Sumter, SC 29154

(4) FCC License Number: PG-6-7614

d. Person in charge of monitoring location:

(1) Name: Shift Supervisor, Campus Police

(2) Telephone: (864) 656-2222

(3) Address: Tiger Stadium, Clemson University

Clemson, SC 29634

(4) Monitoring Hours: 24

e. Federal Aviation Administration:

(1) Associated MCC/Telephone: Atlantic ARTCC (866) 432-2627

(2) Associated SMO/Telephone: Columbia SMO (803) 822-4400

(3) Associated SMO Non-Federal Program Coordinator: Mike Nuttinger

Telephone: (803) 822-4408

f. Submit required forms to appropriate Airway Facilities Office:

(1) Name: FAA Columbia System Management Office

(2) Address: 2825-A Aviation Way

West Columbia, SC 29170-2391

g. FAA telephone number contacts for aircraft accidents:

(1) Associated MCC/Telephone: Atlantic DCC (866)432-2622

(2) Associated MCC/Fax: (770) 210-7391

ATTACHMENT 1

Facility Equipment Performance Standards and Tolerances

If an FAA Maintenance Handbook is applicable to the Non-Federal equipment, include a copy of Chapter 3. If no handbook is applicable refer to the appropriate section of the equipment Technical Instruction Manual.

CHAPTER 3. STANDARDS AND TOLERANCES

51. GENERAL.

This chapter prescribes the standards and tolerances for nondirectional beacon (NDB) facilities as defined and described in Order 6000.15A. All key performances parameters and/or key inspection elements are identified by an arrow (→) placed to the left of the appropriated item.

Parameter	Reference Paragraph	Standard	Tolerance/Limit	
			Initial	Operational
→ 52. RF CARRIER ANTENNA CURRENT.	141	Antenna current as established by flight inspection	Same as standard	±50 percent of initial
53. MODULATION LEVELS	142			
a. NDB Nonsimultaneous Transmitter Output (Voice or Tone)		90 percent	Standard ±5 percent	80 to 95 percent
b. NDB Simultaneous Transmitter Output.				
(1) Voice		70 percent	Standard ±5 percent	60 to 75 percent
(2) Tone		20 percent	15 to 20 percent	Same as initial
→ 54. FREQUENCY	147			
a. Carrier				
(1) One Frequency		Authorized	Standard ±.01 percent	Same as initial
(2) Two Frequency				
(a) Carrier		Authorized	Standard ±.01 percent	Same as initial
(b) Sideband		1020Hz above the carrier frequency	970 to 1070Hz above the carrier frequency	Same as initial
b. Identification				
(1) 400Hz Tone		400Hz	375 to 425Hz	Same as initial
(2) 1020Hz Tone		1020Hz	970 to 1070Hz	Same as initial
→ 55. MONITOR ALARM POINTS	145			

Parameter	Reference Paragraph	Standard	Tolerance Limit: Initial	Tolerance Limit: Operating
a. Local Monitor				
(1) Antenna current		70 percent of normal antenna current	≥70 percent of normal antenna current	Same as initial
(2) Modulation				
(a) Loss of tone		Alarms	Same as standard	Same as standard
(b) Continuous tone		Alarms	Same as standard	Same as standard
b. Remote Monitor				
* (1) Power		50 percent of normal operating power	≥25 percent of normal operating power	Same as initial *
(2) Modulation		Loss of identification	Same as standard	Same as standard
→ 56. SHUTDOWN TIME DELAY	145	≤70 seconds	Same as standard	Same as standard
57. ANTENNA SYSTEM				
a. Insulation Resistance	148	Infinity	≥50 megohms	≥20 megohms
b. Spark Gap Setting				
(1) Class HH		1 to 2 inches (2.56 to 5.13 centimeters)	Same as standard	Same as standard
(2) Class H		½ to 1 inch (1.28 to 2.56 centimeters)	Same as standard	Same as standard
(3) Class MH		3/8 to ½ inch (0.96 to 1.28 centimeters)	Same as standard	Same as standard
(4) LQM and LMM		¼ to 3/8 inch (0.64 to 0.96 centimeters)	Same as standard	Same as standard
58.-99. RESERVED.				

ATTACHMENT 2

Periodic Maintenance and Certification (Verification) Interval

If an EAA Maintenance Handbook is applicable to the Non-Federal equipment, include a copy of Chapter 4 and Appendix I. If no handbook is applicable refer to the appropriate sections of the equipment Technical Instruction Manual.

CHAPTER 4. PERIODIC MAINTENANCE

100. GENERAL.

a. This chapter establishes the maintenance activities required for NDB equipment on a periodic, recurring basis, and the schedules for their accomplishment. The chapter is divided into two sections. The first section identifies the performance checks (i.e., tests, measurements, and observations) of normal operating controls and functions, which are necessary to determine whether operation is within established tolerances/limits. The second section is reserved. Refer to the latest edition of Order 6000.15 for additional general guidance.

b. The following are required key performance checks and maintenance tasks and the maximum intervals between successive accomplishments to assure that the performance of the facility is reliable and within designated technical tolerances. The regions may shorten the time intervals specified, but may not lengthen them, except on a test basis at a limited number of locations. A copy of each regionally authorized increase in the established time intervals, complete with justification, shall be forwarded to Operational Support.

101.-109. RESERVED.

Section 1. PERFORMANCE CHECKS

Performance Checks	Reference Paragraph: Standards & Tolerances	Reference Paragraph: Maintenance Procedures
110. BIWEEKLY. (Tube-Type Without Local Monitor)		
a. Check antenna current	82	141
b. Alternate equipment at dual-equipment facilities	N/A	144
c. Check voice/identification quality	N/A	148
111. MONTHLY. (Tube-Type With Local Monitor)		
a. Check antenna current	82	141
b. Alternate equipment at dual-equipment facilities	N/A	144
c. Check voice/identification quality	N/A	148
112. SEMIANNUALLY.		
a. Check antenna current (solid state only)	82	141
b. Check voice/identification quality	N/A	148
c. Check modulation	89	147
d. Check monitor alarm points	88	143
e. Check auto shutdown	86	145
f. Check automatic reset	N/A	149

Performance Checks	Reference Paragraph: Standards and Tolerances	Reference Paragraph: Maintenance Procedures
113. ANNUALLY:		
a. Measure frequencies	84	147
b. Measure and record the leakage resistance of the antenna/guy lines	57	146
114.-119. RESERVED.		

Section 2. OTHER MAINTENANCE TASKS

Maintenance Tasks	Reference Paragraph: Standards and Tolerances	Reference Paragraph: Maintenance Procedures
120. ANNUALLY. (Polestar Model PA-35D LF/MF Antenna System)	N/A	150
a. Inspect and clean antenna.		
b. Inspect for loose cable connections.		
121. AS REQUIRED. Applicable to Scientific Radio (FA-9589) equipped with Type FA-9589/1 antenna tuning unit. Verify that the vswr is within required limits after a period of severe weather involving lightning strikes in the area of the NDB.	—	172
122-129. RESERVED.		

ATTACHMENT 3
Maintenance Procedures

If an FAA Maintenance Handbook is applicable to the Non-Federal equipment, include a copy of Chapter 5. If no handbook is applicable refer to the appropriate section of the equipment Technical Instruction Manual.

CHAPTER 5. MAINTENANCE PROCEDURES

130. GENERAL.

a. This chapter establishes the procedures for accomplishing the various essential maintenance activities that are required for nondirectional beacons (NDB) on either a periodic or incidental basis. The chapter is divided into three sections. The first section describes the procedures to be used in making the performance checks listed in chapter 4, section 1. The second section is reserved. The third section describes the procedures for accomplishing the special tasks, usually non-scheduled and not listed in chapter 4.

b. Microprocessor-based facilities that have the capability to use data terminals for readout of NDB parameters may use these readings in lieu of the readings obtained with external test equipment. The following procedures are generic in nature and may be used with all NDB equipment types. The results of these test, measurements, and observations shall be compared to the prescribed tolerances and limits of chapter 3. Refer to Order 6000.15A, General Maintenance Handbook for Airway Facilities, for additional general guidance.

131.-139. RESERVED.

Section 1. PERFORMANCE CHECK PROCEDURES

140. FAA FORM 6740-1 ENTRIES.

Order 6000.15A contains policy, guidance, and detailed instructions for field use of FAA Form 6740-1, Technical Performance Record, Nondirectional Beacon (NDB). Figure 5-1 is a sample FAA Form 6740-1 that shows typical entries for normal and unsatisfactory conditions that may be encountered.

141. MEASUREMENT OF ANTENNA CURRENT.

a. Object. This procedure provides a method to determine if the antenna current of the NDB facility is within operating tolerance.

b. Discussion. The coverage of an NDB facility is determined by the current in the vertical radiating element of the antenna system. Therefore, the antenna current becomes the certification parameter for coverage. Antenna current can be read from the rf ammeter located in series with the antenna loading coil. For microprocessor based systems the current can be read directly from the appropriate data screen.

c. Test Equipment Required. None.

d. Conditions. The facility is operating normally.

e. Detailed Procedure.

(1) At facilities with data terminals, obtain the proper screen to determine the facility antenna current and complete steps (3), (4), and (5). If the facility does not use a data terminal, proceed to step (2).

(2) If the antenna ammeter is provided with a shorting switch, turn the shorting switch to the unshorted position.

(3) Read the antenna current during a period when the transmitter is unmodulated. Record the antenna current on FAA Form 6740-1.

(4) Determine if the antenna current is within the operating tolerance.

(5) Restore the facility to normal operation.

142. MEASUREMENT OF MODULATION LEVELS.

a. Object. This procedure provides a method to determine if voice and identification tone modulation percentages are within operating limits.

b. Discussion. The measurement of modulation percentage of NDB transmitters shall be made at the output of the transmitter rather than by sampling the radiated signal from the antenna. This is due to the high Q antenna circuit attenuating the sidebands relative to the carrier, thus reducing the percentage of modulation of the radiated signal. If the measurement were to be made by sampling the radiated signal, it is likely that the transmitter percent of modulation would exceed 100 percent, causing excessive voltages and currents to be produced in the transmitter.

c. Test Equipment Required. Oscilloscope or data terminal.

d. Conditions. A facility shutdown is required for this check except at microprocessor based facilities.

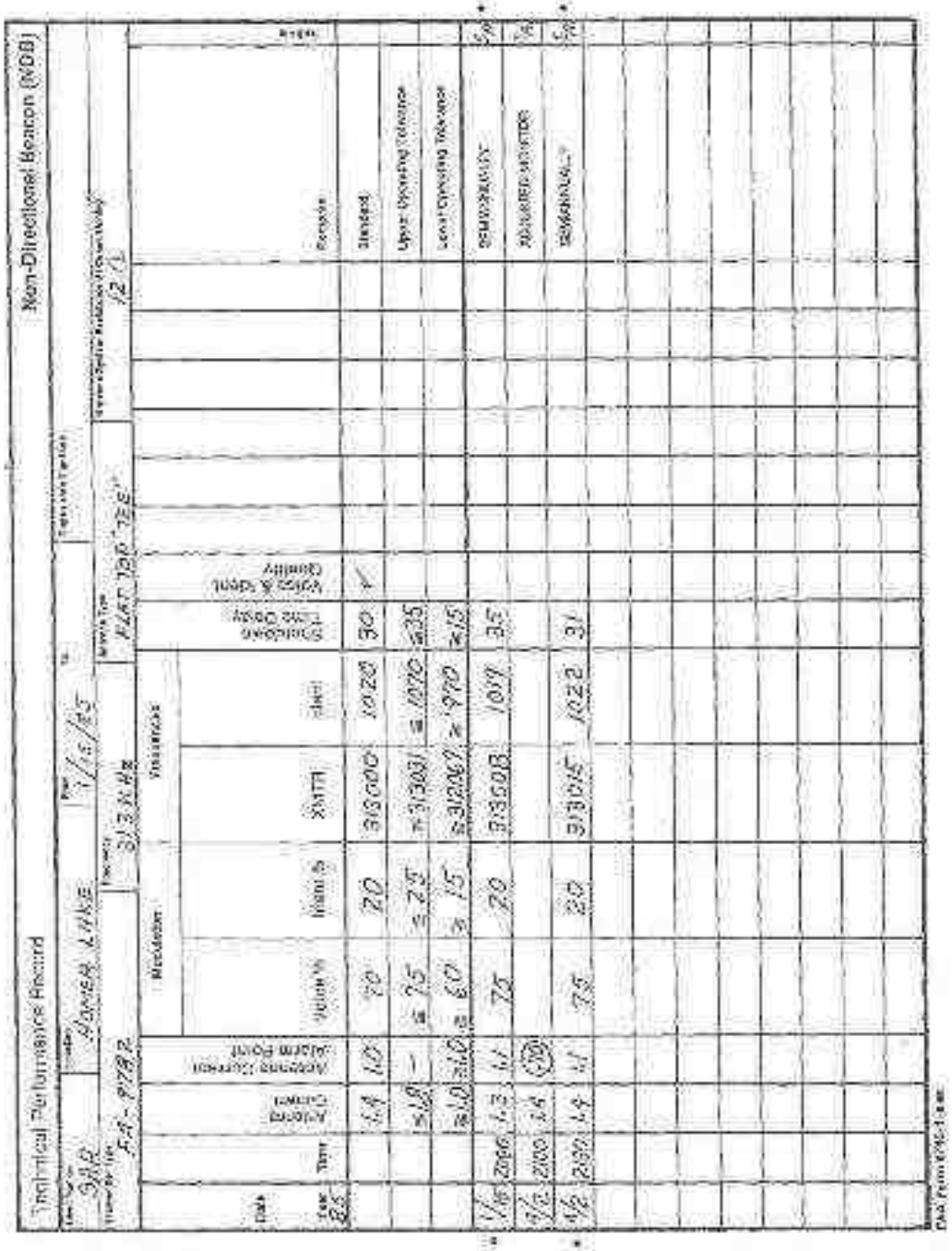


Figure 5-1. Example of FAA Form 6740-1 for Nondirectional Beacons

e. Detailed Procedure.

(1) At facilities with data terminals, obtain the proper screen to determine the facility modulation percentage for the appropriate voice or identification parameter and complete steps (6) and (7). If the facility does not use a data terminal proceed to step (2).

(2) Connect the vertical input of the oscilloscope to the transmitter output. This connection must be made after the transmitter output filter.

(3) Remove voice modulation from the transmitter (if present). Set the identification modulation to constant tone.

(4) Adjust the oscilloscope to display the modulation envelope.

(5) Calculate the modulation percentage, using the following formula:

$$\% \text{ mod} = \frac{E_{max} - E_{min}}{E_{max} + E_{min}}$$

(6) Record the modulation percentage on FAA Form 6740-1.

(7) Ascertain that the modulation percentage is within operating limits and that the modulation envelope is distortion free.

(8) Restore the facility to normal operation.

(9) If the facility has voice capability, remove the tone identification.

(10) With a normal voice transmission, repeat steps (4) through (8), measuring the modulation percentage during voice peaks.

(11) Restore the facility to normal operation.

143. MONITOR ALARM POINTS.

a. Object. This procedure provides a method to determine if the monitor will alarm if the antenna current is reduced below operating limits, or if the identification tone or keying fails. For type FA-9589 antenna current alarm points, see paragraph 174.

b. Discussion. Monitor alarms in the NDB equipment should result in an equipment transfer and/or shutdown. This check determines if the antenna current at which the local monitor alarms is within the operating limits and that the monitor will alarm if the identification tone or keying fails. This check also determines if the remote monitor receiver, if present, indicates the proper status of the facility.

c. Conditions. A facility shutdown is required for this check.

d. Test Equipment Required. None.

e. Detailed Procedure.

(1) If applicable, bypass the monitor to eliminate the time delay in the monitor.

(2) Reduce the transmitter output until the monitor indicates an alarm condition.

(3) Record the antenna current at monitor alarm on FAA Form 6740-1.

(4) Ascertain if the antenna current alarm point is within operating limits.

(5) Restore the facility to normal operation.

(6) Remove the identification keying.

(7) Verify that the monitor alarms.

(8) Restore the facility to normal operation.

(9) If applicable, set the identification keying to constant tone.

(10) Verify that the monitor alarms.

(11) If applicable, verify that the remote indications are correct.

(12) restore the facility to normal operation.

144. ALTERNATE EQUIPMENT.

a. Object. This procedure provides a method to alternate equipment at a dual- equipment facility on a scheduled basis and to determine that the automatic transfer function and standby equipment is operating properly.

b. Conditions. The facility is operating normally. Advance coordination of this maintenance activity with Air Traffic is required.

c. Detailed Procedure.

(1) Simulate an alarm of sufficient duration to cause the equipment to transfer.

(2) Determine if the proper local and remote indications occur.

(3) Continue normal facility operation with the alternate equipment.

145. LOCAL AND REMOTE MONITOR SHUTDOWN OPERATION.

a. Object. This procedure provides a method to determine that a shutdown is properly sensed at the local and remote control points.

b. Discussion. Antenna current and/or modulation alarms in the NDB equipment should result in an equipment transfer and/or shutdown. Also, if the equipment is remotely monitored, there should be an indication that the facility is shut down.

c. Conditions. The facility is operating normally. Advance coordination of this maintenance activity with Air Traffic is required.

d. Detailed Procedure.

(1) Simulate a continuous alarm.

(2) Allow a shutdown to occur.

(3) Ascertain that the shutdown time delay is within operating limits.

(4) Determine if the proper local and remote alarm indications occur.

(5) If remote restore capability is installed, restore the facility from the remote control point.

(6) Enter completion of this check in the facility log.

146. TRANSMISSION LINE INSULATION RESISTANCE.

a. Object. This procedure provides a method to measure the insulation resistance of coaxial transmission lines.

b. Discussion. Low insulation resistance in a coaxial transmission line usually indicates a breach of the integrity of the line, contamination of the cable dielectric, or a deteriorated connector. Moisture within a connector is a common cause of low insulation resistance.

c. Test Equipment Required. Insulation tester.

d. Conditions. The transmission line must be disconnected at both ends. A facility shutdown is required.

e. Detailed Procedure.

(1) Disconnect the transmission line under test at both ends.

(2) Connect the insulation tester between the center conductor and the shield. Operate the tester in accordance with its instructions.

(3) Record the insulation resistance on FAA Form 6740-1.

(4) Ascertain that the insulation resistance is within operation limits.

NOTE: If any transmission line measures less than infinite insulation resistance, especially new lines or those that previously have measured infinity, consider corrective action even though the measurement is within operating limits.

(5) Restore the facility to normal operation.

