

NEW PASSENGER TERMINAL STUDY



SONOMA COUNTY AIRPORT, CA

Chapter 3: Facilities Impact of the New Level 4 Security Requirements

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OVERVIEW

Because of the events of September 11, 2001, the U.S. Congress created the Transportation Security Administration (TSA). This governmental agency was fully authorized to hire staff, create standards and procedures on February 17, 2002.

The TSA functions replace and expand the FAA's traditional role of governing safety and security on the landside portion of the airport.

The TSA is currently in the process of creating staff, standards, and uniform procedures for airports by size category. Needless to say, in its infancy, directives frequently change as airports, the TSA and equipment suppliers interact.

It is becoming clear that "one size" does not fit all, even with airports in the same size category. This is due to existing terminal and roadway configurations. Similarly, parking locations, including garages including restrictions of existing real estate have caused the new rules to be adapted in some cases.

Airports have found difficulty in obtaining clear answers to specific questions from the TSA.

It is entirely possible that within several years, new technologies will replace those existing and currently utilized. These include face recognition, individual identity cards with computer chips for known passengers, coordinated information systems accessed by the airlines for improved passenger profiling purposes, etc.

"The concept of a trusted traveler card to speed up the identification process for frequent travelers continues to receive attention at the TSA, Mineta said, adding that the agency would like to launch a trusted traveler pilot program. However, he repeated concerns expressed earlier by TSA chief John Magaw that such a program would have to be structured to avoid being misused by terrorists.

Mineta also said that he is concerned that the focus on aviation security has replaced the emphasis on enhancing system capacity. He noted that as traffic levels rebuild, "Capacity will be a problem." The unobligated balance in the aviation trust fund will be about \$5 billion by the end of this year, Mineta noted. To deal with capacity issues in the short term, he said the unobligated reserve may have to be drawn down. During the reauthorization of AIR-21, "We will have an opportunity to take a look at the whole issue," he said.

Regarding the rule prohibiting unattended parked vehicles within 300 feet of a terminal, Mineta said the process of reviewing waivers from the rule has improved since the National Security Council and Secret Service are no longer involved." *Airport Report, April 5, 2002*

It is assumed that the improved or new technologies will be faster, more efficient, less expensive and more passenger friendly.

It is also assumed that over the next 15 to 20 years that this "new normality" will continue.

"In a live interview April 1 on AAAE's ANTN Digicast, Mineta responded to concerns expressed by small airports that they do not have the options available to larger airports to hire replacements for departing National Guard troops. A security directive issued April 1 by the TSA calls for airports to provide one officer at each security checkpoint after April 30 and until they are replaced by TSA personnel. Costs associated with the temporary law enforcement presence will be reimbursed by the TSA.

Mineta said that the TSA currently is working to hire and train law enforcement officers for airport security. "My hope is that we will be able to deploy the newly hired TSA law enforcement officers to the smaller airports in order to relieve them of that burden," he explained. "Hopefully, as we bring these people on, we will be able to get them deployed to the smaller airports first and then work them in as we bring on more and more people into medium and large airports as well."

Further, Mineta pledged to "take a look at" situations brought to his attention by small airports that said no options exist within their communities to hire temporary law enforcement officers.

Although a suggestion has been made by TSA staff that Airport Improvement Program (AIP) funds might be used to reimburse airports for the law enforcement officer requirement, Mineta commented, "We are going to be facing capacity issues and I would just as soon not have those resources piddled away in this manner."

Mineta also told AAAE President Charles Barclay during the interview, "What we have to do is bring someone into TSA who has airport operator experience so we have real life experience on our staff."

The TSA will use a combination of technologies to meet the Aviation and Transportation Security Act's mandate that all checked baggage be examined by explosives detection systems (EDS) by the end of this year, Mineta said. Trace detection devices (ETD) will be deployed at smaller airports and the smaller, less expensive ETD devices will be used in combination with the expensive and bulky EDS machines at larger facilities. Mineta noted that the TSA won't use a "one size fits all" approach, adding that ETD technology is "equally good" at screening for explosives. Further, Mineta said that the use of multiple screening technologies coupled with the new corps of trained federal personnel will result in faster screening of baggage. "So some airports will have nothing but ETD's and some will have a mixture of ETD and EDS so that we can make sure that throughout will be sufficient," he said.

