



Detection System Model 3500 Series

Architect/Contractor Information Package

3M Library Systems

3M Center, Building 225-4N-14
St. Paul, Minnesota 55144-1000

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78-8123-7861-6 Rev A



Dear Architect/Contractor:

I would like to take this opportunity to thank you for your interest in the 3M Library Systems products. I think you will find all of the information you will need to assist in the implementation of your plan.

3M LIBRARY SYSTEMS IS A LEADING SUPPLIER OF LIBRARY DETECTION, SELF SERVICE, AND PRODUCTIVITY SOLUTIONS. AS PART OF OUR OFFERING, 3M FACILITATES THE INSTALLATION AND AFTER-SALE SUPPORT (EITHER DURING WARRANTY OR BY SERVICE AGREEMENT WITH THE PURCHASE). 3M SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS APPLICABLE TO PRODUCT SUPPLIERS LIKE 3M.

BECAUSE 3M IS "NOT" A SUBCONTRACTOR, WE WILL NOT ACCEPT HOLDBACKS, OR OTHER PAYMENT RESERVATIONS. 3M'S SALES ARE EXPRESSLY MADE CONDITIONAL UPON THE CONTRACTOR'S AGREEMENT TO MAKE PAYMENT IN FULL WITHIN THIRTY (30) DAYS AFTER DATE OF SHIPMENT. IF THE PURCHASE IS TO BE TAX EXEMPT, A CERTIFICATE MUST BE FORWARDED TO 3M FOR THE FILE.

For service and installation, order status, or any additional questions, please feel free to contact 3M at 1-800-328-0067.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gregory P. Pfouts'.

Gregory P. Pfouts
National Sales Manager
3M Library Systems

Preinstallation Worksheet – 3M™ Detection Systems

Please complete this form and fax it to 3M at 1-800-795-9091

Today's date _____
 Sales consultant _____
 Account name _____
 Key contact name _____
 Phone No. _____
 Installation location _____
 Install contact name _____
 Phone No. _____
 Installation date _____
 Purchasing/payment contact _____
 Phone No. _____

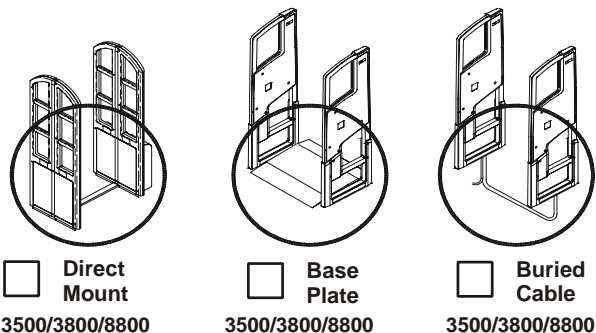
System model number(s) _____
 Accessories _____
 Delayed warranty start date (if applicable) _____
 Model/serial number of equipment to be replaced/removed _____

3M dismantle at additional current rates.....
 Customer dismantle and removal
 Preinstallation worksheet reviewer _____

Note: It is the customer's responsibility to move the system within 10 ft. of the installation location before scheduling the installation.

Does account require PO number for payment of invoices?
 Yes _____ No _____

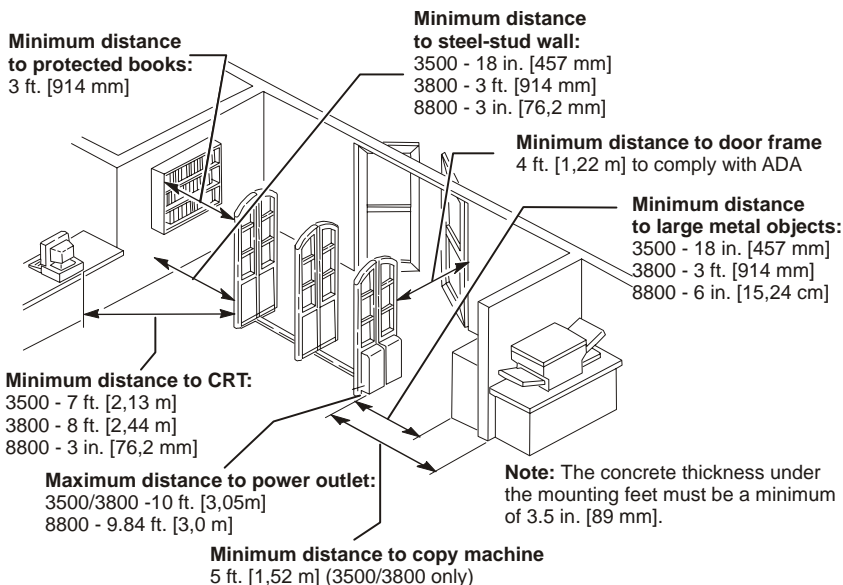
Select a mounting option:



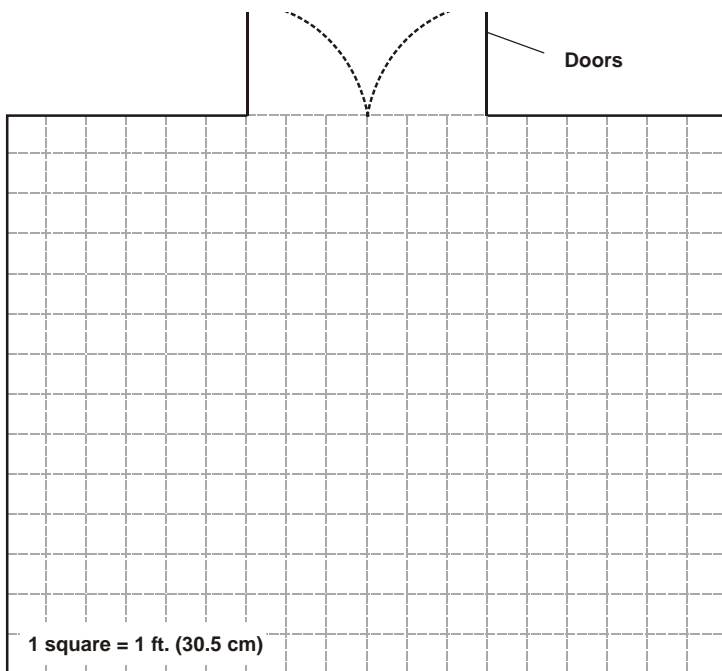
Your site layout must meet the following requirements to help ensure optimal performance:

- Minimum distance from system to large metal objects (windows, doors, walls, display cases, shelves, cabinets, picture frames, counter edges, waste baskets, and furniture):
 3500 - 18 in. [45,7 cm]
 3800 - 3 ft. [91,4 cm]
 8800 - 6 in. [15,24 cm]
- Minimum distance from system to CRT:
 3500/3800 - 7 ft. [2,13 m]
 8800 - 3 in. [7,6 cm]
- The Model 3500 electronics enclosure must be a minimum of 4 ft. [1,22 m] min./21 ft. [6,4 m] (wire-run distance) max. from system panels, and within 10 ft. [3,05 m] of the power source.
- The system must be at least 5 ft. [1,52 m] from copiers (3 in. [76,2 mm] for the Model 8800).
- The system must be at least 3 ft. [914 mm] from materials containing security markers.
- The system must be at least 4 ft. [1,22 m] from door frames to meet ADA requirements.
- The system must be within 10 ft.* [3,05 m] of the power source (9.84 ft.* 3,0 m for Model 8800).
 * Wire-run distance, not straight-line distance.
- 1.25-inch I.D. non-metallic conduit for buried-cable systems.

See the *Architect/Contractor Information Package* for system dimensions and requirements.



Draw your system layout in the following grid:



The eleven most important points for the successful installation of 3M™ Detection Systems

- 1 Maintain the proper distance between the Detection System and large metal objects.**
 - The minimum distances from a Detection System Panel to a wall using metal studs and metal windows, doors, walls, cabinets, shelves, pipes, counter edges, display cases, wastebaskets, and furniture are:
 - **Model 3500** – 18 in. [457 mm]
 - **Model 3800** – 3 ft. [914 mm]
- 2 Locate the Detection System within the maximum distance to a power receptacle:**

(These distances are measured in wire-run feet, not straight-line distance.)