147. RF AND AUDIO FREQUENCIES.

a. Object. This procedure provides a method to measure the NDB facility carrier and audio frequencies.

b. Discussion. The carrier and audio frequencies are measured at the output of the transmitter and identification oscillator respectively, using an electronic counter. Microprocessor-based facilities that use data terminals for the readout of NDB parameters may use these readings in lieu of the readings obtained with electronic counter.

c. Test Equipment Required. Electronic counter or data terminal.

d. Conditions. Normal, except where facility identification keying is interrupted, the facility must be advertised as "out of service for maintenance."

e. Detailed Procedure.

(1) At facilities with data terminals, obtain the proper screen to determine the facility carrier and identification frequencies and complete steps (4), (6), and (7). If the facility does not use a data terminal, proceed to step (2).

(2) Allow the electronic counter sufficient time to warm up.

(3) Connect the electronic counter to sample the transmitter rf signal.

(4) Record the carrier frequency on FAA Form 6740-1.

(5) Connect the electronic counter to a steady tone from the identification oscillator. On some older units, the keyer motor must be stopped with the keying contacts closed.

(6) Record the oscillator frequency (400 or 1020Hz) on FAA Form 6740-1.

(7) Ascertain that both the carrier and identification frequencies are within operating limits.

148. IDENTIFICATION AND VOICE QUALITY.

a. Object. This procedure provides a method to determine that the identification and voice signals are being radiated clear and undistorted.

b. Discussion. The identification and voice transmissions can be monitored at the facility, on the car radio, or at the remote monitoring point. The information should be clear and undistorted.

c. Test Equipment Required. A suitable device to monitor the identification or voice broadcast.

d. Detailed Procedure.

(1) Monitor the radiated tone identification quality for satisfactory results and record findings on FAA Form 6740-1.

(2) If applicable, request a voice broadcast and monitor the radiated signal quality for satisfactory results. Record the results on FAA Form 6740-1.

149. AUTOMATIC RESET

a. Object. This procedure provides a method to check the operation of the automatic restart/reset function.

b. Discussion. The function of the automatic reset circuit is to return a facility to service shortly after it has shutdown due to an alarm condition. When an alarm condition occurs, a short delay takes place before the facility shutdown. This time delay is called the shutdown delay. The equipment will remain off the air until a longer delay, called the automatic reset delay, occurs. After the automatic reset delay, the facility will attempt to return itself to service. The facility will continue to operate if the alarm condition has cleared. If, however, the alarm condition persists, the equipment will again shut down. After a longer delay, the automatic reset will again attempt to return the equipment to service. If this attempt also fails, a much-longer automatic reset delay will occur. The automatic reset will again attempt to return the facility to service. If this attempt is unsuccessful, a fourth attempt will be made after an even longer automatic reset delay. If this attempt also fails, the equipment will remain off the air until manually reset.

c. Test Equipment Required. This procedure requires a device suitable for measuring elapsed time.

d. Conditions. A facility shutdown is required for this check.

e. Detailed Procedure.

(1) Place the toggle switch on top of the automatic reset pcb to the 100X position.

(2) Switch the TONE to KEY and push NORM/BYP switch in. If any lamps are lit on the automatic reset pcb, push the CLEAR AUTO RESET button to extinguish them.

(3) Simulate a fault by switching the TONE switch to CONT. Verify that the equipment attempts to reset 4 times in less than 25 minutes.

(4) Return the TONE switch to KEY to clear the alarm.

(5) Place the toggle switch on top of the automatic reset pcb to the 1X position.

(6) Push the CLEAR AUTO RESET switch and observe that LED's extinguish.

150.-159. RESERVED.

Section 2. OTHER MAINTENANCE TASKS PROCEDURES

* 160. POLESTAR MODEL PA-35D LF/MF ANTENNA.

a. Object. This procedure provides a method to inspect and clean the Polestar Model PA-35D LF/MF antenna.

b. Discussion. Periodic inspection, cleaning, and lubricating of the antenna mast will reduce deterioration of the antenna system and possible outages due to rust and corrosion.

c. Test Equipment Required.

(1) Cleaning solvent, NSN 6850-00-419-5004

(2) Conductive grease, NSN 9150-01-321-4246

(3) Primer, NSN 8040-00-845-4394

(4) Silicone sealant, NSN 8040-00-843-0802 •

d. Conditions. The equipment is removed from service for the duration of this task.

e. Detailed Procedure.

(1) Remove the top clamp assembly and remove the outer clamp half of the pivot/clamp assembly.

(2) Lower the antenna with the winch.

(3) Remove the radial top hat, and sit it aside for later reinstallation.

(4) Remove the two bolts holding the two mast halves together and retain.

(5) Disassemble the joint.

(6) Spray the conducting surfaces with penetrating oil and let set for 20 minutes.

(7) Clean the surfaces by wiping with the cleaning solvent.

(8) Coat the conductive surfaces of both the upper and lower mast sections with conductive grease.

(9) Reassemble the joint by inserting the upper mast section into the low mast section, and secure using 5/16-inch by 4 1/2-inch bolts.

(10) Using solvent, clean the areas around the bolt heads, the nuts, and the top of the bottom tube.

(11) Coat the areas with primer following instructions on the primer can.

(12) Let the primer dry for 2 hours. Apply a bead of silicone sealant around the upper mast/lower mast interface. Bed the seal ring in this material, and tighten the clamp. Then, with silicone sealant, seal the areas around the head and nut ends of the bolts.

(13) Reinstall the top hat. Raise the antenna and secure it, using the clamps removed in the lowering process.

(14) Return the facility to operation.

161.-170. RESERVED.

Section 3. SPECIAL MAINTENANCE PROCEDURES

171. MEASUREMENT OF ANTENNA RESISTANCE.

a. Object. This procedure provides a method to determine the antenna resistance.

b. Discussion. The NDB antenna resistance can be determined by utilizing and NDB antenna resistance meter. The meter was designed to read antenna circuit resistance directly when 1 ampere current is in the antenna circuit. Since this instrument cannot differentiate between resistance and reactance, the antenna systems must be at resonance (reactance = 0 ohms).

c. Test Equipment Required. NDB antenna resistance meter.

d. Conditions. The facility must be removed from service and appropriate NOTAM'S issued.

e. Detailed Procedure. Three separate resistance measurement procedures are listed below. The first measures the resistance of the antenna with an antenna current of 1 ampere. The second is an alternate for measurement of resistance for currents other than 1 ampere. The third is for a resistance under 3 ohms. The test leads which are used to connect the resistance meter to the antenna tuning unit (ATU) should meet the requirements in paragraph e(4).

(1) Antenna Current of 1 Ampere.

(a) If the NDB is a type FA-9589, do the following and then proceed to step (g). Otherwise, proceed to step (b).

1 Set the monitor to BYPASS and the MODE switch (S2) on the NDB operating panel to CARRIER ONLY. Ensure that the antenna current as observed on the maintenance monitor does not exceed 1 ampere.

CAUTION: Antenna current in excess of 1 ampere may cause permanent damage to the rf ammeter of the antenna resistance meter.

2 The FA-9589/1 ATU has test jacks corresponding to those on the antenna resistance meter. Connect the antenna resistance meter to the ATU and ensure that the OHMS FULL SCALE selector is in the OFF position.

3 Set the ANT/METER switch on the ATU to METER.

4 Set the OHMS FULL SCALE selector on the antenna resistance meter to 300 ohms.

(b) Adjust the transmitter output to reduce the antenna current of the NDB to zero or some low value much less than 1 ampere.

(c) Shut the NDB off and break the antenna circuit at the transmitter side of the loading coil. In many NDB's, this is the lead between the loading coils and the autotransformer barrier strip or the location of the antenna current meter. For some types of NDB equipment, the transmitter side of the loading coil may be internal to the transmitter.

(d) Connect the NDB antenna resistance meter as follows:

1 GND terminal to ground in the antenna tuning unit (ATU).

2 TX terminal to the transmitter output terminal disconnected in step (c).

3 ANT terminal to the transmitter side of the loading coil disconnected in step (c).

(e) Set the OHMS FULL SCALE selector to 300 ohms.

CAUTION: Ensure that the readings of the rf ammeters in the antenna resistance meter do not exceed full scale. Be sure that the antenna current has been turned down well below 1 ampere before moving the transmitter on. Exceeding full scale indications on either rf ammeter causes permanent damage to the meters.

(f) Turn the transmitter on.

(g) While observing the ANTENNA IMPEDANCE meter and the ANTENNA CURRENT meter, adjust the transmitter output for an antenna current of 1 ampere. The antenna resistance should be between 3 and 30 ohms for a normally operating antenna system at resonance. If the ANTENNA IMPEDANCE meter indicates over 30 ohms, the antenna system is probably not resonant, or an error was made in connecting the antenna resistance meter.

(h) If an antenna current of 1 ampere cannot be obtained, proceed to the alternate procedure for resistance measurement (step e(2)).

(i) If the ANTENNA IMPEDANCE meter indicates a resistance less than 30 ohms, change the OHMS FULL SCALE switch to the 30-ohm position. It may be necessary to adjust the transmitter output to maintain 1 ampere when switching resistance scales.

(j) If the ANTENNA IMPEDANCE meter indicates a resistance less than 15 ohms, change the OHMS FULL SCALE switch to the 15 ohm position. Adjust transmitter current to 1 ampere if necessary.

(k) If the ANTENNA IMPEDANCE meter indicates a resistance less than 7.5 ohms, switch the OHMS FULL SCALE switch to the 7.5-ohm position. Adjust the transmitter current to 1 ampere if necessary. If the resistance reading is less than 3 ohms, proceed to step e(3) to obtain a resistance reading.

(l) Once the proper scale is chosen, record the antenna resistance reading, taking into account the OHMS FULL SCALE switch position. Perform step e(1)(m) or e(1)(n) to ensure that the antenna system is at resonance.

(m) If the loading coil inductance is continuously adjustable (e.g. Nautel ATU), adjust the loading coil inductance up and down slightly while observing the ANTENNA IMPEDANCE meter. If the antenna system is resonant, the ANTENNA IMPEDANCE meter reading should increase as the inductance is adjusted up and down. The correct antenna resistance is read as the minimum reading of the ANTENNA IMPEDANCE meter with constant antenna current applied.

(n) If the loading coil is tapped rather than continuously adjustable, perform the following steps:

1 Reduce the transmitter output to zero or a low value of antenna current (less than 1 ampere).

2 Turn the transmitter off.

3 Change the loading coil tap toward the antenna, to the next tap above the original tap on the loading coil.

4 Repeat steps (c) through (l).

5 Record the antenna resistance reading and tap setting of the loading coil.

6 Repeat steps 1 through 4 above, except change the tap on the loading coil to the next tap below the original tap.

7 Record the antenna resistance reading and tap setting of the loading coil.

8 If the lowest ANTENNA IMPEDANCE meter reading was obtained with the loading coil on the original tap, the antenna system was already resonant. The lowest antenna impedance read is the correct value for antenna resistance.

* 9. If the lowest antenna impedance reading did not occur on the original tap, the antenna system was not resonant. Repeat steps 1 through 4 above and continue changing the tap in the same direction as the lowest antenna impedance reading until resonance is achieved. (The loading coil tap should be left on the tap that reads the lowest antenna impedance reading for a constant antenna current.)

(e) Once resonant antenna operation has been achieved, record the antenna resistance value.

(p) Set the OHMS FULL SCALE switch to OFF.

(q) If the NDB is not a type FA-9589, turn off the transmitter, disconnect the antenna resistance meter, and reconnect the loading coils.

(r) On the FA-9589/1 ATU, set the ANT/METER switch to ANT and disconnect the antenna resistance meter.

(s) Restore normal NDB operation.

(2) Antenna Current Other Than 1 Ampere. Use this procedure when the antenna current cannot be adjusted to 1 ampere. (See step e(1)(k).)

(a) While observing the ANTENNA IMPEDANCE meter and the ANTENNA CURRENT meter, adjust the transmitter output current to a convenient value. A value such as 0.5 ampere is suggested in order to simplify calculation of antenna resistance. Record this value. Be sure the ANTENNA IMPEDANCE meter does not exceed full scale indication. The antenna resistance should be between 3 and 30 ohms for a normally operating antenna system at resonance.

(b) If the ANTENNA IMPEDANCE meter indicates a resistance less than 30 ohms, change the OHMS FULL SCALE switch to the 30-ohm position. It may be necessary to adjust the transmitter current to maintain the chosen value of current when switching resistance scales.

(c) If the ANTENNA IMPEDANCE meter indicates a resistance less than 15 ohms, change the OHMS FULL SCALE switch to the 15-ohm position. Adjust transmitter current to the chosen value of current if necessary.

(d) If the ANTENNA IMPEDANCE meter indicates a resistance less than 7.5 ohms, change the OHMS FULL SCALE switch to the 7.5-ohm position. *Adjust the transmitter current to the chosen value of current if necessary. If the resistance reading is less than 3 ohms, proceed to step e(3) to obtain a resistance reading.

(e) Once the proper scale is chosen, note the reading on the ANTENNA IMPEDANCE meter and on the ANTENNA CURRENT meter, taking into account the OHMS FULL SCALE switch position. To insure that the antenna system is at resonance, perform steps in paragraph e(1)(m) or e(1)(n).

(f) Once resonant antenna operation has been verified, record the readings on the ANTENNA IMPEDANCE and ANTENNA CURRENT meters.

(g) Use the values recorded in the previous step and the following formula to calculate the true antenna resistance.

$$R_c = R_u/I_a$$

R_u = Uncorrected resistance reading (read in step (f) above)

I_a = Antenna current (read in step (f) above)

R_c = Corrected resistance

(h) Set the OHMS FULL SCALE selector switch to the OFF position.

(i) If the NDB is not a type FA-9589, turn off the transmitter, disconnect the antenna resistance meter, and reconnect the loading coils.

(j) On the FA-9589/1 ATU, set the ANT/METER switch to ANT and disconnect the antenna resistance meter.

(k) Restore normal NDB operation.

(3) Resistance of Less Than 3 Ohms. Use this procedure to measure antenna resistances under 3 ohms. (See step e(1)(k)). An antenna resistance under 3 ohms indicates that the antenna resistance meter is connected incorrectly, or a short exists between the antenna (ANT) terminal of the meter and ground, or that the NDB has an extremely good ground system (a very rare situation). If the antenna resistance is actually under 3 ohms, the antenna resistance meter may be used as a voltmeter to read the voltage on the antenna. An external rf ammeter can then be used to read antenna current, allowing the resistance to be calculated. With a resistance of 3 ohms, the antenna current required to achieve an accurate *

* reading of antenna voltage is usually much higher than 1.5 amperes (the current limit of the antenna resistance meter), thus requiring the use of an external ammeter.

(a) If the NDB is a type FA-9589, do the following and then proceed to step (d). If not, proceed to step (b).

1 Set the monitor to BYPASS and the MODE switch (S2) on the NDB operating panel to CARRIER ONLY.

2 Set the ANT/METER switch on the ATU to ANT.

(b) Adjust the NDB transmitter output to reduce the antenna current to zero or a value much less than 1 ampere.

(c) Shut down the NDB transmitter.

(d) If the NDB does not have an rf ammeter to measure antenna current, connect an external rf ammeter capable of measuring at least the normal operating current of the NDB between the transmitter side of the loading coil and the transmitter. On the FA-9589/1 ATU, this is between the ANT and TX jacks on the front panel.

NOTE: For some types of NDB equipment, the transmitter side of the loading coil may be internal to the transmitter.

(e) Using a suitable test lead, connect the transmit (TX) jack of the antenna resistance meter to the transmitter side of the loading coil (TX jack on the FA-9589/1 ATU), i.e., the transmitter side of the external ammeter. On the FA-9589/1, a single banana plug adapter will facilitate connections to the TX jack.

(f) Using a suitable test lead, connect the ground (GND) jack (black) of the antenna resistance meter to ground in the ATU (to GND jack on the FA-9589/1 ATU).

NOTE: The antenna (ANT) jack on the antenna resistance meter should not be connected for this procedure.

(g) Set the OHMS FULL SCALE switch on the antenna resistance meter to 300 ohms.

(h) On the FA-9589/1 ATU, set the ANT/METER switch to METER.

(i) Turn the NDB transmitter on. If the NDB is a type FA-9589, it should already be on. *

* (j) Increase the transmitter power for several amperes of antenna current as indicated by the facility rf ammeter or the external rf ammeter. Use a current setting (i.e., 2.0 amperes, 2.2 amperes) that will simplify resistance calculation. Do not allow the resistance reading to exceed full scale. Note that the ANTENNA CURRENT meter on the antenna resistance meter does not deflect.

(k) If the ANTENNA IMPEDANCE meter indicates a resistance less than 30 ohms, change the OHMS FULL SCALE switch to the 30-ohm position.

(l) If the ANTENNA IMPEDANCE meter indicates a resistance less than 15 ohms, change the OHMS FULL SCALE switch to the 15-ohm position.

(m) If the ANTENNA IMPEDANCE meter indicates a resistance less than 7.5 ohms, change the OHMS FULL SCALE switch to the 7.5-ohm position.

(n) Once the proper scale is chosen, note the readings on the ANTENNA IMPEDANCE and the rf ammeter, taking into account the OHMS FULL SCALE switch position. Perform steps in paragraph e(1)(m) or e(2)(n) to insure that the antenna system is at resonance.

(o) Once resonant antenna operation has been verified, record the readings on the ANTENNA IMPEDANCE and the antenna current as indicated on the facility rf ammeter or the external rf ammeter.

(p) Use the values recorded in the previous step and the following formula to calculate the true antenna resistance.

$$R_c = R_u / I_a$$

R_c = Uncorrected resistance reading (read in step (o) above)

I_a = Antenna current (read in step (o) above)

R_t = Corrected resistance

(q) Set the OHMS FULL SCALE selector switch to the OFF position.

(r) If the NDB is not a type FA-9589, turn off the transmitter, disconnect the external rf ammeter (if necessary), disconnect the antenna resistance meter, and reconnect the loading coils.

(s) On the FA-9589/1 ATU, set the ANT/METER switch to ANT and disconnect the antenna resistance meter. *

(c) Restore normal NDB operation.

(4) Error Due to Test Lead Inductance. The inductance of the test leads that are used to connect the NDB antenna resistance meter to the NDB antenna will introduce some error into the resistance measurement. Test lead length should be kept as short as possible, especially for NDB's operating on higher frequencies. Test leads of 2 feet (0.61 meter) or less should introduce negligible error into the measurement. Heavy gauge wire (10 AWG or larger) should be used to keep test lead inductance low.

