ADDENDUM NO. 1 April 5, 2013
NEW DOVER HIGH SHOOL – BID PACKAGE H-1
Dover, Delaware 19904

NOTICE: Attach this addendum to the project manual for this project. It modifies and becomes a part of the contract documents. Work or materials not specifically mentioned herein are to be described in the main body of the specifications and as shown on the drawings. Bidders shall acknowledge receipt of this addendum on the space provided on the Bid Form. Failure to do so may subject the bidder to disqualification.

Whenever this Addendum modifies a portion of the Project Manual added information is shown as **Bold** and deleted information is shown as strikethrough.

The contract documents for the above referenced project, dated March 8, 2013 are amended as follows:

GENERAL CLARIFICATIONS

- **BID DUE DATE CHANGED TO THURSDAY, APRIL 11, 2013** and will be received at the Professional Development Administration Building located at 198 Commerce Way Dover, Delaware 19904-8210 until 3:00 pm.
- Attached find the Finishing Hardware Schedule and Catalog Cuts for each contractor's use.

MODIFICATIONS TO SPECIFICATIONS

A. Section 00 01 10 Table of Contents: DELETE this section in its entirety and INSERT new section attached.
B. Section 00 41 00 Bid Form and Attachments: DELETE this section in its entirety and INSERT new section attached.
C. Section 28 10 00 Intrusion and Access Control Systems: ADD the attached section.
   - Section includes S2 and Honeywell as acceptable Access Control substitutes.
D. Section 28 20 00 Video Surveillance System: ADD the attached section.
   - Section includes S2, Exacq and Honeywell as acceptable CCTV substitutes.

MODIFICATIONS TO DRAWINGS

A. T-000: Drawing sheet list includes sheets that have been revised.
B. T-001: Drawing includes site revisions and camera revisions.
C. TF-112: Drawings includes Baseball Building delete.
D. T-122: Drawing includes new CCTV camera.

E. T-132: Drawing includes new CCTV camera.
F. T-400: Drawing includes site cable plant revisions.
G. T-404: Drawing includes revisions to the intercom and clock systems.
H. T-406: Drawing includes CCTV system revisions.
I. T-407: Drawings includes CCTV system revisions.

End of Addendum No. 1

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Contract NDHS-41: Technology

BID FORM

For Bids Due: _____ To: Capital School District
945 Forest Street
Dover, Delaware 19904

Name of Bidder: _____

Bidder Address: _____

_____

Contact Name: _____ E-Mail Address: _____

Delaware Business License No.:_____ Taxpayer ID No.: _____

(Other License Nos.): _____

Phone No.: ( ) _____ - _____ Fax No.: ( ) _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

$_____ ($_____)

ALTERNATES

N/A

UNIT PRICES

N/A

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for one hundred twenty (120) days (Project Manager's Note: Verify and coordinate with Section 00 21 13 Instruction to Bidders.) from the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

_____
(State of Corporation)

Business Address:_____
_____
_____
_____

Witness: _____ By: _____
(Authorized Signature)

(SEAL) _____
(Title)

Date: _____

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor Category	Subcontractor	Address (City & State)
1. CCTV		
2. Access Controls		
3. **AV Systems**		
4.		
5.		

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date _____.

All the terms and conditions of Contract NDHS-41: Technology has been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE (TYPED): _____

AUTHORIZED REPRESENTATIVE (SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

_____

_____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

BID BOND

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____of _____in the County of _____ and State of _____ as Principal, and _____of _____in the County of _____ _____ and State of _____ as Surety, legally authorized to do business in the State of Delaware ('State"), are held and firmly unto the Capital School District in the sum of _____ Dollars (S_____), or percent not to exceed _____ Dollars (S_____) of amount of bid on Contract No. _____ to be paid to the Capital School District for the use and benefit of the Capital School District for which payment well and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators. and successors, jointly and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bounden Principal who has submitted to the Capital School District a certain proposal to enter into this contract for the furnishing of certain material and/or services within the State, shall be awarded this Contract, and if said Principal shall well and truly enter into and execute this Contract as may be required by the terms of this Contract and approved by the Capital School District this Contract to be entered into within twenty days after the date of official notice of the award thereof in accordance with the terms of said proposal, then this obligation shall be void or else to be and remain in full force and virtue.

Sealed with _____seal and dated this____day of _____in the year of our Lord two thousand and _____(20__).

SEALED, AND DELIVERED IN THE PRESENCE OF

_____
Name of Bidder (Organization)

Corporate Seal

By:_____
Authorized Signature

Attest _____

_____
Title

_____
Name of Surety

Witness_____

_____

_____
Title

CONSENT OF SURETY

DATE_____

To: Capital School District
945 Forest Street
Dover, Delaware 19904

Gentlemen:

We, the _____

_____
(Surety Company's Address)

_____

a Surety Company authorized to do business in the State of Delaware hereby agrees that if

_____
(Contractor)

_____
(Address)

_____

is awarded the Contract No. _____

We will write the required Performance and/or Labor and Material Bond required by Paragraph 8 of the Instructions to Bidders.

_____
(Surety Company)

By _____
(Attorney-in-Fact)

END OF SECTION

SECTION 28 10 00

INTRUSION AND ACCESS CONTROL SYSTEMS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Intrusion Detection cabling

B. Intrusion Detection sensors

C. Intrusion Detection end devices

D. Intrusion Detection headend equipment

E. Access Control Hardware

F. Card Readers

G. Associated Cabling

H. Access and Intrusion Servers and Software

I. Associated power supplies, terminations, equipment, labeling and associated cable performance testing.

1.02 DEFINITIONS

A. Intrusion Detection system refers to burglar alarm equipment including motion detectors, door contacts, control panels, communication panels, power supplies, expansion modules and associated wiring.

B. Access Control system refers to card readers, cabling, electronics, access cards and system database to allow or prevent access to the facility.

1.03 SYSTEM DESCRIPTION

A. Design Requirements

1. Provide labor, materials, equipment, services and operations required for a complete installation an Intrusion Detection System.

a. Base panel

b. Expansion modules

c. Keypads

d. Annunciators

e. Motion Detectors

f. Door Contacts

g. Communication Modules

h. Power Supplies

i. Controllers

j. Card Readers

k. Servers

l. Application Software

2. All wiring shall be wired according to manufactures specifications.

a. Refer to notes on each drawing to determine exact installation methods.

b. Strictly adhere to most current version of TIA/EIA Telecommunications cabling standards.

c. Permanently identify and label all cables and termination devices, at distribution rack and workstation in accordance with ANSI TIA/EIA-606 Standard or as agreed by Design consultant and Authority.

d. Remove and replace any cables failing to meet end-to-end testing requirements; do not abandon cable in place. All cable shall be terminated at both ends, unless noted in T-Drawings.

B. Performance Requirements

1. The system shall produce a signal if the system is breached by an unauthorized user.

2. Each sensor shall be individually alarmed.

3. The system shall be capable of a minimum of 8 partitions.

4. The system shall be capable of being scheduled.

5. The system shall be capable of being controlled from the main panel, keypad locations, central station and PC connected to the LAN.

6. The intrusion detection system will alert and record movement throughout the facility that is both authorized and unauthorized.

7. The systems will be capable of communicating onsite as well as to remote locations.

8. The systems shall be controllable in case of emergency situation.

9. All systems shall operate on dedicated circuits with associated cabling in EMT.

10. Comply with applicable requirements in Local, State and Federal Codes, TIA/EIA Standards, and BICSI methodology.

11. Specified cabling system derived from recommendations in approved telecommunications industry codes, standards and methods, including the following documents:

a. Articles 250, 725, 760, 770, 800,810 and 820 of the current National Electrical Code.

b. ANSI/TIA/EIA-568-B.1: Commercial Building Telecommunications Cabling Standard Part 1 – General Requirements

c. ANSI/TIA/EIA-568-B.2: Commercial Building Telecommunications Cabling Standard Part 2 – Balanced Twisted Pair Cabling Components and subsections.

d. ANSI/TIA/EIA-568-B.3: Commercial Building Telecommunications Cabling Standard Part 3 – Optical Fiber Cabling Components

e. ANSI/TIA/EIA-569-A: Commercial Building Standard for Telecommunications Pathways and Spaces

f. ANSI/TIA/EIA-606: Administration Standard for Telecommunications Infrastructure of Commercial Buildings

g. ANSI/TIA/EIA-607: Commercial Building Grounding and Bonding Requirements for Telecommunications

h. BICSI Telecommunications Distribution Methods Manual (TDMM), 12th Edition

i. National Fire Protection Agency (NFPA-70): National Electrical Code (NEC)

1.04 SUBMITTALS

A. Comply with requirements of Division 0 and Division 1 - Submittals and as modified below.

B. Product Data: Submit manufacturer's product literature, technical specifications and similar information for the following items demonstrating compliance with the specified requirements.

1. Motion Detectors, Door Contacts, Keypads

2. Headend Control Panels and Communications Modules

3. Power supplies

4. Copper cable and termination devices.

5. Inner duct and accessories.

6. Wiring diagrams.

7. Card Readers

8. Controllers

9. Servers

C. Samples: Provide samples of assemblies and connections as described below, prior to installation, for approval by designer.

1. Intrusion Detection cables and connections – Submit samples of cables and terminations to be provided including following components and characteristics:

a. Provide all components in colors selected by Design consultant.

D. Quality Control Submittal

1. Test Reports: Submit complete sample test data and reports with exact labels used on cables termination fields.

2. Certificates

a. Manufacturer Certification: Submit certification from manufacturer of products to be installed under this contract certifying that Installer is authorized by manufacturer to install specified products.

b. Installer Experience Listing: Submit list of at least 5 completed projects as specified below in "Quality Assurance – Qualifications – Installer."

E. Contract Closeout Submittal: Comply with requirements of Division 0, including submission of operating and maintenance instructions as item in "Operation and Maintenance Data" manual described in that Section.

1.05 QUALITY ASSURANCE

A. All Work shall be installed in a first class, neat and workmanlike manner by skilled Technicians. The quality of the workmanship shall be subject to inspection and approval by authorized school district personnel. Any work found to be of inferior quality and/or workmanship shall be replaced and/or reworked until the approval of school district personnel is obtained.

B. Qualifications

1. Installer

a. Qualified to cable, terminate, program and test Intrusion Detection systems, and associated power wiring specified in this Section and other Division 27/28 series specifications, certified by manufacturer of products to be installed, and completed at least 5 installations of similar size, nature and complexity as specified for this project.

b. Contractor must maintain a local presence in the State of Delaware. Submit office locations for review.

c. Contractor must provide proof that service and warranty work can be initiated with a 24 hour time period from a service call.

C. Conditions for Consideration of "Or Equal" Products: Where products are specified by name and accompanied by the term "or equal", the proposed "or equal" product will be considered when the following conditions are satisfied. If all the following conditions are not satisfied, Design Consultant will return requests without action, except to record noncompliance with these requirements:

1. Proposed product does not require extensive revisions to the Contract Documents.

2. With the exception of the product name or number and manufacturer's name, proposed product conforms with requirements indicated on the Drawings and in the Specifications in every respect and will produce indicated results.

3. Proposed product is fully documented and properly submitted.

4. Proposed product has received necessary approvals of authorities having jurisdiction.

5. Proposed product is compatible with AND has been coordinated with other portions of the Work.

6. Proposed product provides specified warranty.

7. If proposed product involves more than one contractor, proposed product has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

8. Submission is accompanied with detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.

9. Submission is accompanied with a list of similar installations for completed projects with project names and addresses and names and addresses of design consultants and authorities, if requested.

10. Submission is accompanied with proposed product's Manufacturer signed written statement on Manufacturer's letterhead, certifying that manufacturer complies with requirements in the Contract Documents.

1.06 WARRANTY

A. Installer’s Warranty: Provide manufacturer’s system warranty against electrical or mechanical defects for 1 year from date of final acceptance.

1. The contractor shall revisit the system programming/zoning with the owner at the end of the 1 year warranty period and provide any programming/adjustments necessary required from the owner.

B. Manufacturer warranty coverage for cable systems associated with the Intrusion Detection System and associated Access Control System.

1.07 TRAINING

A. Installing contractor shall provide a minimum of 8 hours of training on system operation and managements as part of their scope of work.

1. Additional hours shall be provided on a time and materials basis at the request of the owner.

B. Installing contractor shall provide a video recording on a standard format DVD to the owner which includes training sessions.

1.08 OPERATION AND MAINTENANCE MANUALS

A. Installing contractor shall provide a minimum of two hardcopy and one electronic copy of all operation and maintenance manuals to the owner at project completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Intrusion Detection

1. Basis of Design – DMP

a. Acceptable Manufacturers

i. Bosch

ii. GE

iii. DSC

iv. Or approved equal

B. Access Control

1. Basis of Design –Red Cloud

a. Acceptable Manufacturers

i. Software House

ii. Amag

iii. GE

iv. S2

v. Honeywell

vi. Or Approved equal

C. Entry Door Video Intercom

1. Basis of Design – AIPHONE

a. Acceptable manufacturers

i. Viking

ii. Or Approved equal

2. Any system component not meeting the design and performance criteria will be rejected.

2.02 ACCESS CONTROL

A. Access Control Server

1. Red Cloud Enterprise Server

B. Access Control Panel

1. Red Cloud EP2500

C. Access Control Door Controller

1. Red Cloud MR51e

D. Access Control Card Reader

1. HID RP40 iClass Reader

E. Access Control Cabling

1. Cat 6 UTP

2. Cabling per manufacturer's specifications.

F. The system shall provide a method for users to remotely access the system and perform all of the functions possible on an operator terminal by LAN (IP). Provide Cat 6 cable and associated connections to school's data network. Install associated system software on all administrative and custodial office computers (pc's) for controlling and monitoring system. Turn over software disc to owner after installations.

G. System Requirements

1. Furnish and install all system equipment including, but not limited to, the following:

a. Access Power Controller, for interface with school's fire alarm panel.

b. Network Interface Module, for IP network link communications.

c. Card readers with LED, indoor/outdoor design.

d. Access Card, quantity of one-hundred (100).

e. Power supply. Quantity as required to support system.

f. Standby batteries. Quantity as required to support system for specified hours upon loss of power. It is the responsibility of contractor to coordinate with other trades to fulfill this requirement regardless if shown on contract drawings (electrical drawings).

2. Each door associated with card reader shall be equipped and wired to control panels with:

a. Request-to-exit Sensor if door hardware does not provide lock release.

b. Push-to-exit Pushbutton where required based on lock types.

3. Contractor shall be responsible for form, fit, function, and coordination of all part numbers listed above, and bring to owner's attention any changes or substitutions for approval.

H. Indoor/outdoor card readers shall be recessed. No exposed conduit shall be used.

I. All magnetic locks shall have built-in SPDT relay contact output that changes state when the lock is reporting secure.

J. All doors except for main entry shall be initially programmed in the lock mode. They are only to unlock when proximity card is used, or manually overridden, or request to exit activated, or fire alarm activates.

K. Wiring:

1. Provide Allied True Color products, or equal. All junction boxes are to be painted green to match conduit. All wiring shall be concealed. No surface metal raceway shall be used unless approved by owner, and if approved, shall be painted to match adjacent wall color.

2.03 INTRUSION DETECTION

A. DMP Intrusion Panel.

1. The communications format shall be a standard format to allow reporting of individual point numbers and text and other expanded diagnostic reports.

B. Remote Access

1. The system shall provide a method for users to remotely access the system and perform all of the functions possible on an operator terminal by LAN (IP). Provide network interface module and Cat 5e cable and associated connections to school's data network.

C. System Design and Operation

1. Primary Control Unit: Control unit shall consist of a power supply, signal processing circuitry, tamper circuits, alarm relay and driver circuits. Solid state, modular construction of the control unit must be incorporated for quick and easy servicing.

2. The system shall be installed so that 10 percent future area protection of each zone may be added without compromising system performance in any way and no additional control equipment is necessary.

3. Sensor zones shall be defined the same as school's fire alarm area zones.

4. The system shall be continuously supervised by a tamper circuit to prevent defeat by cutting, jumping or shorting to ground one or more transducer lines. When the system is in the armed mode of operation or in the stand-by mode of operation, attempts at tampering will activate a remote trouble unit.

5. All zone controls shall be tamperproof installations so that tampering with a zone control will activate the remote trouble module.

6. The system shall operate from 120 volts, 60 Hz power under normal conditions. In the event of a power interruption, the system will automatically operate off of a self-contained emergency D.C. power source located within the control cabinet. When normal A.C. power is restored, the system shall resume normal operation. Under no circumstance will interruption of A.C. power cause the system to generate false alarms or fail to operate.

7. Arming and disarming shall be controlled by keypads.

8. The system shall include the LCD readout style annunciator sensor zone and every hardwired door zone as indicated on the drawings.

9. A system operating keypad shall be a part of the annunciator. The keypad shall override the main arm/disarm clock.

10. System shall have ENTRY AND EXIT time of 60 seconds, and keypads shall sound audible tone during ENTRY AND EXIT.

D. Components

1. Control Panel: DMP XR500n with network interface module.

a. The control shall have a minimum of eight programmable areas (partitions) and eight on-board points of protection. Points can be assigned to any one of the eight areas. Points can be assigned in any order - numerical sequence is not important. Points can be reassigned to a different area without changing the point number.

b. Panel shall have 500-event memory.

c. Panel shall contain a minimum of 128 programmable relays for remote reporting functions.

d. Each device that goes into alarm shall report on an individual basis to the Maintenance Office's computer.

e. Panel shall monitor a minimum of 246 individually identifiable points and have 250 pass codes.

2. Provide panel with, but not limited to, the following accessories:

a. Keypads

i. DMP Aqualite Series keypads

ii. Locations indicated on drawings

b. battery charger module

c. Addressable expansion modules, qty as required

d. relay modules (Form C relays)

e. modules, qty as required

f. Standby batteries. Quantity as required to support system for specified hours upon loss of power. It is the responsibility of contractor to coordinate with other trades to fulfill this requirement regardless if shown on contract drawings (electrical drawings).

g. Telephone cords, qty as required

h. Telephone line switcher, qty as required

i. Transformer, qty as required

E. The control panel shall have provision to send a signal to the building's intercom system when armed. The control panel shall have provision to send a different signal to the intercom system when in alarm.

F. When the security alarm system is first armed, a voice warning shall announce, via interior public address speakers, that the alarm system has been armed and continually announce the time the occupants have to leave the building or disarm the system (a maximum of five [5] minutes). If alarm system is disarmed, voice warning shall shut down immediately.

G. All security alarm outputs shall generate a two-minute voice alarm, warning intruder(s) that the police have been notified, using interior public address speakers.

H. Passive Infrared Motion Detectors:

1. Units shall be DMP PIR detectors

2. Shall be wall mounted with Gimbal mounts with built-in interface. See drawings for locations.

a. Standard devices shall have a standard range of 50 feet x 50 feet.

b. Long Range devices shall have a range of 100 feet x 40 feet.

3. All devices shall be individually addressable.

4. Damage Stoppers (wire guards): Safety Technology International, STI series. Provide for all devices in gym, locker rooms, and other high abuse areas noted on drawings.

I. Magnetic Door Contacts:

1. Recessed – GE 1072

2. Surface Mount – GE 2505

3. Roll Up door – GE 2202

J. Alarm Reporting Device:

1. Interface security system to external digital communicator/dialer, refer to drawing(s) for additional requirements.

2. Panel shall be capable of arming and disarming by a maintained relay contact.

K. Cable/Wiring

1. Provide Allied True Color products, or equal. All junction boxes are to be painted white to match conduit. All wiring shall be concealed. No surface metal raceway shall be used unless approved by owner, and if approved, shall be painted to match adjacent wall color.

a. General: 18-AWG, 4-wire, unshielded, plenum rated. Provide two (2) cable loops for conection of all devices. Alternate connection of devices between cable loops such that every other device in series is connected to one cabel and the other cable is connected to every other device remaining. Cable shall be plenum rated West Penn Model 25244, or approved equal.

2. Surge Protection: Provide transient surge protection devices on the power feeds for all major components of equipment. This shall include equipment with electronic components such as the control panel. Surge protection devices shall be UL listed, equal to Transtector or Isobar. The devices shall have a 5 nanosecond or less response time for clipping excessive voltage. The surge protection devices shall consist of solid state circuitry, will automatically reset after an operation with no degradation in protective capability and have an indicated light to indicate when the unit is non-operational. Devices shall be direct plug-in type, plug strip type, or hard-wired connection type as applicable.

2.04 ENTRY DOOR VIDEO INTERCOM

A. AIPHONE Exterior Station

1. IS-DVF-HID-I

2. SBX-ISDVFP

B. AIPHONE Interior Station

1. IS-MV

C. AIPHONE Controller

1. IS-CCU

D. AIPHONE Power Supplies

1. IS-PU-UL

E. AIPHONE Wiring

1. CAT 6 Cables (See SECTION 27 10 00)

2. Two Conductor for Door Hardware

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine conditions under which Intrusion Detection cabling and equipment and related components are to be installed in coordination with Installer of materials and components specified in this Section and notify affected Prime Contractors and Design consultant in writing of any conditions detrimental to proper and timely installation. Do not proceed with installation until unsatisfactory conditions have been corrected to ensure a safe and timely installation.

1. When Installer confirms conditions as acceptable to ensure proper and timely installation and to ensure requirements for applicable warranty or guarantee can be satisfied, submit to Design consultant written confirmation from applicable Installer. Failure to submit written confirmation and subsequent installation will be assumed to indicate conditions are acceptable to Installer.

2. Visit Site to identify and become familiar with existing field conditions and specific requirements of each Site.

3. Verify all dimensions in field and confirm condition of existing hardware to be utilized.

4. Confirm space requirements and physical confines of all work areas to ensure that all materials can be installed in indicated spaces.

5. Confirm all outlet locations and cable pathways and advise Design consultant in writing of any discrepancies or issues in Design described in Contract Documents.

3.02 PREPARATION

A. Protection: Provide adequate protection of equipment and hardware before and after installation.

B. Existing Intrusion Detection Equipment: Ensure all systems remain operational throughout the project.

1. Identify any circuits and/or wiring at the site not shown on T-Drawings and interfering with installation of specified Equipment.

2. Remove all accessible portions of abandoned communications cabling per NEC 800.52. Tag all communications cabling not terminated at both ends but retained for future use.

3.03 INSTALLATION

A. Provide and install all components necessary to install a complete Intrusion Detection System, including (but is not limited to) connectors, sensors, panels, power supplies, terminators, etc…

1. Cable runs shall be per manufacturer's recommendations in all cases. Any deviation will result in system rejection.

2. Secure all horizontal cables within ceiling cavities to building structure.

3. Loosely bundle all cables and support from structure at unequal intervals from 5 to 6 feet with spring steel fasteners and cable clip rated for use with high performance cables where cable tray or other support structure has not been provided as indicated on Drawings. All mounting clips shall be seismic type as per BOCA.

4. Do not violate manufacturer's recommended loadings. Leave 30% capacity for future use of pathway.

5. Do not support cables from ceiling grid T-Bars, grid wire supports or bridle rings. Do not allow cables to touch ceiling grid.

6. Install cables in EMT conduit in all unfinished, exposed areas as shown in Design consultant and Architectural roof plans and/or T-Drawings, unless alternate pathways are noted.

7. Do not secure cables with permanent cable ties. Do not tighten cable bundles in such a way as to cause jacket deformation or damage.

8. Place cables in compliance with TIA/EIA-568.B standards and BICSI recommended methods.

9. Tight 90-degree bends are unacceptable, and use of plastic "cinch-type" tie-wraps are not permitted, in order to prevent damage to cable jacket and compromise the cable's electrical or optical characteristics.

10. Cable bundles shall be neatly routed with a service loop to provide 10 feet of slack at the cross-connect end and as noted in the T-drawings. Cable bundles shall be secured using only black Velcro cable wraps.

B. Install all exposed cabling in surface raceway by Wiremold, Hubbell or Panduit where in-wall conduit has not been provided. Follow all manufacturers' guidelines requirements regarding bending radius and slack. All bends, offsets and fittings shall be appropriately sized to provide 30% capacity after installation.

C. Install all cable in accordance with National, state and local codes and TIA/EIA Standards, and BICSI methods.

1. Follow manufacturer's guidelines and requirements for all cable termination.

2. Identification: Provide permanent identification labels for patch panels, access panels and entrance facilities.

3.04 TESTING

A. Intrusion Detection, Access Control and Entry Systems

1. Upon completion of work, all parts of the systems installation shall be tested by the installing Contractor and demonstrated free of any defects. Preliminary testing will be permitted but shall not be accepted in lieu of obtaining final test results. Final test results shall be accomplished by the use of proper test equipment for the system being tested.

2. Each device shall be demonstrated to individually alarm and pin point the exact triggered sensor. Any system failing this requirement will be wholly rejected at the contractor's expense.

3. All card reading equipment shall be demonstrated to function to manufacturer's specifications.

4. The video phone entry system shall be verified to be operation and perform to manufacturer's specifications.

5. Re-terminate and re-test any cables or pairs of cables failing end-to-end testing requirements. Replace any faulty cables/pairs or termination devices. Remove all defective cables completely from pathways.

3.05 AS-BUILTS

A. All devices shall be shown in their accurate location

B. All equipment and cables shall be properly identified and labeled.

C. Accurate as-built drawings shall be provided in electronic and hard copy format.

1. 3 copies of electronic (CAD) drawings shall be distributed on appropriate media: 1 to construction management, 1 to designers and 1 to school district personnel.

2. 3 hard copies of CAD drawings shall be plotted on full size sheets and test results of every installed cable have been given to the construction management for appropriate distribution.

3.06 DEMONSTRATION

A. Access, Intrusion and Video Entry Systems Demonstration

1. 16 Hours of demonstration and training on all aspects of the completely installed systems must be provided for the owner.

a. Training shall be video recorded for the owner and given to them after acceptance.

b. Training and system demonstration must include all aspects of the system and its operation.

c. Additional training, beyond the initial 16 hours, shall be provided for the owner at their request on an hourly rate basis.

3.07 ACCEPTANCE

A. Contractors work shall be considered complete after the following conditions have been met:

1. Cable and equipment installation is complete and all cables and equipment have been tested and documented to be installed according to specifications and drawings. Use form at the bottom of this specification for zone descriptions and delineation.

2. A school district Security and Technology representative has successfully tested the "LIVE" system.

3. All punch list items have been reconciled.

4. All disturbed ceiling panels, covers, etc. have been properly reinstalled.

5. All materials and trash have been removed from the site.

6. A 1-Year Installers warranty has been given to a school district Security and Technology representative.

7. Submit Manufacturers Extended Warranty Application.

Contact ID

ACCOUNT# Subscriber Name _____

CHOOSE ONE:

□ **ADDENDUM** TO A NEW SUBSCRIBER MONITORING AGREEMENT.
□ **CHANGE** TO DATA ON AN EXISTING SUBSCRIBER ACCOUNT.

NOTE: UNLESS OTHERWISE INDICATED, THE DEFAULT CALLBACK 0PTl0N FOR RESTORE IS **LOG ONLY**; **TROUBLE IS DEALER ONLY**.

FOR YOUR CONVENIENCE, PANEL PRINT OLITS ARE ACCEPTED. **HOWEVER**, PLEASE INDICATE CALLBACK OPTION. EXCLUSION OF THIS INFORMATION MAY DELAY THE PROCESSING OF A SUBSCRIBER MONITORING AGREEMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT YOUR SALES REPRESENTATIVE.

PANEL: □ADEMCO □NAPCO □FBI □APEX OTHER (SPECIFY)_____
PARTITIONED?: □ NO □ YES (DEFINE BELOW)

1	5
2	6
3	7
4	8

EVENT QUAL.	EVENT CODE	PARTITION	ZONE# USER#	ZONE DESCRIPTION / USER NAME	CALLBACK OPTION	Ax

END OF SECTION

SECTION 28 20 00

VIDEO SURVEILLANCE SYSTEM

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes

1. Video Surveillance Cabling (Plenum Rated)
2. Video Surveillance Hardware, Cameras and Components
3. Video Surveillance Servers
4. Video Surveillance Network Video Recorders
5. Video Surveillance Workstations
6. Video Surveillance Software
7. All materials, terminations, equipment, labeling and associated cable performance testing.

1.02 DEFINITIONS

A. Refer to Division 27 for applicable definitions and terms.

B. CCTV and video surveillance refer to the same system and are used interchangeably. Terms refer to cabling system included in this specification section.

1.03 SYSTEM DESCRIPTION

A. Design Requirements

1. Provide a complete IP based video surveillance system.
   a. System shall utilize IP cameras, CAT 6 UTP cabling connected to CAT 6 patch panels.
   b. Patch panel shall be connected to the LAN via POE switches and multimode backbone fiber.
      i. Each new switch shall have dedicated strands of backbone multimode fiber connected to the chassis switch at the school.
   c. Servers and workstations shall reside on the LAN and be accessible via the TCP/IP network locally and remotely.
   d. Headend equipment shall be located in the main telecom room.
   e. Antivirus software shall be loaded and active on the selected server equipment.
2. Provide labor, materials, equipment, services and operations required for complete installation of LAN compatible Category 6 copper horizontal (camera) wiring.
   a. All horizontal UTP wiring employs a star topology.
      i. Category 6 UTP wiring terminates in Category 6 RJ-45 male connector jack at cameras location and on Category 6 rack-mounted patch panel dedicated for security cameras in telecommunications room. Connections wired per TIA/EIA-568A.
   b. Network cables routed from distribution racks throughout building as shown on T-Drawings.

i. Note and record all cable lengths to the nearest foot.

ii. Replace any UTP cable exceeding 90 meters (295 feet) and route to reduce length to a minimum of 90 meters. Complete all cable rerouting for compliance at no additional cost to Authority.

iii. Replace any cable not meeting industry standards for Cat 6 cables.

iv. Identify to Design consultant prior to installation of any UTP cables that cannot be reduced to 90 meters or less in total length (rise and run).

v. Strictly adhere to most current version of TIA/EIA Telecommunications cabling standards.

c. Category 6 rated RJ-45 type connectors with all four copper pairs terminated and tested in accordance with EIA 568B wiring standard.

d. Permanently identify and label all cables and termination devices, at distribution rack and workstation in accordance with ANSI TIA/EIA-606 Standard or as agreed by Design consultant and Authority.

e. Remove and replace any cables failing to meet end-to-end testing requirements; do not abandon cable in place. All cable shall be terminated at both ends, unless noted in T-Drawings.

3. Fiber Optic Strands (Plenum Rated)

a. 50 Micron Multimode Fiber Optic Strands: Ultra rated to 10 Gbps, fiber optic cable with 50/125 µm core/cladding diameters, 900 mm buffer.

i. Standards

(a) Meeting NEC, Article 770 – Optical Fiber Cables and Raceways and passed UL 910 flame test.

(b) Tight-buffered fibers color-coded in accordance with TIA/EIA-598 “Color Coding of Fiber Optic Cables.”

(c) Differential Mode Delay per TIA-492.

ii. Fibers: Meet TIA/EIA 455-45A “Microscopic Method for Measuring Fiber Geometry of Optical Waveguides” for 50/125 fiber optic cables.

iii. Meet or exceed all Attenuation requirements for fiber optic cable in Addendum 1 of TIA/EIA-568-B.3 “Additional Transmission Performance Specifications for 50/125 µm Optical Fiber Cables.”

iv. Minimum LED Transceiver Bandwidth Requirements: 2000 MHz at 1 Km at 850 nm and 500 MHz at 1 Km at 1300 nm.

(a) IEEE 802.3z Performance: Supports VCSEL 10 Gigabit Ethernet (10GbE) operation in 1000BASE-SX operating window (850 nm) at 300 meters.

v. Shall not exceed 1800 feet in length.

vi. Cable Operating Temperature Range:

(a) Indoor Cables: -20 degrees Celsius to 70 degrees Celsius.

(b) Outdoor Cables: -40 degrees Celsius to 70 Degrees Celsius.

B. Performance Requirements

1. System shall provide multiple recording channel solutions (4, 16, 32, 64, etc., channels) for the quantity of cameras shown.

2. System shall be software based and utilize a server level operating system such as Microsoft Server 2003, Microsoft Server 2008, etc,

    a. The server operating system shall allow regular updates and security patches to be installed.

    b. The server shall have Hard Drive Fault Tolerance, Dual Power Supplies and OS Backup capabilities.

3. System shall allow enterprise level antivirus software to be loaded, configured and run per the manufacturer's specifications.

    a. Certain directories may be excluded from real time scanning.

4. The server and client stations shall be accessible remotely.

5. System shall provide MGEG-4, MJPEG, wavelet and H.264 video compression.

6. IP cameras shall have vari-focal lenses with auto iris and remote digital zoom.

    a. Camera lens shall be suited for the anticipated field of view.

7. IP cameras shall have a wide dynamic range and day night functionality.

8. System shall be capable of recording HD video and megapixel resolutions.

9. System shall provide variable frame rate recording up to 30 FPS (Basis shall be 10 fps).

10. System shall provide edge based motion sensing and recording features. (Basis is 75% motion for a 24 hour period.)

11. System shall allow simultaneous recording and playback of video.

12. System shall provide application and web-based camera viewing.

13. System shall provide multiple user access levels with associated permissions.

14. System shall be expandable.

15. System shall provide remote configuration and management.

16. System shall provide a minimum of 30 days of recorded video for each channel.

17. System shall support cameras from multiple vendors.

18. System shall comply with applicable requirements in Local, State and Federal Codes, TIA/EIA Standards, and BICSI methodology.