 - Mount the **Model 3500** electronic enclosure within 10 ft. [3,05 m] of a power receptacle.

Note: The allowable distance between the **Model 3500** electronics enclosure and a detection panel is 4 ft. [1,2 m] minimum or 21 linear ft. [6,4 m] maximum.
 - The **Model 3800** power inlet can be a maximum of 10 ft. [3,05 m] from a power receptacle.
- 3 For buried-cable installations, use the following non-metallic conduit with correct spacing.**

(Correctly sized conduit is needed to accommodate connectors on the ends of the cables.)

 - **Model 3500/3800** – use 1.25-inch [31,8-mm] I.D., non-metallic conduit
- 4 Locate the Detection System at least 5 ft. [1,52 m] from copier machines.**
- 5 Maintain the minimum distance from the Detection System to a CRT display:**
 - **Model 3800** – 8 ft. [2,44 m]
 - **Model 3500** – 7 ft. [2,13 m]
- 6 Avoid positioning the Detection System near power panels, data cables, and large conduits.**
 - **Model 3500** - 5 ft. [1,52 m] minimum between the Detection System and power/data conduit.
 - **Model 3800** – 10 ft. [3,05 m] minimum between the Detection System and power/data conduit.
- 7 Provide a 4-foot [1,22 m] clear space between the Model system panels and any door.**
 - Required for ADA (Americans with Disabilities Act) compliance.
- 8 Plan the system layout so that patrons entering and exiting the library do not interfere with each other.**
 - Avoid two-way traffic in a single corridor.
- 9 Plan the system layout so that the corridor(s) are centered on the door(s).**
- 10 Locate the system to allow good observation/supervision of the system by your circulation-desk staff.**
- 11 Locate the system so that books and other secured items are stored at least 3 feet [914 mm] from the Detection System.** (This helps ensure that secured items within the library are not detected by the system.)
 - Books and other secured items must be stored at least 3 feet [914 mm] from the Detection System.
 - Patrons and book carts with secured items cannot pass within 3 feet [914 mm] of the Detection System.

System Design Considerations

3M™ Detection Systems

The following design considerations should be addressed when planning the layout of any 3M Detection System.

Patron traffic patterns

- 1 Does your system layout plan center the corridor(s) on the door(s) and help establish normal traffic patterns?
- 2 Do patrons have an easy exit path?
 - Keep changes in traffic direction between check-out and exit to an absolute minimum.
- 3 Will patrons entering and exiting the library interfere with each other?
 - Avoid two-way traffic in a single corridor.
- 4 In the event of an alarm, is there room to identify or stop patrons before they leave the library?
- 5 Are there enough detection-system corridors available to handle typical amount of traffic and to meet codes?
- 6 While in the library, will patrons stand directly next to the system or carry secured items within three feet of the system?
 - This may cause false alarms.
- 7 Will your book carts fit through the corridor?

System location

- 1 Have you attempted to position the system so it can be moved as much as one foot in any direction (if necessary) to compensate for minor environmental interference?
- 2 Do check-out personnel have good visibility and access to the detection hardware?
- 3 Are all applicable codes met?
- 4 Have you investigated whether there are large metal objects hidden within or behind the walls?
- 5 Is power located to minimize the need to run cords and wire molding through traffic areas?
- 6 Will book carts with secured items be stored near the detection system?
 - To avoid false alarms, all secured items must be kept at least 3 ft. from the detection system at all times.
- 7 Have you considered future placement of CRTs and other electronic devices that may cause system interference?

Loss Reduction Guarantee and Standard Warranty

3M™ Detection Systems

One Year 3M™ Tattle-Tape™ Detection Systems Loss Reduction Guarantee: Subject to the Limitation of Liability below, 3M guarantees that your materials losses (loss of books, CDs, DVDs, and other rental assets from patron theft) will improve by an average of 80% during the period 12 months from the date of installation of a Tattle-Tape Detection System provided that a) you are the original purchaser; b) you have executed a one (1) year 3M Service Agreement for maintenance of the Library System product; c) the system has not been subjected to abuse, misuse, accident or neglect; d) you submit to 3M authenticated, written inventory records of your materials losses for the 12 months prior to installation of the system; and e) you submit authenticated, written inventory records of your materials losses for the 12 months following installation of the system. If your materials losses have not been reduced by at least 80% during this 12 month time frame, 3M will reimburse you for the difference between the actual loss reduction and 80%, at the cost of \$25 per item. For example, if you've reduced losses by only 75%, 3M will reimburse you for 5% of those losses at the rate of \$25 per item. Note that all claims under this guarantee must be submitted to 3M within 60 days following expiration of the date 12 months from the date of installation of the Tattle-Tape Detection System. Failure to submit a claim within this time frame will invalidate this guarantee. IMPORTANT: Consumables and non-3M branded products are excluded from this Guarantee. This Guarantee does not apply to the purchase of Tattle-Tape Detection Systems that are replacing prior models of 3M™ Tattle-Tape™ Detection Systems.

Warranty and Limited Remedy for Tattle-Tape™ Detection Systems: Unless stated otherwise in 3M product literature or packaging, 3M warrants that each Tattle-Tape Detection System meets the applicable specifications for a period of ninety (90) days from the date of shipment (or, in the case of hardware installed by 3M, from the date of installation). Any warranties related to 3M software are contained in separate 3M software licenses. Consumables and non-3M branded products are excluded from this Warranty and Limited Remedy.

3M MAKES NO OTHER GUARANTEES, WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. You are responsible for determining whether the 3M product is fit for a particular purpose and suitable for your application. If the 3M product is defective within the warranty period and provided that a) the product has not been subjected to abuse, misuse, accident or neglect and b) you have notified 3M within thirty (30) days after the defect was discovered, your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace or repair the defective 3M product.

Limitation of Liability: EXCEPT WHERE PROHIBITED BY LAW, 3M AND SELLER WILL NOT BE LIABLE FOR ANY LOSS OR DAMAGE ARISING FROM TATTLE-TAPE DETECTION SYSTEMS, WHETHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL, REGARDLESS OF THE LEGAL THEORY ASSERTED, INCLUDING WARRANTY, CONTRACT, NEGLIGENCE OR STRICT LIABILITY.

Guarantee and Warranty Claims: For guarantee and warranty claims, and for service, call one of the following numbers:

In the US: 1-800-328-0067

In Canada: English 1-800-268-6235

Français 1-800-567-3193

Architect's/Contractor's Information Package

3M™ Detection System Model 3500 Series

This package provides architects and contractors with all the information necessary to promote successful equipment installation and optimum operating environment for your new 3M Detection System.


The documents in this package provide precise dimensional and environmental information to help ensure optimum performance.

3M Model 3500 Series Product Information	Page
Model 3500 Series System Layout Checklist	2-2
Model 3501 System Installation Specifications (choose the mounting option that meets your needs)	2-4
Model 3502 System Installation Specifications (choose the mounting option that meets your needs)	2-7
Contractor Installation Instructions for 3M Model 3501 System with Buried Cables	2-10
Model 3501 System Contractor Layout Plan, Buried Wiring Conduit	2-12
Contractor Installation Instructions for 3M Model 3502 System with Buried Cables	2-13
Model 3502 System Contractor Layout Plan, Buried Wiring Conduit	2-15

We hope this package will address all of your needs. Should you require any additional information or pricing, please call 1-800-328-0067, option #3, to leave a message for the 3M Sales Consultant in your area.