172. VERIFICATION OF ANTENNA TUNING UNIT VSWR.

a. Object. This procedure provides a method to verify the vswr of the antenna tuning unit.

b. Discussion. After a sufficient number of lightning pulses have been discharged through the lightning protection device, there is a gradual lowering of the breakdown voltage and insulation resistance. Replacement is indicated by an increase in the vswr.

c. Test Equipment Required. None.

d. Conditions. The facility is operating normally.

e. Detailed Procedure.

(1) Log on; the main menu will be displayed.

(2) Select the A function; the facility parameters will be displayed.

(3) Verify that there has been no significant degradation in the vswr.

(4) Press RETURN for the main menu and log off.

* 173. MATCHING ANTENNA TO TRANSMISSION LINE (USING REMOTE TUNING HOUSE).

a. Object. This procedure provides a method to match the input impedance of the antenna and its tuning house to that of the transmission line.

b. Discussion. The following procedure shall be used to match the input impedance of the antenna and its tuning house to that of the transmission line.

* c. Test Equipment Required. Impedance measuring set (Z bar).

d. Conditions. The facility must be advertised as "out of service for maintenance."

e. Detailed Procedure.

(1) Adjust the tuning house tap and dial settings in accordance with manufacturer's instruction book.

(2) With the transmitter power removed, disconnect the transmission line from the antenna tuning house and reconnect it to the input terminals of the impedance measuring set.

(3) Connect the terminals marked UNKNOWN or X on the impedance measuring set to the input terminals of the antenna tuning unit. Use short leads.

(4) Adjust the impedance measuring set coupling control for minimum coupling. Set the selector switch to the OFF or ZERO position.

(5) Place the transmitter on low power and reduce the output coupling to minimum. Apply power to the transmitter and retune transmitter.

(6) Set the decade resistor in the impedance measuring set to the value of the desired impedance (transmission line Z_o) and the selector switch to the KNOWN or N position.

(7) Increase the impedance measuring set coupling slightly. Adjust its variable tuning capacitor for resonance as indicated by a maximum current indication of the galvanometer. It may be necessary to increase the output coupling on the transmitter to obtain a convenient deflection (three-quarter full scale). Note and record the setting of the tuning capacitor. The galvanometer is protected by a 1/8-ampere, 8AG special high-speed fuse, made especially to protect meters. Never use a higher rating or a Slo-Blo fuse. If the appropriate fuse is not available, do not use the measuring set.

(8) Set the selector switch on the impedance measuring set to the UNKNOWN or X position. Again resonate the impedance measuring set. Note and record the setting of the tuning capacitor. Reverse the leads to the UNKNOWN terminals. The values as read on the impedance measuring set should be substantially the same *

before and after reversing the connections. If they are not the same, the impedance measuring set requires rebalancing. Refer to manufacturer's instruction book. Compare the readings obtained in step (7) with those obtained in this step. If the readings are not the same, the circuit is reactive.

(9) If the circuit is reactive, leave the selector switch on the impedance measuring set in the UNKNOWN or X position. Reset secondary tuning control on the antenna tuning house approximately one division in either direction from its initial setting. Readjust the impedance measuring set tuning capacitor for resonance and note and record its setting. If the tuning capacitor control has moved closer to the setting recorded in step (7), the secondary tuning control adjustment was made in the right direction. If the control has moved further away from the setting obtained in step (7), the tuning adjustment was made in the wrong direction. Continue the adjustments until resonance occurs at the same capacitor setting when the selector switch is set to either the UNKNOWN or the KNOWN position. Under this condition, the primary circuit of the antenna tuning house appears as a pure resistance. Note and record the reading on the galvanometer for the UNKNOWN position of the selector switch.

(10) Set the selector switch on the impedance measuring set to the KNOWN position. Adjust the decade resistor until the galvanometer reads the same when the selector switch is set to either the UNKNOWN or the KNOWN position. If the resistance value of the decade resistor is less than the desired impedance (transmission line Z_o), the antenna tuning house coupling must be increased; if more than the desired impedance, the coupling must be decreased.

(11) Adjust the coupling by small increments in the direction required and repeat the adjustments to the antenna tuning as described in steps (9) and (10) until the desired impedance value is obtained. When the circuits are correctly tuned, the galvanometer indication and the tuning capacitor settings will be the same when the selector switch is set to either the UNKNOWN or the KNOWN positions.

(12) Reconnect the transmission line to the tuning house.

(13) Return the facility to operation.

174. FA-9589 ANTENNA CURRENT ALARM POINT.

a. Object. This procedure is required to determine the antenna current alarm point in the FA-9589 NDB.

b. Discussion. The antenna current alarm point for type FA-9589 NDB is set internally by firmware. The nonadjustable alarm point is permanently set at 70 percent (half power) of set current. When the antenna current alarm is triggered, a shutdown is initiated in the type FA-9589 NDB.

c. Conditions. Notify Airway Facilities operations that there will be a momentary interruption of service with monitor alarm during this procedure. Otherwise, the NDB will operate normally.

d. Test Equipment Required.

(1) Integrated circuit (IC) test clip, 1 each, NSN 5999-00-286-4302, 16 pin, 0.300 inch DIP, or equivalent.

(2) Potentiometer, 1 each, NSN 5905-01-219-1922, 12 turn, ±10 percent, or equivalent.

(3) Test lead, 3 each, NSN 6625-01-171-3717, black, 12-inches, or equivalent.

e. Detailed Procedure.

(1) Open the front cover of the NDB and place the interlock switch to DEFEAT ON. Log on to the NDB system.

(2) From the MAIN MENU, select A) DISPLAY FACILITY PARAMETERS. Observe the control mode, and if it is in CURRENT mode, proceed to step (3). Otherwise, change to the current mode by going back to the MAIN MENU and select E) COMMAND FUNCTIONS and H) CHANGE CONTROL MODE.

(3) From the MAIN MENU, select B) ADJUST FACILITY PARAMETERS. ANTENNA CURRENT should be set for normal operation. If not, select G) ANTENNA CURRENT, and set the antenna current for normal operation.

(4) Calculate 70 percent of the normal antenna current setting. Make a note of this value of current (setting × 0.70) using only the ones and tenths of amperes.

EXAMPLE:

SET CURRENT = 1.66 A
x .70
1.162 ⇒ Ignore the 6 and 2, and record 1.1 ampere.

(5) Slide the 1A3 assembly out on its card guides to gain access to 1A3R308. (Refer to figure 11-9 in instruction book TI 6740.8.) Set the shutdown delay to 5 seconds by turning 1A3R308 fully counterclockwise (ccw). Verify delay time by viewing the C or D screen.

(6) Carefully, place the IC test clip, item d(1), on 1A3U20. Use one test lead jumper, item d(3), to short across pins 12 and 14 of the IC test clip such that pins 12 and 14 of the IC are connected.

(7) Rotate the shaft of the 50-kohm potentiometer, item d(2), fully clockwise until the stop is reached (up to 20 turns).

(8) Using two test leads with clips, connect one test lead from 1A3TP24 to pin 1 of the 50-kohm potentiometer. Connect the other test lead from ground to pin 2 of the potentiometer.

(9) While refreshing the DISPLAY FACILITY PARAMETERS screen, adjust the potentiometer counter-clockwise, in quarter turn increments, until the antenna current on the screen matches the value recorded in step (4).

(10) NDB will shut down after approximately 5 seconds have elapsed.

NOTE: If the NDB fails to shut down, make further adjustment to the potentiometer to ensure that the peak value of antenna current displayed does not exceed 70 percent of the set current. The NDB should then shut down after 5 seconds.

(11) Record the antenna current at monitor alarm on FAA Form 6740-1.

(12) Set power switch 1S1 to the OFF position.

(13) Remove the IC test clip and potentiometer connected to the 1A3 assembly.

(14) Set power switch 1S1 to the ON position and restore the shutdown delay to the original setting by adjusting 1A3R308, then viewing the C or D screen.

(15) Fully insert the 1A3 assembly into the chassis, and restore the facility to normal operation.

175.-189. **RESERVED.**

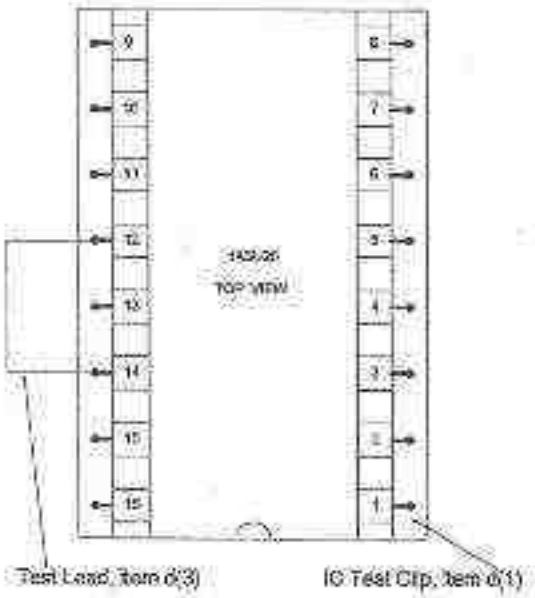


Figure 5-2. IC Test Clip and Jumper

ATTACHMENT 4

Non-Federal Facility Maintenance Logs, Technical Performance Records (TPR) and Verification

1. Introduction. The need for proper and thorough documentation of equipment performance and maintenance activities at non-federal facilities cannot be over emphasized. Past experience has shown that improper documentation or omissions obscure technical problems and precipitate legal difficulties. The FAA Form 6030-1, facility maintenance log, shall be used to provide a complete technical performance history and maintenance activity record. In addition, the facility maintenance log serves as a legal record in case of aircraft accident investigation and litigation.

2. Log Format. Fully legible entries shall be made on the white pages in the facility maintenance log with a ball-point pen using black or other reproducible ink. A carbon copy shall be made using the yellow pages in the log. Information recorded in the maintenance log shall correlate with related data on other forms, records, and reports, including the Technical Performance Record. Appropriate instruction books, maintenance technical handbooks, and the "Operations and Maintenance Manual" may be cited, where applicable, to support log entries.

a. Page lay out. (See examples in Attachment 6 of this OMM)

(1) "Station" Block. Enter the actual name of the facility location (i.e. Memphis, TN.).

(2) "Subject" Block. Enter the facility identifier and type contraction (i.e. MEM NDB).

(3) "Month and Year" block: Enter the month and year.

Note: Enter only one month in this block; the month in which the first entry on the page is being made. (See example in Attachment 6)

(4) "Date" Column: The day of the month shall be entered before the first and last entry of each day. The day of the month shall also be entered for the first and last entry on each log page. For any new month, enter the month and year only in the next available line in the "remarks" block before making any other entry for that month (see Attachment 6, Sample Log Page, item 7).

(5) "Time" (24 Hours) Column: All entries shall use a 24-hour time format based on Universal Time, Coordinated (UTC) only. For the facility covered by this OMM, UTC is determined by adding 4 hours to the local time during Daylight Savings Time (DST) and 5 hours the rest of the year. (i.e. one o'clock local would be 1300 + 4 = 1700Z during DST or 1300 + 5 = 1800Z the rest of the year). The "Z" means UTC.

Note: Local time shall not be entered in this block.

(6) "Code" Column: The FAA uses this column to code all interruptions. For simplicity, a code "Eighty (80)" for all unscheduled interruptions and a code "Sixty (60)" for all scheduled interruptions shall be entered in this block by the NFT.

(7) "Remarks" Column: A brief description of action taken or pertinent facility data shall be inserted in the remarks column. Use as many lines as necessary. Within reasonable limits, entries should be concise, avoiding elaboration of opinion or troubleshooting details. Use abbreviations.

references to substantive records and brief citations of directives where necessary to correlate, substantiate, or support the entry.

(8) "Initials" Column: Each entry shall be initialed by the person making the entry. The initials of any observer should be below those of the writer.

(9) Technician Signature and Date Blocks. The NTT shall sign the block in the lower-right-hand corner of all log pages that are completely filled-out. The date the signature entry is made shall also be entered in the date block to the left of the signature block.

b. Continuity. Since the log is considered a legal document, steps must be taken to ensure that there are no gaps in the log's continuity. The procedures below may seem redundant or unnecessary, but are designed to provide continuous history.

(1) Erasures. There shall be no erasures. Errors shall be voided by a single line strikeout with the correction nearby inserted. The initials of the person making the correction shall appear next to the lined-out portion. If the correction is related to a facility interruption, an explanation of the change shall be contained in a separate log entry.

(2) Page Numbering. All serialized log pages shall be accounted for and placed in proper order. When initiating a new log book, the serial number of the last page of the old log book shall be referenced in the first entry of the new log book (i.e. Log continued from log page F-107154468). Consequently, the serial number of the first page of the new log book shall be referenced in the last entry of the old log book (i.e. Log continued on log page F-106653842).

(3) Log Maintenance Cycle: The log shall be maintained on a basis that corresponds to the minimum (most frequent) maintenance schedule of the facility covered by this OMM. If the minimum periodic maintenance checks outlined in the OMM for this facility are monthly the log shall be maintained on a monthly cycle. If the minimum periodic maintenance checks outlined in the Operations and Maintenance Manual for this facility are quarterly, the log shall be maintained on a quarterly cycle (i.e. Jan. - Mar.; Apr. - Jun.; Jul. - Sep.; Oct. - Dec.). If the minimum periodic maintenance checks outlined in the OMM for this facility are semi-annually, the log shall be maintained on a semi-annual cycle (i.e. Jan. - Jun.; Jul. - Dec.). There shall be a "first entry" at the beginning of the cycle and a "closing entry" or "final entry" at the end of the cycle.

(a) First Entry: The first entry of each month or time interval shall be identified by beginning the entry with the statement "First Entry" (i.e. First Entry: Arrived site)."

(b) Terminating Entry: A terminating statement which identifies the final entry for the month or time interval shall be entered immediately following the last entry for that month or time interval. This final entry shall be made no later than the first visit to the facility in the next month or time interval. The final entry shall be the last entry on the page. If any blank lines remain after the final entry is made, a diagonal line may be drawn down to the bottom of the page. The NFT shall sign the technician block, enter the date of signature in the date block to the left of the signature block and begin the new log period on the next page of the log.

(4) Delayed Entries: Delayed entries shall be made only when necessary to complete the record for a facility interruption or to document maintenance activities at the remote monitor station. The date and time blocks for these entries shall contain the actual date(s) and time(s) of the interruption.

or maintenance activity. In addition, these entries shall be identified by beginning the entry with the phrase "Delayed Entry."

(5) Arrival and Departure Entries. The simple statements "Arrived Site" or "Departing Site" shall be used to document the time the NFT arrives and departs the facility. The arrived site entry may also include information of observation of equipment status as found or information on other relevant observations made relating to the facility. The departing site statement may also include information concerning equipment "as left" status.

3. Activities Requiring Log Entries. Appropriate entries in the facility maintenance log shall document any action or event affecting the status, operation, or performance of the facility. Required entries include, but are not limited to:

a. Participation in flight inspection, FAA ground inspection, routine or periodic maintenance inspections, and aircraft accident investigations.

b. Equipment replacement, modernization, modification, and/or repair.

c. Routine or corrective maintenance and major tune-ups of equipment at the facility and/or the remote monitor station. Entries shall include identification of failed equipment units or components either by reference designation, part number, or other appropriate terminology.

d. Transfer, shutdown, scheduled and unscheduled interruptions, and restoration of service or equipment. Use a separate entry for out of service (OTS) and return to service (RTS) entries. Include slash marks in the time entry column (/) on all interruption entries and enter a code in the "code" block [see par. 2.a. (6) in this section] for all OTS entries.

e. Delivery or shipment of supplies, parts, instruments, and equipment.

f. Any significant irregularities such as incidents of pilferage or vandalism and/or suspected violation of security.

g. Adverse weather, commercial power failures, or access road conditions if deemed to have an impact or potential impact on facility status.

h. Verification or removal of verification (see paragraph 4 below).

i. Arrivals and departures, including time and date.

j. Coordination information relating to the facility which shall include the office contacted and the initials of the person contacted.

k. Any condition resulting in an impact to the use of the Standard Instrument Approach Procedure.

4. Verification. A verification statement shall be used in the facility maintenance log. The verification statement shall be documented exactly as it appears in the Verification Statement page included in Attachment 2. The Verification Statement page also indicates the scheduled interval when the verification statement shall be entered in the facility log. The maximum verification interval shall not

be exceeded. Verification entries can be made as often as necessary, and shall be made prior to facility restoration anytime any action was taken that may have affected the radiated signal(s). Whenever a technician verifies navigational aid equipment or systems, he/she is attesting that the critical or key performance parameters are within the tolerances or limits prescribed in the appropriate equipment instruction book and the OMM, such that a reliable and safe radiated signal is being provided to the aviation public. Since the aviation public must know when a navigational aid is not available, the remote status monitor or indication shall be considered part of the navigational aid system. The OMM and the appropriate instruction book contain the performance parameters applicable to the equipment. If there are any questions concerning a parameter, contact the FAA office responsible for inspecting your facility.

a. Removal of Verification. If the NFT determines that the facility is unreliable, has verification parameters that are out of tolerance and cannot be adjusted to within the tolerances established in Attachment 1 of this OMM, or requires a flight check to confirm that radiated signals are reliable, the verification of the facility shall be removed. The MCC shall be notified of this condition as soon as possible and shall initiate NOTAM action. An entry shall be made in the facility log indicating the reason for removal of verification. Action shall be taken to return the facility to a verifiable status.