To meet the production demand for the larger, more expensive EDS machines, Mineta said the TSA has issued a request for proposals to identify major integrators, such as Lockheed Martin, Raytheon and Boeing, that can manufacture the equipment "on a wartime construction basis."

Mineta acknowledged that the cost of installing EDS equipment "is the next part of the problem that we have to tackle in terms of what's going to be the supplemental (budget request) for (fiscal year) '03 as we even talk about our '03 budget." The whole issue of how to deploy and place EDS equipment is part of this 15 airport process mapping strategy that we have going on to try to figure out what's the best way to do the installation of these machines at various airports in spite of their configuration," Mineta explained. "But the cost of it is going to have to be something that we will have to bear, I think, jointly with the airports." This likely will be done through "some kind of grant program," Mineta said. He noted that the TSA already has reduced acquisition costs for EDS equipment by up to 40 percent and is trying to pare down installation construction costs as well.

By August or September, the TSA will notify airports of the EDS/ETD configuration that will be used at each facility, he said.

TSA ISSUES DIRECTIVE ON SECURITY STAFFING

The Transportation Security Administration (TSA) has released a directive on law enforcement personnel at airport security screening checkpoints.

To ensure proper law enforcement coverage once National Guard troops are withdrawn from airports next month, the TSA has been drafting memorandums of understanding (MOU's) with airports and local law enforcement agencies to provide staffing until TSA can integrate a federal law enforcement staff into the system.

The new directive will require those airports without an MOU (Memorandum of Understanding) in place with the TSA to provide one officer at each checkpoint after April 30. These officers will be in place until the TSA can introduce a federal presence at the airport, which will be no later than November. Costs associated with the law enforcement presence required by the directive will be reimbursed by the TSA.

The directive will require that one officer be positioned at each checkpoint serving up to six open lanes. If the checkpoint has seven to twelve open lanes, then two officers will be required. However, if the airport has more than six lanes at the checkpoint but only six are open, only one officer would be required. The requirement for a law enforcement officer to be on duty would only be effective during times that the checkpoint is open to passenger screening operations.

Security checkpoints cannot become chokepoints, Mineta said. He repeated his goal that the passenger screening process should take no longer than 10 minutes." *Airport Report, April 5, 2002*

The Report focuses on the following topics:

- A. Impact on the terminal building of two x-ray machines and 3 metal detectors, "one-way" exit from secure area, additional pre-security queuing of passengers, security office, search room and detention room at the security checkpoint.
 - B. Minimizing the number of doors accessing the AOA.
 - C. Optimum location of concessions.
 - D. Alternatives for the future possibility of x-raying of checked baggage.
 - E. The impact of the possibility of moving the terminal curbs 100 feet from the terminal.
 - F. Alternatives for thwarting access to the AOA via the inbound baggage delivery system openings to the AOA.
1. Impact on the terminal building of two x-ray machines and 3 metal detectors, "one way" exit from secure area, additional prescreening of passengers, security office, search room and detention room.

At the security checkpoint located at the entrance to the secure holdrooms, etc. There are few changes. An additional width of 12 feet will be required for an additional x-ray machine. Second, additional depth of about 14 feet will be required to accommodate the following: one additional metal detector, an explosion detection device (EDD) or "sniffer" and layout tables for hand examination of baggage contents.

There is no TSA requirements at this security checkpoint for offices or break rooms, nor for a CTX-9000 unit.

2. Minimizing the number of doors accessing the Security Identification Display Area (SIDA).

The total number of doors accessing the SIDA should be minimized. This can be accomplished in the following manner:

Starting with the airline ATO, the FAR Part 107.13 line would be at the single exit door from each ATO operations area and from there to the secure outbound baggage area. The individual airline outbound baggage areas will be combined and expanded into a common use secure outbound baggage area. From this area there are a minimum of two large roll up doors for bag cart movement and one personnel door.