3M Library Systems

3M Center, Bldg. 225-4N-14
St. Paul, MN 55144-1000
1-800-328-0067
www.3M.com/library

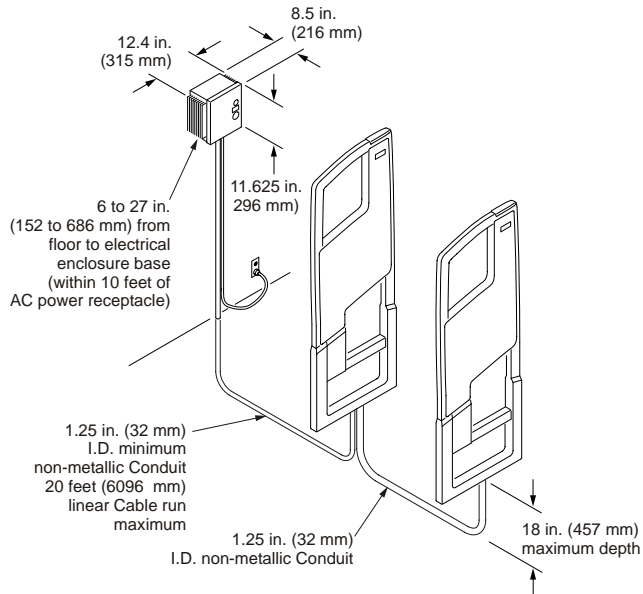

40% Pre-consumer waste paper
10% Post-consumer waste paper

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System Layout Checklist

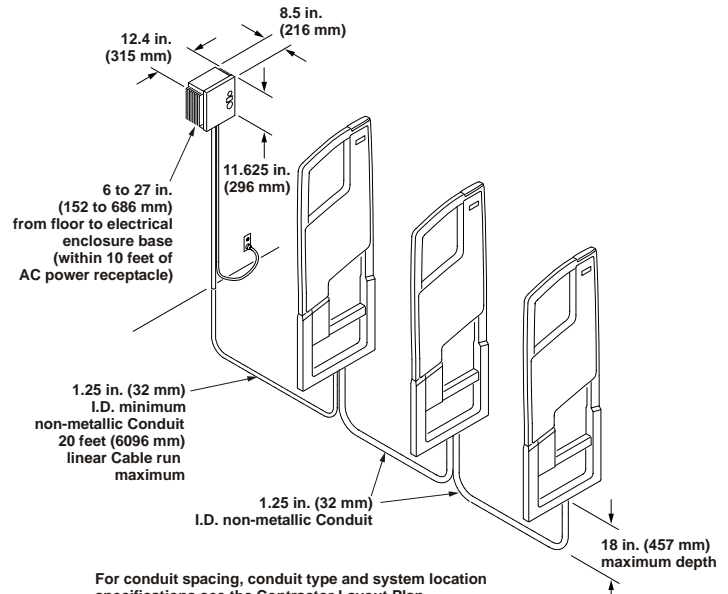
3M™ Detection System Model 3500 Series

This checklist contains the information necessary to provide the environment required to successfully install your new Model 3500 Series Detection System.



For conduit spacing, conduit type and system location specifications see the Contractor Layout Plan and System Layout Check List.

EAS-359C



For conduit spacing, conduit type and system location specifications see the Contractor Layout Plan and System Layout Check List.

EAS-358C

Model 3501

Model 3502

Power Requirements

3M Detection Systems are sophisticated computer-based devices that require high-quality, surge- and noise-free electrical power for optimum performance.

- 1 Single-phase power is required.
- 2 Designed for global use with internal (manual) switch selection for voltages from 100 to 240 VAC, 50 or 60Hz.
- 3 Maximum RMS current draw:
 - 100/120 VAC: 2 Amp
 - 210/240 VAC: 1 Amp
- 4 The Model 3500 system is supplied with a 16 gauge, 3-wire, S-rating, 10 ft. long, NEMA 5-15P plug-type power cord.
 - A power receptacle is required at the Electronic Enclosure, within the power-cord length.
- 5 A dedicated circuit is not required but is recommended to prevent overloading and loss of security.

System placement relative to Interfering Objects

The system must be placed in an environment free of certain types of electrical interference. Check the following list of items to verify that your system will be located at an adequate distance from sources of electrical interference.

Computers (CRT)	For optimum performance, computer terminals should be placed at least 7 ft. from the closest detection panel. If necessary, the computer terminal may be located between 4 ft. and 7ft. from the closest detection panel; however, the computer terminal may require a special shield, which is available at an additional cost.
Doors/Windows	Metal framed windows, doors, counters, shelves, steel stud walls, and metal reinforced walls, must be a minimum of 18 in. from the detection panels.
Large Metal Objects	Large metal objects such as I beam, HVAC ducting, safes, etc., must be a minimum of 18 in. from the detection panels.
Protected Materials	Books and other protected items must be at least 3 ft. from the detection panels.
Telephones	Telephones must be a minimum of 7 ft. from the detection panels.
Copiers	Copiers must be a minimum of 5 ft. from the detection panels.
AC Power Panels	AC Power panels must be a minimum of 5 ft. from the detection panels.
Audio Systems	Stereos, microphones, and audio amplifiers, must be a minimum of 10 ft. from the detection system.
Traffic Control Hardware	Traffic control posts must be a minimum of 12 in. from the panels. Metal railings with more than one horizontal member must be a minimum of 18 in. from the detection panels.
Electronic Enclosure	The Model 3500 Series Electronic Enclosure must be a minimum of 4 ft. from the detection panels. The conduit or cable that runs between the electronic enclosure and detection panels cannot be more than 20 linear feet. The Electronic Enclosure must be visible from the detection panels for service. The Electronic Enclosure must be within 10 ft. of the power receptacle.
System Separation	Model 3500 Series systems separated by less than 20 ft. will require a sync cable connecting the Electronic Enclosures. The minimum separation between two Model 3500 Series systems is 24 in. If your site has other 3M Detection Systems: <ul style="list-style-type: none">▪ The minimum distance to a Model 2300 system is 20 feet [6,0 m]. The minimum distance to a Model 3800 system is 10 feet [3,0 m].▪ The minimum distance to an M1300 Series or M1850 Series system is 20 feet [6,0 m].

Installation Specifications

3M™ Detection System Model 3501

Mounting Options

Important Note: Before calling for installation, the customer must move the system to within 10 feet of the final location.

Direct Mount with Buried Cable Mounting Option

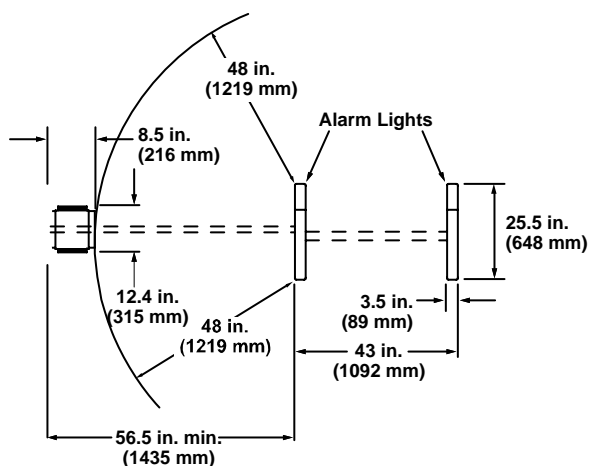
Panel-to-panel cables are run below the finished floor in a non-metallic conduit. Conduit installation is the responsibility of the customer.

Panel-to-electronics-enclosure wiring

Typically, the contractor runs this cable under the floor to get a more finished look. This conduit is 1.25 in. ID, non-metallic, and is the responsibility of the customer.

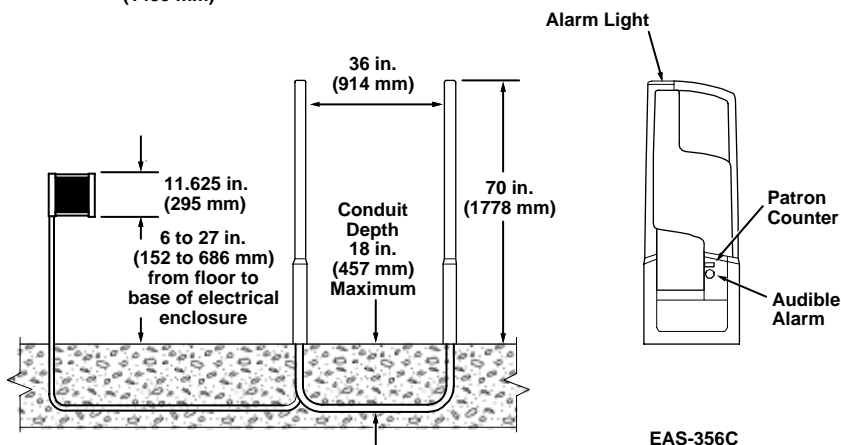
If desired, this cabling can be run on the surface in wire mold by the installer. 3M will provide and install this cable. The Electronic Enclosure must be visible from the detection panels.