5. Technical Performance Records (TPR). The Technical Performance Record, FAA Forms 6000 series are used to provide an ongoing technical record of equipment readings and periodic maintenance checks performed on a commissioned facility as specified in the appropriate maintenance schedule.

a. Establishment of Form. The OMM requires the establishment of TPR forms. The forms may be the standard preprinted forms provided by the FAA, the temporary use of FAA Form 6000-8, Technical Performance Record - Continuation or Temporary Record/Report Form, or a locally developed form that contains all the information of the FAA standard preprinted forms. When the FAA Form 6000-8 is used, column headings shall designate the parameter or appropriate manufacturer's documentation to be recorded. These forms may be developed to fit the needs of one or more specific types of systems or equipment. Technical performance records shall be completed separately for each individual geographical location and for each set of equipment (i.e., equipment number 1 and equipment number 2, main and standby, etc.) as appropriate. Locally generated forms may be used with the approval of the FAA office responsible for the inspection of the facility.

b. Applicability of Guidance. The information contained in the succeeding subparagraphs will generally apply to all technical performance record forms issued or established. Guidance on filling out specific forms may be obtained from Attachment 6 of this OMM. Attachment 6 will also provide examples of all the forms required to document technical parameters for the facility covered by this OMM.

c. Corrections. All entries shall be made with a ball-point pen or typewriter. Erasures or overwrite corrections (i.e. writing over an entry that was previously made to change the entry) are not allowed. Errors will be voided by a single line strikeout and the correct information neatly inserted. The initials of the person making the correction(s) shall be entered adjacent to the lined out portion. Use the next line if insufficient space is available to make the correction legibly on the same line.

d. Entry Frequency. Line entries are not normally required more frequently than the normal maintenance interval (monthlies recorded monthly, quarterlies recorded quarterly, etc.). Exceptions to this interval would be when additional documentation is required, as in post-accident verification, or system restoration activities.

e. Heading Entries. The facility block shall contain the facility identifier followed by the facility type contraction (i.e. XYZ NDB). The other heading blocks should also be filled in with the requested information.

f. Column Headings. The column headings on the form are those system performance indicators that are checked according to the periodic maintenance schedule for the facility. Do not cross out, paste over or otherwise modify specific column headings unless the sample forms in Attachment 6 of this OMM have been modified accordingly. Enter N/A if the parameter column is not applicable to the equipment involved. If a parameter is not applicable, the N/A needs to be entered only once, in the first block of the column. Some forms have unused columns that may be use to record other parameters as desired. If blank columns are not available, a continuation form such as FAA Form 6000-8 may be used to document parameters not specifically required but which the NAT wants to monitor.

g. Date and Time Entries. The month and year correlating to the month and year of the first line entry on the form shall be entered in the "Dates" heading block immediately after the word "from". The line entries in the "Date" column shall contain the month and day only (i.e. 1/23). If the form is used to document data for more than one year, the line just above the first entry for the subsequent year shall contain only the year (i.e. 1996). The first line entry for the new year shall be entered in the first available line below the year only entry. The Time block entry shall be made using a 24 hour format. The entry shall be made using Universal Time, Coordinated (UTC).

Note: See Attachment 4, par. 2 a.(5) of this OMM for an explanation of how to determine UTC.

h. Nominal Block Entries. The Nominal entries shall contain the reference parameters established at commissioning or by FAA flight inspection. These reference parameters shall be within the limits prescribed in the Standards and Tolerances contained in Attachment 1 of this OMM. Standards and Tolerances in the equipment instruction books or other appropriate reference data may be used for those limits not contained in Attachment 1. Operating tolerances or limits shall be entered as required by the form. A dash (-) in the Limits block for the reference parameter indicates that no limit entry is required.

(1) Numerical Values. Numerical values shall be entered with the limits shown as a range (i.e. Enter a frequency of 118.0 MHz ± .002% as 118.0 MHz: ≥117.99764: ≤ 118.00236 MHz; and NOT 118.0 MHz ± .002%). All nominal value and limit blocks on the required FAA 6000 series forms that relate to facility parameters shall be filled in. Any time a reference value is altered due to flight check requirements or changes in the Standards and Tolerances for the facility, a new form shall be started with the new reference value(s) inserted in the nominal block(s). The reason for the changed parameter(s) shall be indicated in the remarks portion of the form or in the facility maintenance log. No reference parameter shall be changed without a confirming flight inspection or a change in the standards and tolerances in Attachment 1 of this OMM.

(2) Non-numerical Entries. When non-numerical entries are appropriate under a column heading (i.e. Day/Night Switch operation, obstruction light operation, etc.) the entry shall be a checkmark, (√). The checkmark should be entered in the nominal block at the start of each new form.

i. Limit Entries. These entries are the observed values of the operating data being recorded. Lines shall not be left blank to separate successive entries. The "Remarks" block shall be used to enter brief comments only. It shall not be used to enter elaborate comments that relate to the facility. The facility maintenance log (FAA Form 6030-1) shall be used for this purpose. Every line entry on the form

shall be initialed by the person making the entry. No line entry that exceeds the limits of the nominal values shall be documented without a subsequent line entry showing the parameter was adjusted to within tolerance. The out of tolerance entry shall be circled.

j. Printout Forms. Facilities that generate printout forms with the same data required by the FAA 6000 series forms may be used in place of the FAA 6000 series forms. In such cases, a copy of the printed form shall be submitted with the copies of the facility logs sent to the FAA office. If printout forms are used to substitute FAA 6000 series forms, the original printout that is generated during commissioning shall be marked as the "Reference Data Printout" and retained at the facility until a new reference data printout is required for reasons indicated in subparagraph (h) above.

k. Form Retention. The FAA 6000 series forms or their equivalents (printout, locally generated, etc.) shall be retained by the sponsor no less than two years. Reference Data Printouts shall be kept until superseded by changed reference readings, even if this time frame exceeds two years.

Table 1
PM/Inspection Scheduling Intervals

Time Period	Tolerance +/-
Daily	No Tolerance
Semiweekly/Twice Weekly	1 day
Weekly	3 days
Biweekly/Semimonthly	5 days
Monthly	10 days
Bimonthly	10 days
Quarterly	30 days
Semiannual	30 days
Annual	60 days
Biennial	90 days
Triennial	120 days

ATTACHMENT 5
Technical Reference Data Record (TRDR) Forms

Insert the Technical Reference Data Record (TRDR) forms.

ATTACHMENT 6
Sample Log and 6000 Series Forms Entries

This section contains sample entries for FAA Form 6030-1 (Facility Maintenance Log) and FAA 6000 series forms (Technical Performance Records) for the specific facility type covered by this OMM. Making data entries that follow those typified by these examples will reduce or eliminate documentation errors and allow entries to conform with FAA requirements.

SAMPLE

FACILITY MAINTENANCE LOG	STATION: ANYTOWN, GA	
	[illegible]: XYZ AWOS	MONTH AND YEAR: JAN. 1996

DATE	TIME [illegible]	[illegible]	REMARKS	[illegible]
5	1400		[1] First Entry: Arrived site.	
	/ 1410	60	[2] Requested AWOS shutdown. MCC (CH) approved.	
	1510		[3] Completed quarterly and semi-annual maint. per OMM schedule.	
	1512		[4] AWOS verified.	
	1515 /		[5] AWOS returned to service. MCC (CH) advised.	
	1520		[6] Departing site.	
			[7] March 1996	
10	1405		Arrived site.	
	/ 1155	80	[8] (Delayed Entry) AWOS reported out of service by Atlanta MCC (CJ).	
	1512		[9] Replaced fuses F1 and F2 in power supply.	
	1515		AWOS verified.	
	1520 /		AWOS returned to service. Atlanta MCC (JM) advised.	
10	1522		Departing site.	
			April 1996	
6	1250		[10] Entry of 3/10 at 1522 is final entry for Jan.-Mar. quarter.	

DATE	[illegible]	DATE	[illegible]
		[illegible]	

FAA FORM 6030-1 [illegible]

SAMPLE LOG PAGE

Sample Log Entries
Reference Paragraphs

The numbers for the notes below correspond to the circled numbers on the left margin of the Sample Log Page found in this section. The reference paragraphs are taken from a typical Operation and Maintenance Manual (OMM).

1. First Entry and Arrival Entry (Reference, OMM page A4-2, par. 2 b. (3) (a), page A4-3, par. 3b.5, and 3 c.)

2. Scheduled Facility Interruption (Reference, OMM page A4-1, par. 2 a. (6) and 3. d.).

3. Completion of Scheduled Maintenance (Reference, OMM page A4-3, par. 3. c.).

4. Verification Entry and Statement (Reference, OMM page A4-2, par. 3. b and page A4-4, par. 4).

5. Return to Service Entry (Reference, OMM page A4-3, par. 3. d.).

6. Departure Entry (Reference, OMM page A4-3, par. 3. c.).

7. New Month Entry (Reference OMM page A4-1, par. 2. (a) (4).).

8. Delayed Entry in Conjunction with an Unscheduled Interruption,. (Reference, OMM page A4-2, par. 2.b.(4).).

9. Corrective Maintenance Entry (Reference OMM, page A4-3, par 3. c.).

10. Last Entry of Period (Month, Quarter, etc.) (Reference OMM, page A4-2, par. 2. b. (3) (b).).

FACILITY MAINTENANCE LOG	STATION: ANYTOWN, GA	SAMPLE
	SUBJECT OF LOG: XYZ AWOS	BEGINNING DATE: OCT. 1995

DATE	TIME (24 HOUR)	CODE	REMARKS	INITIALS
5	1400		Arrived site. Notified by MCC (JK) of aircraft accident involving a Cessna	
			172 making a final approach to the Anytown airport. Will make	
			preliminary status check of AWOS facility.	
	1420		After preliminary evaluation, found AWOS operation normal. All	
			parameters are being broadcast properly. MCC (CR) advised using local	
			telephone.	
	1440		MCC (CR) requested a complete check of AWOS key performance	
			parameters.	
	1555		The operation of the XYZ AWOS was checked beginning at 1440 this date	
			and found to be normal. Meter readings and verification performance	
			parameters were within established standards and tolerances and verified. I	
			verify that this is a true and complete statement of my findings with regard to	
			the XYZ AWOS for the date and time indicated. The XYZ AWOS is verified.	
			Technician_____	
			SIGNATURE	
			Non-Federal Technician	
			TITLE	
			Observer_____	
			SIGNATURE	
			FAA Airway Transp. System Specialist	
			TITLE	
	1610		AWOS verified.	
8	1620		MCC (CR) notified of findings. Departing site. Last entry this page.	
			Note: Other log entries not shown on this sample page may be required by the Aircraft Accident procedures found in this OMM. Follow the procedure requirements.	

DATE	SIGNATURE OF SUPERVISOR/DESIGNEE	DATE 10/5/95	SIGNATURE OF MAINTENANCE TECHNICIAN

FAA FORM 6030-1 (6-78) (FORMERLY FAA FORM 6030)

SAMPLE LOG PAGE - A/C ACCIDENT

ORDINANCE 2004-17

ORDINANCE OF THE COUNTY COUNCIL OF OCONEE COUNTY, SOUTH CAROLINA, AUTHORIZING A LEASE/PURCHASE AGREEMENT, SERIES 2004 RELATING TO THE FINANCING OF VARIOUS 911 EMERGENCY EQUIPMENT FOR MUNICIPAL PURPOSES; AUTHORIZING THE EXECUTION AND DELIVERY OF VARIOUS DOCUMENTS INCLUDING THE LEASE AGREEMENT; AND OTHER MATTERS RELATING THERETO.

BE IT ORDAINED BY THE COUNTY COUNCIL OF OCONEE COUNTY, SOUTH CAROLINA, AS FOLLOWS:

Section 1. The County Council (the "Council") of Oconee County, South Carolina (the "County"), as lessee, hereby finds and determines that:

(a) the County is a body politic and corporate and a political subdivision and, as such, possesses all powers granted to political subdivisions by the Constitution and general laws of this State;

(b) the County desires to enter into a lease/purchase agreement (the "Lease") with a bank or leasing company for the purpose of financing the purchase of various 911 emergency equipment more fully described on Exhibit A attached hereto (the "Equipment"); and

(c) the payments by the County under the Lease will be subject to annual appropriation by the Council.

Section 2. The Council hereby authorizes the Director of Administrative Services and Finance to distribute a request for proposals, in substantially the form attached herein as Exhibit B, to determine the final principal amount not to exceed $_____ and maturity date of the Lease, and to accept the bid containing the lowest interest cost that complies with the request for proposals without further action required of Council.

Section 3. The Council hereby authorizes the County Administrator, the Director of Administrative Services and Finance, the County Attorney, and the Clerk to Council, acting jointly or individually, to execute such documents and instruments as necessary to effect the issuance of the Lease.

Section 4. The Lease will be designated as a "qualified tax-exempt obligation" within the meaning of and for purposes of Section 265(b) of the Internal Revenue Code of 1986, as amended, provided the Lease is executed in calendar year 2004.

Done in meeting duly assembled this ____ day of _____, 2004.

OCONEE COUNTY, SOUTH CAROLINA

ATTEST:

_____
Chairman, Oconee County Council

_____
Clerk to County Council

First Reading: _____
Second Reading: _____
Third Reading: _____

EXHIBIT A

Equipment List

EXHIBIT B

REQUEST FOR PROPOSALS

Oconee County, South Carolina (the "County"), is requesting proposals from various banks, investment bankers and leasing companies with respect to a $_____ tax-exempt lease-purchase agreement (the "Lease Agreement") between the lessor and the County to acquire the items listed on the attached Schedule A.

I. **Structure of Lease**

(a) **Term**: A five (5) year term will be considered with a repayment schedule showing principal amortization of the equipment costs shown on Schedule A in five years.

(b) **Lease Payments**: Five (5) equal amortized annual lease payments of principal and interest due on the anniversary of the closing date beginning one year from the closing date for the equipment listed on Schedule A. Purchase option at end of term will be exercised at cost of $1.00.

(c) **Non-Appropriation**: The Lease Agreement shall contain a nonappropriation clause acceptable to the County. The County's right to exercise its right of nonappropriation shall be unconditional.

(d) **Non-Substitution**: No non-substitution clause or similar clause will be accepted.

(e) **Leased Property**: See attached Schedule A.

(f) **Acquisition Fund**: The Lessor will deposit $_____ into the Acquisition Fund on the day of closing. The Acquisition Fund shall be held by a bank chosen by the County and the lessor. Such bank will have an office or branch in South Carolina.

(g) **Interest Earnings**: Investment of the Acquisition Fund will be directed by the County. The investment earnings, if any, will be applied as a credit against lease payments or, at the option of the County, be used to defray the cost of the Leased Property. The County will reject any proposal that requires the County to pay any portion of investment earnings to the Lessor or a third party.

(h) Costs of Issuance: All such costs will be paid after approval by the County on the day of closing.

(i) Insurance: The County's property is insured through the South Carolina Insurance Reserve Fund. The Leased Property will be insured in a similar manner at face value.

(j) Draw: The County expects to begin drawing from the Acquisition Fund within __ days after closing and final acceptance of all Leased Property will be made within __ months after closing.

(k) Designation as Qualified Tax-Exempt Obligations: The County will designate the Lease Agreement as a "qualified tax-exempt obligation" for purposes of Section 265 of the Internal Revenue Code of 1986, as amended, relating to the ability of financial institutions to deduct from income for federal income tax purposes certain interest expense that is allocable to carrying and acquiring tax-exempt obligations such as the Lease Agreement.

(l) Fees: The County will be responsible for the fees and costs of its County Attorney and for its Bond Counsel. The County will not be responsible for fees or costs of any bidder including the successful bidder, including, but not limited to, counsel fees and costs of bid preparation.

(m) Closing: The County is currently accepting bids on the Leased Property. Closing will be scheduled to ensure that all equipment is delivered within __ months after closing. The County anticipates the closing to be on _____, 2004.

II. Form of Proposal

(a) The proposal must be in writing and not be subject to credit review. A copy of the County's audited financial statement is available from the County. If you should need any additional information, please submit your request in writing to Bond Counsel.

(b) The proposal must specifically answer each of the following questions:

(1) What is the total amount of the financing (principal borrowed)?

(2) What is the principal and interest payment to be paid on each annual payment and what is the interest rate on each annual payment?

(3) What are the maximum other costs associated with this Lease Agreement that will be paid by the County?

(c) The proposal must provide a computation of annual principal and interest payments.

(d) The proposal must compute the interest cost. The bid will be awarded to the bidder submitting the proposal which results in the lowest annual payment amount. All detail necessary to validate those computations must be presented.

(e) Although interest may be earned on the Acquisition Fund and credited to the payment account, do not include any investment earnings in your proposal.

(f) The proposal should list all opinions which will be expected of the County Attorney, Bradley A. Norton, Esquire, and the County's Bond Counsel, Haynsworth Sinkler Boyd, P.A., Greenville, South Carolina.

III. Submission Information

One copy of the sealed proposal clearly marked "Proposal for 2004 Lease Purchase" should be submitted **by 12:00 noon, _____, 2004**, to: Phyllis E. Lombard, Director of Administrative Services and Finance, 415 South Pine Street, Walhalla, South Carolina 29691, telephone (864) 638-4235. Proposals after that date will not be considered. Proposals may be delivered by hand, by mail or by facsimile transmission, but no proposal shall be considered which is not actually received by the County at the place, date and time appointed, and the County shall not be responsible for any failure, misdirection, delay or error resulting from the selection by any bidder of any particular means of delivery of proposals. The County will take reasonable steps to ensure the confidentiality of all proposals transmitted to it by facsimile transmission but cannot guarantee the confidentiality of information transmitted by such means. Proposals by facsimile transmission should be sent to the attention of Phyllis E. Lombard, facsimile (864) 718-1022.

If you should have any questions regarding this Request for Proposals, you should contact Phyllis E. Hornbard, Director of Administrative Services and Finance at (864) 638-4235 or the County's Bond Counsel, Haynsworth Sinkler Boyd, P.A., Greenville, South Carolina, Brad Love (864) 240-3388.

Dated: _____, 2004

SCHEDULE A

Equipment List

STATE OF SOUTH CAROLINA)
) CERTIFICATE OF ORDINANCE
COUNTY OF OCONEE)

I, the undersigned Clerk to County Council of Oconee County, South Carolina (the "County"), do hereby certify as follows:

That the foregoing constitutes a true, correct and verbatim copy of an Ordinance which was given three readings on three separate days, with an interval of not less than seven days between the second and third readings. The original of this Ordinance is duly entered in the permanent records of minutes of meetings of the County Council, in my custody as such Clerk.

That each of said meetings was duly called, and all members of the County Council were notified of the same; that all/a majority of the membership were notified of each meeting and remained throughout the proceedings incident to the adoption of this Ordinance.

WITNESS my official signature this____ day of _____, 2004.

