This quick look guide is meant to be a supplement to the CDG requirements and should be used in conjunction with the CDG. Please understand that any direction or suggestion coming from TSA is advisory only, in no way shall obligate TSA to fund any design or construction, and should be approved by the airport or airline responsible for payment of such design or construction.

NOTE:
REFERENCE CHECKPOINT DESIGN GUIDE 6.1 FOR ADDITIONAL ELECTRICAL AND DATA REQUIREMENTS FOR A COMPLETE CHECKPOINT INSTALLATION.
NOTES BY SYMBOL “O”

1. Preferred location of surface or flush device.
2. Acceptable location of surface or flush device within marked area.
3. Acceptable alternate location of surface or flush device where if preferred location exceeds 10-19 device length.
4. Preferred location of power pole. Coordinate power pole location with any interfering ceiling equipment such as light fixtures, diffusers, grilles, sprinklers, heads, etc.

X-RAY DEVICE LOCATIONS

NOTES:
1. Each equipment location shall utilize either floor outlets or power poles, but not both types of power/data devices (selection depends on airport building construction).
2. It is recommended that the private screening room, if room, and the STS/POD be built into the space of the airport.
3. Power/data devices shown are representative of the typical outlets required. Refer to the checkpoint design guide for alternative types of power/data devices (power poles, modular boxes, etc.).
4. Any space lines from the rear power outlet may route thru the IT room if necessary.
NOTE:
1. Up to 6 208/240v-20 or 30a circuits per mod sets. Power supply conduit should be installed for future equipment deployments.

2. Power supply will be an issue when adding approximately 100amps per lane. Power supply in the vicinity of the checkpoint should be verified and required upgrades planned. This includes but is not limited to additional room for transformers, distribution panels, and upgrades to facility electrical service.

3. Verify outlet device type for dedicated circuits with O&M vendors, TYP.

---

**Equipment**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Max Number of Equipment Placed in the Deflected Circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>30a Circuit</td>
<td>2 (100A) Circuits</td>
</tr>
<tr>
<td>60a Circuit</td>
<td>4 (200A) Circuits</td>
</tr>
<tr>
<td>100a Circuit</td>
<td>8 (400A) Circuits</td>
</tr>
</tbody>
</table>

---

**Notes**

- 1 30a Circuit for AWL.
- 1 30a Circuit for AWL.
- 1 30a Circuit for AWL.
- 1 30a Circuit for AWL.
- 1 30a Circuit for AWL.

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**Special Instructions**

- Power supply must be verified prior to installation.
- Additional room for transformers, distribution panels, and upgrades are required.

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**TSA Checkpoint Electrical Devices – Vanderlande IND.

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**U.S. Department of Homeland Security**

**Revision 19 – Issued April 10, 2018**

**Sheet 18**
NOTES:
1. Equipment shown represents two different x-ray manufacturers for example of outlet placement. Each checkpoint typically includes only one manufacturer.
2. Each equipment location shall utilize either floor outlets or power poles, but not both types of power/data devices, (selection depends on airport building construction).
3. It is recommended that the private screening room be isolated into the space of the airport.
4. Power/data devices shown are representative of the typical outlets required. Refer to the checkpoints design guide for alternative types of power/data devices (power poles, modular boxes, etc.)
5. Wall refers to automated screening lanes.
6. On-screen resolution, I/O room to make 1x4 work standing per lane rounded up.
7. All signs server to be located in the I/O area. Provide 2 CAT 6 data cables from all signs server to the I/O area.
8. Provide general convenience outlets in the beginning, middle, and end of passenger queue.
9. Location of the E-gate turnstiles will be at beginning of the passenger queue.
10. Automatic and/or take infrastructure shall be installed based on the TSA requirements as selected by the airport authority.

SPECIAL NOTE:
Please note that any costs associated with the planning, design, and/or other aspects of this project are the sole responsibility of the airport and/or airline, and TSA will not be liable for any costs or reimbursement for any aspect of the project.