19. Specified cabling system derived from recommendations in approved telecommunications industry codes, standards and methods, including the following documents:

    a. Articles 250, 725, 760, 770, 800,810 and 820 of the current National Electrical Code.

    b. ANSI/TIA/EIA-568-B.1: Commercial Building Telecommunications Cabling Standard Part 1 – General Requirements

c. ANSI/TIA/EIA-568-B.2: Commercial Building Telecommunications Cabling Standard Part 2 – Balanced Twisted Pair Cabling Components and subsections.

d. ANSI/TIA/EIA-568-B.3: Commercial Building Telecommunications Cabling Standard Part 3 – Optical Fiber Cabling Components

e. ANSI/TIA/EIA-569-A: Commercial Building Standard for Telecommunications Pathways and Spaces

f. ANSI/TIA/EIA-606: Administration Standard for Telecommunications Infrastructure of Commercial Buildings

g. ANSI/TIA/EIA-607: Commercial Building Grounding and Bonding Requirements for Telecommunications

h. ANSI/TIA/EIA-758: Customer-Owned Outside Plant Telecommunications Cabling Standard

i. BICSI Telecommunications Distribution Methods Manual (TDMM), 12th Edition

j. National Fire Protection Agency (NFPA-70): National Electrical Code (NEC)

1.04 SUBMITTALS

A. Comply with requirements of Division 0 and Division 1 - Submittals and as modified below.

B. All submittals must conform to the state of Delaware K-12 wiring standards, please refer to this link for additional details:

1. http://dti.delaware.gov/pdfs/pp/CablingAndWiringStandard-K12.pdf

C. Product Data: Submit manufacturer's product literature, technical specifications, wiring diagrams, calculations and similar information for the following items demonstrating compliance with the specified requirements. Product submittals must clearly highlight the equipment being proposed. Failure to clearly indicate the selected items shall be rejected at the contractor's expense.

1. Copper cable, patch cables and termination devices.

2. Inner duct and accessories.

3. Wiring diagrams.

4. Sample of each cable test report.

5. Cameras with anticipated lens type and size.

6. POE Switches

7. NVRs

8. Power Supplies

9. Software Applications

10. Workstations

11. Servers

12. UPS Equipment

D. Samples: Provide samples of equipment as described below, prior to installation, for approval by designer.

1. CCTV cables and connections

2. CCTV Cameras

3. CCTV Housings and Mounts

E. Quality Control Submittal

1. Test Reports: Submit complete sample test data and reports with exact labels used on cables and patch panels

2. Certificates

a. Manufacturer Certification: Submit certification from manufacturer of products to be installed under this contract certifying that Installer is authorized by manufacturer to install specified products.

b. Installer Experience Listing: Submit list of at least 5 completed projects as specified below in “Quality Assurance – Qualifications – Installer.”

F. Contract Closeout Submittal: Comply with requirements of Division 0, including submission of operating and maintenance instructions as item in “Operation and Maintenance Data” manual described in that Section.

1.05 QUALITY ASSURANCE

A. All Work shall be installed in a first class, neat and workmanlike manner by skilled Technicians. The quality of the workmanship shall be subject to inspection and approval by authorized EBPS personnel. Any work found to be of inferior quality and/or workmanship shall be replaced and/or reworked until the approval of EBPS is obtained.

B. Qualifications

1. Installer

a. Qualified to cable, terminate and test data network cabling system, coaxial cable system and associated power wiring specified in this Section and Sections 27/28, certified by manufacturer of products to be installed, and completed at least 5 installations of similar size, nature and complexity as specified for this project.

b. Contractor must maintain a local presence in the State of Delaware. Submit office locations for review.

c. Contractor must provide proof that service and warranty work can be initiated with a 24 hour time period from a service call.

2.

C. Conditions for Consideration of "Or Equal" Products: Where products are specified by name and accompanied by the term "or equal”, the proposed "or equal" product will be considered when the following conditions are satisfied. If all the following conditions are not satisfied, Design Consultant will return requests without action, except to record noncompliance with these requirements:

1. Proposed product does not require extensive revisions to the Contract Documents.

2. With the exception of the product name or number and manufacturer's name, proposed product conforms with requirements indicated on the Drawings and in the Specifications in every respect and will produce indicated results.

3. Proposed product is fully documented and properly submitted.

4. Proposed product has received necessary approvals of authorities having jurisdiction.

5. Proposed product is compatible with AND has been coordinated with other portions of the Work.

6. Proposed product provides specified warranty.

7. If proposed product involves more than one contractor, proposed product has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

8. Submission is accompanied with detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.

9. Submission is accompanied with a list of similar installations for completed projects with project names and addresses and names and addresses of design consultants and authorities, if requested.

10. Submission is accompanied with proposed product's Manufacturer signed written statement on Manufacturer's letterhead, certifying that manufacturer complies with requirements in the Contract Documents.

1.06 WARRANTY

A. Installer’s Warranty: Provide manufacturer’s system warranty against electrical or mechanical defects for 1 year from date of final acceptance.

B. A fifteen (15) year Extended Product Warranty and Systems Assurance Warranty for UTP camera wiring system shall be provided by the manufacturer as follows:

1. Extended Product Warranty: The Extended Product Warranty shall ensure against product and workmanship defects, that all approved cabling components exceed the specifications of TIA/EIA 568B and Addenda for fiber link/channels and copper components, for a fifteen (15) year period. The warranty shall apply to all passive components, including both cable and connecting hardware as a combined system. Any claims cover replacement costs on any defective product, both material and labor. Extended warranties beyond fifteen (15) years will be considered.

2. System Assurance: The System Assurance shall cover the failure of the wiring system to support the application which it was designed to support as well as additional application(s) introduced in the future by recognized standards or user forums that use the TIA/EIA 568B component and link/channel specifications for cabling, for a fifteen (15) year period.

3. System Certification: Upon successful completion of the installation and subsequent inspection, the Authority shall be provided with a numbered certificate, from the manufacturing company, registering the installation.

C. Manufacturer warranty coverage for fiber cable systems associated with the CCTV System.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Preferred Vendor – ONSSI Ocularis IS System

1. Acceptable Substitutes

a. Pelco

b. Panasonic

c. Verint

d. Bosch

e. Honeywell

f. Exacq

g. S2

h. Or approved equal

B. Copper Cabling Components for video surveillance systems

1. UTP Camera Cabling (Plenum Rated)

a. Camera cabling shall provide identical performance to Cat 6 UTP data and voice cabling included in Section 27 12 50 and meet all district performance criteria.

b. Requirements: Complete balanced, twisted-pair compliant with current Category 6 provisions under TIA/EIA 568B Telecommunications Cabling Standard, including but not limited to:

i. “Component compliant” components certified to meet all requirements of TIA/EIA-568-B.2 “Balanced Twisted Pair Cabling Components.”

ii. After assembly into completed cabling channel, all components meet performance requirements as specified in TIA/EIA-568-B.1 and B.2, meet cable manufacturer’s and outlet manufacturer’s performance requirements and are performance certified for Category 6 as a complete channel system.

iii. Shall meet specified physical and transmission characteristics requirements.

iv. Exceed minimum performance requirements of TIA/EIA-568-B by significant margin. Cabling solutions not demonstrating significant margin are not acceptable.

c. Physical Characteristics

i. 100 Ohm Category 6 Unshielded Twisted Pair Cable (UTP)

ii. Meeting requirements of ANSI/ICEA S-80-576. For cables not specified in “Approved Components” paragraph, all 4 pairs insulated with F.E.P. providing maximum 0.023-inch diameter of insulated conductor.

iii. Security data cable shall be green in color

iv. Acceptable Cable

(a) See section 27 12 50

(b) Or Approved Equivalent

v. Consists of four 22 - 26 AWG twisted pairs.

vi. Cable shall be plenum or non-plenum as required by code.

vii. Color coding of pairs:

(a) Pair 1……W-BL; BL

(b) Pair 2……..W-O; O

(c) Pair 3……..W-G; G

(d) Pair 4……..W-BR; BR

viii. Overall diameter not exceeding 0.250 inches for a single cable.

ix. Ultimate Breaking Strength (ASTM D 4565): 400 N minimum

x. Withstands 1-inch bend radius at –20 degrees Celsius without jacket or insulation cracking.

d. Third-party verified to meet TIA/EIA Category 6 requirements. All completed cabling channels fully backwards compatible with requirements of Category 5 and 5e cabling systems.

e. Transmission Characteristics

i. DC resistance of any conductor not exceeding 9.38 Ohms per 100m max. at 20 degrees Celsius measured in accordance with ASTM D4566.

ii. Mutual capacitance of any pair at 1 kHz for 100 m. of cable not exceeding 5.6nF.

iii. DC resistance unbalance between any two conductor of any pair not exceeding 5 percent when measured at or corrected to 20 degrees Celsius in accordance with ASTM D 4566.

iv. Capacitance unbalance to ground at 1 kHz of any pair not exceeding 330 pF per 100 m.

v. Delay skew not exceeding 25 ns at 100 MHz.

vi. Propagation delay of any pair at 10 MHz not exceeding 5.7 ns/m.

vii. Maximum Attenuation of any pair not exceeding values given in TIA/EIA-568-B.2-1.

viii. NEXT coupling loss, PSNEXT loss, ELFEXT loss, PS-ELFEXT loss and Return Loss meeting requirements of TIA/EIA-568-B.2-1.

f. See section 27 12 50 for cabling requirements.

2. Fiber Optic Strands (Plenum Rated)

a. 50 Micron Multimode Fiber Optic Strands: Ultra rated to 10 Gbps, fiber optic cable with 50/125 µm core/cladding diameters, 900 mm buffer.

i. Standards

(a) Meeting NEC, Article 770 – Optical Fiber Cables and Raceways and passed UL 910 flame test.

(b) Tight-buffered fibers color-coded in accordance with TIA/EIA-598 “Color Coding of Fiber Optic Cables.”

(c) Differential Mode Delay per TIA-492.

ii. Fibers: Meet TIA/EIA 455-45A “Microscopic Method for Measuring Fiber Geometry of Optical Waveguides” for 50/125 fiber optic cables.

iii. Meet or exceed all Attenuation requirements for fiber optic cable in Addendum 1 of TIA/EIA-568-B.3 “Additional Transmission Performance Specifications for 50/125 µm Optical Fiber Cables.”

iv. Minimum LED Transceiver Bandwidth Requirements: 2000 MHz at 1 Km at 850 nm and 500 MHz at 1 Km at 1300 nm.

(a) IEEE 802.3z Performance: Supports VCSEL 10 Gigabit Ethernet (10GbE) operation in 1000BASE-SX operating window (850 nm) at 300 meters.

v. Shall not exceed 1800 feet in length.

vi. Cable Operating Temperature Range:

(a) Indoor Cables: -20 degrees Celsius to 70 degrees Celsius.

3. Patch Panels for CCTV Cabling

a. All patch panels must provide identical performance to Cat 6 patch panels included in Section 27 12 50 and meet all district performance criteria

b. Shall meet requirements for category 6 (per state of Delaware Standards) performance requirements.

c. Panels shall contain the number of termination ports required to terminate all LAN and telephone jacks in service area, plus 20% spare capacity.

d. Acceptable units:

i. See section 27 10 00

ii. Or approved equivalent.

e. Panels shall contain the number of termination ports required to terminate all LAN and telephone jacks in service area, plus 20% spare capacity.

4. Patch Cables for CCTV Cabling

a. Factory terminated and tested UTP patch cables at workstation and equipment cross-connect meeting requirements of ANSI/TIA/EIA-568-B for patch cable testing.

i. Meet all requirements of ANSI/TIA/EIA-568-B.2 standard.

ii. Contact plating of minimum of 50 micro inches of gold in contact area over 50 micro inch of nickel, compliant with FCC part 68.5.

iii. Use 8-position connector, unkeyed.

iv. Modular connector maintaining paired construction of cable to facilitate minimum untwisting of wires.

v. Factory assembled and constructed to 100 ohm, 4-pair UTP per ANSI/TIA/EIA-568-B for minimum, Category 6 compliance.

vi. Performance marking indelibly labeled on jacket by manufacturer.

vii. Accepts color-coded labels to comply with TIA/EIA-606 labeling requirements at both ends.

viii. Manufactured by ISO 9001 Company.

5. Power Wiring (if required beyond POE switches)
    a. Wires shall be approved for use in plenum rated spaces.
    b. Power wiring shall be approved by the CCTV manufacturer for use with the CCTV system.
    c. 14/2 AWG copper cable.
6. Network Video Recorder/Server
    a. Basis of Design – Iomnis DE14TB480B62
        i. Minimum of 4servers with no more than 40 cameras per server.
        ii. Microsoft Server 2008 64 Bit
        iii. Antivirus Software capable
        iv. Quad core 3.4 GHz processors
        v. 16 GB Ram
        vi. Memory- 8GB DDR3 1333MHz
        vii. Operating Systems
            (a) Microsoft® Windows® Small Business Server 2008
            (b) Microsoft® Windows® Essential Business Server 2008
            (c) Microsoft Windows® Server 2008 SP2, x86/x64 (x64 includes Hyper-VTM)
            (d) Microsoft Windows® Server 2008 R2, x64 (includes Hyper-VTM v2)2
        viii. Storage
            (a) Minimum One SATA 7200 RPM 6 GB/s 250 GB operating system drive
            (b) Minimum Three SATA 7200 RPM 6 GB/s 250 GB Live Drive
        ix. Network Interface Cards - Two dual port embedded Broadcom NetXtreme II 5709c Gigabit Ethernet NIC with failover and load balancing.
        x. Optional 1GBe and 10GBe add-in NICs
        xi. Peripheral bay - DVD + RW
        xii. Drive Controllers
        xiii. RAID Controllers - PERC H700 (6Gb/s) with 512MB battery-backed cache
        xiv. Power Supplies - Two hot plug high efficient 502w PSU (Energy Smart)
        xv. Uninterruptible Power supplies
        xvi. Availability - Hot-plug hard drives, hot-plug redundant power, redundant cooling, ECC memory, Single Device Data Correction (SDDC), supports memory demand, patrol scrubbing and high availability failover cluster
        xvii. Graphics - Integrated Matrox G200, 8 MB shared video memory

xviii. Management - iDRAC6 Enterprise

xix. Drive Controller Card Required

xx. Dedicated Server is required

7. Base Server

a. CPU: Intel Xeon (Quad Core or better recommended)

b. RAM: 4 GB

c. Hard Drive: 500 GB or more for large systems utilizing extensive Video DB Bookmarking

d. Operating System: Microsoft® Windows® Server2008 (64-bit) or Windows 7.

e. 1 GB Network Card

8. Admin Client

a. Quad Core Intel i5

b. RAM: Minimum 4 GB

c. Windows 7 Professional or Ultimate (32 or 64-bit)

d. Graphics Adapter: Adapter: PCI-Express, 1 GB RAM

e. RAM, Direct 3D supported

9. Software Platform

a. Basis of Design – ONSSI Ocularis IS

i. 4, 16, 32 and 64 Channel availability

ii. Open Architecture

iii. HD compatibility

iv. MGEG-4, MJPEG, wavelet and H.264 Decoding

v. Megapixel resolution recording

vi. Variable frame rates up to 30 FPS

10. Network IP Cameras

a. Indoor Day/Night Dome Basis of Design

i. Axis 9-3346V HD MP IP Dome

ii. Or approved equal with all mounts and accessories

b. Outdoor Day/Night Dome Basis of Design

i. Sony SNCDH260 with UNIMDB3 Gooseneck.

ii. Or approved equal with all mounts and accessories

c. Interior PTZ Camera Basis of Design

i. Axis Q6035 HD MP IP dome with Gooseneck and mount.

ii. Or approved equal with all mounts and accessories

d. Exterior PTZ Camera Basis of Design

i. Axis Q6035-E HD MP IP Dome with Gooseneck and Mount.

ii. Or approved equal with all mounts and accessories

e. 180° Panamorph Camera

i. Aerocont AV8185DN with Dome, Gooseneck and Pole Mount.

ii. Or approved equals with all mounts and accessories

11. PTZ Controller

a. Axis T8310

12. Media Converters

a. Berk-Tek One Reach System

i. With Copper/Fiber Cable for signal and PoE+ power delivery.

13. Workstations

a. Basis of Design – Dell Precision T7500

14. Monitors

a. Basis of Design – Samsung BX2450

15. Rack Monitor

a. 19” SMK-920

16. UPS

a. Basis of Design – APC 3000 VAC UPS with 48V Battery Pack

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine conditions under which CCTV cabling and equipment and related components are to be installed in coordination with Installer of materials and components specified in this Section and notify affected Prime Contractors and Design consultant in writing of any conditions detrimental to proper and timely installation. Do not proceed with installation until unsatisfactory conditions have been corrected to ensure a safe and timely installation.

1. When Installer confirms conditions as acceptable to ensure proper and timely installation and to ensure requirements for applicable warranty or guarantee can be satisfied, submit to Design consultant written confirmation from applicable Installer. Failure to submit written confirmation and subsequent installation will be assumed to indicate conditions are acceptable to Installer.

2. Visit Site to identify and become familiar with existing field conditions and specific requirements of each Site.

3. Verify all dimensions in field and confirm condition of existing hardware to be utilized.

4. Confirm space requirements and physical confines of all work areas to ensure that all materials can be installed in indicated spaces.

5. Confirm all outlet locations and cable pathways and advise Design consultant in writing of any discrepancies or issues in Design described in Contract Documents.

3.02 PREPARATION

A. Protection: Provide adequate protection of equipment and hardware before and after installation.

B. Existing Communications Services: Ensure all telecommunications systems (voice, video and data) remain operational throughout the project.

1. Identify any circuits and/or wiring at the site not shown on T-Drawings and interfering with installation of specified Equipment.

2. Remove all accessible portions of abandoned communications cabling per NEC 800.52. Tag all communications cabling not terminated at both ends but retained for future use.

3.03 INSTALLATION

A. Provide and install all components necessary to install complete telecommunications cabling and equipment systems, including (but is not limited to) connectors, patch cables, terminators, etc…

1. Cable runs shall be continuous and unbroken from end to end. Splicing of any LAN or coaxial video distribution cable is prohibited.

2. Secure all horizontal cables within ceiling cavities to building structure.

3. Loosely bundle all cables and support from structure at unequal intervals from 5 to 6 feet with spring steel fasteners and cable clip rated for use with high performance cables where cable tray or other support structure has not been provided as indicated on Drawings. All mounting clips shall be seismic type as per BOCA.

4. Do not violate manufacturer’s recommended loadings. Leave 30% capacity for future use of pathway.

5. Verify all horizontal cable run lengths prior to installation. Re-distribute horizontal cabling to maintain distance requirements and maintain pathway route accessibility.

6. Do not support cables from ceiling grid T-Bars, grid wire supports or bridle rings. Do not allow cables to touch ceiling grid.

7. Install cables in EMT in all unfinished, exposed areas as shown in Design consultant and Architectural roof plans and/or T-Drawings, unless alternate pathways are noted.

8. Do not secure cables with permanent cable ties. Do not tighten cable bundles in such a way as to cause jacket deformation or damage.

9. Provide a minimum of 15’ of cable slack at camera location and 24 inches at patch panels, unless noted otherwise.

10. Place cables in compliance with TIA/EIA-568.B standards and BICSI recommended methods.

11. Tight 90-degree bends are unacceptable, and use of plastic “cinch-type” tie-wraps are not permitted, in order to prevent damage to cable jacket and compromise the cable’s electrical or optical characteristics.

12. Cable bundles shall be neatly routed with a service loop to provide 10 feet of slack at the cross-connect end and as noted in the T-drawings. Cable bundles shall be secured using only black Velcro cable wraps.

13. 10 feet of service loop shall be provided in the ceiling at each workstation. Contractor shall not secure service loop in coils, but route in such a manner as to minimize EMI.

B. Determine allowable cable proximity to other electrical power sources of 480 Volts or less using TIA/EIA-569A "Cabling Pathway Standard" for UTP cable separations from sources of EMI:

1. Minimum separation distance form Power Source at 480 V or less:

CONDITION	< 2kVA	2-5 Kva	> 5 kVA
a. Unshielded power lines or electrical equipment in proximity to open or non-metal pathways	6 in.	12 in.	24 in.
b. Unshielded power lines or electrical equipment in proximity to open or non-metal pathways	3 in.	6 in.	12 in.
c. Power lines enclosed in a grounded metal conduit (or equivalent shielding) in proximity to grounded metal conduit pathway	3 in.	6 in.	12 in.
d. Transformers & Elec. Motors	40 in.	40 in.	40 in.
e. Fluorescent Lighting	12 in.	12 in.	12 in.

C. Install all exposed cabling in surface raceway by Wiremold, Hubbell or Panduit where in-wall conduit has not been provided. Follow all manufacturers' guidelines requirements regarding bending radius and slack. All bends, offsets and fittings shall be appropriately sized to provide 30% capacity after installation.

D. Install all cable in accordance with National, state and local codes and TIA/EIA Standards, and BICSI methods.

1. Follow manufacturer's guidelines and requirements for all cable termination.

E. Properly terminate all cables at camera locations and distribution racks. Permanently identify all cables in pullboxes, transition points, and termination points by affixing pre-marked self-adhesive wraps similar to Brady "B-500+ Plastic Cloth Markers."

F. Permanently identify all system components following TIA/EIA-606A "Administration Standard for Commercial Telecommunications Infrastructure" with identification format:

1. Identification: Provide permanent identification labels for patch panels, access panels and entrance facilities.

3.04 TESTING

A. LAN and Video Cabling System

1. Upon completion of work, all parts of the telecommunications installation shall be tested by the Telecommunications Contractor and demonstrated free of any defects. Preliminary testing will be permitted but shall not be accepted in lieu of obtaining final test results. Final test results shall be accomplished by the use of proper test equipment for the system being tested.

2. Re-terminate and re-test any cables or pairs of cables failing end-to-end testing requirements. Replace any faulty cables/pairs or termination devices. Remove all defective cables completely from pathways.

3.05 AS-BUILTS

A. Accurate as-built drawings shall be provided in electronic and hard copy format.

a. All equipment shall be shown in its exact location

b. All cables shall be labeled appropriately.

c. All cameras shall be labeled and uniquely identified.

d. 3 copies of electronic (CAD) drawings shall be distributed on appropriate media: 1 to construction management, 1 to designers and 1 to the school district.

e. 3 hard copies of CAD drawings shall be plotted on full size sheets and test results of every installed cable and camera have been given to the construction management for appropriate distribution.

3.06 DEMONSTRATION

A. CCTV System Demonstration

1. 16 Hours of video surveillance demonstration and training on all aspects of the completely installed system must be provided for the owner.

a. Training shall be video recorded for the owner and given to them after acceptance.

b. Training and system demonstration must include all aspects of the system and it operation.

c. Additional training, beyond the initial 16 hours, shall be provided for the owner at their request on an hourly rate basis.

3.07 ACCEPTANCE

A. Contractors work shall be considered complete after the following conditions have been met:

1. Cable and electronics installation is complete and all cable runs have been tested and documented to be installed according to specifications and drawings.

2. A school district Technology representative has successfully tested the “LIVE” system.

3. All punch list items have been reconciled.

4. All disturbed ceiling panels, covers, etc. have been properly reinstalled.

5. All materials and trash have been removed from the site.

6. A 1-Year Installers warranty has been given to a school district Security or Technology representative.

7. Submit Manufacturers Extended Warranty Application.

END OF SECTION

EDiS COMPANY | TEL. (800) 995-EDiS ▪ ediscompany.com

SUBMITTAL APPROVAL SHEET

SUBCONTRACTOR: Union Wholesale

NAME OF PROJECT: DOVER HIGH SCHOOL

Submittal / Drawing No: 080671-01 **Page(s)** 188

DESCRIPTION OF SUBMITTAL ITEM: FINISHING HARDWARE SHEDULE AND CATALOG CUTS

ARCHITECT STAMP

SHOP DRAWING NO. 080671-01 DATE: 09/05/2012

SUBMISSION NO. 1 2 3 BY: BTW

☐ FURNISH AS SUBMITTED

☒ FURNISH AS CORRECTED

If checked above fabrication MAY be undertaken. Review does not authorize changes to Contract sum unless stated in separate letter or Change Order.

If checked below fabrication MAY NOT be undertaken. Resubmit corrected copies for final review. Correction shall be limited to items marked.

☐ REVISE AND RESUBMIT

☐ REJECTED

Review is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the site: for information that pertaines solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; and for coordination of the Work of all trades.

ABHA Architects, Inc.

COORDINATE WITH SUBMITTAL 081113-01 FOR OPENING SIZES, CONFIGURATIONS, TYPES, RATINGS, ETC.

ENGINEER STAMP

CONSTRUCTION MANAGER STAMP

EDiS

REVIEWED X

DATE RECEIVED 07/03/12

CONTRACT NO. Contract NDHS-16 Doors

SUBMITTAL NO. 080671-01

PROJECT NAME: Dover High School

FINISHING HARDWARE SCHEDULE

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Contractor
EDIS

Coordinator
DAVID G. POPLOS, A.H.C.

Submittal Date: **6/27/12**

General:

1. Delete all cylinder dogging on exit devices. Use standard hex key dogging.
2. Change all classroom security L9071 functions to L9050/9056 (as preferred by owner).
3. Verify all closer mounting. Specification intent is for no closers to be visible in corridors or public spaces. Ensure closers are mounted on the inside or least visible side of openings.
4. Verify all lock functions with the owner during the required keying meeting.
5. Specification intent was for all electronic components to be 'plug and play' for ease of installation and owner maintenance. The wiring cables have been included in this submittal, but no plan or diagrams have been provided to show how the hinges and locks/exit devices will be prepared to accomodate these cables to preclude the need for field connections using wire nuts. Forward this information for review.

Manufacturers & Finishes

Manufacturers

ACCURATE LOCK
Best Access Systems
Glynn-Johnson
HES Innovations
Ives
LCN
McKinney
Pemko
Rockwood Manufacturing
Schlage
Securitron
Von Duprin

Finishes

626 - Satin chromium plated over nickel
652 - Satin chromium plated over nickel
US26D - Satin chromium plated over nickel
US28 - Satin aluminum, clear anodized
US3 - Bright brass, clear coated
US32D - Satin stainless steel
USP - Primed for painting

Openings Schedule

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
A101	CORRIDOR	From	ILC CLASSROOM A A101	97
A101.1	ILC CLASSROOM A	From	CLOSET	82
A102	CORRIDOR	From	KCCS-A CLASSROOM A102	6
A102.1	KCCS-A CLASSROOM	From	CLOSET	82
A103	CORRIDOR	From	ILC CLASSROOM B A103	97
A103.1	ILC CLASSROOM B	From	CLOSET	74
A104	CORRIDOR	From	KCCS-B CLASSROOM A104	100
A104.1	KCCS-B CLASSROOM	From	CLOSET	74
A107	CORRIDOR	From	ILC CLASSROOM C A107	97
A107.1	ILC CLASSROOM C	From	CLOSET	82
A108	CORRIDOR	From	KCCS-C CLASSROOM A108	100
A108.1	KCCS-C CLASSROOM	From	CLOSET	82
A109	CORRIDOR	From	DAP CLASSROOM A109	97
A109.1	DAP CLASSROOM	From	CLOSET	82
A110	CORRIDOR A152	To	LITERACY COACH A110	74

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
A111	CORRIDOR	From	COMMON LAB A111	97
A112	CORRIDOR A152	From	LIFE SKILLS A112	97
A113	CORRIDOR	To	TER A113	3
A116	SPECIAL NEEDS AREA	To	CASE MANAGER 2 A116	97
A117	CORRIDOR	To	DISCIPLINE RECEPTION A117	82
A118	SPECIAL NEEDS AREA	From	RECORDS A118	97
A120	SPECIAL NEEDS AREA	To	CASE MANAGER 1 A120	97
A121	DISCIPLINE RECEPTION	From	SUPPLY ROOM A121	82
A122	SPECIAL NEEDS AREA	To	CONFERENCE A A122	74
A123	DISCIPLINE RECEPTION	To	SRS A123	74
A124	SPECIAL NEEDS AREA	To	CONFERENCE B A124	74
A125	DISCIPLINE RECEPTION	To	SMALL CONFERENCE ROOM A125	74
A126	CORRIDOR	From	SPECIAL NEEDS RECEPTION A126	74
A127	DISCIPLINE RECEPTION	To	VOLUNTEER A127	74
A128	SPECIAL NEEDS AREA	From	TRANS. COORDINATOR A128	74
A130	SPECIAL NEEDS AREA	To	WORKROOM A130	74
A131	DISCIPLINE RECEPTION	To	BREAKROOM A131	116
A132	SPECIAL NEEDS AREA	To	PSYCH A132	74
A133	DISCIPLINE RECEPTION	From	TOILET A133	113
A134	CORRIDOR	From	READ 180 CR A134	74

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
A135	DISCIPLINE RECEPTION	From	TOILET A135	113
A136	CORRIDOR	From	READ 180 CR A136	74
A137	DISCIPLINE RECEPTION	To	RECORDS A137	74
A138	CORRIDOR	To	PRE-VOCATION ROOM A138	97
A140	CORRIDOR	To	ADAPTIVE TOILET A140	113
A142	CORRIDOR	To	STAFF TOILET A142	41
A143	CORRIDOR	To	PULL-OUT ROOM A143	97
A144	CORRIDOR	From	ELECTRIC ROOM A144	56
A145	CORRIDOR	From	STORAGE A145	50
A146	CORRIDOR	To	ADAPTIVE TOILET A146	113
A147	CORRIDOR	From	CUSTODIAN CLOSET A147	48
A148	CORRIDOR	To	CHANGING ROOM A148	60
A149	CORRIDOR	To	TREAT SENSORY A149	74
A150	CORRIDOR	To	KCCS OFFICE A150	74
A151A	CORRIDOR	From	CORRIDOR	25
A151B	CORRIDOR	From	CORRIDOR	25
A153A	CORRIDOR	To	SRO A153	97
A153B	DISCIPLINE RECEPTION	To	SRO A153	74
A201	CORRIDOR	From	ENGLISH CLASSROOM A201	97
A201.1	ENGLISH CLASSROOM A201	From	CLOSET	82
A202	CORRIDOR	From	ENGLISH CLASSROOM A202	97

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
A202.1	ENGLISH CLASSROOM A202	From	CLOSET	82
A203	CORRIDOR	From	ENGLISH CLASSROOM A203	97
A203.1	ENGLISH CLASSROOM A203	From	CLOSET	74
A204	CORRIDOR	From	ENGLISH CLASSROOM A204	97
A204.1	ENGLISH CLASSROOM A204	From	CLOSET	74
A207	CORRIDOR	From	ENGLISH CLASSROOM A207	97
A207.1	ENGLISH CLASSROOM A207	From	CLOSET	82
A208	CORRIDOR	From	ENGLISH CLASSROOM A208	97
A208.1	ENGLISH CLASSROOM A208	From	CLOSET	82
A209	CORRIDOR	From	ENGLISH CLASSROOM A209	97
A209.1	ENGLISH CLASSROOM A209	From	CLOSET	82
A210	CORRIDOR	From	ENGLISH CLASSROOM A210	97
A210.1	ENGLISH CLASSROOM A210	From	CLOSET	82
A211	CORRIDOR	To	CENTRAL TEXTBOOK STORAGE A211	43
A212	CORRIDOR	From	ENGLISH CLASSROOM A212	97

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
A212.1	ENGLISH CLASSROOM A212	From	CLOSET	82
A213A	CORRIDOR	From	COMPUTER RESOURCE A213	97
A213B	COMPUTER RESOURCE A213	From	COMPUTER RESOURCE A215	64
A214	CORRIDOR	From	ENGLISH CLASSROOM A214	97
A214.1	ENGLISH CLASSROOM A214	From	CLOSET	82
A215A	CORRIDOR	From	COMPUTER RESOURCE A215	97
A215B	COMPUTER RESOURCE A215	From	LIBRARY	65
A216	CORRIDOR	From	JDG CLASSROOM A216	97
A216.1	JDG CLASSROOM A216	From	CLOSET	82
A217	CORRIDOR	To	YEARBOOK A217	97
A218	CORRIDOR	To	JOURNALISM A218	97
A219	JOURNALISM A218	From	STORAGE A219	74
A220	CORRIDOR	To	DEPARTMENT OFFICE A220	86
A221	DEPARTMENT OFFICE A220	To	STORAGE A221	74
A222	DEPARTMENT OFFICE A220	To	TOILET A222	108
A223	CORRIDOR	From	TR A223	4
A224	CORRIDOR	From	ELECTRICAL A224	56
A225	CORRIDOR	From	CUSTODIAN A225	48
A226	CORRIDOR	From	STORAGE A226	50

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
A227	A.P. ASSISTANT A227	From	A.P. OFFICE A228	74
A228	CORRIDOR	To	A.P. ASSISTANT A227	86
A229A	CORRIDOR	From	CORRIDOR	26
A229B	CORRIDOR	From	CORRIDOR	26
A301	CORRIDOR	From	MATH CLASSROOM A301	97
A301.1	MATH CLASSROOM A301	From	CLOSET	82
A302	CORRIDOR	From	MATH CLASSROOM 302	97
A302.1	MATH CLASSROOM 302	From	CLOSET	82
A303	CORRIDOR	From	MATH CLASSROOM A303	97
A303.1	MATH CLASSROOM A303	From	CLOSET	74
A304	CORRIDOR	From	MATH CLASSROOM A304	97
A304.1	MATH CLASSROOM A304	From	CLOSET	74
A307	CORRIDOR	From	MATH CLASSROOM A307	97
A307.1	MATH CLASSROOM A307	From	CLOSET	82
A308	CORRIDOR	From	MATH CLASSROOM A308	97
A308.1	MATH CLASSROOM A308	From	CLOSET	82
A309	CORRIDOR	From	MATH CLASSROOM A309	97

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
A309.1	MATH CLASSROOM A309	From	CLOSET	82
A310	CORRIDOR	From	MATH CLASSROOM A310	97
A310.1	MATH CLASSROOM A310	From	CLOSET	82
A311	CORRIDOR	From	MATH CLASSROOM A311	97
A311.1	MATH CLASSROOM A311	From	CLOSET	82
A312	CORRIDOR	From	MATH CLASSROOM A312	97
A312.1	MATH CLASSROOM A312	From	CLOSET	82
A313	CORRIDOR	From	MATH CLASSROOM A313	97
A313.1	MATH CLASSROOM A313	From	CLOSET	82
A314	CORRIDOR	From	MATH CLASSROOM A314	97
A314.1	MATH CLASSROOM A314	From	CLOSET	82
A315	CORRIDOR	From	BFM LAB 1 A315	97
A315.1	BFM LAB 1 A315	From	CLOSET	82
A316	CORRIDOR	From	BFM LAB 2 A316	97
A316.1	BFM LAB 2 A316	From	CLOSET	82
A317	CORRIDOR	To	MATH DEPARTMENT OFFICE	86
A319	MATH DEPARTMENT OFFICE	To	STAFF TOILET A319	108