_____
Clerk to County Council
Oconee County, South Carolina

First Reading: _____
Second Reading: _____
Third Reading: _____

1. Fire Commission names of nominees read as follows:

- Jess Neville – 5, 14, 16 – Chairman
- Walter Lee – 3, 7, 12
- Tim Grant – 1, 6, Haz Mat
- Ralph Manee – 8, 13, 15
- Les McMahan – 2, 11,17
- C. G. Phillips – 4, 9, 10

Ex Officio – Ronnie Walker
– Pr of Fire Chiefs Assn

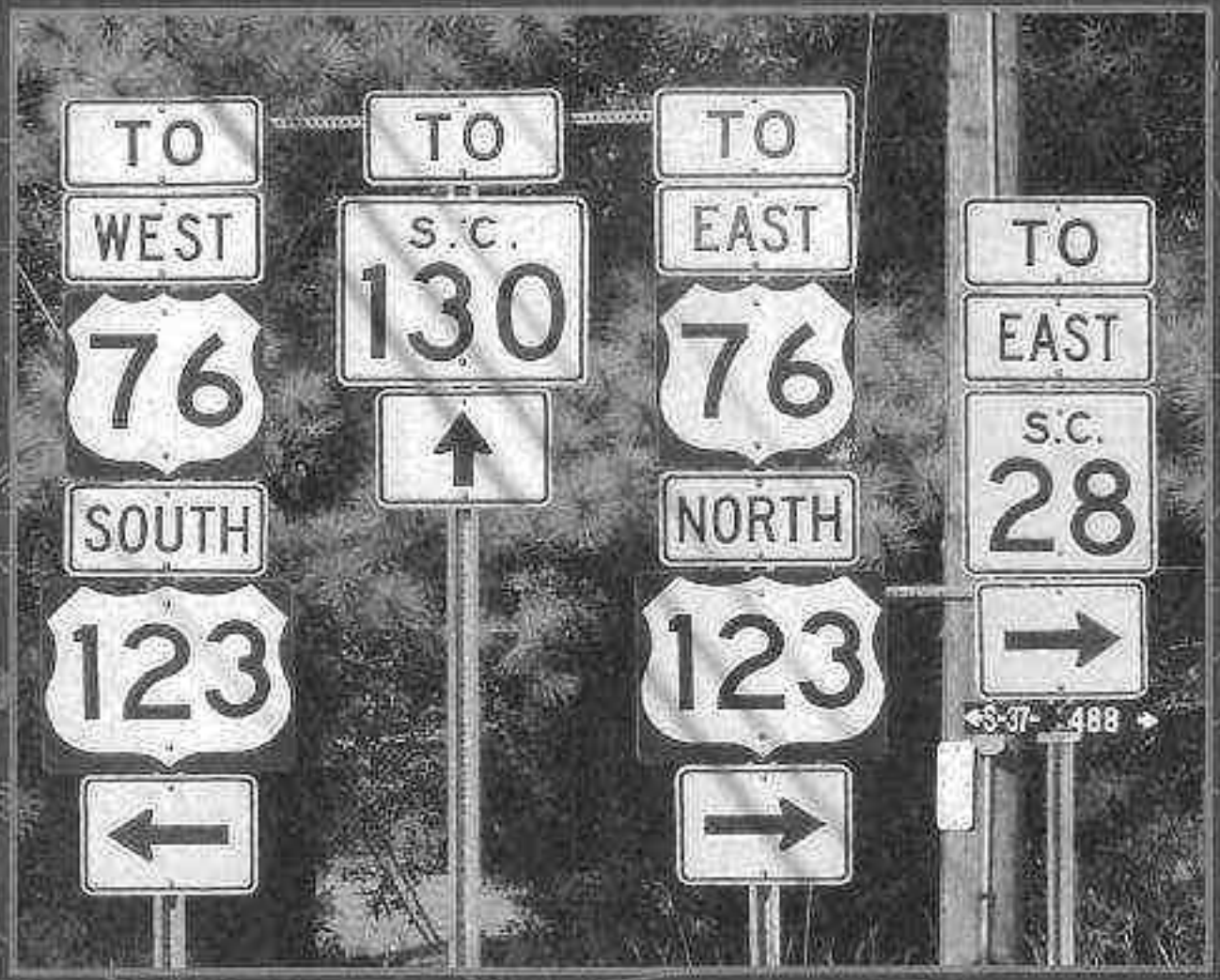
Included in the Master Plan...

- 20 year look into the future
- Recommendations for solid waste, water, sewer, and transportation
- Plans to enhance county development while protecting valuable Oconee County resources
- Promotion of community cooperation

Oconee County Transportation Master Plan

- Roads & Highways
- Rail
- Air
- Public Transportation

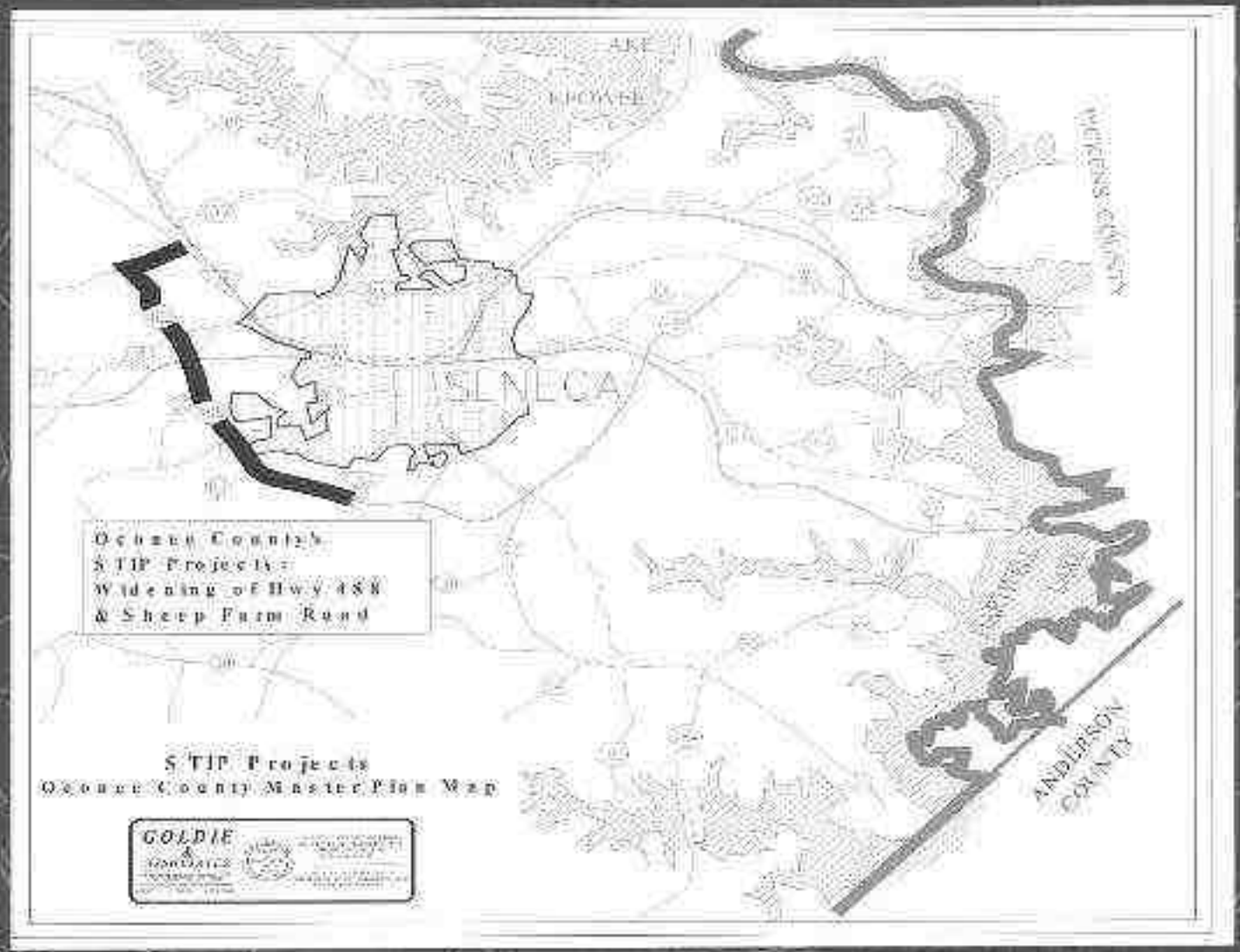
Roads and Highways



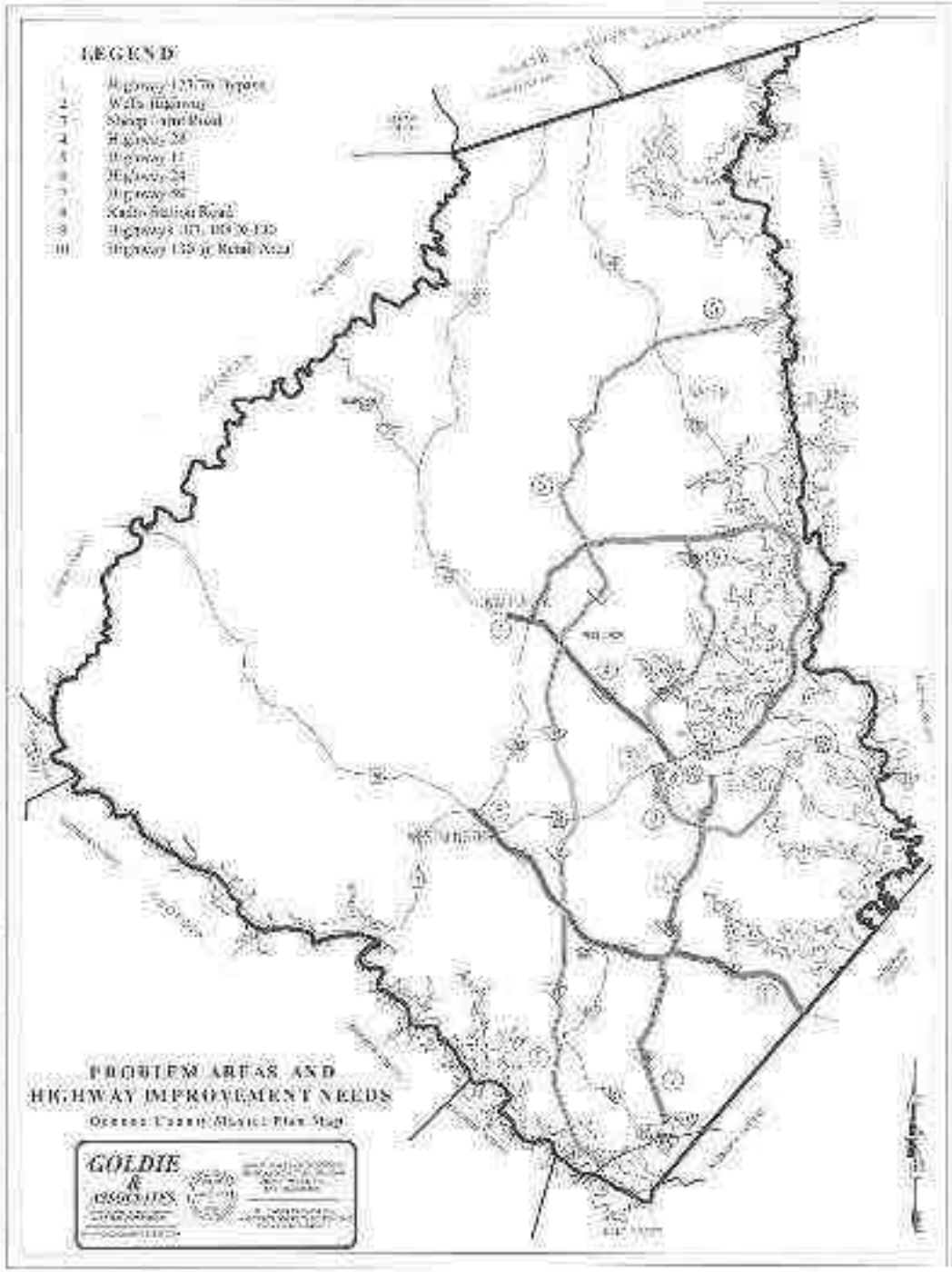
State Transportation Improvement Program (STIP) Project Selection Process

- ACOG Regional Transportation Committee convenes local committee
  - ACOG
  - COG
  - SCDOT