All conduit, outlet boxes, and covers must be installed in compliance with the National Electrical Code and/or local codes.



Panel-to-panel wiring

- 1 Wiring installed below finished flooring, wiring enclosed in 1.25 in. (32 mm) ID non-metallic conduit. Conduit installed by the customer. See *Model 3501 Contractor layout Plan - Buried Wiring*.
- 2 Panel-to-panel cables are long enough for conduit that is placed a maximum of 18 in. (457 mm) below the finished floor surface. Non-metallic conduit should extend 1/4 to 3/8 in. (6 - 10 mm) above the finished floor.
- 3 Conduit placement is critical as it defines where the system will be located. System location must comply with all requirements of the *3M Model 3500 System Layout Checklist*.



EAS-356C

Direct Mount with Threshold Mounting Option

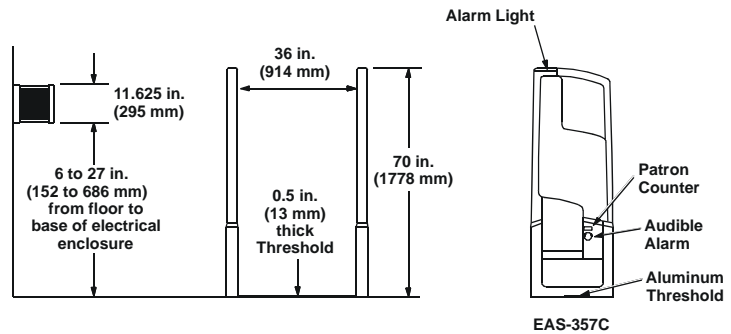
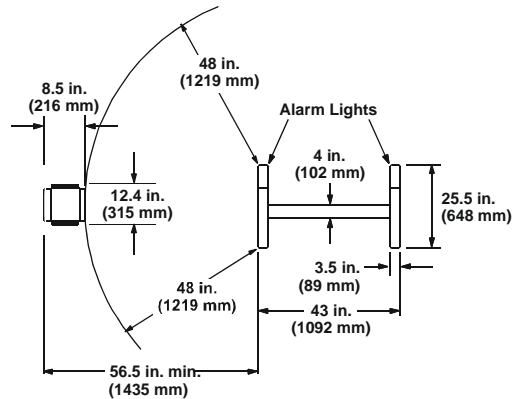
Panel-to-panel cables are enclosed in 4 in. (101.60 mm) wide anodized aluminum threshold.

Panel-to-electronics-enclosure wiring

This cabling will be enclosed in 1500 Series Wire Mold, by the installer, at installation. The Electronic Enclosure should be located to minimize the cable runs across traffic areas. The Electronic Enclosure must be visible from the detection panels.

Panel-to-panel wiring

Wiring enclosed in aluminum threshold by a 3M installer.



Baseplate Mounting Option

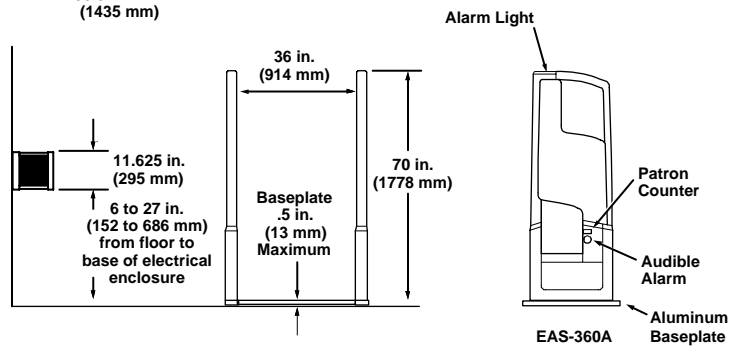
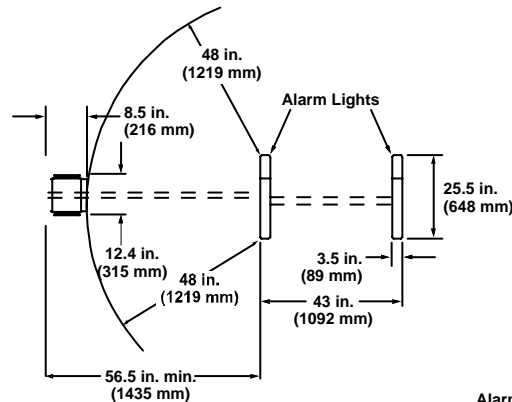
Panel-to-panel cables are enclosed in 25.5 in. (648 mm) wide baseplate.

Panel-to-electronics-enclosure wiring

This cabling will be enclosed in 1500 Series Wire Mold, by the installer, at installation. The Electronic Enclosure should be located to minimize the cable runs across traffic areas. The Electronic Enclosure must be visible from the detection panels.

Panel-to-panel wiring

Wiring enclosed in baseplate by a 3M installer.



System Information – Model 3501 System

The Model 3501 System is a single-corridor detection system consisting of two panels that are mounted to the floor using a mounting foot and anchors, or an aluminum baseplate. The corridor width is 36 in. (914 mm) to comply with ADA (Americans with Disabilities Act).

- A Patron Counter and Visual Alarm Indicator are mounted on the panels for easy viewing. An Audio Alarm is also mounted on the panel.
- The Electronics are enclosed in a metal enclosure, and are remotely located. AC Power is required at the location of the electronics enclosure.

Important Notes:

- 1 The system must be installed with the alarm lights toward the library exit.
- 2 The system must be located on a level surface.
- 3 The Pantone system color is Pantone Cool Gray 5C, with Pantone 8C mounting hardware.
- 4 The system is available in a 36-inch corridor width.
- 5 The location must comply with the *Model 3500 System Layout Checklist* to ensure optimum performance.
- 6 System is available as a Direct Mount with Threshold, Direct Mount with Buried Cables, or Baseplate. The system will be anchored to the floor using concrete anchors.
- 7 The Electronic Enclosure must be a minimum of 4 ft. from the detection panels. The conduit or cable that runs between the electronic enclosure and detection panels cannot be more than 20 linear feet. The Electronic Enclosure must be visible from the detection panels.
- 8 The Electronic Enclosure is designed to be mounted on a wall or other vertical surface, with unrestricted airflow for cooling. AC Power is required within 10 ft. of this enclosure.
- 9 Multiple Model 3500 Series systems installed within 20 feet of each other must be synchronized by an interconnecting cable between their electronic enclosures. This cable is a 3-wire, double-insulated cable to be enclosed in 1/2-in. conduit. The contractor installs the conduit, which should follow the safest route. 3M will install the cable.
- 10 System weight is 210 lbs. (95 Kg).
- 11 The system is shipped with auxiliary contacts for signaling remote devices such as camera systems.
- 12 Detection zone has selectable vertical dimensions; floor to 62 in. height, or 8 in. to 70 in. height. The 70 in. height is recommended.

Electrical Power Requirements

The Model 3501 system is a computer-based device, which requires high quality, surge free, noise free, electrical power for optimum performance.

- 1 Single-phase power is required.
- 2 Designed for global use, operating voltage is selectable from 100 to 240 VAC, 50 or 60 Hz.
- 3 Maximum RMS current draw: 100/120 VAC - 2 amp, 200/240 VAC - 1 amp
- 4 Power Cord: the Model 3501 system is supplied with a 16 ga., 3 wire, S-rating, 10 ft. (3.1m) long, NEMA 5-15P type plug.
- 5 Electrical power is typically supplied from a wall-mounted receptacle.
- 6 Customer must supply an electrical outlet within the power cord length. A dedicated line is not required but is recommended, to prevent overloading and loss of security. A minimum circuit capacity of 15 amps is required.