SPECIAL NOTE:
All IT rooms, I/O rooms and private screening rooms are non-reusable space. All IT rooms need to be cleared through local or if it and TSA no office of real estate for awareness. The local TSA is responsible to make all notifications.
SPECIAL SCOPE NOTE:
PLEASE NOTE THAT ANY COSTS ASSOCIATED WITH THE PLANNING, DESIGN AND/OR OTHER ASPECTS OF THIS PROJECT ARE THE SOLE RESPONSIBILITY OF THE AIRPORT AND/OR AIRLINE AND TSA WILL NOT BE LIABLE FOR ANY COSTS OR REMUNERATION FOR ANY ASPECT OF THE PROJECT.

SPECIAL NOTE:
ALL IT ROOMS, I/O ROOMS AND PRIVATE SCREENING ROOMS ARE NON-REASSIGNED SPACE. ALL IT ROOMS NEED TO BE CLEANED THROUGH LOCAL/CON NO IT AND TSA NO OFFICE OF REAL ESTATE FOR AWARENESS. THE LOCAL TSA IS RESPONSIBLE TO MAKE ALL NOTIFICATIONS.

NOTES:
1. EQUIPMENT SHOWN REPRESENTS TWO DIFFERENT X-RAY MANUFACTURERS FOR EXAMPLE OF OUTLET PLACEMENT. EACH CHECKPOINT TYPICALLY INCLUDES ONLY ONE MANUFACTURER.
2. EACH EQUIPMENT LOCATION SHALL USE EITHER FLOOR OUTLETS OR POLE POLES FOR HARDWARE, BUT NOT BOTH TYPES OF POWER/DEVICES. SELECTION DEPENDS ON AIRPORT BUILDING CONSTRUCTION.
3. IT IS RECOMMENDED THAT THE PRIVATE SCREENING ROOM, I/O ROOM, AND THE SPECIFIED REMAIN HEATED INTO THE SPACE OF THE AIRPORT.
4. POWER/DEVICES SHOWN ARE REPRESENTATIVE OF THE TYPICAL OUTLETS REQUIRED. REFER TO THE CHECKPOINT DESIGN GUIDE FOR ALTERNATIVE TYPES OF POWER/DEVICES (POWERS, POLE/POLE, ANALOG, ETC.).
5. ALL REFER TO AUTOMATED SCREENING LANES.
6. ON SCREEN LOCATION, I/O ROOM TO MAKE 1.6 WORK STATIONS PER LANE ROUNDED UP.
7. ALL SENSORS TO BE LOCATED IN THE IT ROOM, PROVIDE 2 CAT 6 DATA CABLES FROM ALL SENSORS TO THE TSA IT CAVITY FOR FUTURE USE.
8. PROVIDE THREE CONVEYOR OUTLETS IN THE BEGINNING, MIDDLE AND END OF PASSENGER QUEUE.
9. LOCATION OF THE PASSAGE TUNNELS WILL BE AT THE BEGINNING OF THE PASSENGER QUEUE.
10. AUTOMATED X-RAY INFRASTRUCTURE SHALL BE INSTALLED BASED ON THE RFID REQUIREMENTS AS DECIDED BY THE AIRPORT AUTHORITY.

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TSA CHECKPOINT DATA TYPELOGY - VI - CENTRALIZED SERVER

U.S. DEPARTMENT OF HOMELAND SECURITY

Government Printing Office
Washington, DC 20402

Sheet 20
NOTE:

1. Up to 6 208/240V-20 or 30A circuits per MOD sets. Power supply conduit should be installed for future equipment deployments.

2. Power supply will be an issue when adding approximately 100amps per lane. Power supply in the vicinity of the checkpoint should be verified and required upgrades planned. This includes but not limited to additional room for transformers, distribution panels and upgrades to facility electrical service.