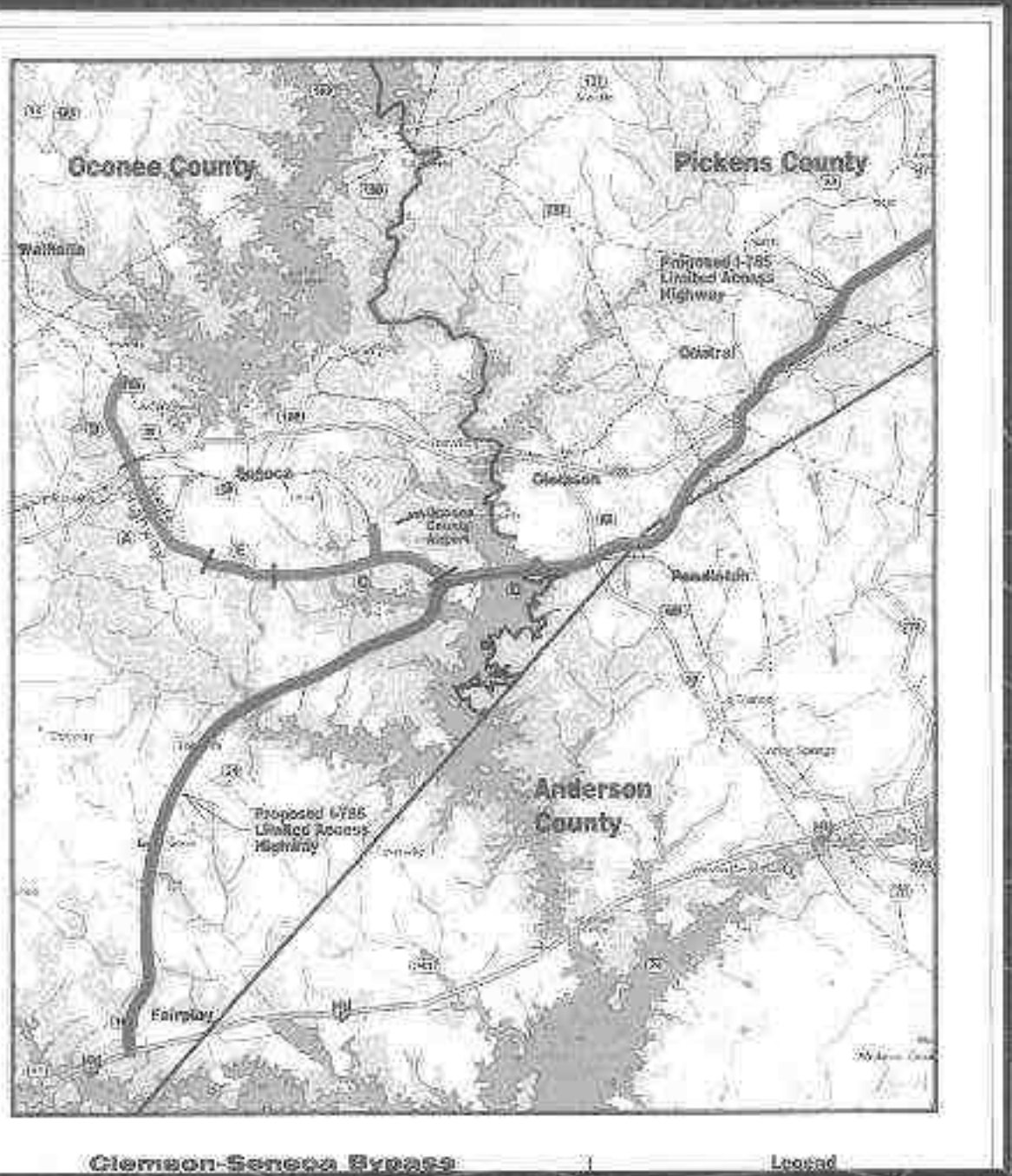
Oconee County STIP Projects



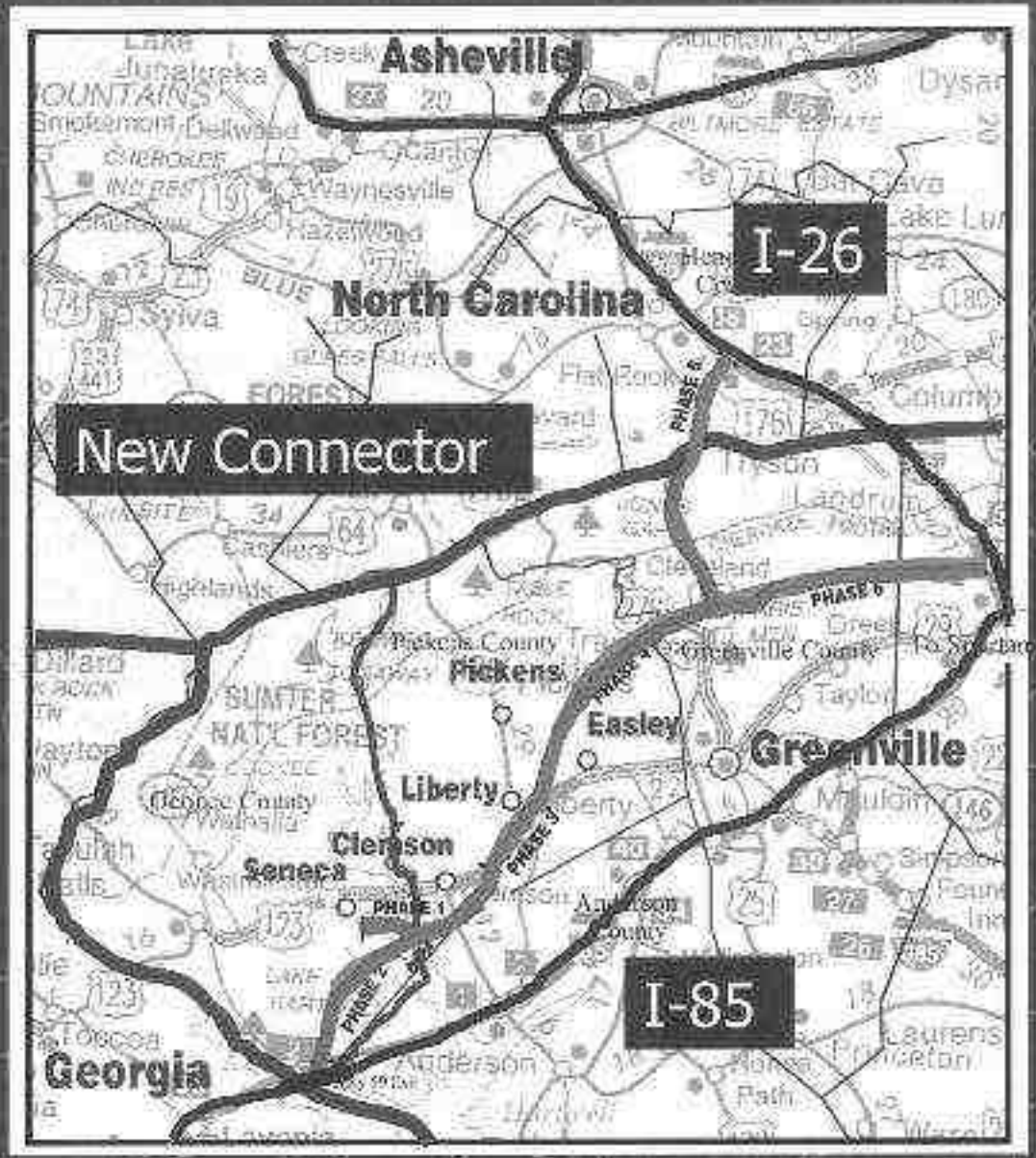
Oconee County Problem Areas



Clemson-Seneca Bypass and Interstate Connector



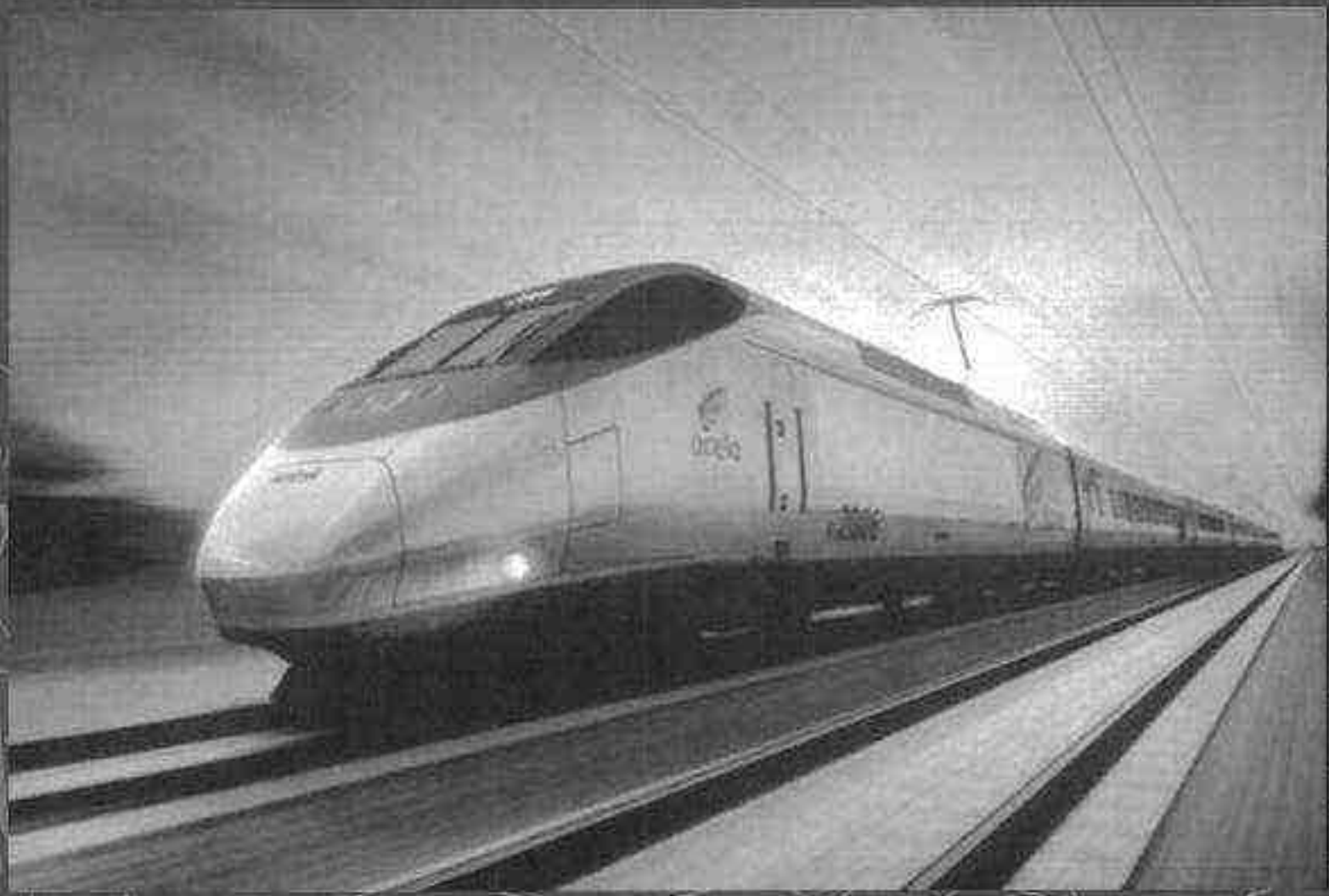
Proposed I-85 to I-26 Interstate Connector



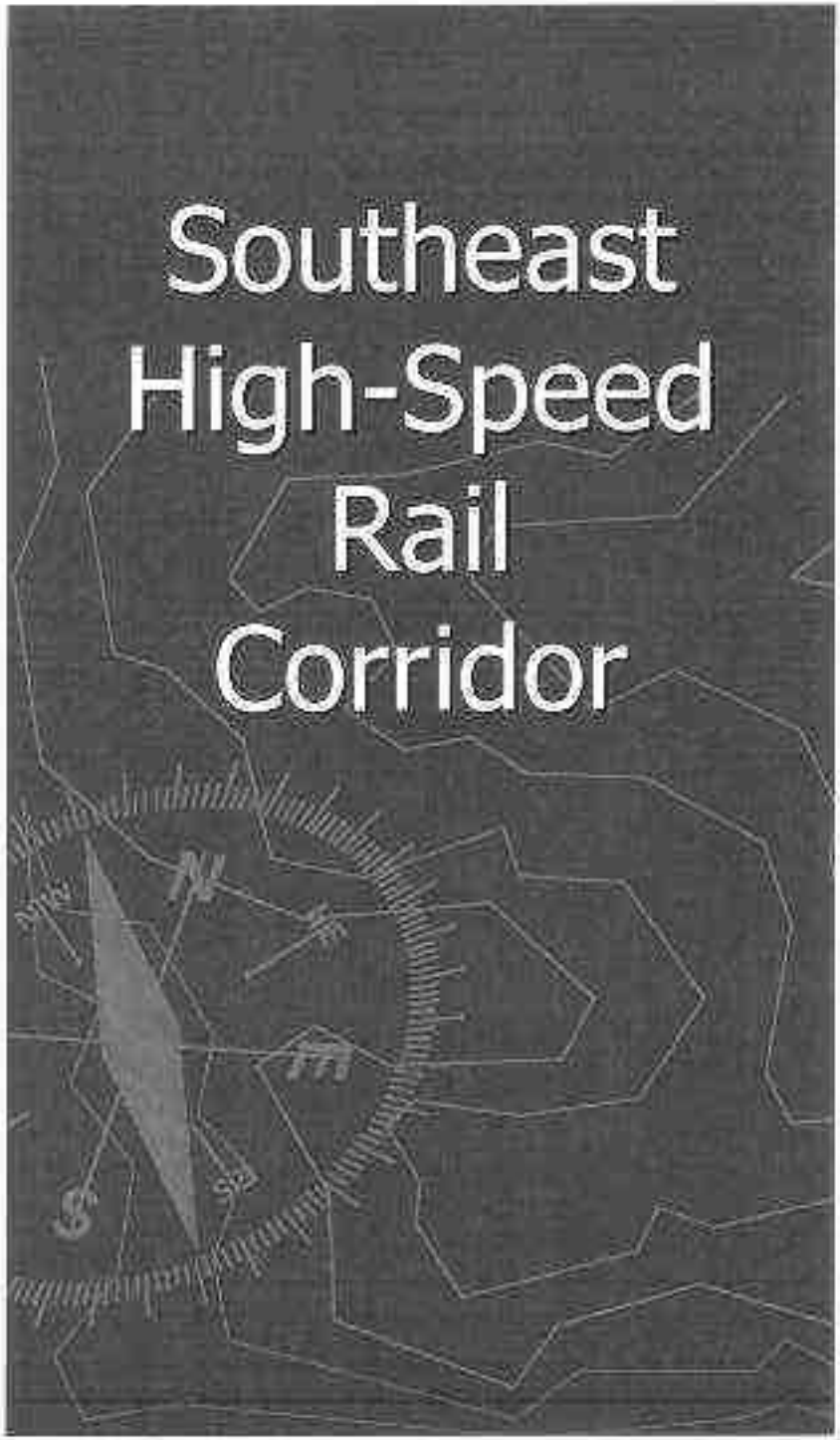
Recommendations

- Set County Priorities
- Work with ACOG/SCDOT
- Protect Existing Commuter Routes such as Hwys 123, 28, 59, 130, Wells Highway

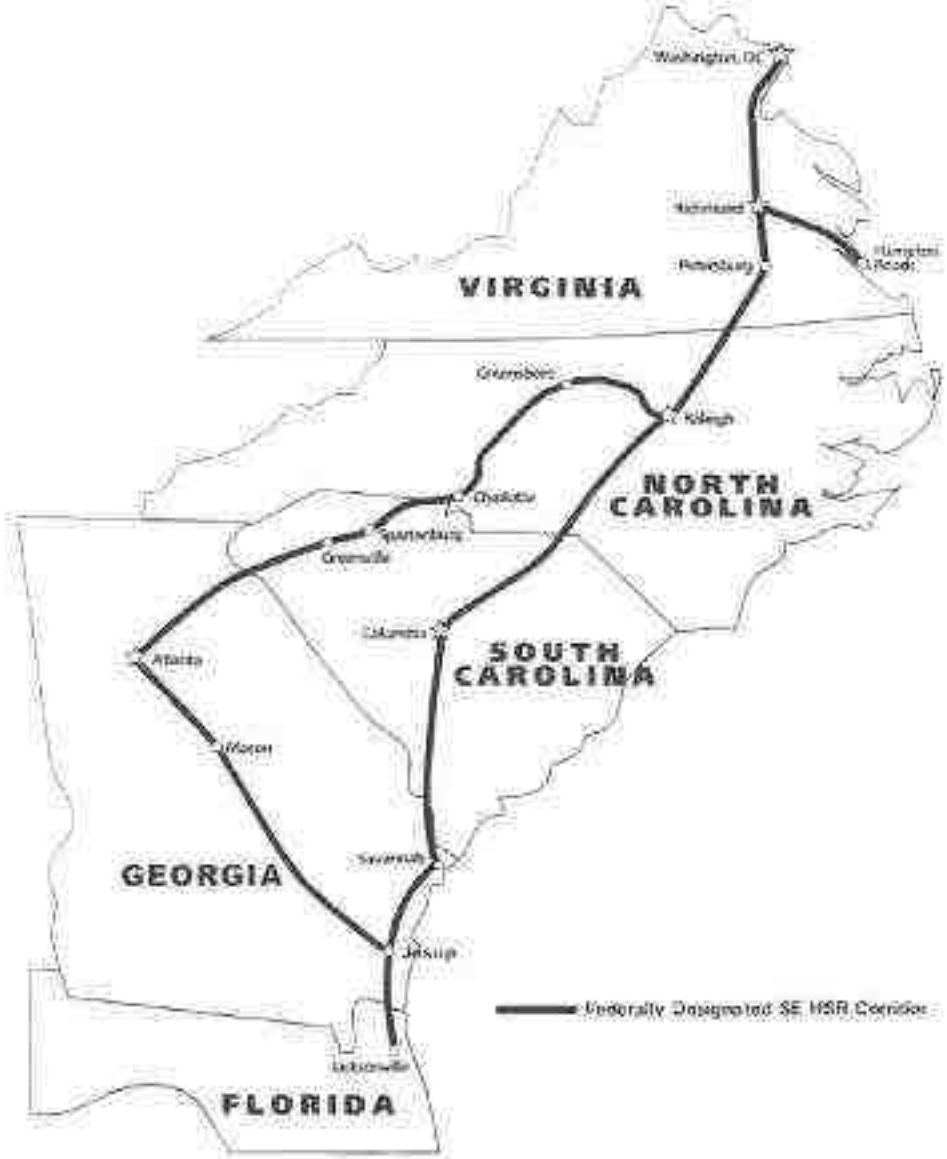
Rail Service



Southeast High-Speed Rail Corridor



Southeast High-Speed Rail Corridor



Base Map:
North Carolina Department of Transportation

Exhibit 1-1

Recommendations

- Monitor HSR project status
- Future evaluation of need for an Oconee County stop for HSR service

Air Service

Air Transportation / Airport Improvements

- Runway Extension
- Navigational Aid Improvements
- Airport Layout Plan Improvements

Recommendations

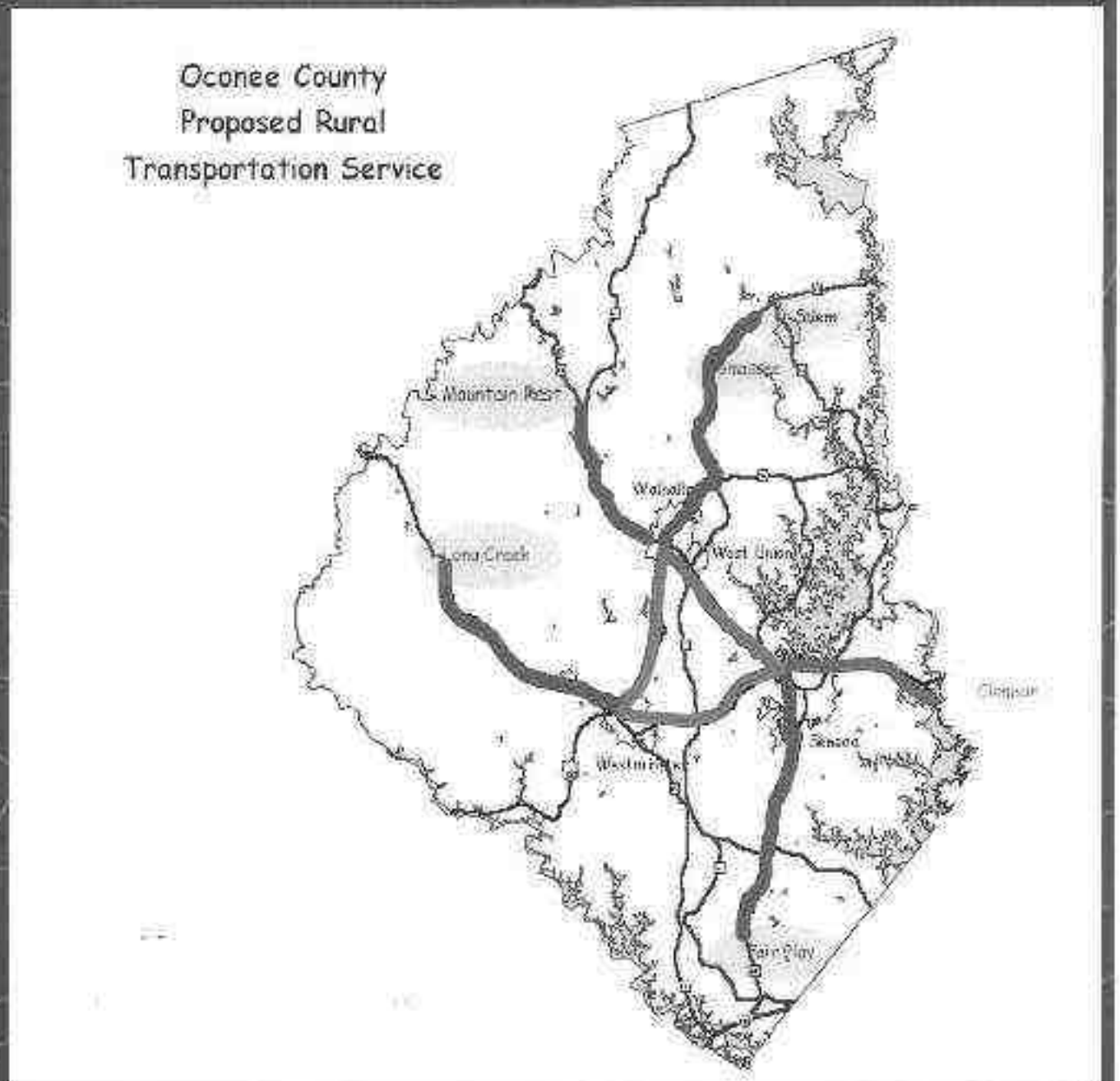
- Approve and Implement the Airport Capital Improvement Plan

Public Transportation

Existing Public Transportation Services in Oconee County

- Senior Solutions
- Anderson-Oconee-Pickens Mental Health Center
- Oconee-Pickens Vocational Rehab
- OC Disabilities and Special Needs Board
- School District
- Emergency Services

First Steps Study (2002)



Oconee County Public Transportation Budget Costs

	Total	Oconee County
Start up costs	$560,000	$35,000
Operating Costs/yr	$493,000	$253,000

Recommendations

- Support Seneca's efforts to bring CAT to Seneca
- Further study is needed if council desires to provide rural public transportation service

Recap of Recommendations

- Set County Priorities
- Work with ACOG/SCDOT
- Protect Existing Commuter Routes
- Monitor progress /needs for HSR Service

Recap of Recommendations

- Approve and implement the Airport Capital Improvement Plan
- Support Seneca's efforts to bring CAT to Seneca
- Further study on rural public transportation service

Local Option Sales Tax
Overview

4-10-10

S.C. Code of Laws

S.C. Sales Taxes

- **State Sales and Use** (5%)