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
A320	CORRIDOR	To	SEMINAR ROOM A320	97
A321	MATH DEPARTMENT OFFICE	From	STORAGE A321	74
A322	CORRIDOR	From	TR A322	4
A323	CORRIDOR	From	ELECTRIC ROOM A323	56
A324	CORRIDOR	From	STORAGE ROOM A324	50
A325	CORRIDOR	From	CUSTODIAN A325	48
A326	CORRIDOR	From	EQUIPMENT PLAT. ACCESS A326	56
A327	CORRIDOR	To	A.P. ASSISTANT A327	86
A328	A.P. ASSISTANT A327	From	A.P. OFFICE A328	74
A329	CORRIDOR	To	SEMINAR ROOM A329	97
A330A	CORRIDOR	From	CORRIDOR	26
A330B	CORRIDOR	From	CORRIDOR	26
A401A	EQUIPMENT PLATFORM	To	ROOF	9
A401B	EQUIPMENT PLATFORM	To	ROOF	9
B104.1	PRINT SHOP B104	From	STORAGE	75
B104A	ELEVATOR LOBBY B164	To	PRINT SHOP B104	100
B104B	PRINT SHOP B104	From	SCHOOL STORE B108	63
B105	CORRIDOR	To	MAIN RECEPTION	86
B106	CORRIDOR	From	EQUIPMENT B106	59
B107	CORRIDOR	To	PRIVATE WAITING B107	74
B108	CORRIDOR	To	SCHOOL STORE	97
B108.1	SCHOOL STORE B108	To	STORAGE	74

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
B109	CORRIDOR	To	ASSISTANT PRINCIPAL B109	74
B110	PRINT SHOP	From	OFFICE B110	82
B111A	CORRIDOR	To	MAIL/WORKROOM B111	4
B111B	CORRIDOR	To	MAIL/WORKROOM B111	74
B112	CORRIDOR	To	WAITING B112	97
B115A	ADMINASTRATIVE ASSISTANT	To	PRINCIPAL B115	80
B115B	CONFERENCE ROOM B119	From	PRINCIPAL B115	74
B116	GUIDANCE RECEPTION	To	RECORDS B116	74
B117	PRINCIPAL B115	To	TOILET B117	108
B119	MAIN RECEPTION	To	CONFERENCE ROOM B119	74
B120	CORRIDOR	To	CONFERENCE ROOM B120	74
B121	CORRIDOR	From	FIRE CLOSET B121	57
B122	CORRIDOR	To	STORAGE B122	74
B124	CORRIDOR	To	GUIDANCE COUNSELOR B124	74
B125	CORRIDOR	To	NURSE	96
B125.1	NURSE AREA	From	EQUIPMENT B125.1	51
B126	CORRIDOR	To	GUIDANCE COUNSELOR B126	74
B127	KCCS NURSE	From	DISPLAY B127	103
B128	CORRIDOR	To	CAREER CENTER	74
B129	NURSE AREA	To	NURSES OFFICE B129	74
B130	CORRIDOR	To	BANK B130	86
B131	NURSE AREA	To	COTS B131	74
B132	CORRIDOR	To	CUSTODIAN B132	48

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
B134	CORRIDOR	To	STAFF TOILET B134	41
B135	NURSE AREA	From	TREATMENT B135	82
B136	CORRIDOR	To	STAFF TOILET B136	41
B137	CORRIDOR B145	From	MEDICINE CLOSET	52
B138	CORRIDOR B162	To	CONFERENCE ROOM B138	74
B139	CORRIDOR B145	From	TREATMENT B139	113
B140	CORRIDOR B163	To	SPEECH B140	74
B141	CORRIDOR B145	From	TOILET B141	113
B142	CORRIDOR B163	To	BEHAVIOR INTERVIEW B142	74
B143	CORRIDOR B145	From	TREATMENT B143	74
B143.1	TREATMENT B143	From	SUPPLY CLOSET B143.1	74
B144	CORRIDOR B163	To	GUIDANCE COUNSELOR B144	74
B146	CORRIDOR B163	To	GUIDANCE COUNSELOR B146	74
B147	NURSE AREA	From	KCCS NURSE B147	76
B148	CORRIDOR B162	To	TESTING / WORKROOM B148	74
B149	KCCS NURSE	From	TOILET B149	110
B151	CORRIDOR	To	WELLNESS RECEPTION / WAITING	97
B153A	CORRIDOR	To	OFFICE B153	86
B153B	WELLNESS RECEPTION / WAITING	To	OFFICE B153	74
B155	WELLNESS RECEPTION / WAITING	To	STORAGE B155	74

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
B157	WELLNESS RECEPTION / WAITING	To	GROUP MEETING B157	74
B159	WELLNESS RECEPTION / WAITING	To	OFFICE B159	74
B160	CORRIDOR B161	From	DISCIPLINE RECEPTION	98
B162A	CORRIDOR B162	From	CORRIDOR B163	115
B163	LOCKER COMMONS	From	CORRIDOR B163	97
B165A	CORRIDOR	To	SUPPLY / RECEIVING B165	86
B165B	CORRIDOR B161	To	SUPPLY / RECEIVING B165	74
B167	CORRIDOR	To	LEAD ADMINASTRATIVE ASSISTANT	74
B202	CORRIDOR B218	To	MENS ROOM B202	105
B203	CORRIDOR	From	MAIN STACKS B203	33
B204	CORRIDOR B218	To	WOMENS ROOM B204	105
B206A	ROTUNDA	From	LARGE GROUP INSTRUCTION B206	16
B206B	ROTUNDA	From	LARGE GROUP INSTRUCTION B206	16
B207	CIRCULATION B205	To	OFFICE B207	74
B209	CIRCULATION B205	To	WORKROOM B209	80
B209B	WORKROOM B209	To	EQUIPMENT STORAGE B211	82
B210	WORLD LANGUAGE DEPARTMENT OFFICE	From	STORAGE B210	74

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
B211	CIRCULATION	To	EQUIPMENT STORAGE B211	74
B212	CORRIDOR	From	WORLD LANGUAGE DEPARTMENT OFFICE	97
B212.1	WORLD LANGUAGE DEPARTMENT OFFICE	From	CLOSET	74
B214	CORRIDOR	To	WORLD LANGUAGE DEPARTMENT OFFICE	86
B215	WORLD LANGUAGE DEPARTMENT OFFICE	To	STAFF TOILET B215	108
B217	MAIN STACKS	From	DISPLAY B217	103
B301	CORRIDOR	From	BFM LAB 3	97
B301.1	BFM LAB 3	From	CLOSET B301.1	82
B301.2	BFM LAB 3	From	DISPLAY B301.2	103
B303A	ROTUNDA	From	LECTURE HALL B303	36
B303B	ROTUNDRA	From	LECTURE HALL B303	36
B304	CORRIDOR B302	To	MENS ROOM B304	105
B305	LECTURE HALL B303	From	DISPLAY B305	104
B306	CORRIDOR B302	To	WOMENS ROOM B306	105
B307	LECTURE HALL B303	From	DISPLAY B307	104
B308.1	PHYSICS CLASSROOM B308	From	CLOSET B308.1	82
B308A	ROTUNDRA	From	PHYSICS CLASSROOM B308	33
B308B	ROTUNDRA	From	PHYSICS CLASSROOM B308	33

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
B309	LECTURE HALL B303	From	AV STORAGE B309	74
B310.1	SENIOR SCIENCE CLASSROOM	From	CLOSET B310.1	82
B310A	CORRIDOR	From	SENIOR SCIENCE CLASSROOM	33
B310B	CORRIDOR	From	SENIOR SCIENCE CLASSROOM	33
B311	LECTURE HALL B303	From	AV STORAGE B311	74
B312.1	SCIENCE PREP A B312	To	CHEM STORAGE B312.1	52
B312A	CORRIDOR	From	SCIENCE PREP A B312	102
B312B	SCIENCE PREP A B312	From	CHEMISTRY CLASSROOM C302	94
B313	CORRIDOR	From	COMMON LAB B313	97
B313.1	COMMON LAB B313	From	CLOSET B313.1	82
B313.2	COMMON LAB B313	From	DISPLAY B313.2	103
C101A	LOCKER COMMONS C128	To	OFFICE C101	86
C101B	WELLNESS RECEPTION/WAITING	To	OFFICE C101	74
C102	CORRIDOR B163	From	TEST STORAGE	52
C103	WELLNESS RECEPTION/WAITING	To	EXAM ROOM C103	74
C104	CORRIDOR B163	To	GUIDANCE COUNSELOR C104	74
C105A	WELLNESS RECEPTION/WAITING	From	TOILET C105	113
C105B	EXAM ROOM C103	To	TOILET C105	111

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
C106A	LOCKER COMMONS C128	From	ELECTRICAL C106	14
C106B	CORRIDOR B163	From	ELECTRICAL C106	14
C107	LOCKER COMMONS C128	From	DEPARTMENT OFFICE C107	97
C108	CORRIDOR C120	From	9TH GRADE CLASSROOM C108	97
C108.1	9TH GRADE CLASSROOM C108	From	CLOSET C108.1	82
C109	DEPARTMENT OFFICE C107	From	TOILET C109	113
C110	CORRIDOR C120	From	9TH GRADE CLASSROOM C110	97
C110.1	9TH GRADE CLASSROOM C110	From	CLOSET C110.1	82
C111	DEPARTMENT OFFICE C107	To	STORAGE C111	74
C112	CORRIDOR C120	From	9TH GRADE CLASSROOM C112	97
C112.1	9TH GRADE CLASSROOM C112	From	CLOSET C112.1	82
C113	CORRIDOR	From	9TH GRADE CLASSROOM C113	97
C113.1	9TH GRADE CLASSROOM C113	From	CLOSET C113.1	82
C115	CORRIDOR	From	9TH GRADE CLASSROOM C115	97
C115.1	9TH GRADE CLASSROOM C115	From	CLOSET C115.1	82
C116	CORRIDOR	From	9TH GRADE CLASSROOM C116	97

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
C116.1	9TH GRADE CLASSROOM C116	From	CLOSET C116.1	74
C117	CORRIDOR	From	9TH GRADE CLASSROOM C117	97
C117.1	9TH GRADE CLASSROOM C117	From	CLOSET C117.1	82
C118	CORRIDOR	From	9TH GRADE CLASSROOM C118	97
C118.1	9TH GRADE CLASSROOM C118	From	CLOSET C118.1	82
C120A	CORRIDOR	From	CORRIDOR	25
C120B	CORRIDOR	From	CORRIDOR	25
C121	CORRIDOR	From	9TH GRADE CLASSROOM C121	97
C121.1	9TH GRADE CLASSROOM C121	From	CLOSET C121.1	74
C122	CORRIDOR	To	SEMINAR ROOM C122	97
C123	CORRIDOR	From	9TH GRADE CLASSROOM C123	97
C123.1	9TH GRADE CLASSROOM C123	From	CLOSET	82
C124	CORRIDOR	From	CUSTODIAN C124	48
C125	LOCKER COMMONS C129	From	ELECTRICAL C125	56
C126	LOCKER COMMONS C129	From	TR C126	4
C127	CORRIDOR	To	SEMINAR ROOM C127	97
C201	CORRIDOR	From	WORLD LANGUAGE CLASSROOM C201	97

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
C201.1	WORLD LANGUAGE CLASSROOM C201	From	CLOSET C201.1	82
C202	CORRIDOR	From	WORLD LANGUAGE CLASSROOM C202	97
C202.1	WORLD LANGUAGE CLASSROOM C202	From	CLOSET C202.1	74
C203	CORRIDOR	From	WORLD LANGUAGE CLASSROOM C203	97
C203.1	WORLD LANGUAGE CLASSROOM C203	From	CLOSET C203.1	82
C204	CORRIDOR	From	WORLD LANGUAGE CLASSROOM C204	97
C204.1	WORLD LANGUAGE CLASSROOM C204	From	CLOSET C204.1	82
C205	CORRIDOR	From	WORLD LANGUAGE CLASSROOM C205	97
C205.1	WORLD LANGUAGE CLASSROOM C205	From	CLOSET C205.1	82
C206	CORRIDOR	From	WORLD LANGUAGE CLASSROOM C206	97
C206.1	WORLD LANGUAGE CLASSROOM C206	From	CLOSET C206.1	82
C207	CORRIDOR	From	HISTORY/SOCIAL STUDIES CLASSROOM C207	97

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
C207.1	HISTORY/SOCIAL STUDIES CLASSROOM C207	From	CLOSET C207.1	82
C208	CORRIDOR	From	HISTORY/SOCIAL STUDIES CLASSROOM C208	97
C208.1	HISTORY/SOCIAL STUDIES CLASSROOM C208	From	CLOSET C208.1	82
C209	CORRIDOR	From	HISTORY/SOCIAL STUDIES CLASSROOM C209	97
C209.1	HISTORY/SOCIAL STUDIES CLASSROOM C209	From	CLOSET C209.1	82
C210	CORRIDOR	From	HISTORY/SOCIAL STUDIES CLASSROOM C210	97
C210.1	HISTORY/SOCIAL STUDIES CLASSROOM C210	From	CLOSET C210.1	82
C213	CORRIDOR	From	HISTORY/SOCIAL STUDIES CLASSROOM C213	97
C213.1	HISTORY/SOCIAL STUDIES CLASSROOM C213	From	CLOSET C213.1	74
C214	CORRIDOR	From	HISTORY/SOCIAL STUDIES CLASSROOM C214	97
C214.1	HISTORY/SOCIAL STUDIES CLASSROOM C214	From	CLOSET C214.1	74
C215	CORRIDOR	From	HISTORY/SOCIAL STUDIES CLASSROOM C215	97

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
C215.1	HISTORY/SOCIAL STUDIES CLASSROOM C215	From	CLOSET C215.1	82
C216	CORRIDOR	From	HISTORY/SOCIAL STUDIES CLASSROOM C216	97
C216.1	HISTORY/SOCIAL STUDIES CLASSROOM C216	From	CLOSET C216.1	82
C217	CORRIDOR	To	SEMINAR ROOM C217	97
C218	CORRIDOR	From	ELECTRICAL ROOM C218	52
C219	CORRIDOR	From	CUSTODIAN C219	48
C220	CORRIDOR	From	TR C220	4
C222	HISTORY/SOCIAL STUDIES DEPARTMENT OFFICE	To	STORAGE C222	74
C223	HISTORY/SOCIAL STUDIES DEPARTMENT OFFICE	To	STAFF C223	108
C224	CORRIDOR	To	HISTORY/SOCIAL STUDIES DEPARTMENT OFFICE	86
C225	CORRIDOR	To	SEMINAR ROOM C225	97
C229C	CORRIDOR	From	CORRIDOR	27
C229D	CORRIDOR	From	CORRIDOR	27
C301.1	BIOLOGY CLASSROOM C301	From	CLOSET DC301.1	82
C301A	CORRIDOR	From	BIOLOGY CLASSROOM C301	33
C301B	CORRIDOR	From	BIOLOGY CLASSROOM C301	33
C302.1	CHEMISTRY CLASSROOM C302	From	CLOSET C302.1	82

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
C302A	CORRIDOR`	From	CHEMISTRY CLASSROOM C302	33
C302B	CORRIDOR	From	CHEMISTRY CLASSROOM C302	33
C302C	CHEMISTRY CLASSROOM C302	From	SCIENCE PREP A B312	95
C303.1	BIOLOGY CLASSROOM C303	From	CLOSET C303.1	82
C303A	CORRIDOR	From	BIOLOGY CLASSROOM C303	33
C303B	CORRIDOR	From	BIOLOGY CLASSROOM C303	33
C304.1	CHEMISTRY CLASSROOM C304	From	CLOSET	82
C304A	CORRIDOR	From	CHEMISTRY CLASSROOM C304	33
C304B	CORRIDOR	From	CHEMISTRY CLASSROOM C304	33
C305.1	BIOLOGY CLASSROOM C305	From	CLOSET C305.1	82
C305A	CORRIDOR	From	BIOLOGY CLASSROOM C303	33
C305B	CORRIDOR	From	BIOLOGY CLASSROOM C303	33
C306.1	CHEMISTRY CLASSROOM C306	From	CLOSET C306.1	82
C306A	CORRIDOR	From	CHEMISTRY CLASSROOM C306	33
C306B	CORRIDOR	From	CHEMISTRY CLASSROOM C306	33

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
C309A	CORRIDOR	From	9TH GRADE SCIENCE CLASSROOM C309	33
C309B	CORRIDOR	To/From	9TH GRADE SCIENCE CLASSROOM C309	33
C310A	CORRIDOR	From	SHARED SCIENCE CLASSROOM C310	33
C310B	CORRIDOR	From	SHARED SCIENCE CLASSROOM C310	33
C311	CORRIDOR	To	9TH GRADE SCIENCE CLASSROOM C311	97
C311.1	9TH GRADE SCIENCE CLASSROOM C311	From	CLOSET C311.1	82
C312	CORRIDOR	From	9TH GRADE SCIENCE CLASSROOM C312	97
C312.1	9TH GRADE SCIENCE CLASSROOM C312	From	CLOSET C312.1	82
C313	WOMEN C307	To	CUSTODIAN C313	48
C314	CORRIDOR	To	DEPARTMENT OFFICE C314	86
C315	DEPARTMENT OFFICE C314	From	TOILET C315	113
C316	DEPARTMENT OFFICE C314	From	STORAGE C316	82
C317	CORRIDOR	From	TR C317	4
C318	CORRIDOR	From	ELECTRICAL ROOM C318	52
C319	CORRIDOR	From	EQUIPMENT PLATFORM ACCESS C319	52
C320A	CORRIDOR	To	SCIENCE PREP B C320	97

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
C320B	CORRIDOR	To	SCIENCE PREP B C320	97
C321C	CORRIDOR	From	CORRIDOR	25
C321D	CORRIDOR	From	CORRIDOR	25
C322	MEN C308	To	STORAGE C322	52
C401A	EQUIPMENT PLATFORM C401	To	ROOF	9
C401B	EQUIPMENT PLATFORM C401	To	ROOF	9
D102	MECHANICAL ROOM D104	From	ELECTRICAL ROOM D102	12
D102A	MECHANICAL ROOM D104	From	ELECTRICAL ROOM D102	15
D103	MECHANICAL ROOM D104	From	FIRE PUMP ROOM D103	46
D104	CORRIDOR D1	From	MECHANICAL ROOM D104	46
D104A	CORRIDOR	To	CUSTODIAL OFFICE E104	77
D104B	CUSTODIAL SHOP	To	CUSTODIAL OFFICE E104	77
D105	CUSTODIAL SHOP	To	CUSTODIAL SHOP/RECEIVING	71
D105B	CORRIDOR	To	CUSTODIAL SHOP/RECEIVING	72
D105C	CORRIDOR D1	To	CUSTODIAL SHOP D105	72
D107	LOCKERS D108	To	TOILET D107	109
D108	CORRIDOR	To	LOCKERS D108	87
D109	CORRIDOR	To	BREAKROOM D109	117
D110	CORRIDOR	To	OFFICE D110	77
D111	CORRIDOR D1	To	WASHERS & DRYERS	66
D111A	WASHERS & DRYERS	From	CLEANING/CHEMICAL STORAGE D111A	77

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
D111B	STUDENT DINING D128	From	TELECOM ROOM D111B	5
D114	FOOD PREP AREA D115	To	STORAGE D114	72
D115	CORRIDOR E3	From	FOOD PREP AREA D115	92
D116A	CORRIDOR E3	From	FOOD SERVICE D116	17
D117B	FOOD SERVICE D116	To	WARE WASHING D117	76
D118A	MAIN STREET	To	FACULTY DINING D118	11
D118B	STUDENT DINING	To	FACULTY DINING D118	118
D119A	FOOD SERVICE D116	To	CONCESSIONS D119	76
D120	EXTERIOR	From	CORRIDOR D1	7
D128C	CORRIDOR D1	From	STUDENT DINING	29
D144	FOOD SERVICE	From	IDF D144	4
D145	STAIR D145	From	CORRIDOR	58
D200	ROOF	From	STAIR	9
E101A	BALCONY	From	RAMP	47
E101B	SOUTH AUDITORIUM VESTIBULE	From	AUDITORIUM	40
E101C	EAST AUDITORIUM VESTIBULE	From	AUDITORIUM	23
E101D	CORRIDOR	From	AUDITORIUM	23
E101E	NORTH AUDITORIUM VESTIBULE	From	AUDITORIUM	40
E101F	BALCONY	From	RAMP	47
E103A	RECEIVING E103	From	CORRIDOR E3	8
E105	CORRIDOR E1	To	LOCKERS E105	90
E106	LOCKERS E105	To	TOILET E106	108
E107	CORRIDOR E1	To	UNIFORM STORAGE E107	67

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
E108	CORRIDOR E1	To	ELECTRICAL E E108	52
E109	CORRIDOR E1	To	IDF E109	4
E110	MAKE-UP-DRESS ROOM E111	From	TOILET E110	113
E111	CORRIDOR E1	To	MAKE-UP-DRESSIN ROOM E111	89
E113	CORRIDOR E1	To	COSTUME PROP STORAGE	67
E114	STAGE	From	CHAIR/PIANO STORAGE	73
E115	CORRIDOR E1	To	MAKE-UP-DRESSIN ROOM E115	86
E116	MAKE-UP-DRESS ROOM E115	From	TOILET E116	113
E117	CORRIDOR E2	To	DANCE OFFICE	74
E120A	CORRIDOR E2	To	INSTRUMENT STORAGE E120	68
E120B	CORRIDOR E2	To	INSTRUMENT STORAGE E120	78
E121	CORRIDOR E2	To	DRUMLINE STORAGE E121	68
E122	CORRIDOR E2	To	MUSIC TECH LAB E122	93
E123	MENS ROOM E124	To	JANITORS CLOSET E123	49
E126	CORRIDOR E3	From	STORAGE E126	53
E126A	CORRIDOR E3	From	CUSTODIAL CLOSET E126A	57
E127	STAIR	From	CATWALK	54
E127A	NORTH STAGE VESTIBULE	From	STAGE	24
E127B	SOUTH STAGE VESTIBULE	From	STAGE	32

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
E128	EAST AUDITORIUM VESTIBULE	From	CATWALK ACCESS	52
E129	CORRIDOR E2	From	SMALL BAND ROOM/REHEARSAL ROOM	21
E129A	LARGE BAND ROOM	To	SMALL BAND ROOM/REHEARSAL ROOM	84
E130A	CORRIDOR E2	From	LARGE BAND ROOM	30
E130B	CORRIDOR E2	From	LARGE BAND ROOM	21
E131A	CORRIDOR E2	To	SHARED OFFICES E131	74
E131B	LARGE BAND ROOM E130	From	SHARED OFFICES E131	84
E132	LARGE BAND ROOM E130	From	INSTRUMENT PRACTICE ROOM E132	84
E133	LARGE BAND ROOM E130	From	INSTRUMENT PRACTICE ROOM E133	84
E134A	CORRIDOR E2	To	MUSIC DEPARTMENT OFFICE E134	86
E134B	CHORAL ROOM E137	From	MUSIC DEPARTMENT OFFICE E134	84
E135	CHORAL ROOM E137	From	CHORAL PRACTICE A E135	84
E136	CHORAL ROOM E137	From	CHORAL PRACTICE B E136	84
E137A	CORRIDOR E2	From	CHORAL ROOM E137	21
E137B	CORRIDOR E2	From	CHORAL ROOM E137	30
E138	SOUTH AUDITORIUM VESTIBULE	To	TICKET BOOTH E138	86
E139	MAIN STREET	From	CORRIDOR E2	22
E143	CORRIDOR E1	From	NORTH STAGE VESTIBULE	24

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
E145	CORRIDOR E1	From	SOUTH STAGE VESTIBULE	31
E146	MAIN STREET	From	NORTH AUDITORIUM VESTIBULE	24
E147	MAIN STREET	From	SOUTH AUDITORIUM VESTIBULE	24
E148	CORRIDOR E2	From	EAST AUDITORIUM VESTIBULE	24
E150A	CORRIDOR E2	From	REHEARSAL SPACE E150	21
E150B	EXTERIOR	From	REHEARSAL SPACE E150	35
E150C	REHEARSAL SPACE E150	From	CLOSET	56
E151	REHEARSAL SPACE E150	To	DRESSING ROOM E151	89
E152	CORRIDOR E2	From		85
E153	STRINGS ROOM E152	To	STORAGE E153	74
E154	STRINGS ROOM E152	To	OFFICE E154	74
E200B	BALCONY	From	LIGHT & SOUND ROOM	86
F100A	MAIN STREET	From	CORRIDOR F100	27
F100B	LOBBY H166	From	CORRIDOR F100	25
F101A	CORRIDOR F100	From	CULINARY ARTS LAB F101	34
F101B	CORRIDOR F100	From	CULINARY ARTS LAB F101	35
F105	PASSAGE F101.1	To	OFFICE F111	79
F107.1	CULINARY ARTS F107	From	CLOSET F107.1	77
F107A	CORRIDOR F100	From	CULINARY ARTS F107	99
F107B	PASSAGE F101.1	From	CULINARY ARTS F107	79

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
F109	PASSAGE F101.1	To	LAUNDRY F109	77
F111	PASSAGE F101.1	To	DRY STORAGE F105	77
F113	CORRIDOR F100	From	COMMUNICATION TECHNOLOGY F113	101
F113.1	COMMUNICATION TECHNOLOGY F113	To	TV F113.1	79
F115A	COMMUNICATIO TECHNOLOGY F113	From	MEDIA F115	77
F115B	2-D STUDIO F119	From	MEDIA F115	77
F117	CORRIDOR F100	To	DEPARTMENT OFFICE F117	87
F119	CORRIDOR F100	From	2-D STUDIO F119	101
F123	2-D STUDIO F119	To	2D STORAGE	77
F125	CORRIDOR F100	From	3-D STUDIO F125	101
F127	3-D STUDIO F125	To	3D STORAGE	79
F129	3D STORAGE	From	KILN F129	79
G102.1	FITNESS G102	From	STORAGE	77
G102A	CORRIDOR G117	From	FITNESS G102	18
G102B	CORRIDOR G117	From	FITNESS G102	34
G104A	CORRIDOR G117	From	WRESTLING/MOVEMENT G104	18
G104B	CORRIDOR G117	From	WRESTLING/MOVEMENT G104	34
G106	CORRIDOR G117	To	ATHLETIC STORAGE G106	70
G108	CORRIDOR G117	To	VESTIBULE G108	99
G110	VESTIBULE G108	To	SMALL TEAM LOCKER	117

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
G114A	CORRIDOR G117	To	LAUNDRY/UNIFORM STORAGE G114	92
G116	CORRIDOR G117	To	VESTIBULE G116	99
G117A	MAIN STREET	From	CORRIDOR G117	25
G117B	HALL H163	From	CORRIDOR G117	25
G118	VESTIBULE G116	To	LARGE TEAM LOCKER	117
G122	CORRIDOR G117	To	TEAM MEETING G122	101
G124	VESTIBULE H161	To	TRAINER G124	88
G124.1	TRAINER G124	From	STORAGE G124.1	77
G132A	VESTIBULE G132	From	GYNASIUM	39
G132B	VESTIBULE G132	From	GYNASIUM	39
G132C	VESTIBULE G132	From	GYNASIUM	39
G132D	MAIN STREET	From	VESTIBULE G132	19
G132E	MAIN STREET	From	VESTIBULE G132	19
G132F	MAIN STREET	From	VESTIBULE G132	19
G133A	VESTIBULE G133	From	GYNASIUM	39
G133B	VESTIBULE G133	From	GYNASIUM	39
G133C	VESTIBULE G133	From	GYNASIUM	39
G133D	MAIN STREET	From	VESTIBULE G133	19
G133E	MAIN STREET	From	VESTIBULE G133	19
G133F	MAIN STREET	From	VESTIBULE G133	19
G134.1	VESTIBULE G134	From	GYNASIUM	42
G134A	VESTIBULE G134	From	GYNASIUM	39

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
G134B	VESTIBULE G134	From	GYNASIUM	39
G134C	CORRIDOR H151	From	VESTIBULE G134	20
G134D	CORRIDOR H151	From	VESTIBULE G134	20
G135.1	VESTIBULE G135	To	STORAGE G135.1	42
G135A	VESTIBULE G135	From	GYMNASIUM	39
G135B	VESTIBULE G135	From	GYMNASIUM	39
G135C	CORRIDOR H164	From	VESTIBULE G135	20
G135D	CORRIDOR H164	From	VESTIBULE G135	20
H102	CORRIDOR H155	To	DRIVERS ED OFFICE H102	87
H103	LOBBY H166	To	STAFF WORKROOM	87
H104A	CORRIDOR H155	To	P.E. STORAGE	45
H105	P.E. STORAGE	From	TOILET H105	112
H106A	CORRIDOR H155	From	AUXILIARY GYM H106	18
H106B	CORRIDOR H155	From	AUXILIARY GYM H106	18
H106C	CORRIDOR H157	From	AUXILIARY GYM H106	18
H106D	CORRIDOR H157	From	AUXILIARY GYM H106	18
H106E	AUXILIARY GYM H106	From	LOCKER ROOM VESTIBULE	106
H106F	AUXILIARY GYM H106	From	VESTIBULE H132	106
H106G	AUXILIARY GYM H106	From	P.E. STORAGE	61
H107	LOBBY H166	To	ASSISTANT PRINCIPAL ASSISTANT H107	87
H108	CORRIDOR H155	To	T.R. H108	5

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
H109	ASSISTANT PRINCIPAL ASSISTANT H107	To	ASSISTANT PRINCIPAL OFFICE	77
~~H110~~ H142B	AUXILIARY GYM H106	From	ADAPTIVE P.E. STORAGE	62
H111	CORRIDOR H155	From	ELECTRIC ROOM H111	13
~~H112~~	~~AUXILIARY GYM H106~~	~~From~~	~~P.E. STORAGE H112~~	~~62~~
H113	CORRIDOR H155	From	CNA CLASSROOM H113	101
H113.1	CNA CLASSROOM H113	To	STORAGE H113.1	79
~~H114~~ H114A	CORRIDOR H137	From	COACH OFFICE H114	107
H115	CORRIDOR H155	From	CNA CLASSROOM H115	101
H116A	COACH OFFICE	To	COACH LOCKER	109
H116B	COACH LOCKER	To	SHOWER H116.1	109
H117.1	CNA LAB H117	From	TOILET H117.1	114
H117A	CNA CLASSROOM H113	From	CNA LAB H117	79
H117B	CNA CLASSROOM H115	From	CNA LAB H117	79
H118A	CORRIDOR H137	From	COACH OFFICE H118	107
H119.1	ECE CLASSROOM H119	From	CLOSET H119.1	83
H119.2	ECE CLASSROOM H119	To	TOILET H119.2	109
H119A	CORRIDOR H155	From	ECE CLASSROOM H119	99
H119B	EXTERIOR	From	ECE CLASSROOM H119	10
H110A	JROTC CLASS		CORR	

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
H120A	COACH OFFICE H118	To	COACH LOCKER H120	109
H120B	COACH LOCKER H120	To	SHOWER H120.1	109
H122.1	A.D. OFFICE	From	DISPLAY H122.1	69
H122A	CORRIDOR H137	From	A.D. OFFICE H122	107
H123.1	ECE CLASSROOM H123	From	CLOSET H123.1	77
H123.2	ECE CLASSROOM H123	To	TOILET H123.2	109
H123A	CORRIDOR H155	From	ECE CLASSROOM H123	99
H123B	EXTERIOR	From	ECE CLASSROOM H123	10
H124A	AUXILIARY GYM	From	P.E. OFFICE	107
H124B	P.E. LOCKER ROOM	To	P.E. OFFICE	83
H125A	ECE CLASSROOM H119	To	LAB H125	77
H125B	ECE CLASSROOM H123	To	LAB H125	77
H126	LOCKER ROOM VESTIBULE	From	P.E. LOCKER ROOM	117
H127A	ECE CLASSROOM H119	To	ECE OBSERVATION H127	77
H127B	ECE CLASSROOM H123	To	ECE OBSERVATION H127	77
H128A	LOCKER ROOM VESTIBULE	To	FACULTY/OFFICIALS H128	77
H128B	FACULTY/OFFICIAL H128	To	FACULTY/OFFICIAL RESTROOM	109
H130	VESTIBULE H144.1	To	P.E. LOCKER ROOM H130	117

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
H131A	CORRIDOR H137	From	CLASSROOM H131	99
H132	VESTIBULE H132	From	P.E. LOCKER ROOM H138	117
H133A	CORRIDOR H137	From	CLASSROOM H133	99
H134A	VESTIBULE H132	To	FACULTY/OFFICIALS H134	87
H134B	FACULTY/OFFICIAL H134	To	FACULTY/OFFICIAL RESTROOM	109
H135A	CORRIDOR H137	From	CLASSROOM H135	99
H136A	AUXILIARY GYM	From	P.E. OFFICE H136	107
H136B	P.E. LOCKER ROOM H138	To	P.E. OFFICE H136	83
H138	VESTIBULE H146.1	To	P.E. LOCKER ROOM H138	117
~~H140A~~ H112A	CORRIDOR H157	To	JROTC UNIFORM STORAGE	81
~~H140B~~ H112B	JROTC OFFICE H142	To	JROTC UNIFORM STORAGE	83
H141.1	HVAC CLASSROOM H141		CLOSET H141.1	77
H141A	CORRIDOR H157	From	HVAC CLASSROOM H141	34
H141B	CORRIDOR H157	From	HVAC CLASSROOM H141	34
H142	CORRIDOR H157	To	JROTC OFFICE	87
H143	CORRIDOR H157	From	CONSTRUCTION SCIENCES CLASSROOM	99
H143.1	CONSTRUCTION SCIENCES CLASSROOM	From	CLOSET H143.1	77
H144.1	CORRIDOR H165	To	VESTIBULE H144.1	99
H144A	CORRIDOR H165	To	WOMEN H144	106
H131B	JROTC CLASS		EXT.	