Options

CCTV Monitor
Voice alarm

Installation Specifications

3M™ Detection System Model 3502

Mounting Options

Important Note: Before calling for installation, the customer must move the system to within 10 feet of the final location.

Direct Mount with Buried Cable Option

Panel-to-Panel cables are run below the finished floor in a non-metallic conduit. Conduit installation is the responsibility of the customer.

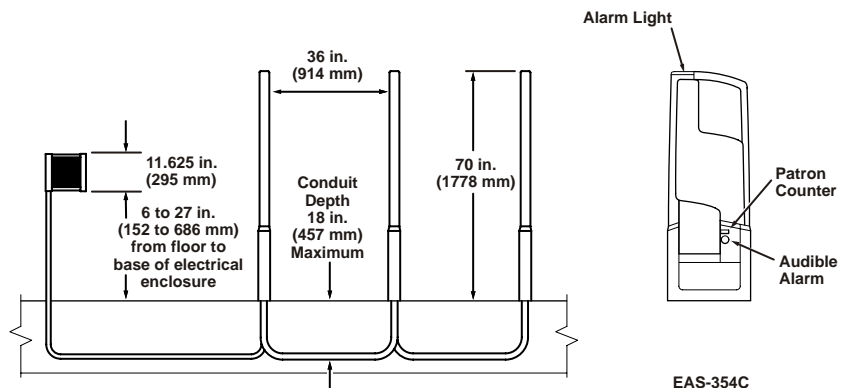
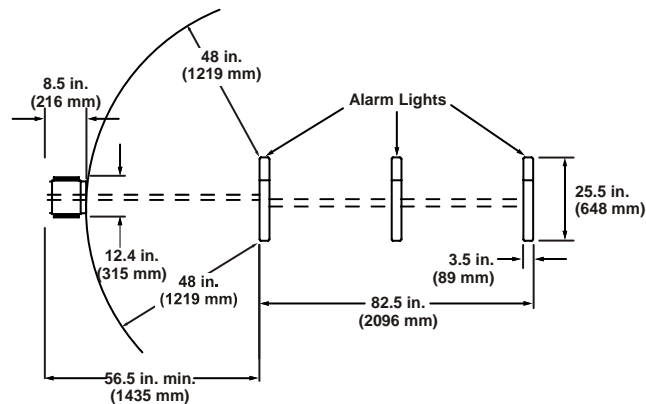
Panel-to-electronics-enclosure wiring

Typically, this cable will be run under the floor by the contractor to get a more finished look. This conduit is 1.25 in. ID, non-metallic, and is the responsibility of the customer. If desired, this cabling can be run on the surface in wire mold by the installer. 3M will provide and install this cable. The Electronic Enclosure must be visible from the detection panels.

All conduit, outlet boxes, and covers must be installed in compliance with the National Electrical code and/or local codes.

Panel-to-panel wiring

- 1 Wiring installed below finished flooring, wiring enclosed in 1.25 in. (32 mm) ID non-metallic conduit. Conduit installed by the customer. See *Model 3502 Contractor layout Plan - Buried Wiring*.
- 2 Panel to panel cables are long enough for conduit that is placed a maximum of 18 in. (457 mm) below the finished floor surface. Non-metallic conduit should extend 1/4 - 3/8 in. (6 - 10 mm) above the finished floor.
- 3 Conduit placement is critical as it defines where the system will be located. System location must comply with all requirements of the *3M Model 3500 System Layout Checklist*.



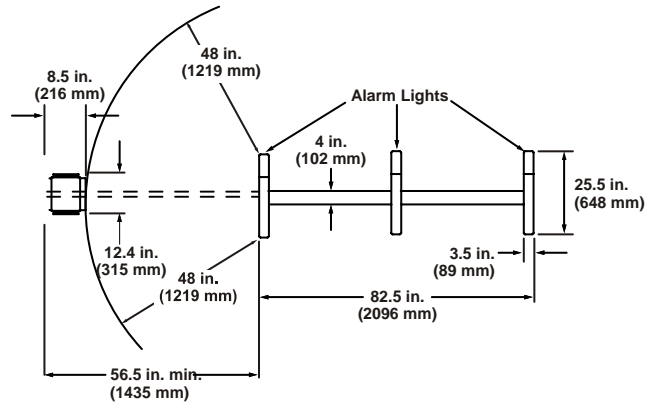
EAS-354C

Direct Mount with Threshold Option

Panel-to-Panel cables are enclosed in 4 in. (101.60 mm) wide anodized aluminum threshold.

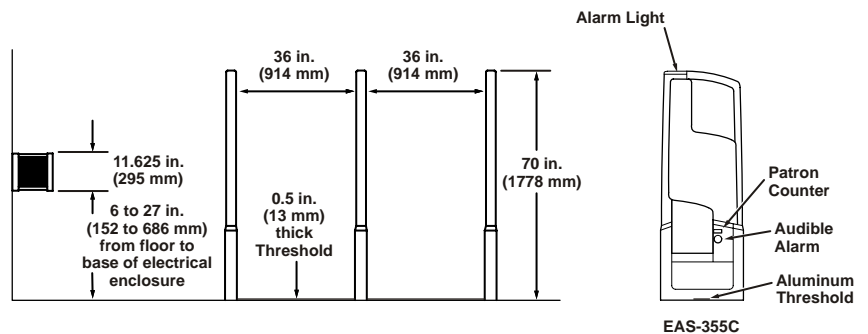
Panel-to-electronics-enclosure wiring

This cabling will be enclosed in 1500 Series Wire Mold, by the installer, at installation. The Electronic Enclosure should be located to minimize the cable runs across traffic areas. The Electronic Enclosure must be visible from the detection panels.



Panel-to-panel wiring

Panel-to-panel wiring enclosed in aluminum threshold by a 3M installer.

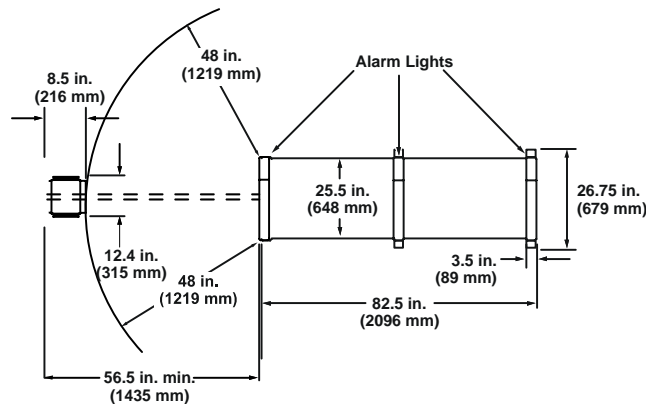


Baseplate Option

Panel-to-Panel cables are enclosed in 25.5 in. (648 mm) wide baseplate.

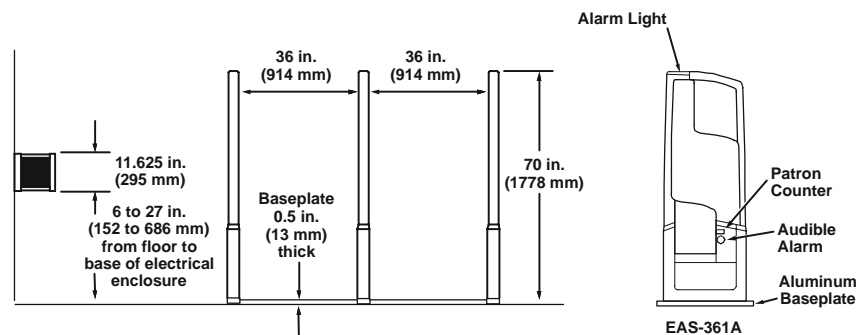
Panel-to-electronics-enclosure wiring

This cabling will be enclosed in 1500 Series Wire Mold, by the installer, at installation. The Electronic Enclosure should be located to minimize the cable runs across traffic areas. The Electronic Enclosure must be visible from the detection panels.