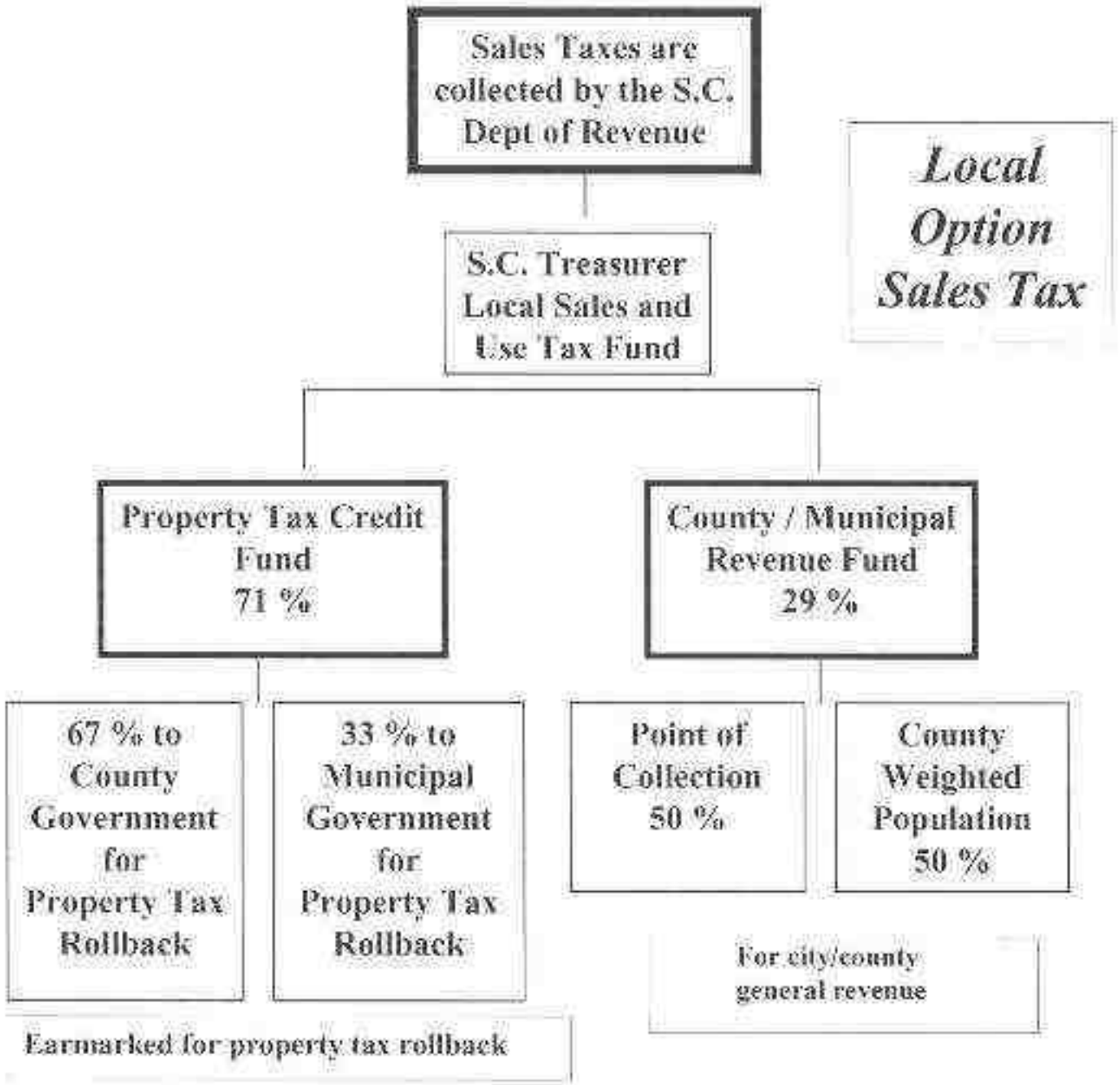
Local Sales Taxes

- **Local Option (1%)**
- **Capital Project** (1%)
- **Transportation** (1%)
- **Vehicle Tax Replacement** (1-2%)
- **Special School** (1%)

Local Option Sales Tax

- One percent maximum tax on retail sales.
- Requires a referendum of county voters in November.
- Minimum 71% to be applied against county and municipal property tax rollback fund. 29% for general revenue or additional rollback.
- Credit /Rollback will only apply to city or county property taxes for *operations*. Won't reduce school taxes.
- 5% Robin Hood, 1/2% Administrative costs

How it Works



- The County\Municipal Revenue Fund may also be used for *additional* property tax rollback.
- Sales tax distributions are made to local jurisdictions monthly.

27 Counties

currently using the local option sales tax

Abbeville, Allendale, Bamberg,

Barnwell, Berkeley, Charleston,

Chester, Chesterfield, Clarendon,

Colleton, Darlington, Dillon,

Edgefield, Florence, Hampton, Jasper,

Kershaw, Lancaster, Laurens,

Lee, Marion, Marlboro, McCormick,

Pickens, Saluda, Sumter, Williamsburg

Additional counties *have either the School, Transportation or Capital Projects sales tax*

Tax Credit Calculation

The property tax "rollback" is not an actual rollback of tax millage, but a credit which is applied to each individual tax bill. A different credit factor is calculated for each municipality and for the unincorporated area of the county. City taxpayers get two tax credits since they pay two taxes.

$$\textbf{Credit Factor} = \frac{\text{Available Sales Tax Revenue}}{\text{Taxable Appraised Value}}$$

Credit = Credit Factor x Appraised Value

Example: **The City of Mayberry** has an appraised tax base of $225 Million. The City will receive $2 million from the local option tax for "rollback". Its credit factor is $2,000,000 / 225,000,000 = .00888

A person with a $100,000 home in Mayberry will get tax relief of **$888** ($100,000 x .00888) on city taxes *and additional relief from county taxes.*

Owner Occupied Home, City Resident

05/06/1999 15:08 864-833-5845 A.D. PAGE 03

TAX NOTICE **PICKENS COUNTY, SOUTH CAROLINA** 1998 TAXES

RECEIPT NUMBER	DISTRICT	NUMBER ACRES/LOTS	NUMBER OF BLOCKS	DESCRIPTION
0460	1	1	1	LOT GLEN LAUREL XXXX

PROPERTY TYPE	ASSESSED VALUE	TAXING AUTHORITY	TAX LEVY	PROPERTY TAX
ACRES/ LOTS	1,040	COUNTY OPERATIONS	60.7	306.63
BUILDINGS	4,011	COUNTY BONDS	6.4	32.33
PERSONAL		SCHOOL OPERATIONS	108.4	547.53
TOTAL	5,051	SCHOOL BONDS	21.6	109.10
		TECH EDUC	2.9	14.65
		LIBRARY	4.2	21.21
		EASLEY	59.0	298.01

Combined City/County tax bill of $605

Tax Relief of $415

68% Reduction

GROSS TAX 1,329.43

TAXABLE APPRAISED VALUE 126,275

TAX CREDIT FACTOR
COUNTY 0.001496
CITY 0.001796

COUNTY CREDIT 189.91
CITY CREDIT 226.79

PRIOR YEAR TAX ON THIS PROPERTY 625.96

STATE PROPERTY TAX RELIEF BENEFIT (SAVINGS) 389.80

THIS PROPERTY HAS 4% LEGAL RESIDENCE

TAX DUE IF PAID BY JAN 15TH
514.53

PAY THIS AMOUNT AFTER JAN 15TH 529.97
PAY THIS AMOUNT AFTER FEB 15 565.99
PAY THIS AMOUNT AFTER MAR 15TH 591.72

PARCEL XX-XX-XX-XXX
ACCOUNT 59X7XX

DETACH STUB HERE - INSERT PAYMENT AND STUB AND RETURN TO THE ADDRESS BELOW.

Total Revenue Estimates

Oconee County and Municipalities

BEA estimated collections > $7.1

Less 5% "Donor County"+ Admin Fee

Net Collections > $6.66

Less est. 15% "1st Year Effect" ***$5.66***

* *in $ millions*

Revenue Estimates

Oconee County and Municipalities

Jurisdiction	Tax Relief	General Revenue
County	**3,192,000**	**1,323,000**
Salem	13,552	2,202
Seneca	823,000	459,100
Walhalla	408,000	71,432
West Union	31,945	10,431
Westminster	295,000	79,196

Notes:

1. Based upon BEA collection estimates
2. First year collections may be as much as 15% less than later years

Reasons to enact a Local Option Sales Tax

- **Relief** for property taxpayers
- **Export** some of the tax burden to non-residents
- **Diversify** revenue sources
- Revenues **grow** with economy

Questions regarding Local Option Sales Tax

- How will municipalities use their 29% revenues ?

- Is there enough time between now and November 2004 to educate the public on the Local Option Tax ?

Local Option Sales Tax

Appalachian Council of Governments

OCONEE COUNTY PROCUREMENT OFFICE

415 South Pine Street – Room 10
Walhalla, SC 29691
Telephone (864) 638-4141
Fax (864) 638-4142

PROCUREMENT DIRECTOR
Marianne A. Dillard

TO: County Council Members

FROM: Marianne A. Dillard

RE: Sound System for Family Courtroom

DATE: July 30, 2004

As you will recollect, Council approved having CDAI, a sub-consultant for Heery International, come in to evaluate the sound systems in the courtrooms. They have completed their report, a copy of which is attached. I have also attached a letter Mr. Hamilton and I received a while back from the Honorable Judge Tim Cain requesting that something be done about the fact that his courtrooms do not have any amplification in them, which he needs desperately.

My request is that I be allowed to take $4,000 from the Courthouse construction line item, along with $3,000 we have encumbered in Sallie Smith's budget from last year to immediately install a completely redesigned sound system for Judge Cain's courtroom. You will note that this is the recommendation of CDAI. Once we are satisfied that the "new" system will work, I will probably request that the other systems be replaced in accordance with CDAI's recommendations.

According to Sally Lowery, the current balance in the Courthouse budget is approximately $120,000. If you have any further questions, please feel free to contact me.

/mad

Enclosures: 3

Cc: Harry Hamilton
Tim Cain
Phyllis Lombard

CDAI
SOLUTIONS

July 28, 2004

Copy
To Henry
for your info
Mike
7-29-04

Mr. Clint Fairchild
Henry International, Inc.
999 Peachtree Street, NE
Atlanta, Georgia 30309

Re: Oconee County Courthouse Courtroom Audio Systems

Dear Clint:

We met with Ms. Marianne Dillard of the Oconee County Purchasing Department, and Ms. Sallie Smith, the Clerk of Court, on Friday, July 23, 2004 to tour the facilities and review the existing audio system installations. We also visited with two judges, Hon. Alexander Macaulay and Hon. Timothy Cain and discussed their observations on the specific courtrooms they used (Circuit Courtroom 339 and Family Courtroom 243, respectively). In addition, we were provided a copy of a letter Judge Cain had prepared dated April 13, 2004 that essentially enumerated his comments to us on site (this letter is attached as your report of October 22, 2003 predates this communication).

There are two types of systems installed: audio recording with sound reinforcement and audio recording without sound reinforcement. With the exception of an integrated amplifier and ceiling speakers and a larger mixing board in the sound reinforcement system courtrooms, the two systems are essentially the same.

General Observations Applicable to all Court Rooms

In general, the courtroom audio systems have not been designed to professional standards. The equipment used is low budget, music industry grade audio equipment that is not appropriate for this application. Though the microphones and speakers can potentially be reused, the electronic components provided do not offer the quality or the functionality that should be provided in a court setting.

In addition, the installation quality is well below professional standards. In Courtrooms 339 and 340, some electronic components are mounted in plastic touring cases lying on their sides under a counter top in the Clerk of Court's box. While two components had been mounted in the case, a mixer amp was laying loose in the interior. In addition, a manual mixing board was sitting on top of the side of the case (under the countertop). The mixing boards in Courtrooms 240 and 243 are placed on a small piece of plywood mounted to the wall. Specific design and installation discrepancies are noted below.

Microphone lines are not properly dressed. There are numerous instances where wires hang loose under countertops where they can easily be pulled loose from the connectors. If this happened it would disable that channel from the recording system and preclude any amplification, which could have implications on the proceedings.

All audio systems utilize manual microphone mixers which require attention from court staff to make adjustments for varying sound levels. Since there is no one to operate the mixer, all microphones are essentially on throughout the proceedings.

which would tend to reduce recording quality as well as having other adverse impacts.

In the jury boxes on the third and fourth floor courtrooms, there are three microphones that are "daisy chained" to a single input even though there is a 24 channel mixing board provided with only 8 inputs used (i.e., there is sufficient mixing capacity to provide individual inputs for each microphone).

Floor boxes are not fitted with the proper panel mount microphone connector(s) though a duplex outlet and two RJ-45 type network connectors are installed. In some cases the floor boxes are not located properly relative to the furniture locations (attorneys' desks, lecterns, etc.). For example, in Courtroom 243, they are placed too far under the tables, causing them to be "under foot." In Courtroom 240, one floor box is placed in the main aisle. These placements pose tripping hazards as well as increased risk for damage to occur.

In some cases microphones are permanently mounted to attorneys' tables which limit flexibility in table location and reportedly cause concern among attorneys about the microphone being open when they are communicating privately with their client(s).

All courtrooms lack assistive listening systems for those who are hearing-impaired.

Recommendations:

Because of the numerous deficiencies in the existing systems, consideration should be given to removing the existing equipment and installing new systems designed around professional quality equipment. The audio components in each courtroom should be rack-mounted in a secure location such as the evidence closet that is located adjacent to each courtroom. This may necessitate providing new conduit for microphone wiring and speaker lines in some cases. In addition, dedicated power circuits with isolated grounds should be provided in the evidence closets with technical grounds also provided at the court reporter's desk.

The new systems should incorporate the following features:

- Automatic microphone mixers should be used in all court rooms. The automatic mixers should provide a remote control, placed at either the judge's bench or the court reporter's desk, to provide manual level adjustment of specific microphone channels if necessary for proper recording or amplification.
- A mute switch should be provided on the judge's bench to mute the system. This should reduce the amount of attention the court staff must devote to the audio and recording systems.
- The sound reinforcement systems should incorporate a masking sound feature to provide additional speech privacy for the judges during sidebar conversations at the bench.

Microphone and speaker wiring does not have sufficiently long service loops to allow the equipment to be pulled out from under the desk.

There is a small box sitting loose in the equipment rack that contains what appears to be a relay for the system mute switch on the judge's bench. When the judge's system mute switch is operated, a loud "pop" can be heard through the speakers.

Recommendations:

The microphone located on the jury box railing closest to the front wall of each room may be removed and used with a switched desk stand on the center lectern.

Speakers should be added in the following locations:

-two over the bench
-one over the jury box (in addition to the one that is there)
-one in the prisoner holding room, with the ability to control volume locally

Observations for Main Courtroom (Room 424)

Findings:

This room has a system similar to those installed in the Circuit Courtrooms except there are six speakers - two over the jury box and two over each side of the gallery. Speaker coverage is poor for the center and for the rear seating areas of the gallery.

Recommendations:

Speakers should be added in the following locations:

-two over the bench area
-one over each attorney table
-eight added to cover the gallery center and rear
-one in the prisoner holding room, with the ability to control volume locally

Budget Estimates for All Courtrooms

For a basic system that would include a digital automatic mixer with remote control, an amplifier, speakers, and all cabling, hardware, and labor, the estimated budget requirement for new systems for each courtroom should be approximately as follows:

Family Courtrooms	$7,000
Circuit Courtrooms	$9,000
Main Courtroom	$10,000

Note that these estimates do not include design fees or costs for infrastructure accommodations such as new floor boxes, power, grounding, cooling, etc., that are typically part of base building construction costs.

In closing, please recognize that there are options for using less expensive (though still professional quality) components. However, there are compromises inherent in these options. For example, while more basic (and less expensive) automatic

microphone mixers could be used, remote control capabilities would generally be limited and could require the mixer and/or audio rack to have to be placed at the judge's bench. Also, if budget considerations dictate, the existing microphones and speakers may be able to be incorporated into the new systems though there are potential service and warranty issues associated with using existing equipment in new systems.

To evaluate the cost effectiveness of a new system design, it may be beneficial for the court to install a "demonstration" system in a single smaller courtroom such as Courtroom 243. This approach could not only address an immediate need for a sound reinforcement system to be added to that courtroom, it could provide a mechanism for refining the design concept so that the new systems designed for the remaining courtrooms are optimized for both cost and function to meet the needs of the court.

Please let us know if we may be of further service to you on this project.

Sincerely yours,

F. Rogers Dixson, Jr., P.E.
President

Notes from 07/23/04 Oconee County Courthouse Site Visit.

Room 339—Circuit Court
-All mics are for court reporting (?)
-Mics on lawyers desk can go away (lawyers don't want them)
-Mic is needed on lectern
-Sound equip in rm 339:
-Phonic Impact II 24ch mixer
-Phonic PCL 3200 C/L
-Phonic NQ3306 31 band GEQ
-Peavey TA60A mixer/amp
-"Magic box" through which main out passes. Box is connected to "system off" switch on judge's bench and houses the relay for the muting of the system.
-3 ceiling speakers: one over jury box, one over left side of gallery, one over right side of gallery
-System is installed in touring rack laid on its side-mixer amp is loose
-Floor boxes need to be located out of aisles—floor boxes have power & data also
-They don't want cables draped across floor. Floor boxes do not have panel mount connector. Inline connector is used and sticks out of floor box.
-Wiring is not secured at clerks desk or witness box or judge's bench.
-They do not want mics permanently mounted to attorney tables

Room 240—Family Court
-Floor box @ defendant table is located in aisle between two tables
-Cables not secured under witness & judge bench
-They want/ need speakers
-Sound equipment:
-8ch mixer (no amp)
-Aux output is unbalanced and terminates at the court reporter station, but has a switch in the circuit so judge can shut off (mute) his mic or the entire system. Signal goes out of mixer then loops back in.
-Desk to side where child sits needs mic connection

Room 243—Family Court (Judge Cain)
-Floor boxes are better but are too close to seat side of tables, are under foot, and don't have panel mount connectors
-Exit doors and swinging doors b/t gallery and bar make noise
-Desk to side where child sits needs mic connection
-Add ceiling speakers

Room 424—Main court room
-Same system as circuit court room, except two additional speakers
-Closet at side (room 411) could house wall mounted rack.
-Floor box locations should be noted/reconsidered if millwork is remodeled.
-Add ceiling speakers

All Courtrooms
-Florescent ballasts buzz in all rooms
-Court reporter would like to/should have control of mic levels due to varying abilities to "speak up"
-They have fixed surveillance cameras & a panic button with deputies having radios
-Judge Cain doesn't think they need audio surveillance feed to security office.
-Add ALS to all rooms.

State of South Carolina
The Family Court of the Tenth Judicial Circuit

TIMOTHY M. CAIN
JUDGE

POST OFFICE BOX 678
WALHALLA, SOUTH CAROLINA 29691-0678
(864) 638-4250
FAX (864) 638-4261

April 13, 2004

The Honorable Harry R. Hamilton
Interim Supervisor for Oconee County
415 S. Pine Street
Walhalla, SC 29691

Ms. Marianne Dillard
Oconee County Purchasing Department
415 S. Pine Street
Walhalla, SC 29691

Re: Family Court Equipment Needs

Dear Mr. Hamilton and Ms. Dillard:

I am writing to request your assistance in getting some items that are necessary to make the Family Court functional in the new courthouse. I understand that certain matters about the courthouse are under review. However, I feel that we are now at a point that certain concerns must be addressed without further delay.

In order for the court to be functional, certain basic requirements must be met. These were discussed repeatedly during the design and construction phases of the new courthouse and have been discussed since we moved into the facility.