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
H144B	VESTIBULE H144.1	To	WOMEN H144	106
H144C	TEAM ROOM H130.1	To	WOMEN H144	106
H145	CORRIDOR H157	From	AGRISCIENCE CLASSROOM H145	99
H145.1	AGRISCIENCE CLASSROOM H145	From	CLOSET H145.1	83
H145.2	AGRISCIENCE CLASSROOM H145	To	ANIMAL LABH145.2	91
H146.1	CORRIDOR H165	To	VESTIBULE H146.1	99
H146A	CORRIDOR H165	To	MEN H146	106
H146B	VESTIBULE H146.1	To	MEN H146	106
H146C	TEAM ROOM H138.1	To	MEN H146	106
H147	CORRIDOR H157	From	JROTC CLASSROOM H147	99
H147.1	JROTC CLASSROOM H147	From	CLOSET H147.1	77
H149	CORRIDOR H165	To	CUSTODIAN H149	49
H151	CORRIDOR H165	From	TR H151	5
H153	CORRIDOR H165	To	TECH OFFICE H153	87
H155.1	EXTERIOR	From	VESTIBULE H155.1	1
H155A	LOBBY H166	From	CORRIDOR H155	28
H155B	VESTIBULE H155.1	From	CORRIDOR H155	38
H157.1	EXTERIOR	From	VESTIBULE H157.1	1
H157A	CORRIDOR	From	CORRIDOR H157	28
H157B	VESTIBULE H157.1	From	CORRIDOR H157	38

Opening Number(s)	Location 1	To/ From	Location 2	Heading Num.
H201	ROOF	From	EQUIPMENT PLATFORM	9
H203	EQUIPMENT PLATFORM	From	EQUIPMENT ROOM	44
J110	MAIN STREET	From	STORAGE	47
K100	EXTERIOR	From	SERVICE YARD	10
ST101A	STAIR #1	From	CORRIDOR A151	2
ST102A	STAIR #2	From	ROTUNDRA CORRIDOR	37
ST103A	STAIR #3	From	ROTUNDRA CORRIDOR	37
ST104A	STAIR #4	From	COMMON LOCKERS C130	37
ST106	CORRIDOR H165	From	STAIR #6	55
ST201	STAIR #1	From	CORRIDOR A229	37
ST202	STAIR #2	From	2ND FLOOR CORRIDOR	37
ST203	STAIR #3	From	2ND FLOOR CORRIDOR	37
ST204	STAIR #4	From	2ND FLOOR CORRIDOR	37
ST206	STAIR #6	From	EQUIPMENT PLATFORM	55
ST301	STAIR #1	From	LOCKER COMMONS A330	37
ST302	STAIR #2	From	ROTUNDR CORRIDOR	37
ST303	STAIR #3	From	ROTUNDRA CORRIDOR	37
ST304	STAIR #4	From	LOCKER COMMONS C324	37

Hardware Schedule

Heading #1 (Group: 00.15.10)

Item #1 1 Pair of doors H155.1, EXTERIOR From VESTIBULE H155.1 RHRA
Item #2 1 Pair of doors H157.1, EXTERIOR From VESTIBULE H157.1 RHRA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

74"?

4	Continuous Hinge	Ives 112HD-95" US28 TW8	US28
2	Removable Mullion	Von Duprin KR-9954-95" SP28	SP28
2	Exit Device	Von Duprin RXELCD-98-NL-OP US3 110MD NL-R US26D RHR 3'0" x 7'0" Door	US26D/US3
2	Exit Device	Von Duprin RXELCD-98EO US26D LHR 3'0" x 7'0" Door	US26D
2	Door Pull	Ives 8190-12 US32D NS	US32D
6	Cylinder	Best 1E74(Std.)C4RP 626	626
2	Cylinder	Best 12E72(Std.)S2RP 626	626
2	Surface Closer	LCN 4040XP EDA AL - LHR	AL
2	Surface Closer	LCN 4040XP EDA AL - RHR	AL
8	Wiring Harness	McKinney QC-C1500P	
2	Threshold	Pemko 271A72" (MSES25SS)	A
4	Door Sweep	Pemko 3452CNB36"	C
2	Weatherstripping	Pemko S88 D25	D
4	Floor Door Stop	Ives FS444 US26D	US26D
4	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
2	Power Supply	Von Duprin PS914- 900-2RS	

1. DOORS CAN BE ELECTRICALLY LOCKED/UNLOCKED BY A REMOTE SIGNAL FROM THE BUILDING CONTROL SYSTEM.
2. FREE EGRESS AT ALL TIMES.
3. 1E74 CYLINDERS FOR DOGGING AND KEY REMOVABLE MULLION.
4. 12E72 CYLINDER FOR OUTSIDE ACTIVE DOOR.

Heading #2 (Group: 00.45.29)

Item #3 1 Pair of doors ST101A, STAIR #1 From CORRIDOR A151 LHRA/RHRA

4'0", 4'0" x 7'0" x 1 3/4" - WD DR x HM FR - I-45

2	Continuous Hinge	Ives 112HD-95" US28 TW8	US28
1	Exit Device	Von Duprin EL-9827-L-F LBR US3 996L-V US26D LHR #17 Lever 4'0" x 7'0" Door	US26D/US3
1	Exit Device	Von Duprin EL-9827-L-F LBR US3 996L-V US26D RHR #17 Lever 4'0" x 7'0" Door	US26D/US3
2	Cylinder	Best 1E74(Std.)C4RP 626	626
2	Electro-Magnetic Holder	LCN SEM 7850 AL	AL
2	Electronic Closer	LCN 4631 STD AL	AL
1	Wall Switch	LCN 8310-856T AL	AL
2	Wiring Harness	McKinney QC-C1500P	
2	Weatherstripping	Pemko 18041CNB 84"	C
1	Weatherstripping	Pemko S88 D25	D
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
1	Power Supply	Von Duprin PS914- 900-2RS	

1. FREE EGRESS AT ALL TIMES.
2. BOTH DOORS ARE NORMALLY HELD OPEN WITH ELECTRO-MAGNETIC HOLDERS.
3. AUTOMATIC OPERATOR ON ACTIVE LEAF FOR USE WHEN DOORS ARE CLOSED.
4. DEPRESSING EITHER EXTERIOR OR VESTIBULE MOUNTED WALL SWITCH TO OPEN DOOR.
5. THIS DOOR IS SEQUENTIALLY OPERATED WITH OPENING ST104A.
6. OPERATOR AND MAGNETIC HOLDERS ARE DISABLED UPON FIRE ALARM ACTIVATION.

Heading #3 (Group: 00.55.60)

Item #4 1 Single door A113, CORRIDOR To TER A113 LH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR - I-45

2	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
1	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652 TW8	652
1	Lockset	Schlage L9080PEU 17A 626 LH RX (L283-263)	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY
2	Wiring Harness	McKinney QC-C1500P	
1	Power Supply	Von Duprin PS902	

1. CARD READER BY OTHERS
2. VALID CARD SWIPE RELEASES FAIL SECURE ELECTRIC LOCK ALLOWING ENTRY.
3. LOCK IS EQUIPPED WITH A REQUEST TO EXIT SWITCH TO SIGNAL AUTHORIZED EGRESS TO THE ACCESS CONTROL SYSTEM.
4. FREE EGRESS AT ALL TIMES.

Heading #4 (Group: 00.55.60)

Item #5	1 Single door A223, CORRIDOR From TR A223	RHR
Item #6	1 Single door A322, CORRIDOR From TR A322	RHR
Item #7	1 Single door B111A, CORRIDOR To MAIL/WORKROOM B111	LH
Item #8	1 Single door C126, LOCKER COMMONS C129 From TR C126	LHR
Item #9	1 Single door C220, CORRIDOR From TR C220	LHR
Item #10	1 Single door C317, CORRIDOR From TR C317	RHR
Item #11	1 Single door D144, FOOD SERVICE From IDF D144	LHR
Item #12	1 Single door E109, CORRIDOR E1 To IDF E109	RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

16	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
8	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652 TW8	652
1	Lockset	Schlage L9080PEU 17A 626 LH RX (L283-263)	626
3	Lockset	Schlage L9080PEU 17A 626 LHR RX (L283-263)	626
1	Lockset	Schlage L9080PEU 17A 626 RH RX (L283-263)	626
3	Lockset	Schlage L9080PEU 17A 626 RHR RX (L283-263)	626
8	Cylinder	Best 1E74(Std.)C265RP3 626	626
8	Surface Closer	LCN 4040XP Rw/PA AL	AL
8	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
8	Wall Door Stop	Ives WS407CCV US32D	US32D
24	Door Silencer	Ives SR64 GRY	GRY
16	Wiring Harness	McKinney QC-C1500P	
8	Power Supply	Von Duprin PS902	

1. CARD READER BY OTHERS
2. VALID CARD SWIPE RELEASES FAIL SECURE ELECTRIC LOCK ALLOWING ENTRY.
3. LOCK IS EQUIPPED WITH A REQUEST TO EXIT SWITCH TO SIGNAL AUTHORIZED EGRESS TO THE ACCESS CONTROL SYSTEM.
4. FREE EGRESS AT ALL TIMES.

Heading #5 (Group: 00.55.60)

Item #13	1 Single door D111B, STUDENT DINING D128 From TELECOM ROOM D111B	RHR
Item #14	1 Single door H108, CORRIDOR H155 To T.R. H108	RH
Item #15	1 Single door H151, CORRIDOR H165 From TR H151	LHR

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

6	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
3	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652 TW8	652
1	Lockset	Schlage L9080PEU 17A 626 LHR RX (L283-263)	626
1	Lockset	Schlage L9080PEU 17A 626 RH RX (L283-263)	626
1	Lockset	Schlage L9080PEU 17A 626 RHR RX (L283-263)	626
3	Cylinder	Best 1E74(Std.)C265RP3 626	626
3	Surface Closer	LCN 4040XP Rw/PA AL	AL
3	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
3	Wall Door Stop	Ives WS407CCV US32D	US32D
9	Door Silencer	Ives SR64 GRY	GRY
6	Wiring Harness	McKinney QC-C1500P	
3	Power Supply	Von Duprin PS902	

1. CARD READER BY OTHERS
2. VALID CARD SWIPE RELEASES FAIL SECURE ELECTRIC LOCK ALLOWING ENTRY.
3. LOCK IS EQUIPPED WITH A REQUEST TO EXIT SWITCH TO SIGNAL AUTHORIZED EGRESS TO THE ACCESS CONTROL SYSTEM.
4. FREE EGRESS AT ALL TIMES.

Heading #6 (Group: 00.55.61)

Item #16	1 Single door A102, CORRIDOR From KCCS-A CLASSROOM A102	NO OPERATOR (A104 GETS OPERATOR)	LHR

3'6" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9071L 17A 626 LHR	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Cylinder	Best 1E74(Std.)C4RP 626	626
1	Electronic Closer	LCN 4631 STD AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY
1	Wiring Harness	McKinney QC-C1500P	
1	Electric Strike	Von Duprin 6210 US32D	US32D
1	Transformer	HES 2002-24	
1	In Line Power Control	HES 2005M3	
2	Wall Switch	LCN 8310-856T AL	AL
1	Electronic Locking Device	Securitron MKAPZ	

1. DOOR IS EQUIPPED WITH AN AUTOMATIC OPERATOR. DEPRESSING EITHER THE INTERIOR OR EXTERIOR WALL SWITCH RELEASES THE ELECTRIC STRIKE AND OPENS THE DOOR.
2. KEY SWITCH TURNS ON/OFF AUTOMATIC OPERATOR.

Heading #7 (Group: 15.04.15)

Item #17 1 Pair of doors D120, EXTERIOR From CORRIDOR D1 RHRA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

2	Continuous Hinge	Ives 112HD-83" US28	US28
1	Removable Mullion	Von Duprin KR-9954 95" SP28	SP28
1	Exit Device	Von Duprin CD-98-NL US26D 990NL-R US26D RHR 3'0" x 7'0" Door	US26D/US26D
1	Exit Device	Von Duprin CD-98-DT US26D 990DT-R US26D LHR 3'0" x 7'0" Door	US26D/US26D
3	Cylinder	Best 1E74(Std.)C4RP 626	626
1	Cylinder	Best 12E72(Std.)S2RP 626 Arm as needed to clear overhead stop.	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
1	Threshold	Pemko 271A72" (MSES25SS)	A
1	Weatherstripping	Pemko S88 D25	D
2	Door Sweep	Pemko 3452CNB36"	C
1	Drip Cap	Pemko 346C 76"	C

Heading #8 (Group: 15.04.16)

Item #18 1 Pair of doors E103A, RECEIVING E103 From CORRIDOR E3 RHRA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

2	Continuous Hinge	Ives 112HD-83" US28	US28
1	Exit Device	Von Duprin CD-9847-TL US32D 990EO-V US26D RHR 376T-US26D 3'0" x 7'0" Door	US26D/US32D
1	Exit Device	Von Duprin CD-9847EO US32D LHR 3'0" x 7'0" Door	US32D
2	Door Pull	Ives 8190-12 US32D NS	US32D
3	Cylinder	Best 1E74(Std.)C4RP 626	626
2	Surface Closer	LCN 4040XP Rw/PA AL Arm as needed to clear overhead stop.	AL
2	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 34" x 35"	US32D
1	Threshold	Pemko 271A72" (MSES25SS)	A
1	Weatherstripping	Pemko S88 D25	D
2	Door Sweep	Pemko 3452CNB36"	C
1	Drip Cap	Pemko 346C 76"	C
2	Weatherstripping	Pemko 18041CNB 84"	C

Heading #9 (Group: 25.04.15)

Item #19	1 Pair of doors A401A, EQUIPMENT PLATFORM To ROOF	RHA
Item #20	1 Pair of doors A401B, EQUIPMENT PLATFORM To ROOF	RHA
Item #21	1 Pair of doors C401A, EQUIPMENT PLATFORM C401 To ROOF	RHA
Item #22	1 Pair of doors C401B, EQUIPMENT PLATFORM C401 To ROOF	RHA
Item #23	1 Pair of doors D200, ROOF From STAIR	RHRA
Item #24	1 Pair of doors H201, ROOF From EQUIPMENT PLATFORM	RHRA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

12	Continuous Hinge	Ives 112HD-83" US28	US28
12	Flush Bolt	Ives FB458 US26D	US26D
6	Dust Proof Strike	Ives DP2 US26D	US26D
4	Lockset	Schlage L9080L 17A 626 RH	626
2	Lockset	Schlage L9080L 17A 626 RHR	626
6	Cylinder	Best 1E74(Std.)C265RP3 626	626
6	Surface Closer	LCN 4040XP S CUSH AL	AL
6	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
12	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
6	Threshold	Pemko 271A72" (MSES25SS)	A
6	Weatherstripping	Pemko S88 D25	D
12	Door Sweep	Pemko 3452CNB36"	C
6	Astragal	Pemko 357SP84"	SP

Heading #10 (Group: 25.25.65)

Item #25	1 Single door H119B, EXTERIOR From ECE CLASSROOM H119	LHR
Item #26	1 Single door H123B, EXTERIOR From ECE CLASSROOM H123	RHR
Item #27	1 Single door K100, EXTERIOR From SERVICE YARD	LHR

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

3	Continuous Hinge	Ives 112HD-83" US28	US28
2	Lockset	Schlage L9056L 17A 626 LHR	626
1	Lockset	Schlage L9056L 17A 626 RHR	626
3	Cylinder	Best 1E74(Std.)C265RP3 626	626
3	Surface Closer	LCN 4040XP SHCUSH AL	AL
3	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
3	Door Sweep	Pemko 3452CNB36"	C
3	Threshold	Pemko 271A36" (MSES25SS)	A
3	Weatherstripping	Pemko S88 D17	D
3	Drip Cap	Pemko 346C 40"	C

L9456 is correct substitution for specified 8225.

Heading #11 (Group: 40.37.60)

Item #28	1 Single door D118A, MAIN STREET To FACULTY DINING D118	LH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

1	Continuous Hinge	Ives 112HD-83" US28	US28
1		ACCURATE LOCK 8845	
1	Latchset	Schlage L9010 17A 626 LH	626
2	Cylinder	Best 1E74(Std.)C4RP 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL

Heading #12 (Group: 45.04.20)

Item #29 1 Pair of doors D102, MECHANICAL ROOM D104 From ELECTRICAL ROOM D102 RHRA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B

6	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
1	Exit Device	Von Duprin 9827-L-F LBR US3 996L-V US26D RHR #17 Lever 3'0" x 7'0" Door Storeroom function.	US26D/US3
1	Exit Device	Von Duprin 9827EO-F US32D LHR 3'0" x 7'0" Door	US32D
1	Cylinder	Best 12E72(Std.)S2RP 626	626
2	Surface Closer	LCN 4040XP Rw/PA AL	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
2	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Weatherstripping	Pemko 18041CNB 84"	C
1	Weatherstripping	Pemko S88 D25	D

Heading #13 (Group: 45.04.60)

Item #30 1 Single door H111, CORRIDOR H155 From ELECTRIC ROOM H111 RHR

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Exit Device	Von Duprin CD-98-L-NL US3 996L-NL-R US26D RHR #17 Lever 3'0" x 7'0" Door	US26D/US3
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Cylinder	Best 12E72(Std.)S2RP 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #14 (Group: 45.04.70)

Item #31 1 Single door C106A, LOCKER COMMONS C128 From ELECTRICAL C106 RHR
Item #32 1 Single door C106B, CORRIDOR B163 From ELECTRICAL C106 LHR

3'6" x 7'0" x 1 3/4" - WD DR x HM FR

6	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
1	Exit Device	Von Duprin 98-L-NL US32D 996L-NL-R US26D LHR #17 Lever 4' Bar 3'6" x 7'0" Door	US26D/US32D
1	Exit Device	Von Duprin 98-L-NL US32D 996L-NL-R US26D RHR #17 Lever 4' Bar 3'6" x 7'0" Door	US26D/US32D
2	Cylinder	Best 1E74(Std.)C4RP 626	626
2	Cylinder	Best 12E72(Std.)S2RP 626	626
2	Surface Closer	LCN 4040XP Rw/PA AL	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
2	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Weatherstripping	Pemko S88 D17	D

Heading #15 (Group: 45.04.70.1)

Item #33 1 Single door D102A, MECHANICAL ROOM D104 From ELECTRICAL ROOM D102 RHR

3'0" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B

3	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
1	Exit Device	Von Duprin 98-L-NL-F US32D 996L-NL-R US26D RHR #17 Lever 3'0" x 7'0" Door	US26D/US32D
1	Cylinder	Best 1E74(Std.)C4RP 626	626
1	Cylinder	Best 12E72(Std.)S2RP 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
1	Weatherstripping	Pemko S88 D25	D

Heading #16 (Group: 45.13.10)

Item #34 1 Pair of doors B206A, ROTUNDA From LARGE GROUP INSTRUCTION B206 RHRA

Item #35 1 Pair of doors B206B, ROTUNDA From LARGE GROUP INSTRUCTION B206 RHRA

7'0"

3'0", 3'0" x 7'4" x 1 3/4" - WD DR x HM FR

4	Continuous Hinge	Ives 112HD-83" US28	US28
2	Exit Device	Von Duprin CD-9847WDC-L LBR US32D 996L-V US26D RHR #17 Lever #10 WDA 3'0" x 7'4" Door	US26D/US32D
2	Exit Device	Von Duprin CD-9847WDC-L-DT LBR US32D 996L-DT-V US26D LHR #17 Lever #10 WDA 3'0" x 7'4" Door	US26D/US32D
4	Cylinder	Best 1E74(Std.)C265RP3 626 Surface rod devices specified.	626
2	Cylinder	Best 12E72(Std.)S2RP 626	626
2	Surface Closer	LCN 4040XP EDA AL - LHR	AL
2	Surface Closer	LCN 4040XP EDA AL - RHR	AL
4	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
4	Wall Door Stop	Ives WS407CCV US32D	US32D
4	Door Silencer	Ives SR64 GRY	GRY

Heading #17 (Group: 45.13.10.1)

Item #36 1 Pair of doors D116A, CORRIDOR E3 From FOOD SERVICE D116 RHRA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

2	Continuous Hinge	Ives 112HD-83" US28	US28
1	Exit Device	Von Duprin CD-9847-L LBR US32D 996L-V US26D RHR #17 Lever 3'0" x 7'0" Door	US26D/US32D
1	Exit Device	Von Duprin CD-9847-L-DT LBR US32D 996L-DT-V US26D LHR #17 Lever 3'0" x 7'0" Door	US26D/US32D
2	Cylinder	Best 1E74(Std.)C265RP3 626 Surface rod devices specified.	626
1	Cylinder	Best 12E72(Std.)S2RP 626	626
1	Surface Closer	LCN 4040XP EDA AL - LHR	AL
1	Surface Closer	LCN 4040XP EDA AL - RHR	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
2	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Door Silencer	Ives SR64 GRY	GRY

Heading #18 (Group: 45.13.11)

Item #37	1 Pair of doors G102A, CORRIDOR G117 From FITNESS G102	RHRA
Item #38	1 Pair of doors G104A, CORRIDOR G117 From WRESTLING/MOVEMENT G104	RHRA
Item #39	1 Pair of doors H106A, CORRIDOR H155 From AUXILIARY GYM H106	RHRA
Item #40	1 Pair of doors H106B, CORRIDOR H155 From AUXILIARY GYM H106	RHRA
Item #41	1 Pair of doors H106C, CORRIDOR H157 From AUXILIARY GYM H106	RHRA
Item #42	1 Pair of doors H106D, CORRIDOR H157 From AUXILIARY GYM H106	RHRA

I-45

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

12	Continuous Hinge	Ives 112HD-83" US28	US28
6	Removable Mullion	Von Duprin KR-9954 95" SP28	SP28
6	Exit Device	Von Duprin CD-98-L US3 996L-R US26D RHR #17 Lever 3'0" x 7'0" Door	US26D/US3
6	Exit Device	Von Duprin CD-98-L-DT US32D 996L-DT-R US26D LHR #17 Lever 3'0" x 7'0" Door	US26D/US32D
18	Cylinder	Best 1E74(Std.)C4RP 626	626
6	Cylinder	Best 12E72(Std.)S2RP 626	626
6	Surface Closer	LCN 4040XP EDA AL - LHR	AL
6	Surface Closer	LCN 4040XP EDA AL - RHR	AL
12	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
12	Wall Door Stop	Ives WS407CCV US32D	US32D
12	Door Silencer	Ives SR64 GRY	GRY

Heading #19 (Group: 45.13.16)

Item #43	1 Pair of doors G132D, MAIN STREET From VESTIBULE G132	LHRA/RHRA
Item #44	1 Pair of doors G132E, MAIN STREET From VESTIBULE G132	LHRA/RHRA
Item #45	1 Pair of doors G132F, MAIN STREET From VESTIBULE G132	LHRA/RHRA
Item #46	1 Pair of doors G133D, MAIN STREET From VESTIBULE G133	LHRA/RHRA
Item #47	1 Pair of doors G133E, MAIN STREET From VESTIBULE G133	LHRA/RHRA
Item #48	1 Pair of doors G133F, MAIN STREET From VESTIBULE G133	LHRA/RHRA

7'10"

3'6", 3'6" x 8'0" x 1 3/4" - WD DR x HM FR I-45 90?

12	Continuous Hinge	Ives 112HD-95" US28	US28
6	Exit Device	Von Duprin 9847WDC-L-F LBR US32D 996L-V US26D LHR #17 Lever 4' Bar #10 WDA 3'6" x 8'0" Door	US26D/US32D
6	Exit Device	Von Duprin 9847WDC-L-F LBR US32D 996L-V US26D RHR #17 Lever 4' Bar #10 WDA 3'6" x 8'0" Door	US26D/US32D
12	Cylinder	Best 12E72(Std.)S2RP 626	626
12	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
6	Surface Closer	LCN 4040XP HEDA w/62G AL LHR	AL
6	Surface Closer	LCN 4040XP HEDA w/62G AL RHR	AL
12	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 41"	US32D
12	Door Silencer	Ives SR64 GRY	GRY

Surface rod devices specified.

Heading #20 (Group: 45.13.16.1)

Item #49	1 Pair of doors G134C, CORRIDOR H151 From VESTIBULE G134	LHRA/RHRA
Item #50	1 Pair of doors G134D, CORRIDOR H151 From VESTIBULE G134	LHRA/RHRA
Item #51	1 Pair of doors G135C, CORRIDOR H164 From VESTIBULE G135	LHRA/RHRA
Item #52	1 Pair of doors G135D, CORRIDOR H164 From VESTIBULE G135	LHRA/RHRA

3'6", 3'6" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B I-45

8	Continuous Hinge	Ives 112HD-83" US28	US28
4	Exit Device	Von Duprin 9847-L-F LBR US32D 996L-V US26D LHR #17 Lever 4' Bar 3'6" x 7'0" Door	US26D/US32D
4	Exit Device	Von Duprin 9847-L-F LBR US32D 996L-V US26D RHR #17 Lever 4' Bar 3'6" x 7'0" Door	US26D/US32D
8	Cylinder	Best 12E72(Std.)S2RP 626 Surface rod devices specified.	626
8	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
4	Surface Closer	LCN 4040XP HEDA w/62G AL LHR	AL
4	Surface Closer	LCN 4040XP HEDA w/62G AL RHR	AL
8	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 41"	US32D
8	Door Silencer	Ives SR64 GRY	GRY

Heading #21 (Group: 45.13.19)

Item #53	1 Pair of doors E129, CORRIDOR E2 From SMALL BAND ROOM/REHEARSAL ROOM	RHRA
Item #54	1 Pair of doors E130B, CORRIDOR E2 From LARGE BAND ROOM	RHRA
Item #55	1 Pair of doors E137A, CORRIDOR E2 From CHORAL ROOM E137	RHRA
Item #56	1 Pair of doors E150A, CORRIDOR E2 From REHEARSAL SPACE E150	RHRA

3'0", 3'0" x 7'0" x 1 3/4" - WD DR x HM FR

8	Continuous Hinge	Ives 112HD-83" US28	US28
4	Exit Device	Von Duprin CD-9847-L LBR US32D 996L-V US26D RHR #17 Lever 3'0" x 7'0" Door	US26D/US32D
4	Exit Device	Von Duprin CD-9847-L-DT LBR US32D 996L-DT-V US26D LHR #17 Lever 3'0" x 7'0" Door	US26D/US32D
8	Cylinder	Best 1E74(Std.)C4RP 626 Surface rod devices specified.	626
4	Cylinder	Best 12E72(Std.)S2RP 626	626
4	Surface Closer	LCN 4040XP EDA AL - LHR	AL
4	Surface Closer	LCN 4040XP EDA AL - RHR	AL
8	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
8	Weatherstripping	Pemko S88 D25	D
8	Weatherstripping	Pemko 18041CNB 84"	C
8	Door Sweep	Pemko 3452CNB36"	C
4	Threshold	Pemko 271A72" (MSES25SS)	A

1. INSTALL PERIMETER GASKETING IN TWO ROWS.

Heading #22 (Group: 45.13.19.1)

Item #57 1 Pair of doors E139, MAIN STREET From CORRIDOR E2 LHRA/RHRA

WD

3'6", 3'6" x 7'10" x 1 3/4" HM DR x HM FR I-45

2	Continuous Hinge	Ives 112HD-93" US28	US28
1	Exit Device	Von Duprin CD-9847-L LBR US32D 996L-V US26D LHR #17 Lever 4' Bar 3'6" x 7'10" Door	US26D/US32D
1	Exit Device	Von Duprin CD-9847-L LBR US32D 996L-V US26D RHR #17 Lever 4' Bar 3'6" x 7'10" Door	US26D/US32D
2	Cylinder	Best 1E74(Std.)C4RP 626	626
2	Cylinder	Best 12E72(Std.)S2RP 626	626
1	Surface Closer	LCN 4040XP EDA AL - LHR	AL
1	Surface Closer	LCN 4040XP EDA AL - RHR	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
2	Weatherstripping	Pemko S88 D25	D
2	Weatherstripping	Pemko 18041CNB 93"	C
2	Door Sweep	Pemko 3452CNB36"	C
1	Threshold	Pemko 271A72" (MSES25SS)	A

Surface rod devices specified.

1. INSTALL PERIMETER GASKETING IN TWO ROWS.

Heading #23 (Group: 45.13.20)

Item #58 1 Pair of doors E101C, EAST AUDITORIUM VESTIBULE From AUDITORIUM RHRA

Item #59 1 Pair of doors E101D, CORRIDOR From AUDITORIUM RHRA

3'0", 3'0" x 7'0" x 1 3/4" - WD DR x HM FR - I-45

4	Continuous Hinge	Ives 112HD-83" US28	US28
2	Exit Device	Von Duprin 9847WDC-L-F LBR US32D 996L-V US26D LHR #17 Lever #10 WDA 3'0" x 7'0" Door	US26D/US32D
2	Exit Device	Von Duprin 9847WDC-L-F LBR US32D 996L-V US26D RHR #17 Lever #10 WDA 3'0" x 7'0" Door	US26D/US32D
4	Cylinder	Best 12E72(Std.)S2RP 626	626
2	Surface Closer	LCN 4040XP EDA AL - LHR	AL
2	Surface Closer	LCN 4040XP EDA AL - RHR	AL
4	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
2	Weatherstripping	Pemko S88 D25	D
4	Weatherstripping	Pemko 18041CNB 84"	C
4	Wall Door Stop	Ives WS407CCV US32D	US32D

Surface rod devices specified.
This comment applies to all '45' series hardware groups for pairs. Make correction for all.

Heading #24 (Group: 45.13.20.1)

Item #60	1 Pair of doors E127A, NORTH STAGE VESTIBULE From STAGE	RHRA
Item #61	1 Pair of doors E143, CORRIDOR E1 From NORTH STAGE VESTIBULE	LHRA/RHRA
Item #62	1 Pair of doors E146, MAIN STREET From NORTH AUDITORIUM VESTIBULE	LHRA/RHRA
Item #63	1 Pair of doors E147, MAIN STREET From SOUTH AUDITORIUM VESTIBULE	LHRA/RHRA
Item #64	1 Pair of doors E148, CORRIDOR E2 From EAST AUDITORIUM VESTIBULE	LHRA/RHRA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B

10	Continuous Hinge	Ives 112HD-83" US28	US28
5	Exit Device	Von Duprin 9847-L-F LBR US26D 996L-V US26D LHR #17 Lever 3'0" x 7'0" Door	US26D/US26D
5	Exit Device	Von Duprin 9847-L-F LBR US26D 996L-V US26D RHR #17 Lever 3'0" x 7'0" Door	US26D/US26D
10	Cylinder	Best 12E72(Std.)S2RP 626	626
5	Surface Closer	LCN 4040XP EDA AL - LHR	AL
5	Surface Closer	LCN 4040XP EDA AL - RHR	AL
10	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
5	Weatherstripping	Pemko S88 D25	D
10	Weatherstripping	Pemko 18041CNB 84"	C
10	Wall Door Stop	Ives WS407CCV US32D	US32D

Heading #25 (Group: 45.13.28)

Item #65	1 Pair of doors A151A, CORRIDOR From CORRIDOR	LHRA/RHRA
Item #66	1 Pair of doors A151B, CORRIDOR From CORRIDOR	LHRA/RHRA
Item #67	1 Pair of doors C120A, CORRIDOR From CORRIDOR	LHRA/RHRA
Item #68	1 Pair of doors C120B, CORRIDOR From CORRIDOR	LHRA/RHRA
Item #69	1 Pair of doors C321C, CORRIDOR From CORRIDOR	LHRA/RHRA
Item #70	1 Pair of doors C321D, CORRIDOR From CORRIDOR	LHRA/RHRA
Item #71	1 Pair of doors F100B, LOBBY H166 From CORRIDOR F100 ← HM DR	LHRA/RHRA
Item #72	1 Pair of doors G117A, MAIN STREET From CORRIDOR G117	LHRA/RHRA
Item #73	1 Pair of doors G117B, HALL H163 From CORRIDOR G117 ← HM DR	LHRA/RHRA

WD

4'0", 4'0" x 7'10" x 1 3/4" - HM DR x HM FR - UL-B

18	Continuous Hinge	Ives 112HD-93" US28	US28
9	Exit Device	Von Duprin 9847-L-F LBR US32D 996L-V US26D LHR #17 Lever 4' Bar 4'0" x 7'10" Door	US26D/US32D
9	Exit Device	Von Duprin 9847-L-F LBR US32D 996L-V US26D RHR #17 Lever 4' Bar 4'0" x 7'10" Door	US26D/US32D
18	Cylinder	Best 12E72(Std.)S2RP 626	626
9	Surface Closer	LCN 4040XP EDA AL - LHR	AL
9	Surface Closer	LCN 4040XP EDA AL - RHR	AL
18	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 47"	US32D
18	Electro-Magnetic Holder	LCN SEM 7850 AL	AL
9	Weatherstripping	Pemko S88 D25	D
18	Weatherstripping	Pemko 18041CNB 93"	C

Heading #26 (Group: 45.13.28.1)

Item #74	1 Pair of doors A229A, CORRIDOR From CORRIDOR	LHRA/RHRA
Item #75	1 Pair of doors A229B, CORRIDOR From CORRIDOR	LHRA/RHRA
Item #76	1 Pair of doors A330A, CORRIDOR From CORRIDOR	LHRA/RHRA
Item #77	1 Pair of doors A330B, CORRIDOR From CORRIDOR	LHRA/RHRA

4'0", 4'0" x 7'10" x 1 3/4" - WD DR x HM FR - I-45

8	Continuous Hinge	Ives 112HD-93" US28	US28
4	Exit Device	Von Duprin 9847WDC-L-F LBR US32D 996L-V US26D LHR #17 Lever 4' Bar #10 WDA 4'0" x 7'10" Door	US26D/US32D
4	Exit Device	Von Duprin 9847WDC-L-F LBR US32D 996L-V US26D RHR #17 Lever 4' Bar #10 WDA 4'0" x 7'10" Door	US26D/US32D
8	Cylinder	Best 12E72(Std.)S2RP 626	626
4	Surface Closer	LCN 4040XP EDA AL - LHR	AL
4	Surface Closer	LCN 4040XP EDA AL - RHR	AL
8	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 47"	US32D
8	Electro-Magnetic Holder	LCN SEM 7850 AL	AL
4	Weatherstripping	Pemko S88 D25	D
8	Weatherstripping	Pemko 18041CNB 93"	C

Heading #27 (Group: 45.13.28.1)

Item #78	1 Pair of doors C229C, CORRIDOR From CORRIDOR	LHRA/RHRA
Item #79	1 Pair of doors C229D, CORRIDOR From CORRIDOR	LHRA/RHRA
Item #80	1 Pair of doors F100A, MAIN STREET From CORRIDOR F100	LHRA/RHRA