3. Verify outlet device type for dedicated circuits with OEM vendor, TYP.

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**Power Requirements**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Max Number of Circuits</th>
<th>Max Power Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>200 amp 208/240V-20</td>
<td>200 Amps</td>
</tr>
<tr>
<td>Power</td>
<td>300 amp 208/240V-20</td>
<td>300 Amps</td>
</tr>
<tr>
<td>Power</td>
<td>400 amp 208/240V-20</td>
<td>400 Amps</td>
</tr>
<tr>
<td>Power</td>
<td>500 amp 208/240V-20</td>
<td>500 Amps</td>
</tr>
<tr>
<td>Power</td>
<td>600 amp 208/240V-20</td>
<td>600 Amps</td>
</tr>
</tbody>
</table>

---

**Power Outlet Requirements**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Max Number of Circuits</th>
<th>Max Power Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>200 amp 208/240V-20</td>
<td>200 Amps</td>
</tr>
<tr>
<td>Power</td>
<td>300 amp 208/240V-20</td>
<td>300 Amps</td>
</tr>
<tr>
<td>Power</td>
<td>400 amp 208/240V-20</td>
<td>400 Amps</td>
</tr>
<tr>
<td>Power</td>
<td>500 amp 208/240V-20</td>
<td>500 Amps</td>
</tr>
<tr>
<td>Power</td>
<td>600 amp 208/240V-20</td>
<td>600 Amps</td>
</tr>
</tbody>
</table>

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For Central Server Solution CDT or Single Mode Fiber

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**TSA Checkpoint Electrical Devices - Smiths Detection**

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NOTES:
1. Equipment shown represents two different X-ray manufacturers for example of outlet placement.
2. Each checkpoint typically includes only one manufacturer.
3. Equipment located shall utilize either floor outlets or power poles, but not both types of power/data devices (selection depends on airport building construction).
4. It is recommended that the primary screening room be built into the space of the airport.
5. Power/data devices shown are representative of the typical outlets required. Refer to the checkpoint design guide for alternative types of power/data devices (power poles, modular boxes, etc.)
6. "TSA" refers to automated screening lanes.
7. On-screen resolution, 1/0, room to make 1.4 work stations per lane rounded up.
8. All sensors required to be located in the TSA IT room provide 2 CAT 6 data cables from all sensors to the TSA IT cabinet for future use.
9. Provide general convenience outlets in the beginning, middle, and end of passenger queue.
10. Location of the E-gate turnstiles shall be at beginning of the passenger queue.
11. Automatic walk-through infrastructure shall be installed based on the OEM requirements as selected by the airport authority.

SPECIAL SCOPE NOTE:
PLEASE NOTE THE ANY COSTS ASSOCIATED WITH THE PLANNING, DESIGN AND/OR OTHER ASPECTS OF THIS PROJECT ARE THE SOLE RESPONSIBILITY OF THE AIRPORT AND/OR AIRLINE AND TSA WILL NOT BE LIABLE FOR ANY COSTS OF REIMBURSEMENT FOR ANY ASPECT OF THE PROJECT.

TSA CHECKPOINT DATA TYPOLOGY - SM - COLLOCATED SERVER

U.S. DEPARTMENT OF HOMELAND SECURITY
REVISION 19 - ISSUED APRIL 10, 2018
U.S. CUSTOMS AND BORDER PROTECTION

Sheet 2/7
SPECIAL NOTE:
Please note that any costs associated with the planning, design and/or other aspects of this project are the sole responsibility of the airport and/or airline and the TSA will not be liable for any costs or reimbursement for any aspect of the project.

SPECIAL NOTE:
All R/W rooms, I/O rooms and private screening rooms are non-leased space. All R/W rooms need to be cleared through location and if a R/W box office of real estate for awareness. The local TSA is responsible to make all notifications.