Panel-to-panel wiring

Panel-to-panel wiring is enclosed in baseplate by a 3M installer.



System Information – Model 3502 System

The Model 3502 system is a dual-corridor detection system consisting of three panels that are mounted to the floor using a mounting foot and anchors, or an aluminum baseplate. The corridor width is 36 in. (914 mm) to comply with ADA (Americans with Disabilities Act).

- A Patron Counter and Visual Alarm Indicator are mounted on the panels for easy viewing. An Audio Alarm is also mounted on the panel.
- The Electronics are enclosed in a metal enclosure, and are remotely located. AC Power is required at the location of the electronics enclosure.

Important Notes:

- 1 The system is installed with the alarm lights toward the library exit.
- 2 The system must be located on a level surface.
- 3 The Pantone system color is Pantone Cool Gray 5C, with Pantone 8C mounting hardware.
- 4 The system is available in a 36-inch corridor width.
- 5 The location must comply with the *Model 3500 System Layout Checklist* to ensure optimum performance.
- 6 Direct mount systems will be anchored to the floor using concrete anchors.
- 7 The Electronic Enclosure must be a minimum of 4 ft. from the detection panels. The conduit or cable that runs between the electronic enclosure and detection panels cannot be more than 20 linear feet. The Electronic Enclosure must be visible from the detection panels.
- 8 The Electronic Enclosure is designed to be mounted on a wall or other vertical surface, with unrestricted airflow for cooling. AC Power is required within 10 ft. of this enclosure.
- 9 Model 3500 systems installed within 20 feet of each other must be synchronized by an interconnecting cable between their electronic enclosures. This cable is a 3-wire, double-insulated cable to be enclosed in 1/2 in. conduit. The contractor installs the conduit, which should follow the safest route. 3M will install the cable.
- 10 The system weight is 300 lbs. (136 Kg).
- 11 The system is shipped with auxiliary contacts for signaling remote devices such as camera systems.
- 12 Detection zone has selectable vertical dimensions; floor to 62 in. height, or 8 in. to 70 in. height. The 70 in. height is recommended.

Electrical Power Requirements

The Model 3502 system is a computer-based device, which requires high-quality, surge- and noise-free, electrical power for optimum performance.

- 1 Single-phase power is required.
- 2 Designed for global use, operating voltage is selectable from 100 to 240 VAC, 50 or 60 Hz.
- 3 Maximum RMS current draw: 100/120 VAC - 2 amps, 200/240 VAC - 1 amps
- 4 Power Cord: The Model 3502 is supplied with a 16 ga., 3 wire, S-rating, 10 ft. (3.1m) long, NEMA 5-15P type plug.
- 5 Electrical power is typically supplied from a wall-mounted receptacle.
- 6 The customer must supply an electrical outlet within the power core length. A dedicated line is not required but is recommended, to prevent over loading and loss of security. A minimum circuit capacity of 15 amps is required.

Options

CCTV Monitor
Voice alarm

Contractor Instructions for Buried Cable Installations

3M™ Detection System Model 3501

Note: Read all installation instructions before starting procedures. If there are any questions, call 3M Technical Service at 1-800-328-0067 option #1.

Materials Required

<u>Item</u>	<u>Supplier</u>
1 Model 3501 and mounting hardware.	3M
2 Rigid non-metallic conduit (Panel to Panel Cables) 1.25 in. (32 mm) ID (see Buried Wiring Conduit Layout – Model 3501 on page 2-12.)	Contractor
3 Conduit (if required for synchronizing multiple systems) from Electronic Enclosure to Electronic Enclosure by the best route. Conduit size of 1/2 in. is adequate. Required only with multiple systems within 20 ft of each other.	Contractor
4 Concrete to pour floor.	Contractor
5 Device to cut trench in floor (for existing floors).	Contractor
6 Materials to hold the conduit in position while pouring floor.	Contractor
7 Finished floor. Install before Detection System.	Contractor

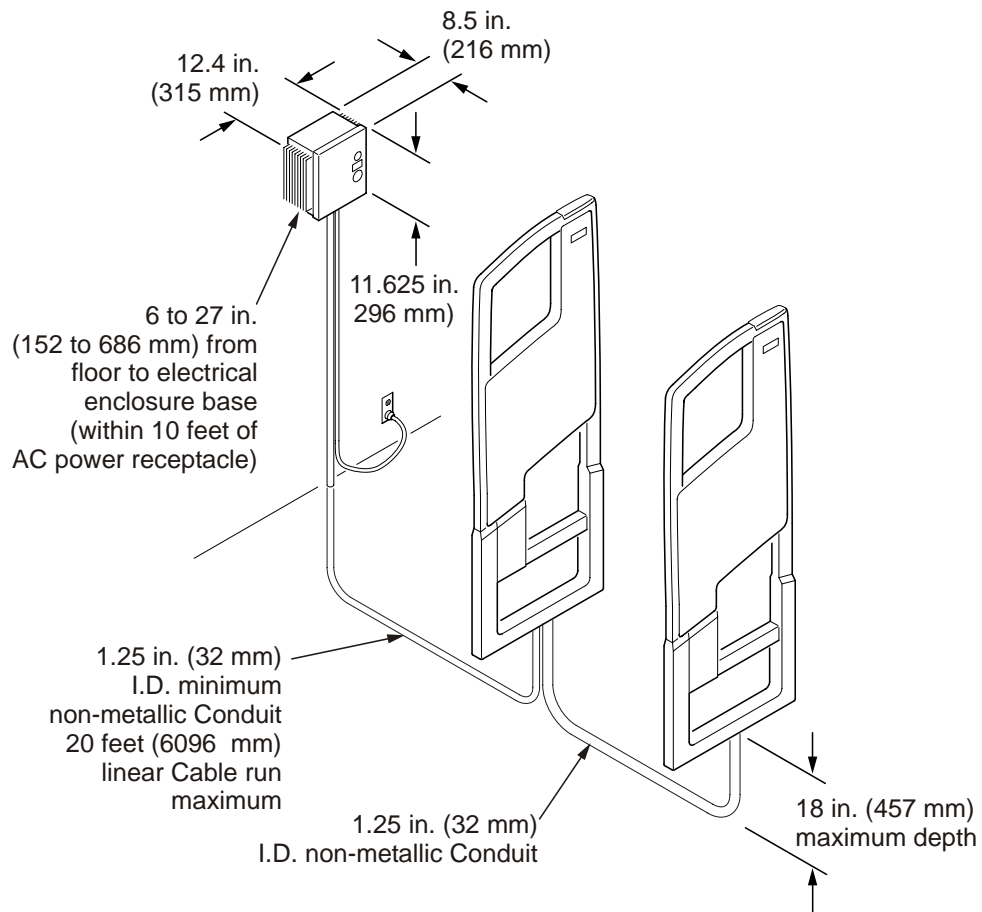
Installation Procedure

These instructions will be used by 3M installers and the site contractor to ensure proper installation of Model 3501 Detection System and buried cables.

- 1 At the request of the contractor, architect, or 3M, the 3M installer will visit the site to examine the site for an acceptable environment and to locate the system in an acceptable location.
 - The contractor and/or architect should be present.
- 2 Using the *Model 3501 Contractor Layout Plan*, the contractor will position and install the *Panel-to-Panel* conduit and the *Panel to Electronic Enclosure* conduit for each system.
 - See [Buried Wiring Conduit Layout – Model 3501](#) on page 2-12 for correct conduit size and location. If the conduit has an ID less than shown, there will be an additional charge at installation, and possibly the conduit will need replacement.
 - Metallic conduit can be substituted for non-metallic if required by code.
Important Note: If metal conduit is used, make sure that it only extends a maximum of ¼ in. above the floor surface and that it does not touch **any** metal (including other metal conduit).
- 3 Bend radius in conduits must be typical to the electrical industry.
 - Water type 90's are not acceptable - as cable connectors may not pass through them.
- 4 The contractor must avoid placing conduit or reinforcing rods in the anchor area under the mounting foot. Concrete in the area under the system must be of high quality and a minimum of 3.5 in, thick for anchoring.
- 5 The contractor will complete the sub floor and the finished floor in the installation area, and will provide an AC receptacle for power within 10 ft. of the Electrical Enclosure location.