4'0", 4'0" x 7'10" x 1 3/4" - WD DR x HM FR - I-90

6	Continuous Hinge	Ives 112HD-93" US28	US28
3	Exit Device	Von Duprin 9847WDC-L-F LBR US32D 996L-V US26D LHR #17 Lever 4' Bar #10 WDA 4'0" x 7'10" Door	US26D/US32D
3	Exit Device	Von Duprin 9847WDC-L-F LBR US32D 996L-V US26D RHR #17 Lever 4' Bar #10 WDA 4'0" x 7'10" Door	US26D/US32D
6	Cylinder	Best 12E72(Std.)S2RP 626	626
3	Surface Closer	LCN 4040XP EDA AL - LHR	AL
3	Surface Closer	LCN 4040XP EDA AL - RHR	AL
6	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 47"	US32D
6	Electro-Magnetic Holder	LCN SEM 7850 AL	AL
3	Weatherstripping	Pemko S88 D25	D
6	Weatherstripping	Pemko 18041CNB 93"	C

Heading #28 (Group: 45.13.28.2)

Item #81	1 Pair of doors H155A, LOBBY H166 From CORRIDOR H155	LHRA/RHRA
Item #82	1 Pair of doors H157A, CORRIDOR From CORRIDOR H157	LHRA/RHRA

4'0", 4'0" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B

4	Continuous Hinge	Ives 112HD-83" US28	US28
2	Exit Device	Von Duprin 9847-L-F LBR US32D 996L-V US26D LHR #17 Lever 4' Bar 4'0" x 7'0" Door	US26D/US32D
2	Exit Device	Von Duprin 9847-L-F LBR US32D 996L-V US26D RHR #17 Lever 4' Bar 4'0" x 7'0" Door	US26D/US32D
4	Cylinder	Best 12E72(Std.)S2RP 626	626
2	Surface Closer	LCN 4040XP EDA AL - LHR	AL
2	Surface Closer	LCN 4040XP EDA AL - RHR	AL
4	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 47"	US32D
4	Electro-Magnetic Holder	LCN SEM 7850 AL	AL
2	Weatherstripping	Pemko S88 D25	D
4	Astragal	Pemko 357SP84"	SP

Heading #29 (Group: 45.13.60)

Item #83	1 Single door D128C, CORRIDOR D1 From STUDENT DINING	RHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

1	Continuous Hinge	Ives 112HD-83" US28	US28
1	Exit Device	Von Duprin CD-98-L US3 996L-R US26D RHR #17 Lever 3'0" x 7'0" Door	US26D/US3
1	Cylinder	Best 1E74(Std.)C4RP 626	626
1	Cylinder	Best 12E72(Std.)S2RP 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #30 (Group: 45.13.69)

Item #84	1 Single door E130A, CORRIDOR E2 From LARGE BAND ROOM	RHR
Item #85	1 Single door E137B, CORRIDOR E2 From CHORAL ROOM E137	RHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

2	Continuous Hinge	Ives 112HD-83" US28	US28
2	Exit Device	Von Duprin CD-98-L US3 996L-R US26D RHR #17 Lever 3'0" x 7'0" Door	US26D/US3
2	Cylinder	Best 1E74(Std.)C4RP 626	626
2	Cylinder	Best 12E72(Std.)S2RP 626	626
2	Surface Closer	LCN 4040XP Rw/PA AL	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
2	Threshold	Pemko 271A36" (MSES25SS)	A
4	Weatherstripping	Pemko S88 D17	D
2	Door Sweep	Pemko 3452CNB36"	C

1. INSTALL PERIMETER GASKETING IN TWO ROWS.

Heading #31 (Group: 45.13.69.1)

Item #86 1 Single door E145, CORRIDOR E1 From SOUTH STAGE VESTIBULE LHR

3'6" x 7'0" x 1 3/4" - WD DR x HM FR - I-45

1	Continuous Hinge	Ives 112HD-83" US28	US28
1	Exit Device	Von Duprin 98-L-F US3 996L-R US26D LHR #07 Lever #17 Lever 4' Bar 3'6" x 7'0" Door	US26D/US3
1	Cylinder	Best 1E74(Std.)C4RP 626	626
1	Cylinder	Best 12E72(Std.)S2RP 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
1	Threshold	Pemko 271A42" (MSES25SS)	A
2	Weatherstripping	Pemko S88 D25	D
1	Miscellaneous Item	Pemko 3452CNB42"	C

1. INSTALL PERIMETER GASKETING IN TWO ROWS.

Heading #32 (Group: 45.13.79)

Item #87 1 Single door E127B, SOUTH STAGE VESTIBULE From STAGE LHR

3'6" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B

1	Continuous Hinge	Ives 112HD-83" US28	US28
1	Exit Device	Von Duprin 98-L-F US3 996L-R US26D LHR #07 Lever #17 Lever 4' Bar 3'6" x 7'0" Door	US26D/US3
1	Cylinder	Best 12E72(Std.)S2RP 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
1	Threshold	Pemko 271A42" (MSES25SS)	A
1	Weatherstripping	Pemko S88 D25	D
1	Miscellaneous Item	Pemko 3452CNB42"	C
1	Wall Door Stop	Ives WS407CCV US32D	US32D

Heading #33 (Group: 45.16.60)

Item #88	1 Single door B203, CORRIDOR From MAIN STACKS B203	LHR
Item #89	1 Single door B308A, ROTUNDRA From PHYSICS CLASSROOM B308	LHR
Item #90	1 Single door B308B, ROTUNDRA From PHYSICS CLASSROOM B308	RHR
Item #91	1 Single door B310A, CORRIDOR From SENIOR SCIENCE CLASSROOM	LHR
Item #92	1 Single door B310B, CORRIDOR From SENIOR SCIENCE CLASSROOM	RHR
Item #93	1 Single door C301A, CORRIDOR From BIOLOGY CLASSROOM C301	RHR
Item #94	1 Single door C301B, CORRIDOR From BIOLOGY CLASSROOM C301	LHR
Item #95	1 Single door C302A, CORRIDOR` From CHEMISTRY CLASSROOM C302	LHR
Item #96	1 Single door C302B, CORRIDOR From CHEMISTRY CLASSROOM C302	RHR
Item #97	1 Single door C303A, CORRIDOR From BIOLOGY CLASSROOM C303	RHR
Item #98	1 Single door C303B, CORRIDOR From BIOLOGY CLASSROOM C303	LHR
Item #99	1 Single door C304A, CORRIDOR From CHEMISTRY CLASSROOM C304	LHR
Item #100	1 Single door C304B, CORRIDOR From CHEMISTRY CLASSROOM C304	RHR
Item #101	1 Single door C305A, CORRIDOR From BIOLOGY CLASSROOM C303	RHR
Item #102	1 Single door C305B, CORRIDOR From BIOLOGY CLASSROOM C303	LHR
Item #103	1 Single door C306A, CORRIDOR From CHEMISTRY CLASSROOM C306	LHR
Item #104	1 Single door C306B, CORRIDOR From CHEMISTRY CLASSROOM C306	RHR
Item #105	1 Single door C309A, CORRIDOR From 9TH GRADE SCIENCE CLASSROOM C309	RHR
Item #106	1 Single door C309B, CORRIDOR To/From 9TH GRADE SCIENCE CLASSROOM C309	LHR
Item #107	1 Single door C310A, CORRIDOR From SHARED SCIENCE CLASSROOM C310	LHR
Item #108	1 Single door C310B, CORRIDOR From SHARED SCIENCE CLASSROOM C310	RHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

21	Continuous Hinge	Ives 112HD-83" US28	US28
11	Exit Device	Von Duprin CD-98-L US3 996L-R US26D LHR #17 Lever 3'0" x 7'0" Door	US26D/US3
10	Exit Device	Von Duprin CD-98-L US3 996L-R US26D RHR #17 Lever 3'0" x 7'0" Door	US26D/US3
21	Cylinder	Best 1E74(Std.)C4RP 626	626
21	Cylinder	Best 12E72(Std.)S2RP 626	626
11	Surface Closer	LCN 4040XP EDA AL - LHR	AL
10	Surface Closer	LCN 4040XP EDA AL - RHR	AL
21	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
21	Wall Door Stop	Ives WS407CCV US32D	US32D
63	Door Silencer	Ives SR64 GRY	GRY

Heading #34 (Group: 45.16.60)

Item #109	1 Single door F101A, CORRIDOR F100 From CULINARY ARTS LAB F101	RHR
Item #110	1 Single door G102B, CORRIDOR G117 From FITNESS G102	LHR
Item #111	1 Single door G104B, CORRIDOR G117 From WRESTLING/MOVEMENT G104	RHR
Item #112	1 Single door H141A, CORRIDOR H157 From HVAC CLASSROOM H141	RHR
Item #113	1 Single door H141B, CORRIDOR H157 From HVAC CLASSROOM H141	LHR

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

5	Continuous Hinge	Ives 112HD-83" US28	US28
2	Exit Device	Von Duprin CD-98-L US3 996L-R US26D LHR #17 Lever 3'0" x 7'0" Door	US26D/US3
3	Exit Device	Von Duprin CD-98-L US3 996L-R US26D RHR #17 Lever 3'0" x 7'0" Door	US26D/US3
5	Cylinder	Best 1E74(Std.)C4RP 626	626
5	Cylinder	Best 12E72(Std.)S2RP 626	626
2	Surface Closer	LCN 4040XP EDA AL - LHR	AL
3	Surface Closer	LCN 4040XP EDA AL - RHR	AL
5	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
5	Wall Door Stop	Ives WS407CCV US32D	US32D
15	Door Silencer	Ives SR64 GRY	GRY

Heading #35 (Group: 45.16.60.1)

Item #114	1 Single door E150B, EXTERIOR From REHEARSAL SPACE E150	LHR
Item #115	1 Single door F101B, CORRIDOR F100 From CULINARY ARTS LAB F101	LHR

3'6" x 7'0" x 1 3/4" - HM DR x HM FR

2	Continuous Hinge	Ives 112HD-83" US28	US28
2	Exit Device	Von Duprin CD-98-L US32D 996L-R US26D LHR #17 Lever 4' Bar 3'6" x 7'0" Door	US26D/US32D
2	Cylinder	Best 1E74(Std.)C4RP 626	626
2	Cylinder	Best 12E72(Std.)S2RP 626	626
2	Surface Closer	LCN 4040XP EDA AL - LHR	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
2	Wall Door Stop	Ives WS407CCV US32D	US32D
6	Door Silencer	Ives SR64 GRY	GRY

Heading #36 (Group: 45.16.65)

Item #116	1 Single door B303A, ROTUNDA From LECTURE HALL B303	LHR
Item #117	1 Single door B303B, ROTUNDRA From LECTURE HALL B303	RHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

2	Continuous Hinge	Ives 112HD-83" US28	US28
1	Exit Device	Von Duprin CD-98-L US3 996L-R US26D LHR #17 Lever 3'0" x 7'0" Door	US26D/US3
1	Exit Device	Von Duprin CD-98-L US3 996L-R US26D RHR #17 Lever 3'0" x 7'0" Door	US26D/US3
2	Cylinder	Best 1E74(Std.)C4RP 626	626
2	Cylinder	Best 12E72(Std.)S2RP 626	626
1	Surface Closer	LCN 4040XP EDA AL - LHR	AL
1	Surface Closer	LCN 4040XP EDA AL - RHR	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
2	Floor Door Stop	Ives FS438 US26D	US26D
6	Door Silencer	Ives SR64 GRY	GRY

Heading #37 (Group: 45.95.28)

Item #118	1 Pair of doors ST102A, STAIR #2 From ROTUNDRA CORRIDOR	LHRA/RHRA
Item #119	1 Pair of doors ST103A, STAIR #3 From ROTUNDRA CORRIDOR	LHRA/RHRA
Item #120	1 Pair of doors ST104A, STAIR #4 From COMMON LOCKERS C130	LHRA/RHRA
Item #121	1 Pair of doors ST201, STAIR #1 From CORRIDOR A229	LHRA/RHRA
Item #122	1 Pair of doors ST202, STAIR #2 From 2ND FLOOR CORRIDOR	LHRA/RHRA
Item #123	1 Pair of doors ST203, STAIR #3 From 2ND FLOOR CORRIDOR	LHRA/RHRA
Item #124	1 Pair of doors ST204, STAIR #4 From 2ND FLOOR CORRIDOR	LHRA/RHRA
Item #125	1 Pair of doors ST301, STAIR #1 From LOCKER COMMONS A330	LHRA/RHRA
Item #126	1 Pair of doors ST302, STAIR #2 From ROTUNDR CORRIDOR	LHRA/RHRA
Item #127	1 Pair of doors ST303, STAIR #3 From ROTUNDRA CORRIDOR	LHRA/RHRA
Item #128	1 Pair of doors ST304, STAIR #4 From LOCKER COMMONS C324	LHRA/RHRA

4'0", 4'0" x 7'0" x 1 3/4" - WD DR x HM FR - I-45

22	Continuous Hinge	Ives 112HD-83" US28	US28
11	Exit Device	Von Duprin 9847WDC-L-BE-F LBR US32D 996L-BE-V US26D LHR #17 Lever 4' Bar #10 WDA 4'0" x 7'0" Door	US26D/US32D
11	Exit Device	Von Duprin 9847WDC-L-BE-F LBR US32D 996L-BE-V US26D RHR #17 Lever 4' Bar #10 WDA 4'0" x 7'0" Door	US26D/US32D
11	Surface Closer	LCN 4040XP EDA AL - LHR	AL
11	Surface Closer	LCN 4040XP EDA AL - RHR	AL
22	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 47"	US32D
22	Electro-Magnetic Holder	LCN SEM 7850 AL	AL
11	Weatherstripping	Pemko S88 D25	D
22	Weatherstripping	Pemko 18041CNB 84"	C

1. DOORS ARE MAGNETICALLY HELD OPEN.
2. INTEGRATE WITH FIRE ALARM SYSTEM TO AUTOMATICALLY RELEASE UPON ALARM ACTIVATION.

Heading #38 (Group: 45.99.10)

Item #129	1 Pair of doors H155B, VESTIBULE H155.1 From CORRIDOR H155	LHRA/RHRA
Item #130	1 Pair of doors H157B, VESTIBULE H157.1 From CORRIDOR H157	LHRA/RHRA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

4	Continuous Hinge	Ives 112HD-83" US28	US28
2	Push Bar	Von Duprin 350 US3 LHR 3'0"	US3
2	Push Bar	Von Duprin 350 US3 RHR 3'0"	US3
4	Door Pull	Ives 8103-12 US32D NS	US32D
2	Surface Closer	LCN 4040XP EDA AL - LHR	AL
2	Surface Closer	LCN 4040XP EDA AL - RHR	AL
4	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
4	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Weatherstripping	Pemko S88 D25	D
4	Weatherstripping	Pemko 18041CNB 84"	C

Heading #39 (Group: 45.99.16)

Item #131	1 Pair of doors G132A, VESTIBULE G132 From GYNASIUM	LHRA/RHRA
Item #132	1 Pair of doors G132B, VESTIBULE G132 From GYNASIUM	LHRA/RHRA
Item #133	1 Pair of doors G132C, VESTIBULE G132 From GYNASIUM	LHRA/RHRA
Item #134	1 Pair of doors G133A, VESTIBULE G133 From GYNASIUM	LHRA/RHRA
Item #135	1 Pair of doors G133B, VESTIBULE G133 From GYNASIUM	LHRA/RHRA
Item #136	1 Pair of doors G133C, VESTIBULE G133 From GYNASIUM	LHRA/RHRA
Item #137	1 Pair of doors G134A, VESTIBULE G134 From GYNASIUM	LHRA/RHRA
Item #138	1 Pair of doors G134B, VESTIBULE G134 From GYNASIUM	LHRA/RHRA
Item #139	1 Pair of doors G135A, VESTIBULE G135 From GYMNASIUM	LHRA/RHRA
Item #140	1 Pair of doors G135B, VESTIBULE G135 From GYMNASIUM	LHRA/RHRA

3'6", 3'6" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B (45)

20	Continuous Hinge	Ives 112HD-83" US28	US28
10	Push Bar	Von Duprin 350 US3 LHR 3'6"	US3
10	Push Bar	Von Duprin 350 US3 RHR 3'6"	US3
20	Door Pull	Ives 8103-12 US32D NS	US32D
10	Surface Closer	LCN 4040XP EDA AL - LHR	AL
10	Surface Closer	LCN 4040XP EDA AL - RHR	AL
20	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
20	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 41"	US32D
20	Door Silencer	Ives SR64 GRY	GRY
20	Wall Door Stop	Ives WS407CCV US32D	US32D

Heading #40 (Group: 45.99.19)

Item #141	1 Pair of doors E101B, SOUTH AUDITORIUM VESTIBULE From AUDITORIUM	RHRA
Item #142	1 Pair of doors E101E, NORTH AUDITORIUM VESTIBULE From AUDITORIUM	RHRA

3'0", 3'0" x 7'0" x 1 3/4" - WD DR x HM FR

4	Continuous Hinge	Ives 112HD-83" US28	US28
2	Push Bar	Von Duprin 350 US3 LHR 3'0"	US3
2	Push Bar	Von Duprin 350 US3 RHR 3'0"	US3
4	Door Pull	Ives 8103-12 US32D NS	US32D
2	Surface Closer	LCN 4040XP EDA AL - LHR	AL
2	Surface Closer	LCN 4040XP EDA AL - RHR	AL
4	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
4	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Threshold	Pemko 271A72" (MSES25SS)	A
4	Weatherstripping	Pemko S88 D25	D
4	Door Sweep	Pemko 3452CNB36"	C

1. INSTALL PERIMETER GASKETING IN TWO ROWS.

Heading #41 (Group: 55.00.60)

Item #143	1 Single door A142, CORRIDOR To STAFF TOILET A142	RH
Item #144	1 Single door B134, CORRIDOR To STAFF TOILET B134	LH
Item #145	1 Single door B136, CORRIDOR To STAFF TOILET B136	RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

9	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Dead Lock	Schlage AD-200-MD-50-KP-SPA-626-BD-C123-LH-4B-09-663-10-072-1-3/4"	626
2	Dead Lock	Schlage AD-200-MD-50-KP-SPA-626-BD-C123-RH-4B-09-663-10-072-1-3/4"	626
3	Surface Closer	LCN 4040XP Rw/PA AL	AL
3	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
3	Wall Door Stop	Ives WS407CCV US32D	US32D
9	Door Silencer	Ives SR64 GRY	GRY

Heading #42 (Group: 55.04.00)

Item #146	1 Pair of doors G134.1, VESTIBULE G134 From GYNASIUM	LHRA/RHRA
Item #147	1 Pair of doors G135.1, VESTIBULE G135 To STORAGE G135.1	RHA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

12	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Flush Bolt	Ives FB458 US26D	US26D
2	Dust Proof Strike	Ives DP2 US26D	US26D
1	Lockset	Schlage L9080L 17A 626 LHR	626
1	Lockset	Schlage L9080L 17A 626 RH	626
1	Lockset	Schlage L9080L 17A 626 RHR	626
3	Cylinder	Best 1E74(Std.)C265RP3 626	626
4	Wall Door Stop	Ives WS407CCV US32D	US32D
4	Door Silencer	Ives SR64 GRY	GRY

Heading #43 (Group: 55.04.10)

Item #148	1 Pair of doors A211, CORRIDOR To CENTRAL TEXTBOOK STORAGE A211	RHA

7'0"

3'0", 3'0" x 7'4" x 1 3/4" - WD DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Flush Bolt	Ives FB458 US26D	US26D
1	Dust Proof Strike	Ives DP2 US26D	US26D
1	Lockset	Schlage L9080L 17A 626 RH	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
2	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Door Silencer	Ives SR64 GRY	GRY

Heading #44 (Group: 55.04.10)

Item #149 1 Pair of doors H203, EQUIPMENT PLATFORM From EQUIPMENT ROOM RHRA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Flush Bolt	Ives FB458 US26D	US26D
1	Dust Proof Strike	Ives DP2 US26D	US26D
1	Lockset	Schlage L9080L 17A 626 RHR	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
2	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Door Silencer	Ives SR64 GRY	GRY

Heading #45 (Group: 55.04.12)

Item #150 1 Pair of doors H104A, CORRIDOR H155 To P.E. STORAGE RHA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Flush Bolt	Ives FB458 US26D	US26D
1	Dust Proof Strike	Ives DP2 US26D	US26D
1	Lockset	Schlage L9080L 17A 626 RH	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Surface Closer	LCN 4040XP H AL	AL
2	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Door Silencer	Ives SR64 GRY	GRY

Heading #46 (Group: 55.04.20)

Item #151 1 Pair of doors D103, MECHANICAL ROOM D104 From FIRE PUMP ROOM D103 RHRA

Item #152 1 Pair of doors D104, CORRIDOR D1 From MECHANICAL ROOM D104 RHRA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B

12	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
4	Flush Bolt	Ives FB458 US26D	US26D
2	Dust Proof Strike	Ives DP2 US26D	US26D
2	Lockset	Schlage L9080L 17A 626 RHR	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
2	Surface Closer	LCN 4040XP Rw/PA AL	AL
4	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
4	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Weatherstripping	Pemko S88 D25	D

1. ASTRAGAL SUPPLIED WITH HOLLOW METAL DOORS.

Heading #47 (Group: 55.04.50)

Item #153	1 Single door E101A, BALCONY From RAMP	RH ~~LHR~~
Item #154	1 Single door E101F, BALCONY From RAMP	LH ~~RHR~~
Item #155	1 Single door J110, MAIN STREET From STORAGE	LHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

9	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Lockset	Schlage L9080L 17A 626 LHR	626
1	Lockset	Schlage L9080L 17A 626 RHR	626
3	Cylinder	Best 1E74(Std.)C265RP3 626	626
3	Wall Door Stop	Ives WS407CCV US32D	US32D
9	Door Silencer	Ives SR64 GRY	GRY

Heading #48 (Group: 55.04.55)

Item #156	1 Single door A147, CORRIDOR From CUSTODIAN CLOSET A147	LHR
Item #157	1 Single door A225, CORRIDOR From CUSTODIAN A225	RHR
Item #158	1 Single door A325, CORRIDOR From CUSTODIAN A325	RHR ~~LHR~~
Item #159	1 Single door B132, CORRIDOR To CUSTODIAN B132	RH
Item #160	1 Single door C124, CORRIDOR From CUSTODIAN C124	RHR
Item #161	1 Single door C219, CORRIDOR From CUSTODIAN C219	RHR
Item #162	1 Single door C313, WOMEN C307 To CUSTODIAN C313	RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

21	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Lockset	Schlage L9080L 17A 626 LHR	626
2	Lockset	Schlage L9080L 17A 626 RH	626
3	Lockset	Schlage L9080L 17A 626 RHR	626
7	Cylinder	Best 1E74(Std.)C265RP3 626	626
7	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
7	Wall Door Stop	Ives WS407CCV US32D	US32D
21	Door Silencer	Ives SR64 GRY	GRY

Heading #49 (Group: 55.04.55)

Item #163	1 Single door E123, MENS ROOM E124 To JANITORS CLOSET E123	LH
Item #164	1 Single door H149, CORRIDOR H165 To CUSTODIAN H149	RH

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9080L 17A 626 LH	626
1	Lockset	Schlage L9080L 17A 626 RH	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
2	Wall Door Stop	Ives WS407CCV US32D	US32D
6	Door Silencer	Ives SR64 GRY	GRY

Heading #50 (Group: 55.04.57)

Item #165	1 Single door A145, CORRIDOR From STORAGE A145	LHR
Item #166	1 Single door A226, CORRIDOR From STORAGE A226	RHR
Item #167	1 Single door A324, CORRIDOR From STORAGE ROOM A324	RHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

9	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9080L 17A 626 LHR	626
2	Lockset	Schlage L9080L 17A 626 RHR	626
3	Cylinder	Best 1E74(Std.)C265RP3 626	626
3	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
9	Door Silencer	Ives SR64 GRY	GRY

Heading #51 (Group: 55.04.57)

Item #168	1 Single door B125.1, NURSE AREA From EQUIPMENT B125.1	LHR

2'6" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9080L 17A 626 LHR	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #52 (Group: 55.04.60)

Item #169	1 Single door B137, CORRIDOR B145 From MEDICINE CLOSET		RHR
Item #170	1 Single door B312.1, SCIENCE PREP A B312 To CHEM STORAGE B312.1		RH
Item #171	1 Single door C102, CORRIDOR B163 TO TEST STORAGE	RHR	~~LHR~~
Item #172	1 Single door C218, CORRIDOR From ELECTRICAL ROOM C218		RHR
Item #173	1 Single door C318, CORRIDOR From ELECTRICAL ROOM C318		LHR
Item #174	1 Single door C319, CORRIDOR From EQUIPMENT PLATFORM ACCESS C319		RHR
Item #175	1 Single door C322, MEN C308 To STORAGE C322		RH
Item #176	1 Single door E108, CORRIDOR E1 To ELECTRICAL E E108		LH
Item #177	1 Single door E128, EAST AUDITORIUM VESTIBULE From CATWALK ACCESS		RHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

27	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9080L 17A 626 LH	626
2	Lockset	Schlage L9080L 17A 626 LHR	626
2	Lockset	Schlage L9080L 17A 626 RH	626
4	Lockset	Schlage L9080L 17A 626 RHR	626
9	Cylinder	Best 1E74(Std.)C265RP3 626	626
9	Surface Closer	LCN 4040XP Rw/PA AL	AL
9	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
9	Wall Door Stop	Ives WS407CCV US32D	US32D
27	Door Silencer	Ives SR64 GRY	GRY

Heading #53 (Group: 55.04.60)

Item #178 1 Single door E126, CORRIDOR E3 From STORAGE E126 LHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR - I-45

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9080L 17A 626 LHR	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #54 (Group: 55.04.60.1)

Item #179 1 Single door E127, STAIR From CATWALK LHR

2'6" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9080L 17A 626 LHR	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 28"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #55 (Group: 55.04.60.2)

Item #180 1 Single door ST106, CORRIDOR H165 From STAIR #6 RHR

Item #181 1 Single door ST206, STAIR #6 From EQUIPMENT PLATFORM RHR

3'6" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Lockset	Schlage L9080L 17A 626 RHR	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
2	Surface Closer	LCN 4040XP Rw/PA AL	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
2	Wall Door Stop	Ives WS407CCV US32D	US32D
6	Door Silencer	Ives SR64 GRY	GRY

Heading #56 (Group: 55.04.70)

Item #182	1 Single door A144, CORRIDOR From ELECTRIC ROOM A144	RHR
Item #183	1 Single door A224, CORRIDOR From ELECTRICAL A224	LHR
Item #184	1 Single door A323, CORRIDOR From ELECTRIC ROOM A323	LHR
Item #185	1 Single door A326, CORRIDOR From EQUIPMENT PLAT. ACCESS A326	LHR
Item #186	1 Single door C125, LOCKER COMMONS C129 From ELECTRICAL C125	RHR
Item #187	1 Single door E150C, REHEARSAL SPACE E150 From CLOSET	LHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

18	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
4	Lockset	Schlage L9080L 17A 626 LHR	626
2	Lockset	Schlage L9080L 17A 626 RHR	626
6	Cylinder	Best 1E74(Std.)C265RP3 626	626
6	Surface Closer	LCN 4040XP Rw/PA AL	AL
6	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
6	Wall Door Stop	Ives WS407CCV US32D	US32D
6	Weatherstripping	Pemko S88 D17	D

Heading #57 (Group: 55.04.70)

Item #188	1 Single door B121, CORRIDOR From FIRE CLOSET B121	LHR
Item #189	1 Single door E126A, CORRIDOR E3 From CUSTODIAL CLOSET E126A	LHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR - I-45

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Lockset	Schlage L9080L 17A 626 LHR	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
2	Surface Closer	LCN 4040XP Rw/PA AL	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
2	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Weatherstripping	Pemko S88 D17	D

Heading #58 (Group: 55.04.70)

Item #190	1 Single door D145, STAIR D145 From CORRIDOR	RH	~~RHR~~

3'0" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9080L 17A 626 RHR	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
1	Weatherstripping	Pemko S88 D17	D

Heading #59 (Group: 55.04.70.1)

Item #191 1 Single door B106, CORRIDOR From EQUIPMENT B106 LHR

3'6" x 7'0" x 1 3/4" - WD DR x HM FR - I-45

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9080L 17A 626 LHR	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
1	Weatherstripping	Pemko S88 D17	D

Heading #60 (Group: 55.05.60)

Item #192 1 Single door A148, CORRIDOR To CHANGING ROOM A148 RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9056P 17A 626 RH L583-375	626
1	Cylinder	Best 1E74(Std.)C4RP 626	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Door Silencer	Ives SR64 GRY	GRY

Heading #61 (Group: 55.06.07)

Item #193 1 Pair of doors H106G, AUXILIARY GYM H106 From P.E. STORAGE RHRA

4'0", 4'0" x 7'0" x 1 3/4" - HM DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Flush Bolt	Ives FB458 US26D	US26D
1	Dust Proof Strike	Ives DP2 US26D	US26D
1	Lockset	Schlage L9080P 17A 626 RHR LLL-Trim	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Flush Pull	Rockwood 94DLL US32D	US32D
2	Overhead Door Stop	Glynn-Johnson 906S US32D	US32D
2	Door Silencer	Ives SR64 GRY	GRY

Heading #62 (Group: 55.06.07.1)

Item #194	1 Pair of doors ~~H110,~~ H142B, AUXILIARY GYM H106 From ADAPTIVE P.E. STORAGE	RHRA
Item #195	1 Pair of doors H112, AUXILIARY GYM H106 From P.E. STORAGE H112	RHRA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

12	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652		652
4	Flush Bolt	Ives FB458 US26D		US26D
2	Dust Proof Strike	Ives DP2 US26D		US26D
2	Lockset	Schlage L9080P 17A 626 RHR LLL-Trim		626
2	Cylinder	Best 1E74(Std.)C265RP3 626		626
2	Flush Pull	Rockwood 94DLL US32D		US32D
4	Overhead Door Stop	Glynn-Johnson 904S US32D		US32D
4	Door Silencer	Ives SR64 GRY		GRY

Heading #63 (Group: 55.08.50)

Item #196	1 Single door B104B, PRINT SHOP B104 From SCHOOL STORE B108	LHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652		652
1	Lockset	Schlage L9071L 17A 626 LHR	L9466 is closest match to specified function.	626
2	Cylinder	Best 1E74(Std.)C265RP3 626		626
1	Wall Door Stop	Ives WS407CCV US32D		US32D
3	Door Silencer	Ives SR64 GRY		GRY

Heading #64 (Group: 55.08.58)

Item #197	1 Single door A213B, COMPUTER RESOURCE A213 From COMPUTER RESOURCE A215	RHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652		652
1	Lockset	Schlage L9071L 17A 626 RHR	L9466 is closest match to specified function.	626
2	Cylinder	Best 1E74(Std.)C265RP3 626		626
1	Overhead Door Stop	Glynn-Johnson 904S US32D		US32D
3	Door Silencer	Ives SR64 GRY		GRY

Heading #65 (Group: 55.08.58.1)

Item #198	1 Single door A215B, COMPUTER RESOURCE A215 From LIBRARY	RHR

3'6" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652		652
1	Lockset	Schlage L9071L 17A 626 RHR	L9466 is closest match to specified function.	626
2	Cylinder	Best 1E74(Std.)C265RP3 626		626
1	Overhead Door Stop	Glynn-Johnson 905S US32D		US32D
3	Door Silencer	Ives SR64 GRY		GRY

Heading #66 (Group: 55.37.00)

Item #199 1 Pair of doors D111, CORRIDOR D1 To WASHERS & DRYERS RHA

3'6", 1'6" x 7'0" x 1 3/4" - HM DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Flush Bolt	Ives FB458 US26D	US26D
1	Dust Proof Strike	Ives DP2 US26D	US26D
1	Lockset	Schlage L9070L 17A 626 RH	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
2	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Door Silencer	Ives SR64 GRY	GRY

Heading #67 (Group: 55.37.00.1)

Item #200 1 Pair of doors E107, CORRIDOR E1 To UNIFORM STORAGE E107 RHA
Item #201 1 Pair of doors E113, CORRIDOR E1 To COSTUME PROP STORAGE RHA

WD

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B I-45

12	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
4	Flush Bolt	Ives FB458 US26D	US26D
2	Dust Proof Strike	Ives DP2 US26D	US26D
2	Lockset	Schlage L9070L 17A 626 RH	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
4	Surface Closer	LCN 4040XP Rw/PA AL	AL
4	Wall Door Stop	Ives WS407CCV US32D	US32D
4	Door Silencer	Ives SR64 GRY	GRY

Heading #68 (Group: 55.37.00.1)

Item #202 1 Pair of doors E120A, CORRIDOR E2 To INSTRUMENT STORAGE E120 RHA
Item #203 1 Pair of doors E121, CORRIDOR E2 To DRUMLINE STORAGE E121 RHA

3'0", 3'0" x 7'0" x 1 3/4" - WD DR x HM FR - I-45

12	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
4	Flush Bolt	Ives FB458 US26D	US26D
2	Dust Proof Strike	Ives DP2 US26D	US26D
2	Lockset	Schlage L9070L 17A 626 RH	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
4	Surface Closer	LCN 4040XP Rw/PA AL	AL
4	Wall Door Stop	Ives WS407CCV US32D	US32D
4	Door Silencer	Ives SR64 GRY	GRY

Heading #69 (Group: 55.37.07)

Item #204 1 Pair of doors H122.1, A.D. OFFICE From DISPLAY H122.1 RHRA

2'6", 2'6" x 7'0" x 1 3/4" - HM DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Flush Bolt	Ives FB458 US26D	US26D
1	Dust Proof Strike	Ives DP2 US26D	US26D
1	Lockset	Schlage L9070L 17A 626 RHR	626
1	Cylinder	Best 1E74(Std.)C4RP 626	626
2	Overhead Door Stop	Glynn-Johnson 903S US32D	US32D
2	Door Silencer	Ives SR64 GRY	GRY

Heading #70 (Group: 55.37.12)

Item #205 1 Pair of doors G106, CORRIDOR G117 To ATHLETIC STORAGE G106 RHA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Flush Bolt	Ives FB458 US26D	US26D
1	Dust Proof Strike	Ives DP2 US26D	US26D
1	Lockset	Schlage L9070L 17A 626 RH	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Surface Closer	LCN 4040XP H AL	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
2	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Door Silencer	Ives SR64 GRY	GRY