First, we need to be able to hear what is said in the courtroom. By law, the Family Court is a court of record. The Court Reporter must be able to see and hear everyone. With the current design, the Court Reporter cannot see the presiding judge or the witness most of the time, unless the witness is very tall. The Guardian *ad Litem* (a person appointed to represent the interests of minor children or persons under a legal disability) and his/her counsel cannot see the witness. Because of this situation, it is even more important that everyone be able to hear what is said.

Unfortunately, in the current situation, this is often impossible, due to the fact that no sound amplification system was installed in the Family Court courtrooms. We do not have a sound system in the Family Court, only a recording system. We need an amplification component so that the voice of the witness or other person speaking can be heard and understood by everyone in the room. We need amplification and speakers at the bench, witness stand and all counsel/party tables.

It is my understanding that incredibly, a sound amplification system was not included in the design of the courthouse. It is also my understanding that an amplification system was omitted from the Family Court courtrooms due to costs concerns, although I am told this could have been included at a minimal cost considering what was spent for what we received. Both Family Court courtrooms need this system.

I have previously expressed these concerns, but felt it necessary to again document the same because of incidents which have recently taken place in trials in Family Court.

In one case, a twelve year old child had to testify. It is often intimidating for a young child to have to testify in court in front of strange people in a strange setting. We simply could not hear this soft spoken child because of a lack of amplification, and I found myself having to repeatedly ask the child to speak up. This interferes with the flow of the hearing and undoubtedly increases the apprehension and discomfort of the child witness.

Another instance involved a female litigant who has several medical conditions, one of which affects her speech and ability to speak up. Again, I was forced to repeatedly ask this witness to speak loudly so that everyone, including her own attorney, could hear her and so that a proper record of the proceeding could be made.

I am today presiding at an abuse and neglect hearing which involves a termination of parental rights action. I can think of no other type of case that would be more important. I am writing this memorandum during the lunch hour as so far, I have repeatedly had to ask witnesses to speak up so that all of the attorneys, parties and Guardian *ad Litem* can hear their testimony. Again, as a result of the design of the bench and witness stand, these persons often cannot see the witness, so it is important that they be able to hear the witness.

This situation is now at a critical stage as we are now, on occasion, beginning to operate two courtrooms in Family Court at the same time. Both courtrooms need the necessary equipment, as I anticipate that both will be used in this fashion on a more frequent basis as we ask for and receive additional court time for the overcrowded court docket.

I realize that my frustration with the situation is evident in this letter. However, we have now been in the facility for approximately one year and after meetings and discussions with the architects, builders, consultants and others, these problems have not been addressed.

I hope and trust that you will accept this letter in the spirit in which it is intended. We in the Family Court sincerely appreciate the assistance and leadership provided by the County in bringing

about the new courthouse. The facility is a much needed significant improvement over the old facility and has resulted in a more efficient and better utilized court. We are now better able to serve our citizens. It is my sincere hope that some way can be found to fully utilize the new facility so that we may do the important work of serving the families and children of Oconee County.

Essentially, what I am asking for is some additional microphones, wiring and speakers so that we can hear what is said in court. I do not know what can be done about the sight issues at this stage, but understand the consultants retained by the County will be addressing these problems.

Please let me know what can be done to address these problems. I will be happy to meet with you or representatives of your staff and/or to make a presentation to the County Council to further discuss these issues if you desire. If any additional information is needed, please do not hesitate to call upon me.

This letter is intended to only address immediate sight/sound issues, as I have previously provided to representatives of Oconee County requested information concerning these and other problems at the courthouse.

Thanking you for your attention to and consideration in these matters, and with kind personal regards, I remain,

Sincerely,

Timothy M. Cain

cc: The Honorable Sallie C. Smith

BILL TO:
OCONEE COUNTY
5 SOUTH PINE STREET
WALHALLA, SC 29691

PHONE: 864-638-4241 FAX: 864-638-4242

PURCHASE ORDER NO: 41215

This PO number must appear on all packages and correspondence.

1 of 1

VENDOR: 51023
JIMMY ROGERS HOUSE OF MUSIC
130 BYRD ST SW
SENECA SC 29678

SHIP TO:
NEW COURTHOUSE SITE
WALHALLA SC 29691

Notes to Vendor:

Order Date: 02/27/2002 Date Required: 03/03/2003 Ship Via: BEST WAY

Quantity	U/M	Catalog No	Description	Unit Price	Total
1.00	EA		HARDWARE TO INSTALL SOUND SYSTEMS PER COUNTY DRAWINGS AND YOUR QUOTE DATED 2/4/02 AND YOUR LETTER WHICH IS HEREBY MADE A PART OF THIS P.O. BY REFERENCE. TO INCLUDE ALL LABOR AND HARDWARE TO INSTALL SOUND AND RECORDING SYSTEMS IN 3 COURT ROOMS AND RECORDING SYSTEMS IN 2 COURT ROOMS.	16,946.170	16,946.17
1.00	EA		LABOR TO INSTALL SOUND SYSTEMS	11,480.000	11,480.00
			C.O. 1 Recording, repairs, etc.		4,094.11

Sub-total	28,426.17
Sales Tax	847.31
Order Total	~~29,273.48~~ 33,369.59

Requested By: ROBERT BANKS

Account Distribution

Line	Acct. Number	Amount	Line	Acct. Number	Amount
[illegible]	012-508-50850-00000	29,273.48			

NOTICE TO VENDORS: This order is given for immediate acceptance by the seller. Unless promptly notified to the contrary the purchaser will assume that the Seller accepts the order as written and that he will make prompt delivery on or before the date specified. Oconee County will pay no more than the price listed on this Purchase Order. All shipments will be F.O.B. destination unless specified on the Purchase Order. Seller shall provide a copy of the original invoice accompanied by one copy of all shipping papers. Purchaser reserves the right to cancel the entire order or any portion thereof if the Seller fails to make delivery as specified. No changes in any way shall be allowed except on written authority of the County Procurement Director.

APR 0 9 2003

Authorized Signature: ______________________

White-Vendor Copy, Pink-Procurement Copy, Yellow-Finance Copy, Goldenrod-Department Copy, Green-Receiving Copy, Blue-Vendor File Copy

AGREEMENT OF FIRST RESPONSE AND MUTUAL AID

This agreement is made and entered into this _____ day of _____ 2004, by and between Stephens County, Georgia and Oconee County, South Carolina, which are political subdivisions of their respective states:

WITNESS TO:
Parties hereto agree as follows:

1.
RECITALS

This agreement is made and entered into with the respect to the following facts:

(A) That the parties of Stephens County, Georgia and Oconee County, South Carolina are political subdivisions of their state and are contiguous, and

(B) That each party maintains and staffs a fire department for the purpose of fire suppression, protection, and

(C) It is to the mutual advantage and benefit of each of the parties hereto that they render supplemental fire suppression, protection, and prevention to the other party in the event of a fire or other local emergency, and to take part in 12 hours joint training exercises, and,

(D) It is the desire of the signatories hereto to enter into this agreement for mutual aid and first response, pursuant to the 1983 Constitution of the State of Georgia, Article IX, Section II, Paragraph 3, on the terms and conditions hereafter contained.

2.
FIRST RESPONSE AND AUTOMATIC AID:

The parties have established mutually beneficial response districts being certain feasible boundary limits as determined and agreed upon by the parties based upon recommendation by the Chiefs of each jurisdiction, and as marked on maps which are attached hereto and incorporated by reference into this agreement. Boundary limits by agreement of the parties may be changed from time to time to reflect the changing population and growth of these areas. In the event of any structure fire in the above established area of one jurisdiction, the other party involved in this agreement will be automatically dispatched on a first alarm basis and will respond with at least one class "A" pumper and four firefighters to operate the pumper. Automatic response will be entered into the respective 911 computers to assure proper dispatch. Automatic Aid will be dispatched on all fire alarms, residential, commercial, industrial, and any other structure fires that are reported.

3.
MUTUAL AID

Any additional first response automatic aid and secondary mutual aid shall be extended to a level agreed upon by the fire chiefs in each instance. The party furnishing such additional aid shall determine the actual amount of aid to be extended in each instance based on available personnel and equipment as well as the local conditions of the aid-furnishing jurisdiction. It is further agreed that the parties will participate in joint training exercises in order to ensure basic standardization of operations and philosophy, to the extent necessary as determined and agreed upon by the fire chiefs of each of the parties.

4.
SUPERVISION

The highest ranking officer of the furnishing jurisdiction is expected to coordinate and give general directions as to the work to be done in the case of the first response automatic aid. This officer is expected to be in command until properly relived by the jurisdiction receiving the aid. Whenever possible, personnel who are furnished will work under their own supervision and with their equipment. All general directions relative to the work to be done will be given by the appropriate officers of the jurisdiction receiving the aid.

5.
LIABILITY

There shall be no liability imposed on any party or its personnel for failure to respond for the purpose of extinguishing or controlling fire or other immediate response emergencies. All damages or repairs to any equipment or apparatus shall be borne by the owner jurisdiction.

6.
COMPENSATION

No party under this agreement will be required to pay any compensation to the other party under this agreement for services rendered pursuant to this agreement since the mutual advantage and protection afforded by this agreement is considered adequate compensation to both parties.

7.
RELEASE OF CLAIMS

Each of the parties agree to release the other party from any and all liabilities, claims, judgments, costs or demands for damage to that party's property, whether intentional or unintentional, whether directly arising or indirectly arising from the use of any vehicle, equipment, or apparatus being used by the other party during the provision of service pursuant to this agreement.

8.
INJURIES TO PERSONNEL

Any damage or other compensation which is required to be paid to any personnel by reason of injury occurring while their services are being utilized pursuant to this agreement shall be the sole responsibility of the party regularly providing insurance coverage to that person.

9.
THIRD PARTIES

This agreement shall not be construed as, or deemed to be, an agreement for the benefit of any third party or parties, and no third party or parties shall have any right to action hereunder for any cause whatsoever.

10.
TERM OF AGREEMENT

This agreement shall commence on the date of execution hereof shall continue in force unless terminated by either party as outlined in the termination procedure below.

11
TERMINATION

Either party to this agreement may terminate the agreement by giving not less than ninety (90) days written notice to the other party and upon the running of ninety (90) days from said written notice this agreement shall be terminated.

12
ADMINISTRATION

It is agreed by each of the parties that for the purpose of liaison and administration, the fire chiefs of each jurisdiction shall be jointly responsible.

13
APPLICATION

This agreement and attachments shall constitute the entire agreement between the parties and shall be the sole instrument for the provision of emergency fire service between the two parties.

IN WITNESS WHEREOF, we have caused this agreement to be executed on the date appearing above.

WITNESS:

STEPHENS COUNTY, GA

Joey Marcus
Chairman, Stephens County Board of Fire Chiefs

Linda Bell
Chairwoman, Stephens County Commissioners

Darrell Hampton
Stephens County Administrator

WITNESS:

OCONEE COUNTY, SC

Ronald Butts
Oconee County Fire Marshall

Charles R. Williams
Chairman, Oconee County Fire Commission

Harry Hamilton
Oconee County Administrator

W. Frank Ables, Jr., Chair
Oconee County Council

MEMORANDUM
OF
AGREEMENT
FOR THE DETENTION OF JUVENILES

THIS AGREEMENT is made this ___ day of _____, 2004, by and between the South Carolina Department of Juvenile Justice (DJJ) by and through its duly authorized employee and the governing body of Oconee County, hereinafter referred to as Oconee County, by and through its duly authorized official and/or employee;

WHEREAS, the Juvenile Detention Act of 1990, in compliance with the Juvenile Justice and Delinquency Prevention Act of 1974, mandates, in effect, that juveniles who are held in detention be confined in separate and distinct facilities from adults similarly confined; and

WHEREAS, Oconee County does not operate or manage its own detention facility for juveniles, or otherwise have such a facility available to it for the detention of juveniles; and

WHEREAS, DJJ operates a facility for the detention of juveniles, along with an array of other residential placements for juveniles, who are awaiting their adjudication and/or dispositional hearings in the Family or General Sessions Courts of this State, which have passed all necessary state inspections or approvals, and are suitable for the detention of juveniles; and

WHEREAS, the General Assembly has mandated that "the governing body of the law enforcement agency having original jurisdiction (over) where the offense occurred" be responsible for paying a portion of the costs of the detention services for juveniles provided by DJJ, who are charged with committing crimes within the governing body's jurisdictional limits;

NOW THEREFORE, in consideration of the mutual promises contained herein, it is agreed as follows:

DJJ will admit into its Juvenile Detention Center in Columbia, and detain such juveniles in this Center, subject to its design/operational capacity and any limitations set forth in Section 20-7-7215 (A), those juveniles who are charged with committing criminal/status offenses within the jurisdictional limits of the above listed entity and who have been/are:

1. qualified to be placed in secure detention (as determined by Section 20-7-7210 (A)), which the local law enforcement entity wishes to have detained prior to a detention hearing before the Family Court; or

2. ordered to be detained by the Family Court; or

3. pending waiver of juveniles (16 and below) who have been waived to the Court of General Sessions to be tried as adults; or

4. 16 years old and charged as an adult with committing a Category A-D felony.

Acceptance and retention of detainees in its Juvenile Detention Center will be on a space available basis and will be in accordance with admission and retention criteria established by DJJ. However, Oconee County agrees to remove any detainees accepted and detained under paragraph 4 above, on or within one week after that detainee's 17th birthday.

Oconee County agrees to assign an open Purchase Order Number _____, to be effective from July 1, 2004 to June 30, 2005.

The per diem rate for the detention of juveniles, to be paid by "the governing body of the law enforcement agency having original jurisdiction where the offense occurred," is $25.00 per 24-hour day. (Detention periods of between from 1 to 23 hours shall be charged as a ½ day.). Payments to DJJ are to be made on a monthly basis as the costs accrue.

DJJ agrees to bill Oconee County on a monthly basis; said bills to be sent on or before the 15th day of the month after the month where the costs are incurred, with payment to be made on or before the first (1st) day of the following month. Additionally, DJJ agrees to periodically provide Oconee County with a report on Oconee County's use of the DJJ Detention Facility. This report will reflect the status of juveniles being detained for periods greater than 30 days.

The "local law enforcement agency having jurisdiction where the offense was committed" shall be responsible for transporting all juveniles to and from DJJ's Juvenile Detention Center.

In accordance with Act #571 of 1990, relating to Juvenile Detention and consistent with the criteria outlined in DJJ Community Services Policies and Procedures (24-Hour Detention/Release: Policy Number 380.01), no juvenile shall be placed in and/or transported to, a DJJ detention facility until law enforcement has notified DJJ and DJJ has conducted a detention screening, or until a Family Court Judge or other judicial official, has determined that placement in secure detention is appropriate.

Oconee County shall provide the DJJ Juvenile Detention Center with all relevant information pertaining to the juvenile, including medical history/limitations/pre-existing conditions, known psychological and psychiatric problems, charges pending before the court, and completed screening or detention forms if such records or information are in the possession of, or otherwise known to, the transporting law enforcement agency.

DJJ's Juvenile Detention Center shall have the right to refuse admission when a juvenile is presented for placement without an appropriate detention order signed by the Court or detention referral papers, completed and signed by a DJJ employee or screening agent. DJJ's Juvenile Detention Center shall also have the right to refuse admission when a juvenile is deemed inappropriate by the Center for placement due to psychological/psychiatric problems, age, history, not meeting referral/admissions criteria, indications of alcohol or other drug intoxication, medical condition which requires emergency or immediate medical care or treatment or for any other reason which puts the Center at risk, should such a juvenile be accepted.

DJJ shall not be financially responsible for the cost of medical care provided to a juvenile detained in its juvenile detention center for any injury, illness, condition, or medical need that pre-existed the juvenile's admission to its Detention Center.

Detention services provided by DJJ shall commence upon execution of this contract and terminate, unless this contract is reauthorized and renewed, on June 30, 2005. Either party may cancel this agreement upon thirty (30) days' written notice.

Sums paid or payable under this contract shall not exceed $_____ for fiscal year 2004-2005 as determined by both parties. However, if juveniles continue to be presented for secure detention by Oconee County once the above budgeted amount has been reached, Oconee County agrees to pay for the cost of any additional detainees as provided for in the paragraph addressing detention rates.

APPROVED:

_____

Administrator/Manager
(or other Authorized Official)

W. R. Byars Jr.

William R. Byars, Jr., Director
South Carolina Department of
Juvenile Justice

_____

Date

_____

Date

MEMORANDUM OF AGREEMENT

BETWEEN THE

FEDERAL AVIATION ADMINISTRATION

AND

OCONEE COUNTY, SOUTH CAROLINA

In accordance with the requirements of the applicable provisions of FAR Part 171 and the enclosed Operations and Maintenance Manual (OMM) dated 7/26/94, The County of Oconee, South Carolina having installed the CEU NDB at Clemson-Oconee Airport, South Carolina hereby accepts the enclosed OMM as approved by the Federal Aviation Administration (FAA).

The undersigned agree to the operation and maintenance of the above facility in accordance with all applicable FAA requirements, standards, and criteria governing such facility, including those requirements contained in the applicable provisions of FAR Part 171 and the enclosed OMM.

The FAA reserves the right to amend the OMM to reflect changes in FAA operating policies and procedures. Such amendments shall be effective 30 days following the mailing of the written notification to the owner or sponsor and the maintenance technician identified in the OMM.

At any time that the person(s) identified as the maintenance technician(s) in the OMM no longer performs the functions indicated, the FAA shall be notified within 10 working days.

The undersigned agree that noncompliance with the above requirements will be grounds for the cancellation of FAA approved instrument flight rule procedures.

With regard to any liability which may arise from the use and/or the operation of this facility each party expressly agrees that it shall be solely and exclusively liable for the negligence of its own agents or employees, in accordance with applicable law, and that neither party looks to the other to save or hold it harmless for the consequences of any negligence on the part of one of its own agents or employees.

Signature: _____ Date: _____
Harry Hamilton, County Administrator

Signature: _____ Date: _____
Roger B. Mohl, Manager
System Management Office, Columbia, SC

Enclosure: Operations and Maintenance Manual

OPERATIONS AND MAINTENANCE MANUAL

FOR

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CLEMSON-OCONEE COUNTY AIRPORT, CLEMSON, SOUTH CAROLINA

(This manual is prepared to fulfill the requirements of Federal Aviation Regulations Part 171 and Section 606 of the Federal Aviation Act of 1958. Facility equipment performance standards and tolerances for facility maintenance are incorporated herein as Attachment 1, Facility Equipment Performance Standards and Tolerances, to this manual.)

Operations and Maintenance Manual Approved:

_____ Date: _____

Roger B. Mull, Manager
System Management Office, Columbia, SC

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)