Access from the baggage claim area can be reduced to one personnel door. Flat bed re-circulating claim devices can be configured to thwart access to the SIDA as outlined in item 4.

From the ground level holdroom, it is possible for two gates to be serviced through one door to the apron. No aircraft loading bridges are planned.

In this manner, the total number of SIDA access doors, depending on the phase of terminal development can be held to about 9 to 10: 1 in the baggage claim area; 5 to 6 from the airline ATO's; and 4 from the common holdroom to SIDA.

3. Optimum location for concessions.

With the new security requirements, only ticketed passengers are allowed beyond the security checkpoint.

It is recommended that retail spaces and "bar/lounge", "fast food" or "deli" service be located at ground level outside of the secure area of the terminal. It should be noted that this serves the traveling passengers and public before security.

4. Alternatives for future x-raying of all check baggage.

Airport Security, Operations and Facilities Planning Potential Responses and Implications following September 11, 2001

A. Security Measures

- Development of standardized personal passenger profiles
- Development of common international standards for recording and sharing data
- ID for all processes is likely to move to biometric recognition technology

In general, the new TSA security requirements will have the following general facilities impact on passenger terminals.

B. Implications for Facilities

- In general, terminals will need to be larger and have significantly improved IT infrastructure
- Improved security will likely result in inconvenience to passengers, at least initially, and will have significant cost implications
- Increased passenger processing times, therefore larger accumulations of people in terminals, therefore larger facilities required including waiting areas, concessions and support facilities
- More thorough security procedures will require additional check-in and other processing facilities and staff
- More secure and access-restricted airside (including less through the fence vehicular traffic and more rigorous clearance of commercial goods)
- Self-serve check-in kiosks may be allowed, but with biometric recognition
- Longer connection times to accommodate security processes, therefore more aircraft gates will be required
- Meeters and well-wishers may not be allowed beyond security, therefore concessions will be required on both sides of the secure line
- Special arrival and departure facilities and processes will be required for high risk flights
- Increased on-airport facilities will be required for increased operational staff training and support
- Reduced carry-on bags therefore increased checked bags will strain existing systems which will have to be expanded and improved
- Improved technology will be required for carry-on screening, including explosive detection
- Additional security operational facilities will be required, including search rooms and back of house facilities

5. Impact of the possibility of moving the terminal curbs 100 feet from the terminal.

This is no longer a TSA requirement.

Further, the TSA had adopted a 300 foot perimeter-parking rule for all vehicles. This is no longer a TSA requirement.

Revised 300-Foot Rule Guidance Released

Yesterday, the FAA Office of Civil Aviation Security Operations (ACO) released to the FAA regions and field units revised guidance pertaining to the application of the 300 foot rule at airports. The document, dated February 8, 2002, is entitled "Guidance for Domestic Airport Emergency Amendment Modified Contingency Measure SCA3." Amendments include a new 2,000-pound explosives capacity category and examples of specific vehicle types included in each category. In addition, it states that "Modifications (to the 300 foot rule) approved after September 11, 2001 will not have to be re-submitted."

Subsequently, the 300 foot perimeter parking rule has been eliminated for small and non-hub airports.

A TSA plan to inspect all vehicles entering the Airport, as if passing through a car wash is a possibility.

6. Alternatives for thwarting access to the AOA via the inbound system openings to the SIDA when "racetrack" baggage claim devices are utilized.

The solution is simple and clear. "Doghouse" enclosures are added on the airside around each flat bed claim device.

A baggage handler presses a button raising motorized doors so that bags can be unloaded onto the device. When unloading is completed, a button closes the motorized doors.

The unit(s) with baggage, continue to re-circulate, accessible to the public interior side, with no access to the airside.

The TSA has required that all check baggage at commercial service airports be screened.