Heading #71 (Group: 55.37.20)

Item #206 1 Pair of doors D105, CUSTODIAL SHOP To CUSTODIAL SHOP/RECEIVING RHA

3'0", 3'0" x 7'0" x 1 3/4" - WD DR x HM FR - I-45

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Flush Bolt	Ives FB458 US26D	US26D
1	Dust Proof Strike	Ives DP2 US26D	US26D
1	Lockset	Schlage L9070L 17A 626 RH	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Surface Closer	LCN 4040XP EDA AL - RH	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
2	Wall Door Stop	Ives WS407CCV US32D	US32D
1	Weatherstripping	Pemko S88 D25	D

Heading #72 (Group: 55.37.20)

Item #207	1 Pair of doors D105B, CORRIDOR To CUSTODIAL SHOP/RECEIVING	RHA
Item #208	1 Pair of doors D105C, CORRIDOR D1 To CUSTODIAL SHOP D105	RHA
Item #209	1 Pair of doors D114, FOOD PREP AREA D115 To STORAGE D114	RHA

3'0", 3'0" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B

18	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
6	Flush Bolt	Ives FB458 US26D	US26D
3	Dust Proof Strike	Ives DP2 US26D	US26D
3	Lockset	Schlage L9070L 17A 626 RH	626
3	Cylinder	Best 1E74(Std.)C265RP3 626	626
3	Surface Closer	LCN 4040XP EDA AL - RH	AL
6	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
6	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Weatherstripping	Pemko S88 D25	D

Heading #73 (Group: 55.37.20.1)

Item #210	1 Pair of doors E114, STAGE From CHAIR/PIANO STORAGE	RHRA

3'6", 3'6" x 7'0" x 1 3/4" - HM DR x HM FR - UL-B

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Flush Bolt	Ives FB458 US26D	US26D
1	Dust Proof Strike	Ives DP2 US26D	US26D
1	Lockset	Schlage L9070L 17A 626 RHR	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Surface Closer	LCN 4040XP EDA AL - RHR	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 41"	US32D
2	Wall Door Stop	Ives WS407CCV US32D	US32D
1	Weatherstripping	Pemko S88 D25	D

Heading #74 (Group: 55.37.50)

Item #211	1 Single door A103.1, ILC CLASSROOM B From CLOSET	RHR
Item #212	1 Single door A104.1, KCCS-B CLASSROOM From CLOSET	LHR
Item #213	1 Single door A110, CORRIDOR A152 To LITERACY COACH A110	LH
Item #214	1 Single door A122, SPECIAL NEEDS AREA To CONFERENCE A A122	RH
Item #215	1 Single door A123, DISCIPLINE RECEPTION To SRS A123	LH
Item #216	1 Single door A124, SPECIAL NEEDS AREA To CONFERENCE B A124	LH
Item #217	1 Single door A125, DISCIPLINE RECEPTION To SMALL CONFERENCE ROOM A125	RH
Item #218	1 Single door A126, CORRIDOR From SPECIAL NEEDS RECEPTION A126	RHR
Item #219	1 Single door A127, DISCIPLINE RECEPTION To VOLUNTEER A127	LH
Item #220	1 Single door A128, SPECIAL NEEDS AREA From TRANS. COORDINATOR A128	LHR
Item #221	1 Single door A130, SPECIAL NEEDS AREA To WORKROOM A130	LH
Item #222	1 Single door A132, SPECIAL NEEDS AREA To PSYCH A132	RH
Item #223	1 Single door A134, CORRIDOR From READ 180 CR A134	LHR
Item #224	1 Single door A136, CORRIDOR From READ 180 CR A136	RHR
Item #225	1 Single door A137, DISCIPLINE RECEPTION To RECORDS A137	RH
Item #226	1 Single door A149, CORRIDOR To TREAT SENSORY A149	LH
Item #227	1 Single door A150, CORRIDOR To KCCS OFFICE A150	RH
Item #228	1 Single door A153B, DISCIPLINE RECEPTION To SRO A153	RH
Item #229	1 Single door A203.1, ENGLISH CLASSROOM A203 From CLOSET	RHR
Item #230	1 Single door A204.1, ENGLISH CLASSROOM A204 From CLOSET	LHR
Item #231	1 Single door A219, JOURNALISM A218 From STORAGE A219	LHR
Item #232	1 Single door A221, DEPARTMENT OFFICE A220 To STORAGE A221	LH
Item #233	1 Single door A227, A.P. ASSISTANT A227 From A.P. OFFICE A228	LHR
Item #234	1 Single door A303.1, MATH CLASSROOM A303 From CLOSET	RHR
Item #235	1 Single door A304.1, MATH CLASSROOM A304 From CLOSET	LHR
Item #236	1 Single door A321, MATH DEPARTMENT OFFICE From STORAGE A321	LHR
Item #237	1 Single door A328, A.P. ASSISTANT A327 From A.P. OFFICE A328	LHR
Item #238	1 Single door B107, CORRIDOR To PRIVATE WAITING B107	RH
Item #239	1 Single door B108.1, SCHOOL STORE B108 To STORAGE	RH
Item #240	1 Single door B109, CORRIDOR To ASSISTANT PRINCIPAL B109	LH
Item #241	1 Single door B111B, CORRIDOR To MAIL/WORKROOM B111	RH
Item #242	1 Single door B115B, CONFERENCE ROOM B119 From PRINCIPAL B115	RHR
Item #243	1 Single door B116, GUIDANCE RECEPTION To RECORDS B116	LH
Item #244	1 Single door B119, MAIN RECEPTION To CONFERENCE ROOM B119	LH
Item #245	1 Single door B120, CORRIDOR To CONFERENCE ROOM B120	LH
Item #246	1 Single door B122, CORRIDOR To STORAGE B122	LH
Item #247	1 Single door B124, CORRIDOR To GUIDANCE COUNSELOR B124	RH
Item #248	1 Single door B126, CORRIDOR To GUIDANCE COUNSELOR B126	LH
Item #249	1 Single door B128, CORRIDOR To CAREER CENTER	RH
Item #250	1 Single door B129, NURSE AREA To NURSES OFFICE B129	LH
Item #251	1 Single door B131, NURSE AREA To COTS B131	RH
Item #252	1 Single door B138, CORRIDOR B162 To CONFERENCE ROOM B138	RH
Item #253	1 Single door B140, CORRIDOR B163 To SPEECH B140	LH
Item #254	1 Single door B142, CORRIDOR B163 To BEHAVIOR INTERVIEW B142	RH
Item #255	1 Single door B143, CORRIDOR B145 From TREATMENT B143	RHR
Item #256	1 Single door B143.1, TREATMENT B143 From SUPPLY CLOSET B143.1	LHR
Item #257	1 Single door B144, CORRIDOR B163 To GUIDANCE COUNSELOR B144	LH
Item #258	1 Single door B146, CORRIDOR B163 To GUIDANCE COUNSELOR B146	RH
Item #259	1 Single door B148, CORRIDOR B162 To TESTING / WORKROOM B148	LH
Item #260	1 Single door B153B, WELLNESS RECEPTION / WAITING To OFFICE B153	LH
Item #261	1 Single door B155, WELLNESS RECEPTION / WAITING To STORAGE B155	LH
Item #262	1 Single door B157, WELLNESS RECEPTION / WAITING To GROUP MEETING B157	RH
Item #263	1 Single door B159, WELLNESS RECEPTION / WAITING To OFFICE B159	LH
Item #264	1 Single door B165B, CORRIDOR B161 To SUPPLY / RECEIVING B165	RH
Item #265	1 Single door B167, CORRIDOR To LEAD ADMINASTRATIVE ASSISTANT	LH
Item #266	1 Single door B207, CIRCULATION B205 To OFFICE B207	RH

Item #267	1 Single door B210, WORLD LANGUAGE DEPARTMENT OFFICE From STORAGE B210	RHR
Item #268	1 Single door B211, CIRCULATION To EQUIPMENT STORAGE B211	LH
Item #269	1 Single door B212.1, WORLD LANGUAGE DEPARTMENT OFFICE From CLOSET	RHR
Item #270	1 Single door B309, LECTURE HALL B303 From AV STORAGE B309	LHR
Item #271	1 Single door B311, LECTURE HALL B303 From AV STORAGE B311	RHR
Item #272	1 Single door C101B, WELLNESS RECEPTION/WAITING To OFFICE C101	RH
Item #273	1 Single door C103, WELLNESS RECEPTION/WAITING To EXAM ROOM C103	LH
Item #274	1 Single door C104, CORRIDOR B163 To GUIDANCE COUNSELOR C104	RH
Item #275	1 Single door C111, DEPARTMENT OFFICE C107 To STORAGE C111	LH
Item #276	1 Single door C116.1, 9TH GRADE CLASSROOM C116 From CLOSET C116.1	RHR
Item #277	1 Single door C121.1, 9TH GRADE CLASSROOM C121 From CLOSET C121.1	LHR
Item #278	1 Single door C202.1, WORLD LANGUAGE CLASSROOM C202 From CLOSET C202.1	RHR
Item #279	1 Single door C213.1, HISTORY/SOCIAL STUDIES CLASSROOM C213 From CLOSET C213.1	LHR
Item #280	1 Single door C214.1, HISTORY/SOCIAL STUDIES CLASSROOM C214 From CLOSET C214.1	RHR
Item #281	1 Single door C222, HISTORY/SOCIAL STUDIES DEPARTMENT OFFICE To STORAGE C222	RH
Item #282	1 Single door E117, CORRIDOR E2 To DANCE OFFICE	LH
Item #283	1 Single door E131A, CORRIDOR E2 To SHARED OFFICES E131	LH ~~RH~~
Item #284	1 Single door E153, STRINGS ROOM E152 To STORAGE E153	LH
Item #285	1 Single door E154, STRINGS ROOM E152 To OFFICE E154	LH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

225	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
27	Lockset	Schlage L9070L 17A 626 LH	626
13	Lockset	Schlage L9070L 17A 626 LHR	626
22	Lockset	Schlage L9070L 17A 626 RH	626
13	Lockset	Schlage L9070L 17A 626 RHR	626
75	Cylinder	Best 1E74(Std.)C265RP3 626	626
75	Wall Door Stop	Ives WS407CCV US32D	US32D
225	Door Silencer	Ives SR64 GRY	GRY

Heading #75 (Group: 55.37.50)

Item #286	1 Single door B104.1, PRINT SHOP B104 From STORAGE	LHR

2'6" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 LHR	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #76 (Group: 55.37.50)

Item #287	1 Single door B147, NURSE AREA From KCCS NURSE B147	RHR
Item #288	1 Single door D117B, FOOD SERVICE D116 To WARE WASHING D117	RH
Item #289	1 Single door D119A, FOOD SERVICE D116 To CONCESSIONS D119	RH

3'6" x 7'0" x 1 3/4" - WD DR x HM FR

9	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Lockset	Schlage L9070L 17A 626 RH	626
1	Lockset	Schlage L9070L 17A 626 RHR	626
3	Cylinder	Best 1E74(Std.)C265RP3 626	626
3	Wall Door Stop	Ives WS407CCV US32D	US32D
9	Door Silencer	Ives SR64 GRY	GRY

Heading #77 (Group: 55.37.50)

Item #290	1 Single door D104A, CORRIDOR To CUSTODIAL OFFICE E104	RH
Item #291	1 Single door D104B, CUSTODIAL SHOP To CUSTODIAL OFFICE E104	RH
Item #292	1 Single door D110, CORRIDOR To OFFICE D110	LH
Item #293	1 Single door D111A, WASHERS & DRYERS From CLEANING/CHEMICAL STORAGE D111A	RHR
Item #294	1 Single door F107.1, CULINARY ARTS F107 From CLOSET F107.1	LHR
Item #295	1 Single door F109, PASSAGE F101.1 To LAUNDRY F109	RH
Item #296	1 Single door F111, PASSAGE F101.1 To ~~DRY STORAGE F105~~ OFFICE F111	RH
Item #297	1 Single door F115A, COMMUNICATION TECHNOLOGY F113 From MEDIA F115	LHR
Item #298	1 Single door F115B, 2-D STUDIO F119 From MEDIA F115	RHR
Item #299	1 Single door F123, 2-D STUDIO F119 To 2D STORAGE	LH
Item #300	1 Single door G102.1, FITNESS G102 From STORAGE	LHR
Item #301	1 Single door G124.1, TRAINER G124 From STORAGE G124.1	RHR
Item #302	1 Single door H109, ASSISTANT PRINCIPAL ASSISTANT H107 To ASSISTANT PRINCIPAL OFFICE	RH
Item #303	1 Single door H123.1, ECE CLASSROOM H123 From CLOSET H123.1	LHR
Item #304	1 Single door H125A, ECE CLASSROOM H119 To LAB H125	LH
Item #305	1 Single door H125B, ECE CLASSROOM H123 To LAB H125	RH
Item #306	1 Single door H127A, ECE CLASSROOM H119 To ECE OBSERVATION H127	LH
Item #307	1 Single door H127B, ECE CLASSROOM H123 To ECE OBSERVATION H127	RH
Item #308	1 Single door H128A, LOCKER ROOM VESTIBULE To FACULTY/OFFICIALS H128	RH
Item #309	1 Single door H141.1, HVAC CLASSROOM H141 CLOSET H141.1	LHR
Item #310	1 Single door H143.1, CONSTRUCTION SCIENCES CLASSROOM From CLOSET H143.1	RHR
Item #311	1 Single door H147.1, JROTC CLASSROOM H147 From CLOSET H147.1	RHR

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

66	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
4	Lockset	Schlage L9070L 17A 626 LH	626
5	Lockset	Schlage L9070L 17A 626 LHR	626
8	Lockset	Schlage L9070L 17A 626 RH	626
5	Lockset	Schlage L9070L 17A 626 RHR	626
22	Cylinder	Best 1E74(Std.)C265RP3 626	626
22	Wall Door Stop	Ives WS407CCV US32D	US32D
66	Door Silencer	Ives SR64 GRY	GRY

Heading #78 (Group: 55.37.50)

Item #312 1 Single door E120B, CORRIDOR E2 To INSTRUMENT STORAGE E120 RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR - I-45

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 RH	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #79 (Group: 55.37.50)

Item #313 1 Single door F105, PASSAGE F101.1 To ~~OFFICE F111~~ DRY STORAGE F105 RH
Item #314 1 Single door F107B, PASSAGE F101.1 From CULINARY ARTS F107 RHR
Item #315 1 Single door F113.1, COMMUNICATION TECHNOLOGY F113 To TV F113.1 RH
Item #316 1 Single door F127, 3-D STUDIO F125 To 3D STORAGE LH
Item #317 1 Single door F129, 3D STORAGE From KILN F129 RHR
Item #318 1 Single door H113.1, CNA CLASSROOM H113 To STORAGE H113.1 LH
Item #319 1 Single door H117A, CNA CLASSROOM H113 From CNA LAB H117 LHR
Item #320 1 Single door H117B, CNA CLASSROOM H115 From CNA LAB H117 RHR

3'6" x 7'0" x 1 3/4" - HM DR x HM FR

24	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Lockset	Schlage L9070L 17A 626 LH	626
1	Lockset	Schlage L9070L 17A 626 LHR	626
2	Lockset	Schlage L9070L 17A 626 RH	626
3	Lockset	Schlage L9070L 17A 626 RHR	626
8	Cylinder	Best 1E74(Std.)C265RP3 626	626
8	Wall Door Stop	Ives WS407CCV US32D	US32D
24	Door Silencer	Ives SR64 GRY	GRY

Heading #80 (Group: 55.37.51)

Item #321 1 Single door B115A, ADMINASTRATIVE ASSISTANT To PRINCIPAL B115 RH
Item #322 1 Single door B209, CIRCULATION B205 To WORKROOM B209 RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Lockset	Schlage L9070L 17A 626 RH	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
2	Floor Door Stop	Ives FS438 US26D	US26D
6	Door Silencer	Ives SR64 GRY	GRY

Heading #81 (Group: 55.37.51)

Item #323 1 Single door ~~H140A~~ H112A, CORRIDOR H157 To JROTC UNIFORM STORAGE RH

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 RH	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Floor Door Stop	Ives FS438 US26D	US26D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #82 (Group: 55.37.57)

Item #324	1 Single door A101.1, ILC CLASSROOM A From CLOSET		LHR
Item #325	1 Single door A102.1, KCCS-A CLASSROOM From CLOSET		RHR
Item #326	1 Single door A107.1, ILC CLASSROOM C From CLOSET		LHR
Item #327	1 Single door A108.1, KCCS-C CLASSROOM From CLOSET		RHR
Item #328	1 Single door A109.1, DAP CLASSROOM From CLOSET		RHR
Item #329	1 Single door A117, CORRIDOR To DISCIPLINE RECEPTION A117		RH
Item #330	1 Single door A121, DISCIPLINE RECEPTION From SUPPLY ROOM A121		LHR
Item #331	1 Single door A201.1, ENGLISH CLASSROOM A201 From CLOSET		LHR
Item #332	1 Single door A202.1, ENGLISH CLASSROOM A202 From CLOSET		RHR
Item #333	1 Single door A207.1, ENGLISH CLASSROOM A207 From CLOSET		LHR
Item #334	1 Single door A208.1, ENGLISH CLASSROOM A208 From CLOSET		RHR
Item #335	1 Single door A209.1, ENGLISH CLASSROOM A209 From CLOSET		RHR
Item #336	1 Single door A210.1, ENGLISH CLASSROOM A210 From CLOSET		RHR
Item #337	1 Single door A212.1, ENGLISH CLASSROOM A212 From CLOSET		LHR
Item #338	1 Single door A214.1, ENGLISH CLASSROOM A214 From CLOSET		RHR
Item #339	1 Single door A216.1, JDG CLASSROOM A216 From CLOSET		LHR
Item #340	1 Single door A301.1, MATH CLASSROOM A301 From CLOSET		LHR
Item #341	1 Single door A302.1, MATH CLASSROOM 302 From CLOSET	RHR	~~LHR~~
Item #342	1 Single door A307.1, MATH CLASSROOM A307 From CLOSET		LHR
Item #343	1 Single door A308.1, MATH CLASSROOM A308 From CLOSET		RHR
Item #344	1 Single door A309.1, MATH CLASSROOM A309 From CLOSET		RHR
Item #345	1 Single door A310.1, MATH CLASSROOM A310 From CLOSET		LHR
Item #346	1 Single door A311.1, MATH CLASSROOM A311 From CLOSET		LHR
Item #347	1 Single door A312.1, MATH CLASSROOM A312 From CLOSET		RHR
Item #348	1 Single door A313.1, MATH CLASSROOM A313 From CLOSET		RHR
Item #349	1 Single door A314.1, MATH CLASSROOM A314 From CLOSET		LHR
Item #350	1 Single door A315.1, BFM LAB 1 A315 From CLOSET		RHR
Item #351	1 Single door A316.1, BFM LAB 2 A316 From CLOSET		LHR
Item #352	1 Single door B110, PRINT SHOP From OFFICE B110		LHR
Item #353	1 Single door B135, NURSE AREA From TREATMENT B135		LHR
Item #354	1 Single door B209B, WORKROOM B209 To EQUIPMENT STORAGE B211		RH
Item #355	1 Single door B301.1, BFM LAB 3 From CLOSET B301.1		LHR
Item #356	1 Single door B308.1, PHYSICS CLASSROOM B308 From CLOSET B308.1		RHR
Item #357	1 Single door B310.1, SENIOR SCIENCE CLASSROOM From CLOSET B310.1		LHR
Item #358	1 Single door B313.1, COMMON LAB B313 From CLOSET B313.1		RHR
Item #359	1 Single door C108.1, 9TH GRADE CLASSROOM C108 From CLOSET C108.1		RHR
Item #360	1 Single door C110.1, 9TH GRADE CLASSROOM C110 From CLOSET C110.1		RHR
Item #361	1 Single door C112.1, 9TH GRADE CLASSROOM C112 From CLOSET C112.1		LHR
Item #362	1 Single door C113.1, 9TH GRADE CLASSROOM C113 From CLOSET C113.1		LHR
Item #363	1 Single door C115.1, 9TH GRADE CLASSROOM C115 From CLOSET C115.1		LHR
Item #364	1 Single door C117.1, 9TH GRADE CLASSROOM C117 From CLOSET C117.1		RHR
Item #365	1 Single door C118.1, 9TH GRADE CLASSROOM C118 From CLOSET C118.1		LHR
Item #366	1 Single door C123.1, 9TH GRADE CLASSROOM C123 From CLOSET		RHR
Item #367	1 Single door C201.1, WORLD LANGUAGE CLASSROOM C201 From CLOSET C201.1		LHR
Item #368	1 Single door C203.1, WORLD LANGUAGE CLASSROOM C203 From CLOSET C203.1		RHR
Item #369	1 Single door C204.1, WORLD LANGUAGE CLASSROOM C204 From CLOSET C204.1		LHR
Item #370	1 Single door C205.1, WORLD LANGUAGE CLASSROOM C205 From CLOSET C205.1		LHR
Item #371	1 Single door C206.1, WORLD LANGUAGE CLASSROOM C206 From CLOSET C206.1		RHR
Item #372	1 Single door C207.1, HISTORY/SOCIAL STUDIES CLASSROOM C207 From CLOSET C207.1		LHR
Item #373	1 Single door C208.1, HISTORY/SOCIAL STUDIES CLASSROOM C208 From CLOSET C208.1		RHR
Item #374	1 Single door C209.1, HISTORY/SOCIAL STUDIES CLASSROOM C209 From CLOSET C209.1		RHR
Item #375	1 Single door C210.1, HISTORY/SOCIAL STUDIES CLASSROOM C210 From CLOSET C210.1		LHR
Item #376	1 Single door C215.1, HISTORY/SOCIAL STUDIES CLASSROOM C215 From CLOSET C215.1		RHR
Item #377	1 Single door C216.1, HISTORY/SOCIAL STUDIES CLASSROOM C216 From CLOSET C216.1		LHR
Item #378	1 Single door C301.1, BIOLOGY CLASSROOM C301 From CLOSET DC301.1		RHR
Item #379	1 Single door C302.1, CHEMISTRY CLASSROOM C302 From CLOSET C302.1		LHR

Item #380	1 Single door C303.1, BIOLOGY CLASSROOM C303 From CLOSET C303.1	RHR
Item #381	1 Single door C304.1, CHEMISTRY CLASSROOM C304 From CLOSET	LHR
Item #382	1 Single door C305.1, BIOLOGY CLASSROOM C305 From CLOSET C305.1	LHR
Item #383	1 Single door C306.1, CHEMISTRY CLASSROOM C306 From CLOSET C306.1	RHR
Item #384	1 Single door C311.1, 9TH GRADE SCIENCE CLASSROOM C311 From CLOSET C311.1	LHR
Item #385	1 Single door C312.1, 9TH GRADE SCIENCE CLASSROOM C312 From CLOSET C312.1	LHR
Item #386	1 Single door C316, DEPARTMENT OFFICE C314 From STORAGE C316	RHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

189	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
33	Lockset	Schlage L9070L 17A 626 LHR	626
2	Lockset	Schlage L9070L 17A 626 RH	626
28	Lockset	Schlage L9070L 17A 626 RHR	626
63	Cylinder	Best 1E74(Std.)C265RP3 626	626
63	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
189	Door Silencer	Ives SR64 GRY	GRY

Heading #83 (Group: 55.37.57)

Item #387	1 Single door H119.1, ECE CLASSROOM H119 From CLOSET H119.1	LHR
Item #388	1 Single door H124B, P.E. LOCKER ROOM To P.E. OFFICE	RH
Item #389	1 Single door H136B, P.E. LOCKER ROOM H138 To P.E. OFFICE H136	LH
Item #390	1 Single door ~~H140B~~, JROTC OFFICE H142 To JROTC UNIFORM STORAGE H112B	RH
Item #391	1 Single door H145.1, AGRISCIENCE CLASSROOM H145 From CLOSET H145.1	LHR

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

15	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 LH	626
2	Lockset	Schlage L9070L 17A 626 LHR	626
2	Lockset	Schlage L9070L 17A 626 RH	626
5	Cylinder	Best 1E74(Std.)C265RP3 626	626
5	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
15	Door Silencer	Ives SR64 GRY	GRY

Heading #84 (Group: 55.37.59)

Item #392	1 Single door E129A, LARGE BAND ROOM To SMALL BAND ROOM/REHEARSAL ROOM	RH
Item #393	1 Single door E131B, LARGE BAND ROOM E130 From SHARED OFFICES E131	RHR
Item #394	1 Single door E132, LARGE BAND ROOM E130 From INSTRUMENT PRACTICE ROOM E132	RHR
Item #395	1 Single door E133, LARGE BAND ROOM E130 From INSTRUMENT PRACTICE ROOM E133	RHR
Item #396	1 Single door E134B, CHORAL ROOM E137 From MUSIC DEPARTMENT OFFICE E134	LHR
Item #397	1 Single door E135, CHORAL ROOM E137 From CHORAL PRACTICE A E135	LHR
Item #398	1 Single door E136, CHORAL ROOM E137 From CHORAL PRACTICE B E136	LHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

	21	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
	3	Lockset	Schlage L9070L 17A 626 LHR	626
	1	Lockset	Schlage L9070L 17A 626 RH	626
	3	Lockset	Schlage L9070L 17A 626 RHR	626
	7	Cylinder	Best 1E74(Std.)C265RP3 626	626
	7	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
14	7	Weatherstripping	Pemko S88 D17	D
	7	Threshold	Pemko 271A36" (MSES25SS)	A
	7	Door Sweep	Pemko 3452CNB36"	C

1. INSTALL PERIMETER GASKETING IN TWO ROWS.

Heading #85 (Group: 55.37.59.1)

Item #399	1 Pair of doors E152, CORRIDOR E2 From	RHRA

3'0", 3'0" x 7'0" x 1 3/4" - WD DR x HM FR

	6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
	2	Flush Bolt	Ives FB458 US26D	US26D
	1	Dust Proof Strike	Ives DP2 US26D	US26D
	1	Lockset	Schlage L9070L 17A 626 RHR	626
	1	Cylinder	Best 1E74(Std.)C265RP3 626	626
	2	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
2	1	Weatherstripping	Pemko S88 D25	D
	1	Threshold	Pemko 271A72" (MSES25SS)	A
	2	Door Sweep	Pemko 3452CNB36"	C

1. INSTALL PERIMETER GASKETING IN TWO ROWS.

Heading #86 (Group: 55.37.60)

Item #400	1 Single door A220, CORRIDOR To DEPARTMENT OFFICE A220	LH
Item #401	1 Single door A228, CORRIDOR To A.P. ASSISTANT A227	RH
Item #402	1 Single door A317, CORRIDOR To MATH DEPARTMENT OFFICE	LH
Item #403	1 Single door A327, CORRIDOR To A.P. ASSISTANT A327	RH
Item #404	1 Single door B105, CORRIDOR To MAIN RECEPTION	
Item #405	1 Single door B130, CORRIDOR To BANK B130	LH
Item #406	1 Single door B153A, CORRIDOR To OFFICE B153	LH
Item #407	1 Single door B165A, CORRIDOR To SUPPLY / RECEIVING B165	LH
Item #408	1 Single door B214, CORRIDOR To WORLD LANGUAGE DEPARTMENT OFFICE	RH
Item #409	1 Single door C101A, LOCKER COMMONS C128 To OFFICE C101	RH
Item #410	1 Single door C224, CORRIDOR To HISTORY/SOCIAL STUDIES DEPARTMENT OFFICE	RH
Item #411	1 Single door C314, CORRIDOR To DEPARTMENT OFFICE C314	RH
Item #412	1 Single door E115, CORRIDOR E1 To MAKE-UP-DRESSING ROOM E115	RH
Item #413	1 Single door E134A, CORRIDOR E2 To MUSIC DEPARTMENT OFFICE E134	LH
Item #414	1 Single door E138, SOUTH AUDITORIUM VESTIBULE To TICKET BOOTH E138 ASI SKETCH A-1556	RH
Item #415	1 Single door E200B, BALCONY From LIGHT & SOUND ROOM	LHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

48	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
7	Lockset	Schlage L9070L 17A 626 LH	626
1	Lockset	Schlage L9070L 17A 626 LHR	626
8	Lockset	Schlage L9070L 17A 626 RH	626
16	Cylinder	Best 1E74(Std.)C265RP3 626	626
16	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
16	Surface Closer	LCN 4040XP Rw/PA AL	AL
16	Wall Door Stop	Ives WS407CCV US32D	US32D
48	Door Silencer	Ives SR64 GRY	GRY

Heading #87 (Group: 55.37.60)

Item #416	1 Single door D108, CORRIDOR To LOCKERS D108	RH
Item #417	1 Single door F117, CORRIDOR F100 To DEPARTMENT OFFICE F117	RH
Item #418	1 Single door H102, CORRIDOR H155 To DRIVERS ED OFFICE H102	RHR ~~RH~~
Item #419	1 Single door H103, LOBBY H166 To STAFF WORKROOM	RH
Item #420	1 Single door H107, LOBBY H166 To ASSISTANT PRINCIPAL ASSISTANT H107	LH
Item #421	1 Single door H134A, VESTIBULE H132 To FACULTY/OFFICIALS H134	LH
Item #422	1 Single door H142, CORRIDOR H157 To ~~JROTC OFFICE~~ PE STOR. (HW GROUP: 55.04.70)	LH
Item #423	1 Single door H153, CORRIDOR H165 To TECH OFFICE H153	RH

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

24	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
3	Lockset	Schlage L9070L 17A 626 LH	626
5	Lockset	Schlage L9070L 17A 626 RH	626
8	Cylinder	Best 1E74(Std.)C265RP3 626	626
8	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
8	Surface Closer	LCN 4040XP Rw/PA AL	AL
8	Wall Door Stop	Ives WS407CCV US32D	US32D
24	Door Silencer	Ives SR64 GRY	GRY

Heading #88 (Group: 55.37.60.1)

Item #424 1 Single door G124, VESTIBULE H161 To TRAINER G124 RH

3'6" x 7'0" x 1 3/4" - HM DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 RH	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #89 (Group: 55.37.61)

Item #425 1 Single door E111, CORRIDOR E1 To MAKE-UP-DRESSING ROOM E111 LH
Item #426 1 Single door E151, REHEARSAL SPACE E150 To DRESSING ROOM E151 LH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Lockset	Schlage L9070L 17A 626 LH	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
2	Surface Closer	LCN 4040XP Rw/PA AL	AL
2	Floor Door Stop	Ives FS438 US26D	US26D
6	Door Silencer	Ives SR64 GRY	GRY

Heading #90 (Group: 55.37.62)

Item #427 1 Single door E105, CORRIDOR E1 To LOCKERS E105 RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 RH	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Surface Closer	LCN 4040XP H AL	AL
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #91 (Group: 55.37.62)

Item #428 1 Single door H145.2, AGRISCIENCE CLASSROOM H145 To ANIMAL LABH145.2 RH

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 RH	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Surface Closer	LCN 4040XP H AL	AL
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #92 (Group: 55.37.62.1)

Item #429 1 Single door D115, CORRIDOR E3 From FOOD PREP AREA D115 LHR
Item #430 1 Single door G114A, CORRIDOR G117 To LAUNDRY/UNIFORM STORAGE G114 RH

3'6" x 7'0" x 1 3/4" - HM DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 LHR	626
1	Lockset	Schlage L9070L 17A 626 RH	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
2	Surface Closer	LCN 4040XP H AL	AL
2	Wall Door Stop	Ives WS407CCV US32D	US32D
6	Door Silencer	Ives SR64 GRY	GRY

Heading #93 (Group: 55.37.69)

Item #431 1 Single door E122, CORRIDOR E2 To MUSIC TECH LAB E122 RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 RH	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Weatherstripping	Pemko S88 D17	D
1	Threshold	Pemko 271A36" (MSES25SS)	A
1	Door Sweep	Pemko 3452CNB36"	C

Heading #94 (Group: 55.37.71)

Item #432 1 Single door B312B, SCIENCE PREP A B312 From CHEMISTRY CLASSROOM C302 LHR

~~3'0" x 7'0" x 1 3/4" - WD DR x HM FR~~ CASED OPENING

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 LHR	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Floor Door Stop	Ives FS438 US26D	US26D
1	Weatherstripping	Pemko S88 D17	D

Heading #95 (Group: 55.37.71.1)

Item #433 1 Single door C302C, CHEMISTRY CLASSROOM C302 TO SCIENCE PREP A B312 RHR

7'0"

3'4" x 7'4" x 1 3/4" - WD DR x HM FR I-90

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 RHR	626
1	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 38"	US32D
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Floor Door Stop	Ives FS438 US26D	US26D
1	Weatherstripping	Pemko S88 D17	D

Heading #96 (Group: 55.38.10)

Item #434 1 Pair of doors B125, CORRIDOR To NURSE RHA / LHA

3'0", 3'0" x 7'0" x 1 3/4" - WD DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Flush Bolt	Ives FB458 US26D	US26D
1	Dust Proof Strike	Ives DP2 US26D	US26D
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D
1	Lockset	Schlage L9071L 17A 626 RH	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
2	Wall Door Stop	Ives WS407CCV US32D	US32D
2	Door Silencer	Ives SR64 GRY	GRY

Heading #97 (Group: 55.38.60)