NOTES:
1. Equipment shown represents two different X-ray manufacturers. Each checkpoint typically includes only one manufacturer.
2. Each equipment location shall either be floor outlet or power pole, but not both types of power/data devices. Selection depends on airport building construction.
3. It is recommended that the private screening room, R/W room, and the stair room be built into the space of the airport.
4. Power/data devices shown are representative of the typical outlets required, refer to the checkpoint design guide for alternative types of power/data devices (power poles, modular boxes, etc.)
5. ALE refers to automated screening lanes.
6. On-screen resolution, I/O room to make 1:4 work station per lane rounded-up.
7. All spenders to be located in the TSA IT room, provide 2 CAT 6 data cables from all spenders to the TSA IT cabinet for future use.
8. Provide general convenience outlets in the beginning, middle and end of passenger queue.
9. Location of the E-gate turnstiles will be at beginning of the passenger queue.
10. Automatic and take infrastructure shall be installed based on the OCA requirements as selected by the airport authority.
SPECIAL NOTE:
Please note that any costs associated with the planning, design, and/or other aspects of this project are the sole responsibility of the airport and/or airline. Any costs will not be reimbursed for any costs or reimbursement for any aspect of the project.

STANDARD POWER/DATA LAYOUT FOR AUTOMATED SCREENING LANE:

- Standard Power/Data Layout for Automated Screening Lane
- Various components and connections depicted in a diagram format.
- Diagram includes labels for power/data outlets and connections.
- Notations for specific areas and connections are provided in the diagram.

NOTES:
1. Equipment shown represents two different X-ray manufacturers for example of outlet placement. Each checkpoint potentially includes only one manufacturer.
2. Each equipment location shall utilize either floor outlets or power poles, but not both types of power/data devices. Selection depends on airport building construction.
3. It is recommended that the private screening room, D, E, and, and the step down be built into the space of the airport.
4. Power/data devices shown are representative of the typical outlets required. Refer to the checkpoint design guide for alternative types of power/data devices (power poles, modular boxes, etc.).
5. "Wall" refers to automated screening lanes.
6. On-screen resolution, 1/10 room to make 1.4 work stations per lane rounded up.
7. All signs server to be located in the T.S.A. it room. Provide 3 CAT 6 data cables from all signs server to the T.S.A. it cabinet for future use.
8. Provide central convenience outlets in the beginning, middle and end of passenger queue.
9. Location of the e-gate turnstiles will be at beginning of the passenger queue.
10. Automatic handgate infrastructure shall be installed based on the TSA requirements as selected by the airport authority.
<table>
<thead>
<tr>
<th>CABLE REQUIREMENTS</th>
<th>CABLE DESTINATION</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRONT X-RAY OUTLET - A</td>
<td>2 X CAT6</td>
<td>TSA IT RACK</td>
</tr>
<tr>
<td>REAR X-RAY OUTLET - B</td>
<td>6 X CAT6</td>
<td>IT RACK</td>
</tr>
<tr>
<td>AVS/ETD/BLS/AVS - C</td>
<td>4 X CAT6</td>
<td>IT RACK</td>
</tr>
<tr>
<td>SINGLE LANE WALL - D</td>
<td>4 X CAT6</td>
<td>IT RACK</td>
</tr>
<tr>
<td>PRIVATE SCREENING ROOM - E</td>
<td>4 X CAT6</td>
<td>IT RACK</td>
</tr>
<tr>
<td>FURIOUS ALARM AND CHRONOS CLOCK - F</td>
<td>2 X CAT6</td>
<td>IT RACK</td>
</tr>
<tr>
<td>INCEPAD AND PC BOARD - G</td>
<td>4 X CAT6</td>
<td>IT RACK</td>
</tr>
<tr>
<td>ASL SUPERVISOR CONTROL LOCATION - H</td>
<td>2 X CAT6</td>
<td>IT RACK</td>
</tr>
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</table>
### ASL Checkpoint Data Cabling Requirements