There are a number of alternatives to accomplish this task as follows:

OPTION 1 – EDS BEFORE ATO

Locate the Explosion Detection System (EDS) and “sniffer” in ticket lobby opposite the ticket counters. Passengers check in at the ticket counters to receive boarding pass and bag tags for any checked baggage.

Some to all passengers are then directed to the EDS, where their checked luggage is processed.

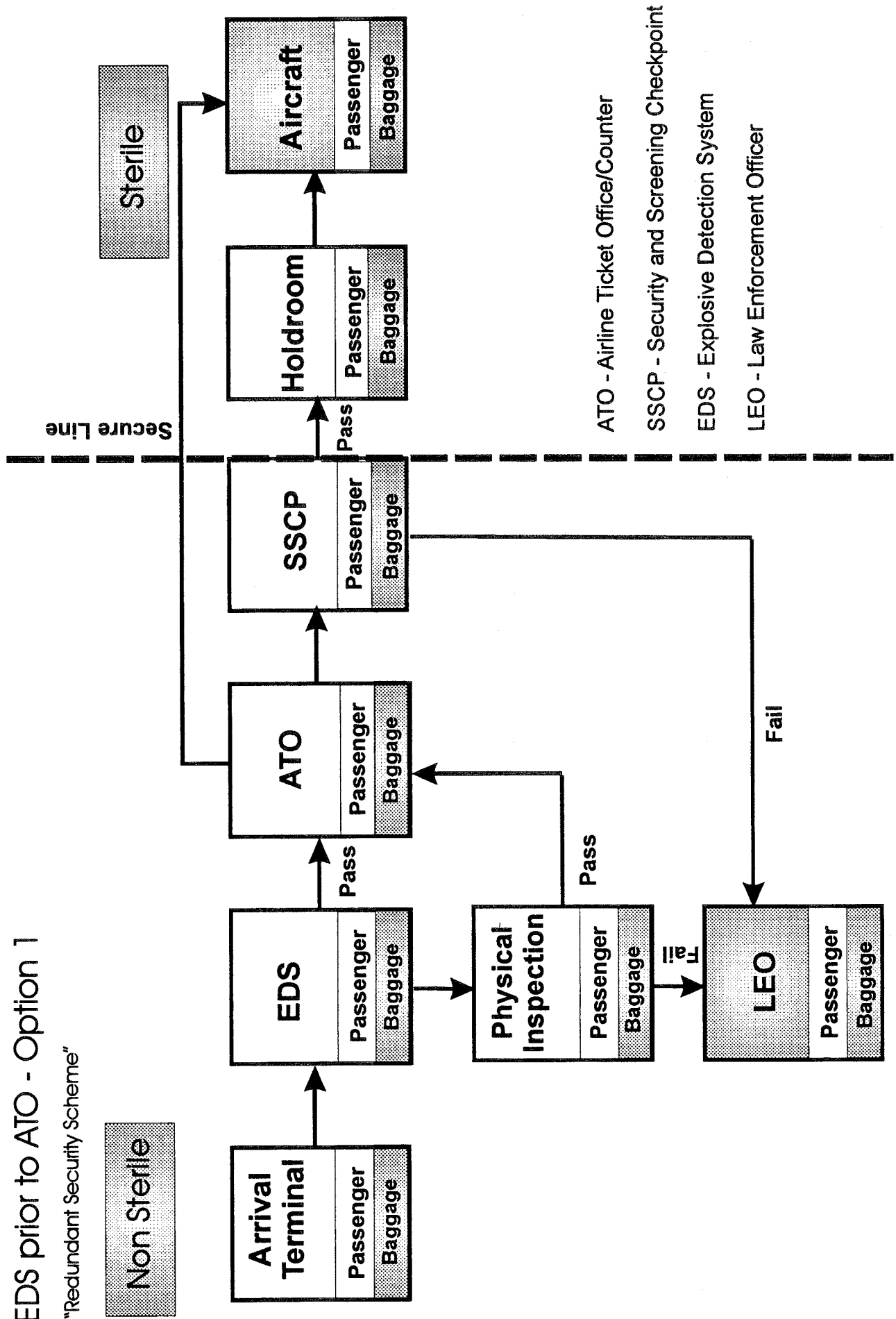
The “resolution” takes place on site. The bags may no longer be touched by the passenger. They are transported to the individual airline ticket counter by TSA personnel. Correlation of the numbers of bags checked and bag tags issued is made by airline personnel and placed on a traditional outbound baggage system.