Item #435	1 Single door A101, CORRIDOR From ILC CLASSROOM A A101		RHR
Item #436	1 Single door A103, CORRIDOR From ILC CLASSROOM B A103		LHR
Item #437	1 Single door A107, CORRIDOR From ILC CLASSROOM C A107		RHR
Item #438	1 Single door A109, CORRIDOR From DAP CLASSROOM A109		LHR
Item #439	1 Single door A111, CORRIDOR From COMMON LAB A111		LHR
Item #440	1 Single door A112, CORRIDOR A152 From LIFE SKILLS A112		LHR
Item #441	1 Single door A116, SPECIAL NEEDS AREA To CASE MANAGER 2 A116		LH
Item #442	1 Single door A118, SPECIAL NEEDS AREA From RECORDS A118		RHR
Item #443	1 Single door A120, SPECIAL NEEDS AREA To CASE MANAGER 1 A120		RH
Item #444	1 Single door A138, CORRIDOR To PRE-VOCATION ROOM A138		RH
Item #445	1 Single door A143, CORRIDOR To PULL-OUT ROOM A143		RH
Item #446	1 Single door A153A, CORRIDOR To SRO A153		LH
Item #447	1 Single door A201, CORRIDOR From ENGLISH CLASSROOM A201		RHR
Item #448	1 Single door A202, CORRIDOR From ENGLISH CLASSROOM A202		LHR
Item #449	1 Single door A203, CORRIDOR From ENGLISH CLASSROOM A203		LHR
Item #450	1 Single door A204, CORRIDOR From ENGLISH CLASSROOM A204		RHR
Item #451	1 Single door A207, CORRIDOR From ENGLISH CLASSROOM A207		RHR
Item #452	1 Single door A208, CORRIDOR From ENGLISH CLASSROOM A208		LHR
Item #453	1 Single door A209, CORRIDOR From ENGLISH CLASSROOM A209		LHR
Item #454	1 Single door A210, CORRIDOR From ENGLISH CLASSROOM A210		LHR
Item #455	1 Single door A212, CORRIDOR From ENGLISH CLASSROOM A212		RHR
Item #456	1 Single door A213A, CORRIDOR From COMPUTER RESOURCE A213		RHR
Item #457	1 Single door A214, CORRIDOR From ENGLISH CLASSROOM A214		LHR
Item #458	1 Single door A215A, CORRIDOR From COMPUTER RESOURCE A215		LHR
Item #459	1 Single door A216, CORRIDOR From JDG CLASSROOM A216		RHR
Item #460	1 Single door A217, CORRIDOR To YEARBOOK A217		RH
Item #461	1 Single door A218, CORRIDOR To JOURNALISM A218		RH
Item #462	1 Single door A301, CORRIDOR From MATH CLASSROOM A301		RHR
Item #463	1 Single door A302, CORRIDOR From MATH CLASSROOM 302	LHR	~~RHR~~
Item #464	1 Single door A303, CORRIDOR From MATH CLASSROOM A303		LHR
Item #465	1 Single door A304, CORRIDOR From MATH CLASSROOM A304		RHR
Item #466	1 Single door A307, CORRIDOR From MATH CLASSROOM A307		RHR
Item #467	1 Single door A308, CORRIDOR From MATH CLASSROOM A308		LHR
Item #468	1 Single door A309, CORRIDOR From MATH CLASSROOM A309		LHR
Item #469	1 Single door A310, CORRIDOR From MATH CLASSROOM A310		RHR
Item #470	1 Single door A311, CORRIDOR From MATH CLASSROOM A311		RHR
Item #471	1 Single door A312, CORRIDOR From MATH CLASSROOM A312		LHR
Item #472	1 Single door A313, CORRIDOR From MATH CLASSROOM A313		LHR
Item #473	1 Single door A314, CORRIDOR From MATH CLASSROOM A314		RHR
Item #474	1 Single door A315, CORRIDOR From BFM LAB 1 A315	LHR	~~RHR~~
Item #475	1 Single door A316, CORRIDOR From BFM LAB 2 A316		RHR
Item #476	1 Single door A320, CORRIDOR To SEMINAR ROOM A320		LH
Item #477	1 Single door A329, CORRIDOR To SEMINAR ROOM A329		LH
Item #478	1 Single door B108, CORRIDOR To SCHOOL STORE		RH
Item #479	1 Single door B112, CORRIDOR To WAITING B112		LH
Item #480	1 Single door B151, CORRIDOR To WELLNESS RECEPTION / WAITING		RH
Item #481	1 Single door B163, LOCKER COMMONS From CORRIDOR B163		RHR
Item #482	1 Single door B212, CORRIDOR From WORLD LANGUAGE DEPARTMENT OFFICE		LHR
Item #483	1 Single door B301, CORRIDOR From BFM LAB 3		LHR
Item #484	1 Single door B313, CORRIDOR From COMMON LAB B313		RHR
Item #485	1 Single door C107, LOCKER COMMONS C128 From DEPARTMENT OFFICE C107		RHR
Item #486	1 Single door C108, CORRIDOR C120 From 9TH GRADE CLASSROOM C108		LHR
Item #487	1 Single door C110, CORRIDOR C120 From 9TH GRADE CLASSROOM C110		LHR
Item #488	1 Single door C112, CORRIDOR C120 From 9TH GRADE CLASSROOM C112		RHR
Item #489	1 Single door C113, CORRIDOR From 9TH GRADE CLASSROOM C113		RHR
Item #490	1 Single door C115, CORRIDOR From 9TH GRADE CLASSROOM C115		RHR

Item #491	1 Single door C116, CORRIDOR From 9TH GRADE CLASSROOM C116	LHR
Item #492	1 Single door C117, CORRIDOR From 9TH GRADE CLASSROOM C117	LHR
Item #493	1 Single door C118, CORRIDOR From 9TH GRADE CLASSROOM C118	RHR
Item #494	1 Single door C121, CORRIDOR From 9TH GRADE CLASSROOM C121	RHR
Item #495	1 Single door C122, CORRIDOR To SEMINAR ROOM C122	LH
Item #496	1 Single door C123, CORRIDOR From 9TH GRADE CLASSROOM C123	LHR
Item #497	1 Single door C127, CORRIDOR To SEMINAR ROOM C127	RH
Item #498	1 Single door C201, CORRIDOR From WORLD LANGUAGE CLASSROOM C201	RHR
Item #499	1 Single door C202, CORRIDOR From WORLD LANGUAGE CLASSROOM C202	LHR
Item #500	1 Single door C203, CORRIDOR From WORLD LANGUAGE CLASSROOM C203	LHR
Item #501	1 Single door C204, CORRIDOR From WORLD LANGUAGE CLASSROOM C204	RHR
Item #502	1 Single door C205, CORRIDOR From WORLD LANGUAGE CLASSROOM C205	RHR
Item #503	1 Single door C206, CORRIDOR From WORLD LANGUAGE CLASSROOM C206	RHR
Item #504	1 Single door C207, CORRIDOR From HISTORY/SOCIAL STUDIES CLASSROOM C207	RHR
Item #505	1 Single door C208, CORRIDOR From HISTORY/SOCIAL STUDIES CLASSROOM C208	LHR
Item #506	1 Single door C209, CORRIDOR From HISTORY/SOCIAL STUDIES CLASSROOM C209	LHR
Item #507	1 Single door C210, CORRIDOR From HISTORY/SOCIAL STUDIES CLASSROOM C210	RHR
Item #508	1 Single door C213, CORRIDOR From HISTORY/SOCIAL STUDIES CLASSROOM C213	RHR
Item #509	1 Single door C214, CORRIDOR From HISTORY/SOCIAL STUDIES CLASSROOM C214	LHR
Item #510	1 Single door C215, CORRIDOR From HISTORY/SOCIAL STUDIES CLASSROOM C215	LHR
Item #511	1 Single door C216, CORRIDOR From HISTORY/SOCIAL STUDIES CLASSROOM C216	RHR
Item #512	1 Single door C217, CORRIDOR To SEMINAR ROOM C217	LH
Item #513	1 Single door C225, CORRIDOR To SEMINAR ROOM C225	LH
Item #514	1 Single door C311, CORRIDOR To 9TH GRADE SCIENCE CLASSROOM C311	LHR ~~LH~~
Item #515	1 Single door C312, CORRIDOR From 9TH GRADE SCIENCE CLASSROOM C312	RHR
Item #516	1 Single door C320A, CORRIDOR To SCIENCE PREP B C320	LH
Item #517	1 Single door C320B, CORRIDOR To SCIENCE PREP B C320	RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

249	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
10	Lockset	Schlage L9071L 17A 626 LH	626
29	Lockset	Schlage L9071L 17A 626 LHR	626
9	Lockset	Schlage L9071L 17A 626 RH	626
35	Lockset	Schlage L9071L 17A 626 RHR	626
166	Cylinder	Best 1E74(Std.)C265RP3 626	626
83	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
10	Surface Closer	LCN 4040XP EDA AL - LH	AL
29	Surface Closer	LCN 4040XP EDA AL - LHR	AL
9	Surface Closer	LCN 4040XP EDA AL - RH	AL
35	Surface Closer	LCN 4040XP EDA AL - RHR	AL
83	Weatherstripping	Pemko S88 D17	D

Refer to general note regarding classroom security function. Typical.

Heading #98 (Group: 55.38.60)

Item #518	1 Single door B160, CORRIDOR B161 From DISCIPLINE RECEPTION	RHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR - UL-C I-45

3	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9071L 17A 626 RHR	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Surface Closer	LCN 4040XP EDA AL - RHR	AL
1	Weatherstripping	Pemko S88 D17	D

Heading #99 (Group: 55.38.60)

Item #519	1 Single door F107A, CORRIDOR F100 From CULINARY ARTS F107	LHR
Item #520	1 Single door G108, CORRIDOR G117 To VESTIBULE G108	RH
Item #521	1 Single door G116, CORRIDOR G117 To VESTIBULE G116	LH
Item #522	1 Single door H119A, CORRIDOR H155 From ECE CLASSROOM H119	RHR
Item #523	1 Single door H123A, CORRIDOR H155 From ECE CLASSROOM H123	LHR
Item #524	1 Single door H131A, CORRIDOR H137 From CLASSROOM H131	LHR
Item #525	1 Single door H133A, CORRIDOR H137 From CLASSROOM H133	LHR
Item #526	1 Single door H135A, CORRIDOR H137 From CLASSROOM H135	RHR
Item #527	1 Single door H143, CORRIDOR H157 From CONSTRUCTION SCIENCES CLASSROOM	LHR
Item #528	1 Single door H144.1, CORRIDOR H165 To VESTIBULE H144.1	RH
Item #529	1 Single door H145, CORRIDOR H157 From AGRISCIENCE CLASSROOM H145	RHR
Item #530	1 Single door H146.1, CORRIDOR H165 To VESTIBULE H146.1	LH
Item #531	1 Single door H147, CORRIDOR H157 From JROTC CLASSROOM H147	RHR

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

39	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
2	Lockset	Schlage L9071L 17A 626 LH	626
5	Lockset	Schlage L9071L 17A 626 LHR	626
2	Lockset	Schlage L9071L 17A 626 RH	626
4	Lockset	Schlage L9071L 17A 626 RHR	626
26	Cylinder	Best 1E74(Std.)C265RP3 626	626
13	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
2	Surface Closer	LCN 4040XP EDA AL - LH	AL
5	Surface Closer	LCN 4040XP EDA AL - LHR	AL
2	Surface Closer	LCN 4040XP EDA AL - RH	AL
4	Surface Closer	LCN 4040XP EDA AL - RHR	AL
13	Weatherstripping	Pemko S88 D17	D

Heading #100 (Group: 55.38.60.1)

Item #532	1 Single door A104, CORRIDOR From KCCS-B CLASSROOM A104 ← ADD OPERATOR	RHR
Item #533	1 Single door A108, CORRIDOR From KCCS-C CLASSROOM A108	LHR
Item #534	1 Single door B104A, ELEVATOR LOBBY B164 To PRINT SHOP B104	RH

3'6" x 7'0" x 1 3/4" - WD DR x HM FR

9	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9071L 17A 626 LHR	626
1	Lockset	Schlage L9071L 17A 626 RH	626
1	Lockset	Schlage L9071L 17A 626 RHR	626
6	Cylinder	Best 1E74(Std.)C265RP3 626	626
3	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
1	Surface Closer	LCN 4040XP EDA AL - LHR	AL
1	Surface Closer	LCN 4040XP EDA AL - RH	AL
1	Surface Closer	LCN 4040XP EDA AL - RHR	AL
3	Weatherstripping	Pemko S88 D25	D

Heading #101 (Group: 55.38.60.1)

Item #535	1 Single door F113, CORRIDOR F100 From COMMUNICATION TECHNOLOGY F113	RHR
Item #536	1 Single door F119, CORRIDOR F100 From 2-D STUDIO F119	LHR
Item #537	1 Single door F125, CORRIDOR F100 From 3-D STUDIO F125	LHR
Item #538	1 Single door G122, CORRIDOR G117 To TEAM MEETING G122	RH
Item #539	1 Single door H113, CORRIDOR H155 From CNA CLASSROOM H113	LHR
Item #540	1 Single door H115, CORRIDOR H155 From CNA CLASSROOM H115	LHR

3'6" x 7'0" x 1 3/4" - HM DR x HM FR

18	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
4	Lockset	Schlage L9071L 17A 626 LHR	626
1	Lockset	Schlage L9071L 17A 626 RH	626
1	Lockset	Schlage L9071L 17A 626 RHR	626
12	Cylinder	Best 1E74(Std.)C265RP3 626	626
6	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
4	Surface Closer	LCN 4040XP EDA AL - LHR	AL
1	Surface Closer	LCN 4040XP EDA AL - RH	AL
1	Surface Closer	LCN 4040XP EDA AL - RHR	AL
6	Weatherstripping	Pemko S88 D25	D

Heading #102 (Group: 55.38.65)

Item #541	1 Single door B312A, CORRIDOR From SCIENCE PREP A B312	LHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9071L 17A 626 LHR	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Surface Closer	LCN 4040XP S CUSH AL	AL
1	Weatherstripping	Pemko S88 D17	D

Heading #103 (Group: 55.64.00)

Item #542	1 Pair of doors B127, KCCS NURSE From DISPLAY B127	RHRA
Item #543	1 Pair of doors B217, MAIN STACKS From DISPLAY B217	RHRA / LHRA?
Item #544	1 Pair of doors B301.2, BFM LAB 3 From DISPLAY B301.2	RHRA / LHRA?
Item #545	1 Pair of doors B313.2, COMMON LAB B313 From DISPLAY B313.2	RHRA / LHRA?

3'0", 3'0" x 7'0" x 1 3/4" - WD DR x HM FR

24	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
8	Flush Bolt	Ives FB458 US26D	US26D
4	Dust Proof Strike	Ives DP2 US26D	US26D
4	Lockset	Schlage L9070L 17A 626 RHR	626
4	Cylinder	Best 1E74(Std.)C265RP3 626	626
8	Wall Door Stop	Ives WS407CCV US32D	US32D
8	Door Silencer	Ives SR64 GRY	GRY

Heading #104 (Group: 55.64.50)

Item #546	1 Single door B305, LECTURE HALL B303 From DISPLAY B305	LHR
Item #547	1 Single door B307, LECTURE HALL B303 From DISPLAY B307	RHR

2'6" x 7'0" x 1 3/4" - WD DR x HM FR

6	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9070L 17A 626 LHR	626
1	Lockset	Schlage L9070L 17A 626 RHR	626
2	Cylinder	Best 1E74(Std.)C265RP3 626	626
2	Overhead Door Stop	Glynn-Johnson 903S US32D	US32D
2	Weatherstripping	Pemko S88 D17	D

Heading #105 (Group: 55.64.60)

Item #548	1 Single door B202, CORRIDOR B218 To MENS ROOM B202	RH
Item #549	1 Single door B204, CORRIDOR B218 To WOMENS ROOM B204	LH
Item #550	1 Single door B304, CORRIDOR B302 To MENS ROOM B304	RH
Item #551	1 Single door B306, CORRIDOR B302 To WOMENS ROOM B306	LH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

12	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
2	Dead Lock	Schlage L463L 626 LH	626
2	Dead Lock	Schlage L463L 626 RH	626
4	Cylinder	Best 1E74(Std.)C4RP 626	626
4	Door Pull	Ives 8302-10 4" x 16" US32D CFC	US32D
4	Push Plate	Ives 8200 4" x 16" US32D 8"	US32D
4	Surface Closer	LCN 4040XP Rw/PA AL	AL
4	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
4	Wall Door Stop	Ives WS407CCV US32D	US32D
12	Door Silencer	Ives SR64 GRY	GRY

Heading #106 (Group: 55.64.60)

Item #552	1 Single door H106E, AUXILIARY GYM H106 From LOCKER ROOM VESTIBULE	90 MIN.	LHR
Item #553	1 Single door H106F, AUXILIARY GYM H106 From VESTIBULE H132	90 MIN.	RHR
Item #554	1 Single door H144A, CORRIDOR H165 To WOMEN H144		LH
Item #555	1 Single door H144B, VESTIBULE H144.1 To WOMEN H144		RH
Item #556	1 Single door H144C, TEAM ROOM H130.1 To WOMEN H144		LH
Item #557	1 Single door H146A, CORRIDOR H165 To MEN H146		RH
Item #558	1 Single door H146B, VESTIBULE H146.1 To MEN H146		LH
Item #559	1 Single door H146C, TEAM ROOM H138.1 To MEN H146		RH

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

24	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
3	Dead Lock	Schlage L463L 626 LH	626
1	Dead Lock	Schlage L463L 626 LHR	626
3	Dead Lock	Schlage L463L 626 RH	626
1	Dead Lock	Schlage L463L 626 RHR	626
8	Cylinder	Best 1E74(Std.)C4RP 626	626
8	Door Pull	Ives 8302-10 4" x 16" US32D CFC	US32D
8	Push Plate	Ives 8200 4" x 16" US32D	US32D
8	Surface Closer	LCN 4040XP Rw/PA AL	AL
8	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
8	Wall Door Stop	Ives WS407CCV US32D	US32D
24	Door Silencer	Ives SR64 GRY	GRY

Heading #107 (Group: 55.64.61)

Item #560	1 Single door ~~H114~~ H114A, CORRIDOR H137 From COACH OFFICE H114		RHR
Item #561	1 Single door H118A, CORRIDOR H137 From COACH OFFICE H118		LHR
Item #562	1 Single door H122A, CORRIDOR H137 From A.D. OFFICE H122		RHR
Item #563	1 Single door H124A, AUXILIARY GYM From P.E. OFFICE		RHR
Item #564	1 Single door H136A, AUXILIARY GYM From P.E. OFFICE H136	90 MIN.	LHR

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

15	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
2	Dead Lock	Schlage L463L 626 LHR	626
3	Dead Lock	Schlage L463L 626 RHR	626
5	Cylinder	Best 1E74(Std.)C4RP 626	626
5	Door Pull	Ives 8302-10 4" x 16" US32D CFC	US32D
5	Push Plate	Ives 8200 4" x 16" US32D	US32D
5	Surface Closer	LCN 4040XP Rw/PA AL	AL
5	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
5	Wall Door Stop	Ives WS407CCV US32D	US32D
15	Door Silencer	Ives SR64 GRY	GRY

Heading #108 (Group: 55.65.50)

Item #565	1 Single door A222, DEPARTMENT OFFICE A220 To TOILET A222	RH
Item #566	1 Single door A319, MATH DEPARTMENT OFFICE To STAFF TOILET A319	LH
Item #567	1 Single door B117, PRINCIPAL B115 To TOILET B117	LH
Item #568	1 Single door B215, WORLD LANGUAGE DEPARTMENT OFFICE To STAFF TOILET B215	LH
Item #569	1 Single door C223, HISTORY/SOCIAL STUDIES DEPARTMENT OFFICE To STAFF C223	LH
Item #570	1 Single door E106, LOCKERS E105 To TOILET E106	RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

18	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
4	Lockset	Schlage L9040 17A 626 LH	626
2	Lockset	Schlage L9040 17A 626 RH	626
6	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
6	Wall Door Stop	Ives WS407CCV US32D	US32D
18	Door Silencer	Ives SR64 GRY	GRY

Heading #109 (Group: 55.65.50)

Item #571	1 Single door D107, LOCKERS D108 To TOILET D107	LH
Item #572	1 Single door H116A, COACH OFFICE To COACH LOCKER	RH
Item #573	1 Single door H116B, COACH LOCKER To SHOWER H116.1	LH
Item #574	1 Single door H119.2, ECE CLASSROOM H119 To TOILET H119.2	RH
Item #575	1 Single door H120A, COACH OFFICE H118 To COACH LOCKER H120	LH
Item #576	1 Single door H120B, COACH LOCKER H120 To SHOWER H120.1	RH
Item #577	1 Single door H123.2, ECE CLASSROOM H123 To TOILET H123.2	LH
Item #578	1 Single door H128B, FACULTY/OFFICIALS H128 To FACULTY/OFFICIALS RESTROOM	RH
Item #579	1 Single door H134B, FACULTY/OFFICIALS H134 To FACULTY/OFFICIALS RESTROOM	LH

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

27	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
5	Lockset	Schlage L9040 17A 626 LH	626
4	Lockset	Schlage L9040 17A 626 RH	626
9	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
9	Wall Door Stop	Ives WS407CCV US32D	US32D
27	Door Silencer	Ives SR64 GRY	GRY

Heading #110 (Group: 55.65.50.1)

Item #580	1 Single door B149, KCCS NURSE From TOILET B149	RHR

3'6" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9040 17A 626 RHR	626
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 40"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #111 (Group: 55.65.57)

Item #581 1 Single door C105B, EXAM ROOM C103 To TOILET C105 LH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9040 17A 626 LH	626
1	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #112 (Group: 55.65.57)

Item #582 1 Single door H105, P.E. STORAGE From TOILET H105 RHR

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9040 17A 626 RHR	626
1	Overhead Door Stop	Glynn-Johnson 904S US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #113 (Group: 55.65.60)

Item #583	1 Single door A133, DISCIPLINE RECEPTION From TOILET A133	RHR
Item #584	1 Single door A135, DISCIPLINE RECEPTION From TOILET A135	LHR
Item #585	1 Single door A140, CORRIDOR To ADAPTIVE TOILET A140	LH
Item #586	1 Single door A146, CORRIDOR To ADAPTIVE TOILET A146	RH
Item #587	1 Single door B139, CORRIDOR B145 From TREATMENT B139	LHR
Item #588	1 Single door B141, CORRIDOR B145 From TOILET B141	RHR
Item #589	1 Single door C105A, WELLNESS RECEPTION/WAITING From TOILET C105	RHR
Item #590	1 Single door C109, DEPARTMENT OFFICE C107 From TOILET C109	RHR
Item #591	1 Single door C315, DEPARTMENT OFFICE C314 From TOILET C315	LHR
Item #592	1 Single door E110, MAKE-UP-DRESSING ROOM E111 From TOILET E110	RHR
Item #593	1 Single door E116, MAKE-UP-DRESSING ROOM E115 From TOILET E116	RHR

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

33	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9040 17A 626 LH	626
3	Lockset	Schlage L9040 17A 626 LHR	626
1	Lockset	Schlage L9040 17A 626 RH	626
6	Lockset	Schlage L9040 17A 626 RHR	626
11	Surface Closer	LCN 4040XP Rw/PA AL	AL
11	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
11	Wall Door Stop	Ives WS407CCV US32D	US32D
33	Door Silencer	Ives SR64 GRY	GRY

Heading #114 (Group: 55.65.60)

Item #594 1 Single door H117.1, CNA LAB H117 From TOILET H117.1 LHR

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Lockset	Schlage L9040 17A 626 LHR	626
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #115 (Group: 55.95.21)

Item #595 1 Pair of doors B162A, CORRIDOR B162 From CORRIDOR B163 LHRA/RHRA

3'0", 3'0" x 7'0" x 1 3/4" - WD DR x HM FR - I-90

6	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
1	Latchset	Schlage L9010 17A 626 LHR	626
1	Latchset	Schlage L9010 17A 626 RHR Auto Flush Bolts	626
2	Surface Closer	LCN 4040XP Rw/PA AL	AL
2	Electro-Magnetic Holder	LCN SEM 7850 AL	AL
1	Coordinator	Ives COR72 US26D	US26D
2	Mounting Bracket	Ives MB1V USP	USP
1	Weatherstripping	Pemko S88 D25	D
2	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 35"	US32D

1.DOORS ARE MAGNETICALLY HELD OPEN.
2. INTEGRATE WITH FIRE ALARM SYSTEM TO AUTOMATICALLY RELEASE THE DOORS UPON ALARM ACTIVATION.

Heading #116 (Group: 55.95.50)

Item #596 1 Single door A131, DISCIPLINE RECEPTION To BREAKROOM A131 RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1 4 1/2" x 4 1/2" 652	652
1	Latchset	Schlage L9010 17A 626 RH	626
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

Heading #117 (Group: 55.99.60)

Item #597	1 Single door D109, CORRIDOR To BREAKROOM D109	RH
Item #598	1 Single door G110, VESTIBULE G108 To SMALL TEAM LOCKER	RH
Item #599	1 Single door G118, VESTIBULE G116 To LARGE TEAM LOCKER	LH
Item #600	1 Single door H126, LOCKER ROOM VESTIBULE From P.E. LOCKER ROOM	LHR
Item #601	1 Single door H130, VESTIBULE H144.1 To P.E. LOCKER ROOM H130	RH
Item #602	1 Single door H132, VESTIBULE H132 From P.E. LOCKER ROOM H138	RHR
Item #603	1 Single door H138, VESTIBULE H146.1 To P.E. LOCKER ROOM H138	LH

3'0" x 7'0" x 1 3/4" - HM DR x HM FR

21	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
7	Push Plate	Ives 8200 4" x 16" US32D	US32D
7	Door Pull	Ives 8302-10 4" x 16" US32D	US32D
7	Surface Closer	LCN 4040XP Rw/PA AL	AL
7	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
7	Wall Door Stop	Ives WS407CCV US32D	US32D
21	Door Silencer	Ives SR64 GRY	GRY

Heading #118 (Group: 55.99.60)

Item #604	1 Single door D118B, STUDENT DINING To FACULTY DINING D118	RH

3'0" x 7'0" x 1 3/4" - WD DR x HM FR

3	Standard Hinge	Ives 5BB1HW 4 1/2" x 4 1/2" 652	652
1	Push Plate	Ives 8200 4" x 16" US32D	US32D
1	Door Pull	Ives 8302-10 4" x 16" US32D	US32D
1	Surface Closer	LCN 4040XP Rw/PA AL	AL
1	Kick Plate	Ives 8400 CUSTOM US32D B4E 10" x 34"	US32D
1	Wall Door Stop	Ives WS407CCV US32D	US32D
3	Door Silencer	Ives SR64 GRY	GRY

ADD DOORS:	HW. SET:
H110A	55.37.60
H131B	25.25.65

CATALOG CUTS

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Contractor
EDIS

Coordinator
DAVID G. POPLOS, A.H.C.

Submittal Date: **6/27/12**

UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

CYLINDERS

STANLEY®
Security Solutions

E SERIES

MORTISE AND RIM CYLINDERS

STANLEY
BEST ACCESS SYSTEMS

UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

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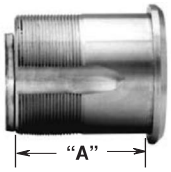
1E SERIES — FEATURES

1E Mortise Cylinder

Standard mortise applications require use of BEST's 1E series cylinders with standard 1E-C4 cam. BEST cylinders may be altered to function with other manufacturers' locks by use of different cams (see page 8) and different cylinder rings (see page 9). Special cylinder variations are available for most applications (see pages 4 & 5). BEST cylinders are machined from brass or bronze bar stock and are available in a variety of finishes. Additional security is provided by a set screw that mounts diagonally in the cylinder wall and when tightened, holds the cylinder securely in the housing. BEST mortise cylinders feature the BEST interchangeable core and may be master-keyed into any existing BEST system. Contact your local Stanley Security Solutions sales office for information on special cylinder applications not listed in this catalog.



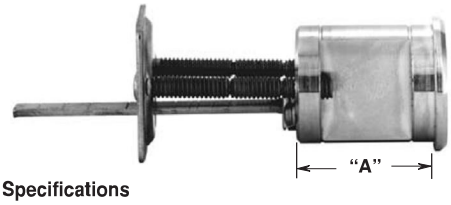
Specifications

Cylinder Nomenclature	Dimension "A"	Door Thickness
1E-64	1 1/8"	1 5/8" to 2 1/4"
1E-74	1 1/4"	1 7/8" to 2 1/2"

Cylinder diameter– 1 5/32"
To order: see below example: **1E74-C4-RP3-626**
Products covered by on or more of the following patents:
4,437,695 4,633,690 4,616,394

1E Rim Cylinder

Standard rim cylinder applications require the use of BEST's 1E rim cylinder series. BEST rim cylinders are interchangeable with other manufacturers' rim cylinders. BEST rim cylinders are machined from solid bar stock and are available in a variety of finishes. The standard package for the BEST rim cylinder includes cylinder, RP3 ring package, 1E-S2 spindle, clamp plate and clamp plate screws. BEST rim cylinders feature the BEST interchangeable core and may be master-keyed into any existing Best system.



Specifications

Cylinder Nomenclature	Dimension "A"	Door Thickness
1E-62	1 3/16"	1" to 2 3/4"
1E-72	1 11/32"	1 1/4" to 3"

Cylinder diameter– 1 5/32"
To order: see below example: 1E72-S2-RP3-626

1E — HOW TO ORDER

STEP A	B	C	D	E	F	G	
1E	**7**	**4**		**C4**	**RP3**	**626**	**
Cylinder Diameter	**Core Housing**	**Function Code Length**	**Standard Mortise Code**	**Cam or Spindle**	**Rings**	**Standard Finishes**	
1E– 1 5/32" **3E–** 1 1/2" **5E–** see pages 10,11 **8E–** see page 7	**0–** dummy **6–** 6 pin **7–** 7 pin housing accepts all Best cores	**2–** rim **4–** mortise* **6–** tapered mortise see pages 4-5 for special cylinders	**Blank–** standard **22–** 1 3/8" **24–** 1 1/2" up to **96–** 6" (see page 4-5)	**C4–** standard cam **C181**– Adams Rite MS cam **S2–** standard spindle (For special cams see page 8)	**RP1–** tapered cyl. **RP2–** 6 pin mortise **RP3–** std. package **RP4–** 3E mortise (For special rings see page 9)	**605 606** **612 613** **622 625** **626 690** Specify hand if required	

* For additional special mortise cylinders, see pages 4 and 5.
** Must specify keymark and number of keys or designate L/C for less core.

STANLEY BEST ACCESS SYSTEMS

MORTISE AND

UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

STANDARD RINGS

RP Standard Ring Package

The RP standard ring package includes a 1E-R3 (3/16") and 1E-R5 (3/8") ring.

RP1 Ring Package

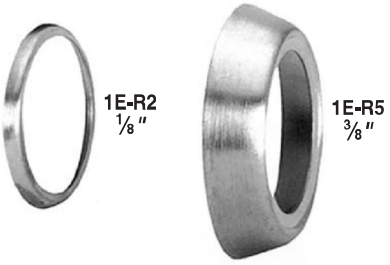
The RP1 ring package for the 1E-76 cylinder includes a 1E-R2 (1/8") and 1E-R3 (3/16") ring.

RP2 Ring Package

The RP2 ring package for the 1E-64 cylinder includes a 1E-R2 (1/8") and 1E-R4 (1/4") ring.

RP3 Ring Package

The RP3 ring package for the 1E-62, 1E-72 and 1E-74 cylinders includes a 1E-R2 (1/8") and a 1E-R5 (3/8")



STANDARD CAM

Standard Cam for 1E-64, and 1E-74 Mortise Cylinders

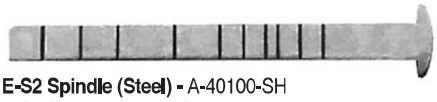
Standard 1E-C4 Cam

Unless otherwise specified, the 1E-C4 cam is supplied on all 1E mortise cylinders.

Commonly used cams are listed on page 8.

If a cam other than the variety listed is needed, a sample cam should be forwarded to your local BEST office along with the lock manufacturer's name and lock series or identification number.

SPINDLES



1E-S2 Spindle (Steel) - A-40100-SH
1E-S3 Spindle (Bronze) - A-40100-Z
5" Spindle - A-54950; **5/32" Spindle -** A-40101

The 1E-S2 flat spindle is supplied standard on all 1E rim cylinders. If marine application is necessary, request "marine construction" (1E-S3 bronze spindle and non ferrous materials supplied). A five (5) inch spindle is available for thick door applications.

MORTISE SERVICE EQUIPMENT

ED211

ED212

ED211 Mortise Cylinder Wrench
The Best mortise cylinder wrench and test handle is an essential dual-purpose tool. The double end is used primarily to install or remove BEST mortise cylinders without marring the cylinder surface finish. The single end may be used to test the lock operation, as well as align the throw pins.
To order specify: ED211 mortise cylinder wrench.

ED212 Mortise Cylinder Cam Assembly Tool
Mortise cylinder cams are quickly changed with the use of this tool. Approximate length 1 3/4".
To order specify: ED212 assembly tool.

ED221 Mortise Cylinder Thread Repair Die
Tool for re-threading 1 5/32" diameter cylinders.
To order specify: ED221 thread repair die.

ED222 Cylinder Cam Testing Tool
Special cylinder / wrench assembly. Screws provide rapid means to install cams for testing.
To order specify: ED222 cam testing tool.

ED225 Hole Tap For 1 5/32" Mortise Cylinder
Tap tool used to re-thread housing threads for 1E Mortise Cylinders.

A40095 Standard Throw Pins

UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

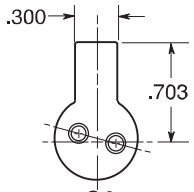
Submittal Date: 6/27/12

CYLINDERS AND CAMS

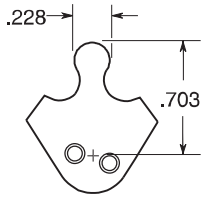
Special cams are available which will operate most mortise locksets, regardless of make or function. With these cams,your masterkeyed system can be extended through the use of replacement cylinders with cams similar to those being used. A few of the cams are illustrated. Other designs are available upon request. All cams available are designed for use on BEST mortise cylinders.

WARNING– Best Access Systems desires to provide up-to-date and reliable product adaptation uses. However, BEST cannot guarantee the quality of other manufacturers' locksets. In addition, other lock manufacturers' may make changes to their product that affect the operation and compatibility of our core and cylinder adaptation. When this occurs, those manufacturers' have no obligation to notify BEST. If you are using a BEST cylinder in another manufacturers' lockset and find that it does not operate properly for any reason, please contact your local BEST sales office immediately.