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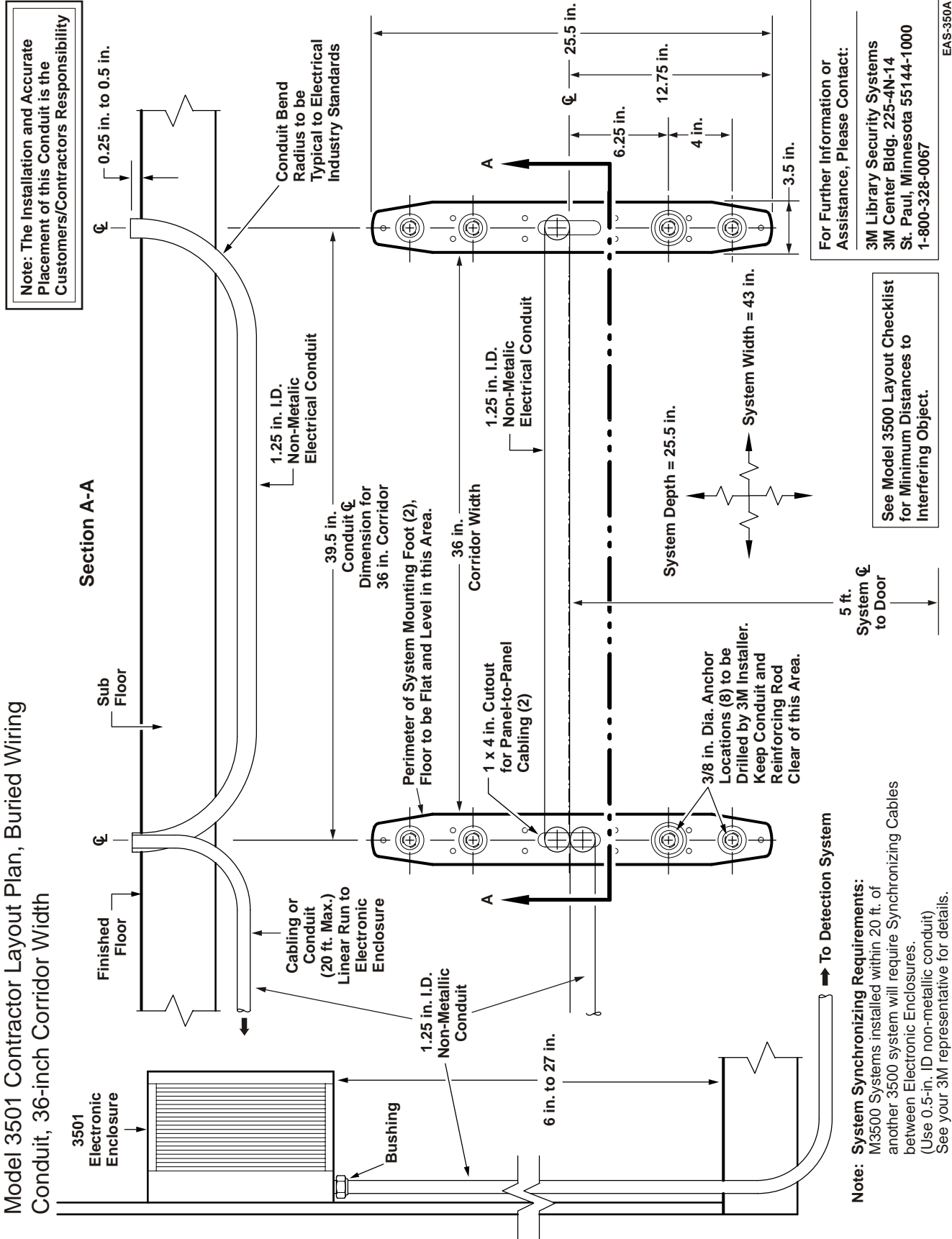
- 6 The 3M installer will install the panel cables, electronic enclosure cables, mounting system, and the detection panels.
- 7 The 3M installer will energize the system and complete operational checks and adjustments.



For conduit spacing, conduit type and system location specifications see the Contractor Layout Plan and System Layout Check List.

EAS-359C

Buried Wiring Conduit Layout - Model 3501 System



Note: The Installation and Accurate Placement of this Conduit is the Customers/Contractors Responsibility

See Model 3500 Layout Checklist for Minimum Distances to Interfering Object.

For Further Information or Assistance, Please Contact:
 3M Library Security Systems
 3M Center Bldg. 225-4N-14
 St. Paul, Minnesota 55144-1000
 1-800-328-0067

Note: System Synchronizing Requirements:
 M3500 Systems installed within 20 ft. of another 3500 system will require Synchronizing Cables between Electronic Enclosures.
 (Use 0.5-in. ID non-metallic conduit)
 See your 3M representative for details.

Contractor Instructions for Buried Cable Installations

3M™ Detection System Model 3502

Important: Read all installation instructions before starting procedures. If there are any questions, call 3M Technical Service at 1-800-328-0067 option #1.

Materials Required

<u>Item</u>	<u>Supplier</u>
1 Model 3502 and mounting hardware.	3M
2 Rigid non-metallic conduit (Panel to Panel Cables) 1.25 in. (32 mm) ID (see Buried Wiring Conduit Layout – Model 3502 System on page 15.)	Contractor
3 Rigid non-metallic conduit (Panel to Electronic Enclosure) 1.25 in. (32 mm) ID	Contractor
4 Conduit (if required for synchronizing multiple systems) from Electronic Enclosure to Electronic Enclosure by the best route. Conduit size of 1/2 in. is adequate. Required only with multiple systems within 20 ft.	Contractor
5 Concrete to pour floor.	Contractor
6 Device to cut trench in floor (for existing floors).	Contractor
7 Materials to hold the conduit in position while pouring floor.	Contractor
8 Finished floor. Install before Detection System.	Contractor