Advantages: Least cost, simplicity of operation.

Disadvantages: Enlarged ticket lobby, cross circulation, additional airline personnel required. A bag tag may be switched by a passenger to a heavier bag thereby avoiding excess weight charges. Also, a passenger may “lose” a tagged bag and claim a compensation for a lost bag at destination.

EDS prior to ATO - Option 1

"Redundant Security Scheme"



ATO - Airline Ticket Office/Counter

SSCP - Security and Screening Checkpoint

EDS - Explosive Detection System

LEO - Law Enforcement Officer

OPTION 2 – EDS AFTER ATO (IN SECURE OUTBOUND BAGGAGE AREA)

(Preferred for the New Terminal)

Description/sequence of operation:

The ATO baggage handling area is configured for routing conveyors to EDS area. Passengers carry their bags to the ATO for check in. Boarding passes and bag tags are issued. The passenger has "checked in".

The checked bags are placed on an outbound baggage belt to the Transportation Security Agency (TSA) area where a CTX-9000 unit(s) and "sniffer(s)" are located.

Screening of passengers and carry-on baggage is done at the traditional security area prior to holdroom access.

Baggage is screened for explosives behind the scenes. "Dirty" bags reviewed with passenger in Resolution Room. Clean bags are forwarded to a common baggage handling room turntable for pick up by the airlines.

Pros

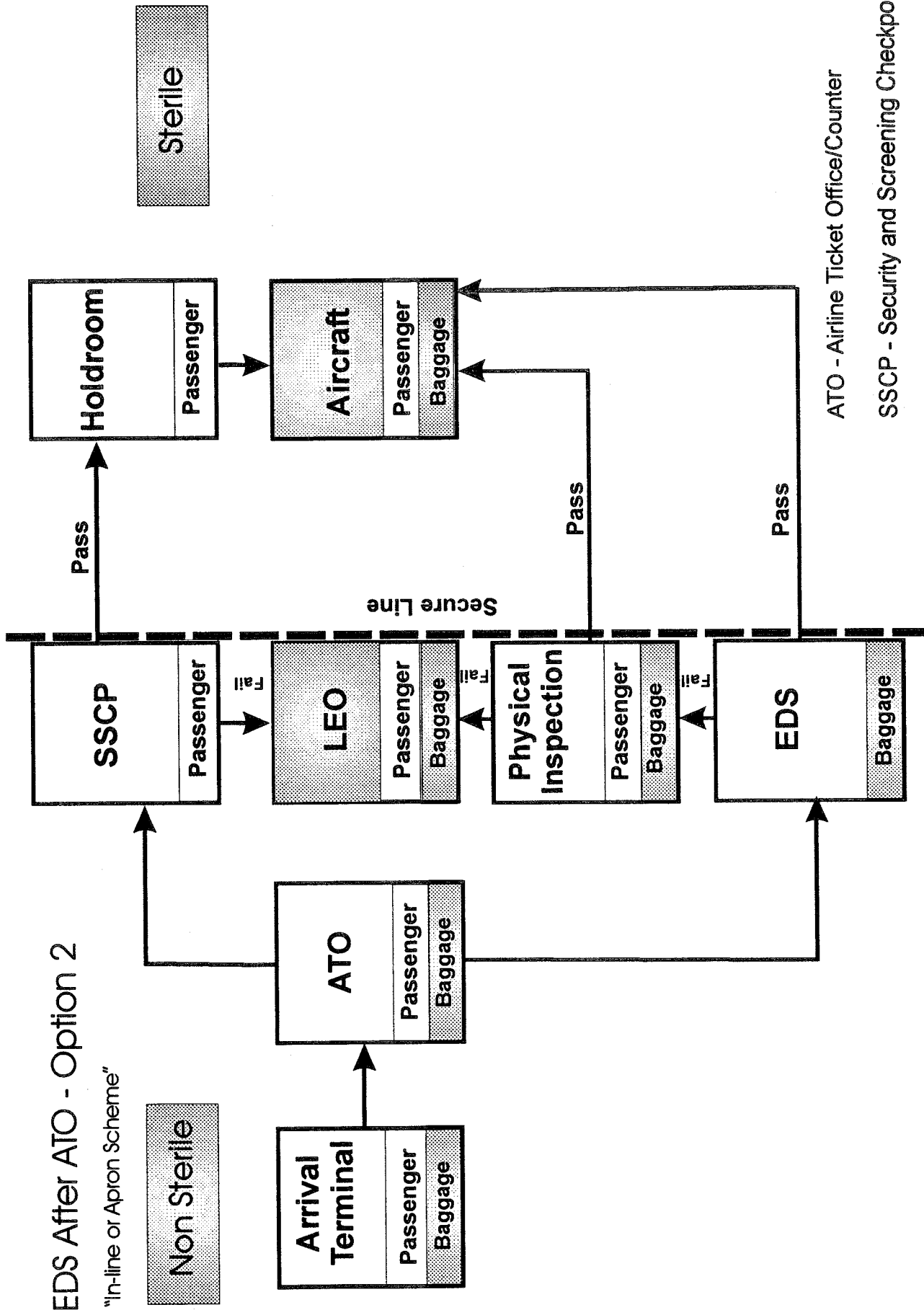
Fastest option for throughput of screened baggage due to shorter conveyor route. Lowest construction cost due to shorter conveyor route, no underground conveyor required, no design of new remote screening facility required. Fastest turnaround time for design revisions.