<table>
<thead>
<tr>
<th>Cable Requirements</th>
<th>Cable Destination</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRONT X-RAY OUTLET - A</td>
<td>4 CAT5</td>
<td>TO F-RACK</td>
</tr>
<tr>
<td>REAR X-RAY OUTLET - B</td>
<td>2 CAT5</td>
<td>ASL SEMS SERVER - M</td>
</tr>
<tr>
<td>REAR X-RAY OUTLET - B</td>
<td>3 CAT5</td>
<td>TO F-RACK</td>
</tr>
<tr>
<td>REAR X-RAY OUTLET - B</td>
<td>3 CAT5</td>
<td>TO F-RACK</td>
</tr>
<tr>
<td>SINGLE LANE WALL - D</td>
<td>6 CAT5</td>
<td>TO F-RACK</td>
</tr>
<tr>
<td>PRIVATE SENSOR ROOM - E</td>
<td>2 CAT5</td>
<td>TO F-RACK</td>
</tr>
<tr>
<td>PRIVATE SENSOR ROOM - E</td>
<td>2 CAT5</td>
<td>TO F-RACK</td>
</tr>
<tr>
<td>AVIATION ARM AND CHORDS CLOAK - F</td>
<td>2 CAT5</td>
<td>TO F-RACK</td>
</tr>
<tr>
<td>SECURITY AND VISIT RUG - G</td>
<td>4 CAT5</td>
<td>TO F-RACK</td>
</tr>
</tbody>
</table>

### Additional Requirements for Centralized ASL SEMS Server

- 2 X CAT5/PER EACH CHECKPOINT ASL MANAGED SWITCH TO CENTRALIZED SEMS SERVER
- MAX CABLE RUN 275 FEET
- 2 X SINGLE MODE FIBER OPTIC CABLE RUNS OVER 275 FEET

### TSA Checkpoint Electrical Design – ASL Data Cable Requirements

- 2 X CAT5/TO F-RACK
- 2 X CAT5/F-LANE Supplied

### U.S. Department of Homeland Security

**Revision 19 – Issued April 10, 2018**

**Sheet 34**
• SEMS Server is to be located in a TSA IT Room or a shared Comm. room with the airport in a locked cabinet that shall provided by ASL vendor. If neither are available TSA HQ IT and TSA HQ Checkpoint design agreed space.
• SEMS Client PC to be located in a TSA Office at the respective checkpoint. Alternate location is at the TSA STSO podium in an approved securable computer cabinet.
• Project Sponsor provided managed switch must be located in a secure location in the checkpoint.
• Fiber optic to be single mode.
• All cable runs to be 100% redundant.
• The fiber infrastructure from the nearest communication room adjacent to each SSCP to the TSA CMF in each terminal will be provided by the airport/airlines at its sole cost and expense. The fiber will be dedicated for TSA use for as long as needed and any maintenance, repair or replacement will be the sole responsibility of the airport/airline. There shall be no cost to TSA for its use of the above referenced fiber infrastructure and its components. This will be a “closed network” at the airport for the TSA ASL only.
• TSA Approved Network switches:

  Cisco C3560CX-12PC
  • 12 Gigabit Ethernet ports
  • 2 x 1 GE copper uplinks
  • 2 x 1 GE SFP uplinks
  • IP base (IP services with RTU license)
  • PoE+ support with up to 240 W of PoE budget

  Cisco 3850-12S-S
  • 12 x Gigabit Gigabit Ethernet SFP
  • Port transmission speed, port duplex mode, system, status, PoE
  • IPv4 routes

  Cisco WS-C3850-48P

  Cisco WS-C3850-24S
GENERAL NOTES - WIRE GAUGE ASSUMPTIONS

- Look at Full Load of the equipment if available.
- Utilize the electrical specs of the units if available. If not use worst case scenario of 30A/2P circuit with (3) #10s.
- If the Distance of the equipment to panel exceeds 100’ up to 150’, estimate (3) #8s. If the distance of the equipment to panel exceeds 150’ up to 250’ estimate (3) #6 conductors.
- Utilize minimum dedicated 1” conduits to leave extra room in the conduits for expansions and risks.
- CT power requirements listed in most cases as 208V/30A as worst case possibility. Verify exact requirement with CT OEM.
- CT connection devices are to be twist lock and appropriate to circuit.