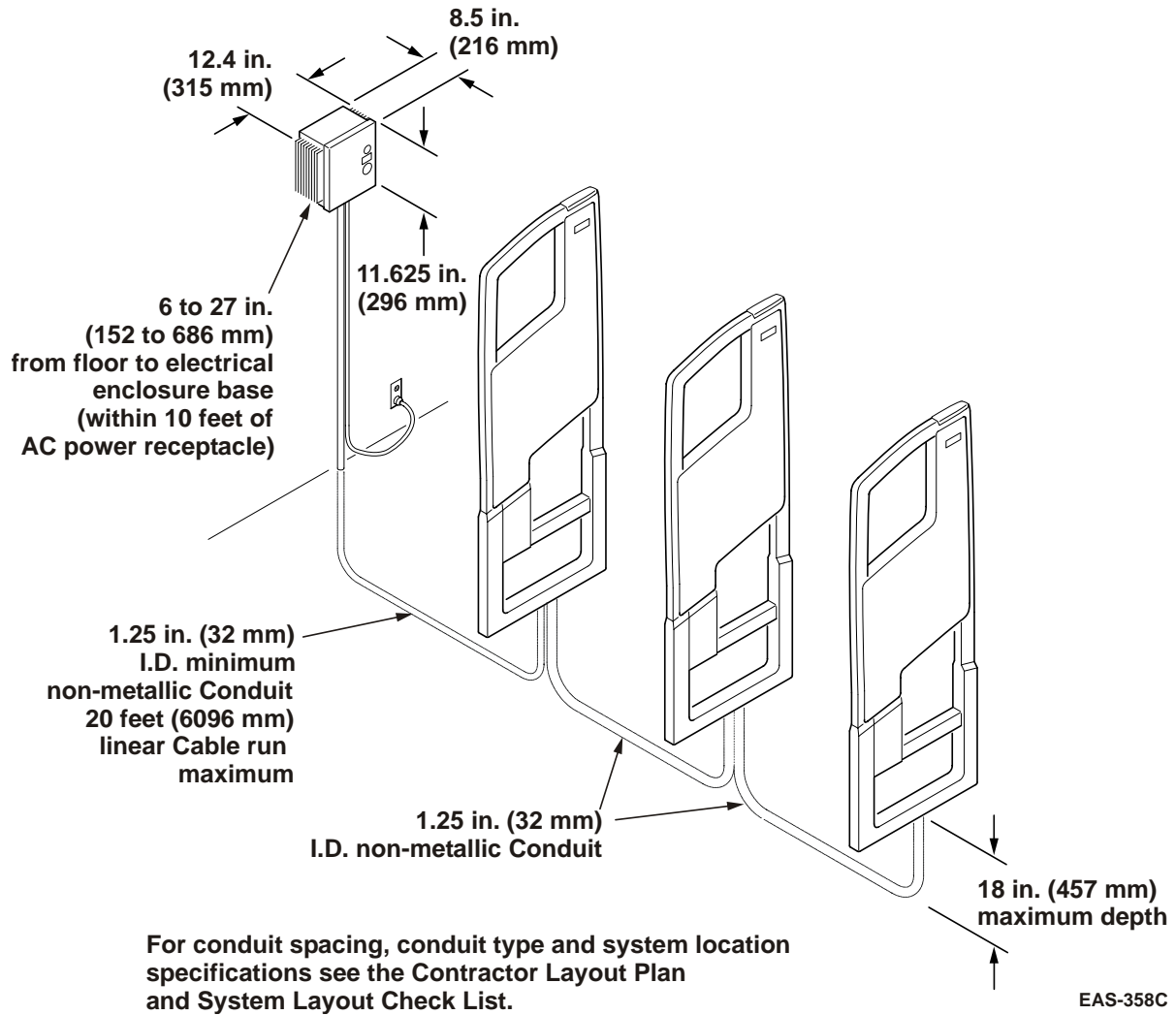
Installation Procedure

These instructions will be used by 3M installers and the site contractor to ensure proper installation of Model 3502 Detection System and buried cables.

- 1 At the request of the contractor, architect, or 3M, the 3M installer will visit the site to examine the site for an acceptable environment and to locate the system in an acceptable location.
 - The contractor and/or architect should be present.
- 2 Using the *Model 3502 Contractor Layout Plan*, the contractor will position and install the *Panel-to-Panel* conduit and the *Panel to Electronic Enclosure* conduit for each system.
 - See [Buried Wiring Conduit Layout – Model 3502 System](#) on page 15 for correct conduit size and location. If the conduit has an ID less than shown, there will be an additional charge at installation, and possibly the conduit will need replacement.
 - Metallic conduit can be substituted for non-metallic if required by code.
Important Note: If metal conduit is used, make sure that it only extends a maximum of ¼ in. above the floor surface and that it does not touch **any** metal (including other metal conduit).
- 3 Bend radius in conduits must be typical to the electrical industry.
 - Water type 90's are not acceptable - as cable connectors may not pass through them.
- 4 The contractor must avoid placing conduit or reinforcing rods in the anchor area under the mounting foot.
 - Concrete in the area under the system must be of high quality and a minimum of 3.5 in. thick for anchoring.

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- 5 The contractor will complete the sub floor and the finished floor in the installation area, and will provide an AC receptacle for power within 10 ft. of the Electrical Enclosure location.
- 6 The 3M installer will install the panel cables, electronic enclosure cables, mounting system, and the detection panels.
- 7 The 3M installer will energize the system and complete operational checks and adjustments.

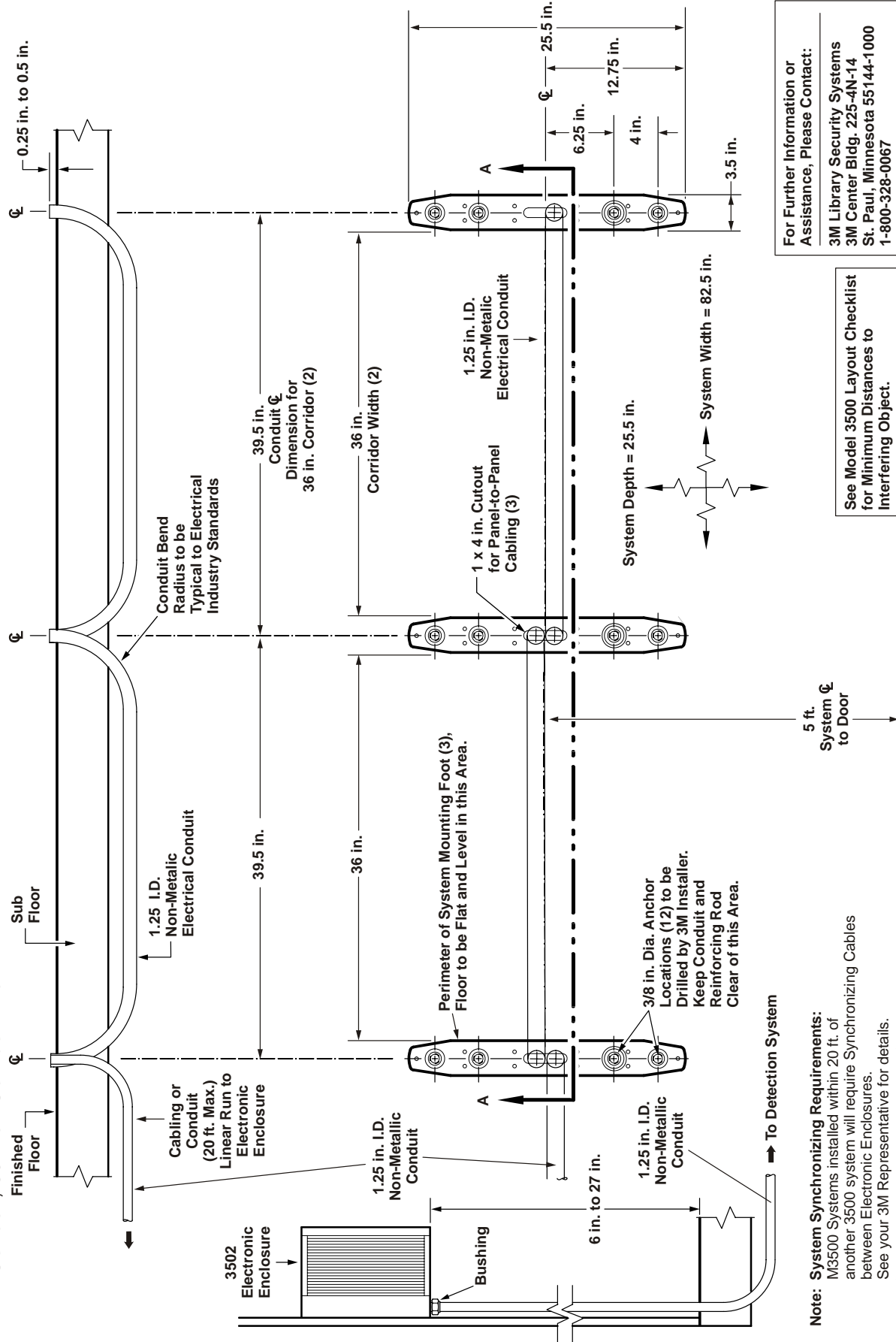


Buried Wiring Conduit Layout - Model 3502 System

Note: The Installation and Accurate Placement of this Conduit is the Customers/Contractors Responsibility

Model 3502 Contractor Layout Plan, Buried Wiring Conduit, 36-inch Corridor Width

Section A-A



For Further Information or Assistance, Please Contact:
 3M Library Security Systems
 3M Center Bldg, 225-4N-14
 St. Paul, Minnesota 55144-1000
 1-800-328-0067

See Model 3500 Layout Checklist for Minimum Distances to Interfering Object.

Note: System Synchronizing Requirements:
 M3500 Systems installed within 20 ft. of another 3500 system will require Synchronizing Cables between Electronic Enclosures. See your 3M Representative for details. (Use 0.5-in. ID non-metallic conduit)