Cons

If carry on baggage must be screened, an additional scanner will be needed at the second floor screening area. (At present no TSA requirement) Allows the possibility of a passenger carrying a suitcase bomb into the terminal.

EDS After ATO - Option 2

"In-line or Apron Scheme"



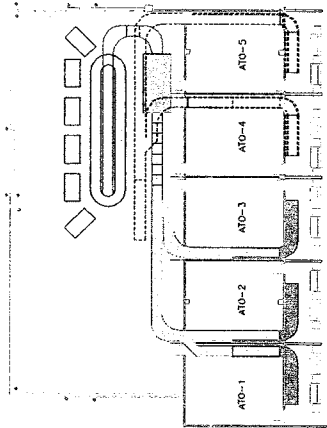
ATO - Airline Ticket Office/Counter

SSCP - Security and Screening Checkpoint

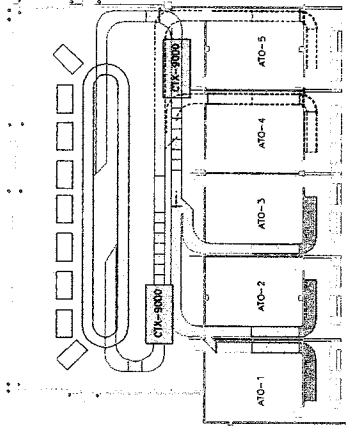
EDS - Explosive Detection System

LEO - Law Enforcement Officer

**OPTION 2A-PHASE 1
OUTBOUND BAGGAGE SECURITY STUDY-
FLAT PLATE RECIRCULATING DEVICE RECLAIM**



**OPTION 2A-PHASE 2
OUTBOUND BAGGAGE SECURITY STUDY-
FLAT PLATE RECIRCULATING DEVICE RECLAIM**



LEGEND

- CONVEYOR MERGE
- CONVEYOR AT GROUND LEVEL
- CONVEYOR ABOVE CEILING
- EDS
- *34" CONVEYOR SURFACE
- *34" ABOVE 1st FLOOR
- SEARCH TABLE



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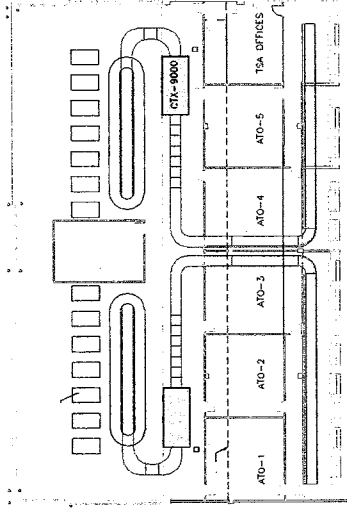
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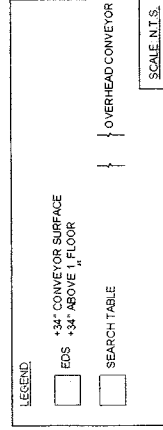
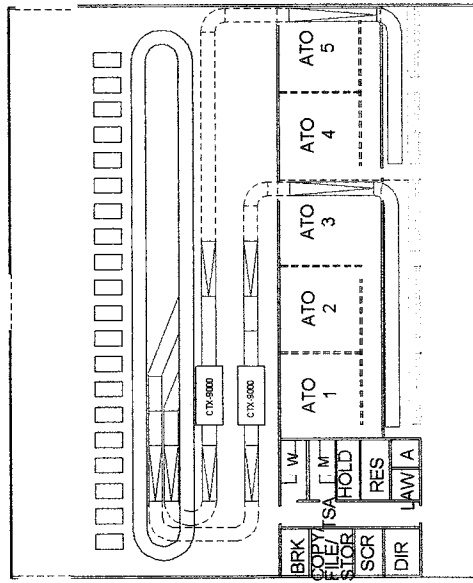
**TERMINAL SYSTEMS ANALYSIS PROGRAM
SONOMA COUNTY AIRPORT**
SONOMA, CA AUG 29, 2001

SONOMA COUNTY
AUGUST 29, 2002
STS-S3

OPTION 2C
 OUTBOUND BAGGAGE SECURITY STUDY
 FLAT PLATE RECIRCULATING DEVICE RECLAIM
 PREFERRED FOR LONG TERM (9 GATES)



OPTION 2B
 OUTBOUND BAGGAGE SECURITY STUDY
 FLAT PLATE RECIRCULATING DEVICE RECLAIM
 ALTERNATE PREFERRED FOR LONG TERM (9 GATES)



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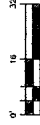
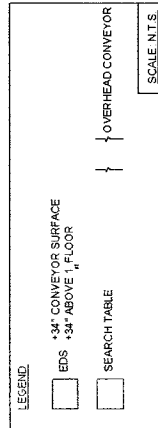
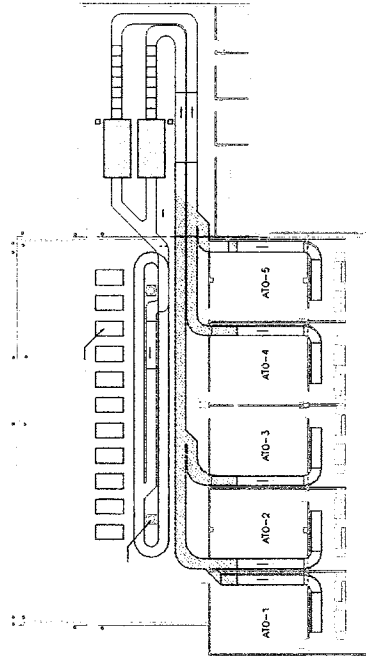
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**OPTION 2D
OUTBOUND BAGGAGE SECURITY STUDY
FLAT PLATE RECIRCULATING DEVICE RECLAIM**



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TERMINAL SYSTEMS ANALYSIS PROGRAM
SONOMA COUNTY AIRPORT
 SONOMA, CA
 AUG 28, 2001

SONOMA
 COUNTY

AUGUST 28, 2002
STS-S5

OPTION 3 – EDS AFTER ATO (TWO STEP BAGGAGE CHECK IN)

Separate airline check-in function from TSA baggage check in function.

Description/sequence of operation:

Passenger checks in, receives boarding pass and bag tags for checked baggage. Passenger then proceeds with bags to TSA area with CTX-9000 and office area.

Passengers with carry-on luggage proceed to security point at entrance to holdroom area.

Pros

Any "resolution" occurs on site. Simpler, less expensive outbound baggage reclaim system, avoiding inclines, turns, declines, indexing of belt prior to CTX-9000.

Cons

Passenger could switch bag tag with heavier bag and avoid payment for excess. Passenger may check on bag less and claim it has been lost at destination city. There are electronic remedies for this if airlines are willing.

NEW TERMINAL OUTBOUND BAGGAGE AREA SECURITY SPACE REQUIREMENTS

The TSA office requirements at a non-or small hub airport are as follows:

1. Resolution Room (100SF) in the EDS screening area for dealing with "dirty bags". Double doors to this room, since a portable containment vessel will be used to move the suspect bag into the resolution room.
2. Clear pathway 8 feet wide from the EDS machine to the Resolution Room for moving the containment vessel.
3. Overhead coiling door on exterior of EDS area for moving CTX scanner into and out of this room.
4. Male and female restrooms for TSA workers in EDS area.
5. A secure way to walk from the secure part of the terminal to the Resolution Room. This will be used for two purposes.
 - a. For moving passengers with "dirty" bags to the Resolution Room. Pathway must be handicapped accessible.
 - b. For access by Federal Law Enforcement to the Terminal.
6. Holding Cell (100SF) next to the Resolution Room for Federal Law Enforcement to detain suspects. CMU walls from floor to bottom of structure. Floor drain near a combination toilet, lavatory, bubbler (penal type by Bradley or equal).
7. General storage area in the EDS are (80SF).
8. Break room (120SF) for Federal employees at the EDS area.
9. Director of Security Office (120SF) located such that it has windows to the baggage handling area as well as to the EDS screening area.
10. Bomb Disposal Offices (BDO) Office, (80SF)
11. File Room and Copy Room (100SF)
12. Federal Screener's Supervisor's Office (80SF) and Screener's Office (2 person office) (80SF)
13. Federal Law Enforcement Supervisor's Office and Law Enforcement Office (80SF) and Armory (30SF)
14. Telephone Room (50SF)
15. Mechanical Room (as needed)

NOTE: Some TSA personnel may have a dual role at non-and small hub airports, thereby reducing the office space needs.

The following are the latest required released by the TSA regarding the Security Check Point.

The requirements for the screening of all checked baggage has not been released to date.

July 18, 2002

Dear Federal Security Director/IFSR/Airport Manager:

The Transportation Security Administration (TSA) has been working to develop a set of passenger screening checkpoint design standards and elements. I know a number of you have told us you are anxious to begin reconfiguring checkpoints, either to increase security or passenger throughput or to tie into broader future airport construction projects. I also know that you have been waiting for the TSA to provide checkpoint guidance and clarification.

I am pleased to provide a copy of our *Preliminary TSA Security Checkpoint Conceptual Design Requirements*. These design standards and elements have been developed by TSA based on our experiences at Baltimore-Washington International Airport and the comprehensive current state analysis TSA conducted at fifteen airports. As part of this analysis, TSA site survey teams examined current configurations of passenger screening checkpoints over a cross-section of commercial airports. In addition, the survey teams met with a range of airport, security and airline officials to identify current best practices in checkpoint design and utilization.

Please use the following document to assist you in planning. We will work closely with individual airports to adjust elements as necessary for specific space constraints. As you may already know, we recently announced that Lockheed Martin will be responsible for the coordination of any required passenger checkpoint reconfiguration.

Should you have questions or comments, please do not hesitate to contact Kimberley Siro at (202) 267-3949. Thank you for your patience and for your continued cooperation and support.

Sincerely,

/s/signed

Stephen J. McHale
Deputy Under Secretary