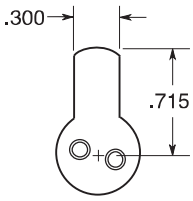
NOTE: Cams not drawn to scale



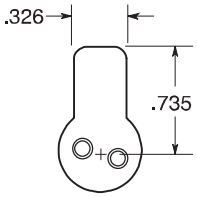
C4
(when ordered with cylinder, step E, page 2) **1E - C4** (for cam only)



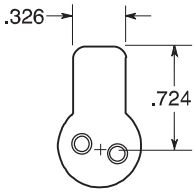
C118
(when ordered with cylinder, step E, page 2) **1E - C118** (for cam only)



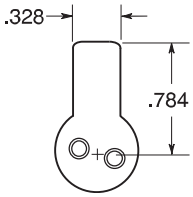
C127
(when ordered with cylinder, step E, page 2) **1E - C127** (for cam only)



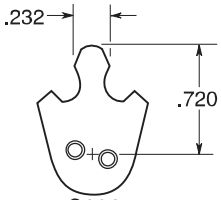
C128
(when ordered with cylinder, step E, page 2) **1E - C128** (for cam only)



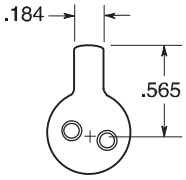
C129
(when ordered with cylinder, step E, page 2) **1E - C129** (for cam only)



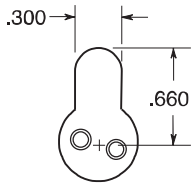
C136
(when ordered with cylinder, step E, page 2) **1E - C136** (for cam only)



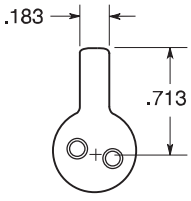
C161
(when ordered with cylinder, step E, page 2) **1E - C161** (for cam only)



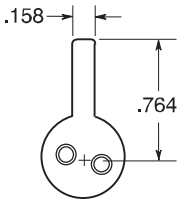
C181
(when ordered with cylinder, step E, page 2) **1E - C181** (for cam only)



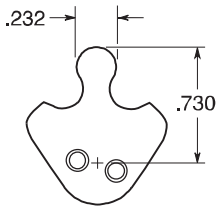
C191
(when ordered with cylinder, step E, page 2) **1E - C191** (for cam only)



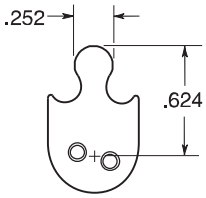
C208
(when ordered with cylinder, step E, page 2) **1E - C208** (for cam only)



C210
(when ordered with cylinder, step E, page 2) **1E - C210** (for cam only)



C258
(when ordered with cylinder, step E, page 2) **1E - C258** (for cam only)



C265
(when ordered with cylinder, step E, page 2) **1E - C265** (for cam only)

NOTE: While certain functions may require a different cam, in general the following cams will work for these common applications.

C4.....Standard cam
C127....Arrow mortise (latch)
C161....Corbin-Russwin mortise
Arrow mortise (deadbolt)
C181....Adams Rite
C191....Best mortise (latch)
C208....Sargent
C258....Best mortise (deadbolt)
C265....Schlage L mortise

90 Series Surface Overhead Door Holders/Stops

90 Series Heavy-Duty

Glynn-Johnson 90 series holders and stops are the most rugged models available for heavy-duty applications. The channel is surface-mounted to the door, most often with sex bolts, and the jamb bracket is surface mounted to the jamb, requiring minimal door and frame preparation.

These versatile units can be used in conjunction with most surface-applied door closers. The provided templates allow for variable mounting positions, ranging from 85º to 110º Hold-Open/Stop angle. These templates are designed for installation in almost all types of doors, including doors with conventional butt-type hinges or specialty hinges.

Four Models:
- 90H Series Hold-Open Model
- 90S Series Stop-Only Model
- 90F Series Friction Hold-Open Model
- 90SE Series Special Stop-Only Model

Five Sizes:
- Simple
- Standardized
- Each model is available in five sizes

Three Options:
- J—Angle Jamb Bracket
- SHIM—Blade Stop Shim Kits
- SOC—Pin-in-Socket Security Screw Package

Unmatched Convenience:
- Non-Handed
- Improved Compatibility with Door Closers
- Single-Acting Doors
- Interior/Exterior Applications
- Durable
- Easy to Install
- Improved Corrosion Resistance
- Function Conversion Kits Available

Materials and Finishes:
In 300 series Stainless Steel, Brass and Steel substrates, these models are available in the largest selection of finishes in the industry. Stainless Steel models offer the highest resistance to corrosion. Available in the following finishes:

Finish	Description
US3	Polished Brass
US4	Satin Brass
US10	Satin Bronze
US10B	Oil Rubbed Bronze
US32	Polished Stainless Steel
US32D	Satin Stainless Steel
SP4	Powder Coat Brass
SP10	Powder Coat Bronze
SP28	Powder Coat Aluminum
SP313	Powder Coat Dark Bronze
SPBLK	Powder Coat Black
652	Chrome-like Coating

Models

Glynn-Johnson 90 series door holders and stops provide long-lasting protection for doors, frames and hardware. All models incorporate a heavy-duty channel/slide-arm design and offset jamb bracket. This unique design allows for simple field modification of functions, should user requirements change.

90H Series Hold-Open

(Suffix H) Hold-Open models provide a convenient method of holding the door open at a predetermined position for short or long periods of time, permitting an unobstructed traffic flow through the opening. The Hold-Open function can easily be turned on or off by simply rotating the serrated knob on the bottom of the channel. This knob engages the Hold-Open mechanism, allowing the door to be held open at a predetermined position ranging from 85º to 110º. When the knob is flipped over, it acts as a stop and shock absorber.

The tension on the Hold-Open mechanism can be adjusted using a phillips screwdriver to offset air currents or other exterior conditions. The Hold-Open tension adjustment is located on the top of the slider in the channel.

90S Series Stop-Only

(Suffix S) When the Hold-Open function is not a requirement, Stop-Only models provide a reliable method of door control. Stop-Only models provide the same shock-absorbing capability as Hold-Open models. The Stop-Only model may be used on fire doors.

90F Series Friction Hold-Open

(Suffix F) Friction Hold-Open models are ideal for patient room doors, wardrobe and closet doors or similar applications where multiple Hold-Open positions are desired. The friction tension can be adjusted through the top of the channel using an allen wrench. The friction tension adjustment is located on the top of the slider in the channel.

90SE Series Special Stop-Only

(Suffix SE) When Stop-Only models are used in conjunction with single-point, Hold-Only electronic door closers, the Stop-Only function may be ordered without the shock-absorbing mechanism. Used as an auxiliary stop, these models prolong the life of the closer. The stop location is adjusted using an allen wrench on the stop block located in the channel.

Note: Caution should be taken when using this option in other applications, as the elimination of the shock-absorbing spring can put added stress on the door and frame.

Application Information

UL Classification

The 90 series Stop-Only models are classified by Underwriters Laboratories (UL) as Miscellaneous Fire Door Accessories. This classification applies to use on either Hollow Metal Fire Doors or Wood Fire Doors. These units may be used on doors of any rating. As a reminder, the Miscellaneous Fire Door Accessories (GVUX) section is defined by UL as: "Miscellaneous fire door accessories are intended in the individual Listings. The accessories have been investigated to determine that when installed in accordance with the manufacturer's instructions, the accessories do not adversely affect the fire rating of the fire door and/or fire door frames."

Dead-Stop Templating:

Dead-stop templating is recommended for applications where a wall or similar obstruction is placed at an opening angle of 110º or less (i.e., doors that open back-to-back). Dead-stop templating can be applied to Hold-Open, Stop-Only and Friction models. The Dead-Stop position is the point at which the shock-absorbing spring is fully compressed. Therefore, when Dead-Stop Templating is used, the initial degree of opening will be 5º to 7º less than the Dead-Stop opening.

Example: If the holder is templated to a 100º Dead Stop, the door will hold open at an angle between 93º and 95º but no further than 100º

Note: Do not use dead-stop templating on the 90SE Series since there is no shock-absorbing spring.

Environmental Considerations:

Environmental factors should always be considered when specifying overhead holders and stops. Doors that are positioned on a building's exterior or subject to corrosive conditions should be equipped with a holder constructed primarily of stainless steel or brass materials. For interior applications, steel is acceptable, though brass substrates generally provide a more attractive architectural-grade finish.

Function Conversion Kits

- FK90H—Converts a 90F or a 90S unit into a 90H unit. To order specify FK90H.
- FK90F—Converts a 90H or a 90S unit into a 90F unit. To order specify FK90F.
- FK90SE—Converts a 90H, 90F or a 90S unit into a 90SE unit. To order specify FK90SE–Finish.
- No kit is needed to convert a 90H or 90F unit into a 90S unit.

Options

Suffix J (Angle Jamb Bracket):

An angle jamb bracket is available for converting standard models to hinge-side or flush transom mounting. The angle jamb bracket affixes to the standard jamb bracket. If ordered with the unit add suffix J. If needed separately order 90J by finish needed.

Suffix SOC (Pin-in-Socket Security Screws):

A screw package with pin-in-socket screws for mounting the door bracket and the jamb bracket is provided instead of the standard screw package.

Suffix SHIM (Blade Stop Shims):

Shim kits are available in 3 sizes
90 SHIM1 is a 1/4" Shim Kit
90 SHIM2 is a 1/2" Shim Kit
90 SHIM3 is a 3/4" Shim Kit

If ordered with overhead, add suffix SHIM (1, 2 or 3). If needed separately order 90 SHIM (1, 2 or 3)–Finish.

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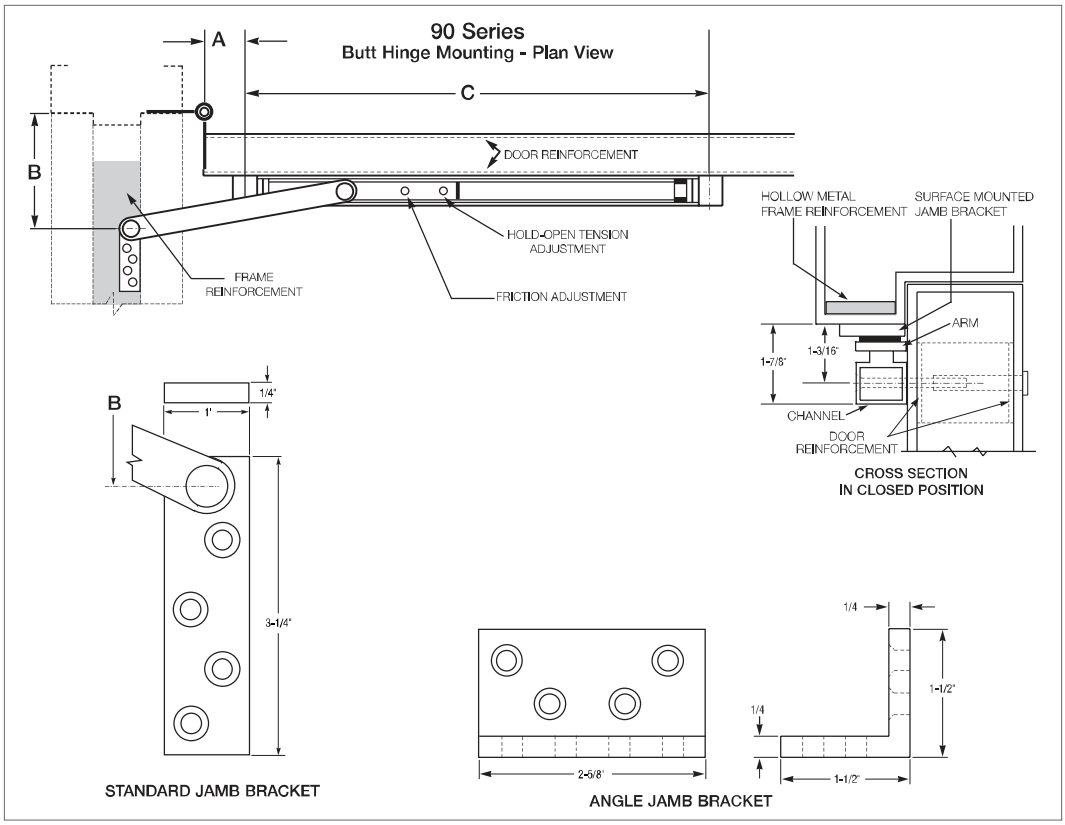
THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

90 Series Surface Overhead Door Holders/Stops



90 Series Sizing Chart								
BUTTS/OFFSET PIVOTS					CENTER HUNG			
SIZE	DOOR OPENING	STOP ONLY	HOLD OPEN	FRICTION	DOOR OPENING	STOP ONLY	HOLD OPEN	FRICTION
1	----	----	----	----	----	---	--	---
2	23-1/16"–27"	902S	902H	902F	27-1/16"–33'	902S	902H	902F
3	27-1/16"–33"	903S	903H	903F	33-1/16"–39'	903S	903H	903F
4	33-1/16"–39"	904S	904H	904F	39-1/16"–45'	904S	904H	904F
5	39-1/16"–45"	905S	905H	905F	45-1/16"–51'	905S	905H	905F
6	45-1/16"–51"	906S	906H	906F	51-1/16"–59'	906S	906H	906F

Note: This chart illustrates the most common types of hinging and door opening sizes. For unusual door details, contact Glynn-Johnson for availability.

BHMA/ANSI, A156.8 & FED. Spec. Cross Reference		
G-J Model	BHMA*	FED. Spec.
902 - 906H	C02511	1161
902 - 906S	C02541	1161A
902 - 906F	C02531	—

** First numeral (0) designates optional material.*

To specify:
Brass material, change 0 to 1 (i.e. C12511)
Stainless Steel material, change 0 to 5 (i.e. C52511)
Steel material, change 0 to 8 (i.e. C82511)

The template information on this page is for reference only and is not intended to serve as an installation template. For complete dimensional information, refer to Glynn-Johnson template book.

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How to Order

90 4 H – US32D – J

Overhead Series:
- **90**

Size (Door Opening Using Butts or Offset Pivots):

2	(23-1/16"–27")
3	(27-1/16"–33")
4	(33-1/16"–39")
5	(39-1/16"–45")
6	(45-1/16"–54")

Function:

H	Hold-Open
F	Friction Hold-Open
S	Stop-Only
SE	Special Stop-Only

Finishes:

US3	Polished Brass
US4	Satin Brass
US10	Satin Bronze
US10B	Oil Rubbed Bronze
US32	Polished Stainless Steel
US32D	Satin Stainless Steel
SP4	Powder Coat Brass
SP10	Powder Coat Bronze
SP28	Powder Coat Aluminum
SP313	Powder Coat Dark Bronze
SPBLK	Powder Coat Black
652	Chrome-like Coating

Options:

J	Angle Jamb Bracket
SHIM	Blade Stop Shims—
	SHIM1–1/4" Kit
	SHIM2–1/2" Kit
	SHIM3–3/4" Kit
SOC	Pin-in-Socket Security Screws

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Accessories

Electrical Accessories

item	accessory	description
	2001M: Plug-in bridge rectifier	Converts AC to DC. 35 V, 1 Amp includes MOV
	2001-1: Wire-in bridge rectifier	Converts AC to DC. 35 V, 2 Amp
	2002: Universal AC transformer	Converts 120/208/240 VAC to 12 or 24 VAC output. 24V, 1.67Amp max
	2002P-24: AC plug-in transformer	Converts 110/120 VAC to 24 VAC output. 5V, 0.2 Amp max
	2004M: ElectroLynx® Adapter	Adapter between existing HES electric strikes and ElectroLynx® connectors
	2005M: SMART Pac II™	In-line power control able to receive input voltages from 12-32V AC or DC. Built-in bridge rectifier provides 12 or 24VDC output. Under continuous duty the output VDC is reduced by 25% to extend the life of the electric strike. Includes in-line fuse, MOV, and 2-8 second adjustable timer
	2005M3: SMART Pac III™	In-line power control able to receive input voltages from 12-32V AC or DC. Built-in bridge rectifier. Continuous duty timer reduces initial voltage by 25% to extend the life of the electric strike. Includes built-in resettable fuse, MOV, voltage regulation and input status LED. (Available Q2, 2011)
	2006M: Plug-in buzzer	Audible operation indicator
	2007M: Plug-in pigtail connectors	With 4" wire leads

NOTE: Updated accessories (ending in 'M') offer easier wiring with new micro-fit connectors.

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3CB1 3 Knuckle, Full Mortise A5
3CB1HW 3 Knuckle, Full Mortise A6
3SP1 3 Knuckle, Full Mortise A6
5PB1 5 Knuckle, Full Mortise A7
5BB1 5 Knuckle, Full Mortise A7
5BB1HW 5 Knuckle, Full Mortise A8
5BB1WT 5 Knuckle, Full Mortise A8
5BB4 5 Knuckle, Full Mortise A9
5BB4HW 5 Knuckle, Full Mortise A9
5BB1SC 5 Knuckle, Full Mortise A10
5BB1SCHW 5 Knuckle, Full Mortise A10
Electrified Hinge A11

Residential Hinges A12

Continuous Hinges A13

Pivots A31

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Meets ANSI/BHMA A156.1
A8111 – Steel
A5111 – Stainless Steel
A2111 – Brass

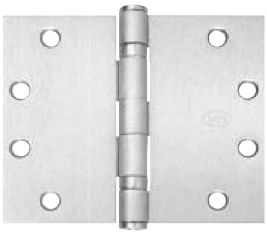
5BB1HW 5 Knuckle, Ball Bearing, Heavy Weight Full Mortise Hinge

- For heavy weight doors
- High frequency usage
- 4 ball bearing
- Packed with wood and metal screws

Options
- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge	Size (Inches)	Size (mm)	Gauge
4.5 x 4	114 x 102	0.180	5 x 4.5	127 x 114	0.190
4.5 x 4.5	114 x 114	0.180	5 x 5	127 x 127	0.190



Meets ANSI/BHMA A156.1
A8111 – Steel

5BB1WT 5 Knuckle, Ball Bearing, Wide Throw Full Mortise Hinge

- For medium weight doors
- Medium frequency usage
- 2 ball bearing
- Packed with wood and metal screws

Options
- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
4.5 x 5	114 x 127	0.134
4.5 x 6	114 x 152	0.134
5 x 6	127 x 152	0.146
5 x 7	127 x 178	0.146
5 x 8	127 x 203	0.146

Finishes *brass*

Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

Finishes *steel*

Ives Finish	USP	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	600	632	633	639	640	641	643	646	651	652

Finishes *stainless steel*

Ives Finish	US32	US32D
BHMA	629	630

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Ives Continuous Hinges are designed to last the life of the building. The unique design distributes the weight of the door along the entire length of the frame, reducing the high amount of stress normally associated at top of door and frame on butt hinge applications. Not only does this reduce hinge failure, it also keeps your door in constant alignment, eliminating the chance of door sag. These characteristics make continuous hinges suitable for high use/high traffic doors.

The design of a continuous hinge eliminates the gap between the door and the frame. The absence of gap also helps prevents finger from being pinched, making it a safer device than traditional hinges. These these benefits result in higher efficiency and less maintenance, maximizing the value of your opening investment.

Continuous hinges are available in two styles; aluminum geared and pin and barrel in steel or stainless steel.

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Aluminum Geared Hinges

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Aluminum Geared Hinges

How to Order:

112HD - CL - 83 - EPT

Model

045HD	Half Surface
046HD	Half Surface
053HD	Half Surface
054HD	Half Surface
112HD	Full Mortise
157HD	Full Surface - Center Pivot
210HD	Full Surface - Swing Clear
224HD	Full Mortise - Edge Protector

Finish

CL	Clear
BR	Bronze

Length

83"	
85"	*other lengths available, consult factory*
95"	
120"	

Options

* **EPT**	Electric Power Transfer Prep
* **TW4, TW8**	Electric Through Wire
SEC	Security Fasteners - Pin-in-Socket
WD	Wood Fasteners
HM	Thread forming screws (pilot hole required)

* *Full Mortise Models Only*

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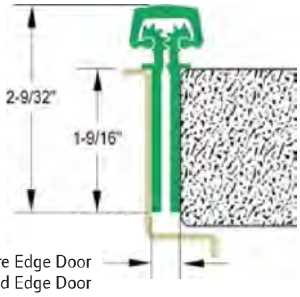
112HD Full Moritse Aluminum Geared Continuous Hinge

- Non Handed
- Flush Mounted, No Inset
- 48" Maximum Door Width
- Beveled or Square Edge Doors

For Doors Weighing up to 450 pounds without reinforcing, 600 pounds with reinforcing

Standard lengths 83", 85", 95", 120"
Standard Mounting Hardware
12-24 X 3/4" Steel Self Drilling, Self Tapping Screws
Optional WD - Wood Screws or SEC - Security Fasteners Available

Finishes
Clear (CL), Dark Bronze (DB)
Custom Anodizing and Painting are available, consult factory.



5/16" Clearance for square Edge Door
1/32" Clearance For Beveled Edge Door

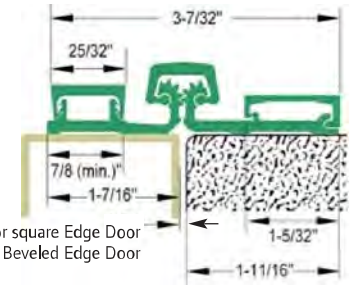
157HD Full Surface, Center Pivot Aluminum Geared Continuous Hinge

- Non Handed
- Narrow Frame
- 1/16" Door Inset
- 48" Maximum Door Width
- Beveled or Square Edge Doors

For Doors Weighing up to 600 pounds

Standard lengths 83", 85", 95", 120"
Standard Mounting Hardware
12-24 X 1/2" Steel Self Tapping Screws,
1/4-20 X 1-1/2" AL Sex Bolt, 1/4-20 X 1" Steel Shoulder Bolt,
12-24 X 3/4" Steel Self Drilling,
Optional SEC - Security Fasteners Available

Finishes
Clear (CL), Dark Bronze (DB)
Custom Anodizing and Painting are available, consult factory.



1/16" Clearance for square Edge Door
3/32" Clearance For Beveled Edge Door

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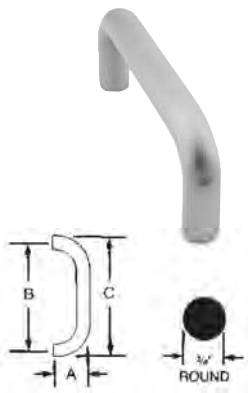


8102 Door Pull - 3/4" Round

Available mounting – standard, F, H-I-L, or J see pages B15 and B16

Available Sizes

6", 8", 10"

Product No.	Projection "A"	Clearance	Center to Center "B"	Overall Length "C"
8102-6	2-1/4"	1-1/2"	6"	6-3/4"
8102-8	2-1/4"	1-1/2"	8"	8-3/4"
8102-0	2-1/4"	1-1/2"	10"	10-3/4"

Finishes *brass*

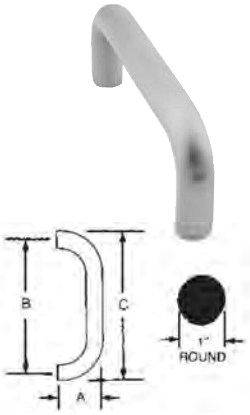
US Number	US3	US4	US10	US10B	US15	US26	US26D
BHMA	605	606	612	613	619	625	626

Finishes *stainless steel*

US Number	US32D
BHMA	630

Finishes *aluminum*

US Number	US28
BHMA	628



8103 Door Pull - 1" Round

Available mounting – standard, F, H-I-L, or J see pages B15 and B16

Available Sizes

8", 10", 12"

Product No.	Projection "A"	Clearance	Center to Center "B"	Overall Length "C"
8103-8	2-1/2"	1-1/2"	8"	9"
8103-0	2-1/2"	1-1/2"	10"	11"
8103-2	2-1/2"	1-1/2"	12"	13"

Finishes *brass*

US Number	US3	US4	US10	US10B	US15	US26	US26D
BHMA	605	606	612	613	619	625	626

Finishes *stainless steel*

US Number	US32	US32D
BHMA	629	630

Finishes *aluminum*

US Number	US28
BHMA	628

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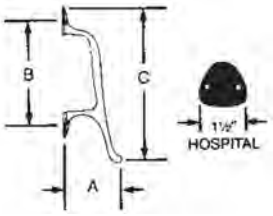


8121 Door Pull

Available mounting – K see page B16

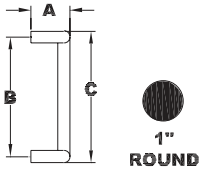
Size

5-3/4"

Product No.	Projection "A"	Center to Center "B"	Overall Length "C"
8121-5	3-1/2"	5-3/4"	8-3/4"

Finishes *brass*

US Number	US26D
BHMA	626



8190 90° Offset Door Pull

Available mounting – standard H-I-L,M, N or O see page B15 and B17

Available Sizes

8", 10", 12", 18"

Product No.	Projection "A"	Clearance	Center to Center "B"	Overall Length "C"
8190-8	3-1/4"	2-1/4"	8"	9"
8190-0	3-1/4"	2-1/4"	10"	11"
8190-2	3-1/4"	2-1/4"	12"	13"
8190-18	3-1/4"	2-1/4"	18"	19"

Finishes *brass*

US Number	US3	US4	US10	US10B	US15	US26	US26D
BHMA	605	606	612	613	619	625	626

Finishes *stainless steel*

US Number	US32	US32D
BHMA	629	630

Finishes *aluminum*

US Number	US28
BHMA	628

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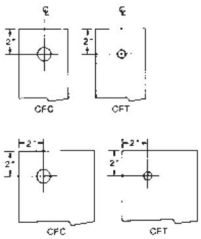
8200 Push Plate
8300 Pull Plate, Prep for Pull (less pull)

Available Sizes
3" x 12"
3.5" x 15"
4" x 16"
6" x 16"
8" x 16"
Special sizes are available. Consult factory.



Plates Cut for Cylinder or Thumbturns

Plates are available with cutout for cylinder or thumbturn; standard cutout is 2″ from top and centered on plates up to 4″ wide. For plates wider than 4″ cutout is located 2″ from outer edge, specify LH or RH. When pull location interferes with standard cutout location a detail drawing should be furnished with the order.

Standard cutout is 1-1/4″ for cylinder and 3/8″ for thumbturn.

Specify CFC for cutout for cylinder or CFT for cutout for thumbturn.

Finishes *brass*

US Number	US3	US4	US10	US10B	US15	US26	US26D
BHMA	605	606	612	613	619	625	626

Finishes *stainless steel*

US Number	US32D
BHMA	630

Finishes *aluminum*

US Number	US28
BHMA	628

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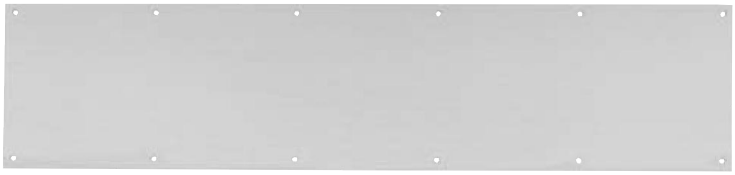
Submittal Date: 6/27/12

8400 Series Protection Plates

- Door protection plates are available in .050″ thick brass, stainless steel or aluminum; and 1/8″ thick high impact polyethylene in clear or black.
- Bevel edge options; specify B4E for all four edges.
- Mounting screw pack furnished standard, 16 screws per pack. Optional screw packs are available for TEK or TORK screw heads. Refer to the following chart for ordering.
- Specify NMH for no mounting holes.
- Specify NMH-A for no mounting holes with adhesive.
- Specify CS for counter sunk mounting holes.
- Specify ERS prepped with extra row of screws.

Kickplate Gasket Tape Tape is recommended when using a brass plate on a metal door to reduce tarnishing from electrolytic oxidation. One tape pack will cover an the perimeters of a 8″ x 34″ kickplate. Order 8401 Gasket Tape.



8400 Protection Plate
8402 (UL)* Protection Plate

**UL mark appears in upper right corner.*

Number of screw packs required by plate size (specify TEK Screws or TORK screws).

	22"-25"	26"-33"	34"-41"	42"-48"
4"-8"	1	1	1	1
9"-16"	1	1	1	1
17"-24"	1	1	1	2
25"-32"	1	1	2	2
33"-40"	1	2	2	2
41"-48"	2	2	2	2

Finishes *brass*

US Number	US3	US4	US10	US10B	US15	US26	US26D
BHMA	605	606	612	613	619	625	626

Finishes *stainless steel*

US Number	US32	US32D
BHMA	629	630

Finishes *aluminum*

US Number	US28
BHMA	628

Finishes *plastic*

Clear and Black

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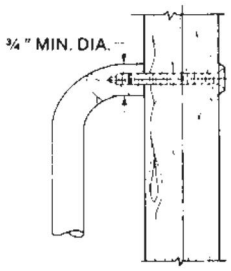
Submittal Date: 6/27/12

Mounting

- All mounting hardware is for standard 1-3/4" door.
- Consult Customer Service if other than standard.

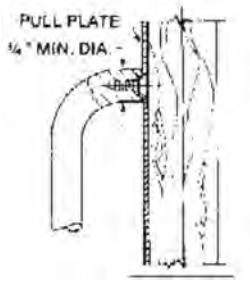
Standard Mount



Standard Mounting

- (2) 1/4-20 x 2-1/4" brass, oval head machine screws; plated to match.
- (2) No. 14 countersunk washers; plated to match

Type G Mount



Concealed Pull Plate Mounting

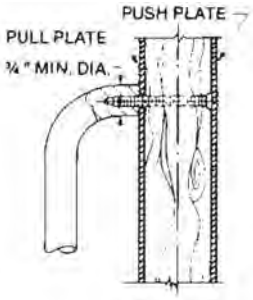
Available only for 8302, 8303, 8311 Pull Plates.

- (2) 1/4-20 x 5/8" steel flat head machine screws; zinc plated.

Pull mounts directly onto plate.

Plate is attached to door by 6 screws.

Type F Mount

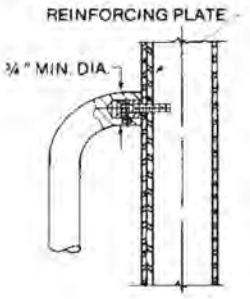


Wood Doors
Concealed Pull Mounting With Push Plate

- (2) 1/4-20 x 2-1/4" steel flat head machine screws; zinc plated.

Available only for 8102, 8103, 8105, 8111, 8302, 8303, 8305 and 8311. Plate on opposite side of door must be ordered separately.

Type H-I-L Mount



Reinforced Hollow Metal Door
Concealed Pull Mounting

Available only for 8102 8103, 8103EZ or wood door Pulls and 8302, 8303 pull plates.

- (2) Steel screw sleeves; zinc plated.
- (2) 1/4-20 x 1-1/4" steel countersunk trim head machine screw; zinc plated for reinforced metal door.
- (2) 1/4 x 1-1/2" steel countersunk trim head steel metal screw; zinc plated for wood doors.

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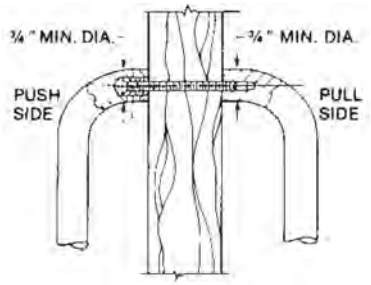
THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

Mounting

- All mounting hardware is for standard 1-3/4" door.
- Consult Customer Service if other than standard.

Type J Mount



Back to Back Pull Mounting

Available only for 8102, 8103, Pulls and 8302, 8303 Pull plates.

- (2) Steel screw sleeves; zinc plated.
- (2) 1/4-20 x 2-3/4" steel countersunk trim head machine screws; zinc plated.

Pulls furnished in pairs (PR) unless single (SGL) specified.

Type K Mount

Back to Back Pull Mounting

Available only for 8121-5 Pulls.

- (4) Steel screw sleeve nuts; steel zinc plated.
- (8) No. 8-32 x 1" brass oval head machine screws; plated to match.

Pulls furnished in pairs (PR).

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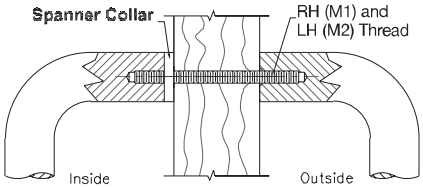
Mounting for 8103EZ, 8190, 9100, 9103EZ and 9190

- All mounting hardware is for standard 1-3/4" door.
- Consult Customer Service if other than standard.

Type M Mount

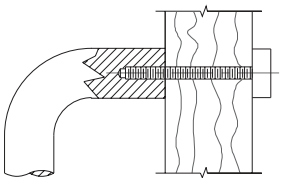


Back-to-Back with Spanner Collar

Wood or Metal Door

Available only for 8103EZ and 8190 Pulls.
- (2) 3/8-16 x 2-7/8" RH/LH bolts with finish matching spanner collars for tight, durable back-to-back mounting. Pulls furnished in pairs (PR) or Single (SGL) must specify M1 or RH thread or M2 for LH thread.

Type O Mount

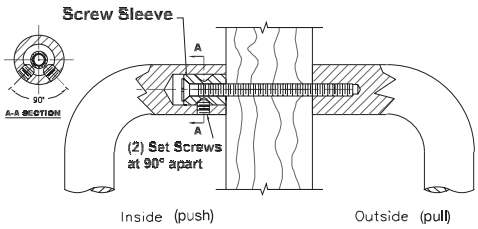


Decorative Blind Thru - Bolt

Wood or Metal Door

Available only for 8103EZ, 8190 and 9100 series Push/Pull Combinations.
- (2) 1/4-20 x 2-1/4" blind thru - bolts; plated to match.

Type N Mount



Back-to-Back "Two-Anchor"

Wood or Metal Door

Available only for 8103EZ, 8190 and 9100 series Push/Pull Combinations.
- (2) 1/4-20 x 2-3/4" steel countersunk trim head machine screws with (4) set screws for maximum anchoring force.
- (2) Steel screw sleeves; zinc plated.

Type NO Push/Pull Mounting

Type N & Type O

Pushbar to Pull
- (1) 1/4-20 X 3"steel countersunk trim head machine screws with (2) set screws.
- (1) steel screw sleeve, zinc plated.

Free End Pushbar & Pull
- (2) 1/4-20 X 2-1/4" blind thru-bolts; plated to match.

Type NS-Standard Push/Pull Mounting

Type N & Standard

Pushbar to Pull
- (1) 1/4-20 X 3"steel countersunk trim head machine screws with (2) set screws.
- (1) steel screw sleeve, zinc plated.

Free End Pushbar & Pull
- (2) 1/4-20 X 2-1/4" brass, oval head mach screws; plated to match.
- (2) No. 14 countersunk washers; plated to match.

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THE NEW DOVER HIGH SCHOOL
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Submittal Date: 6/27/12

Meets ANSI/BHMA A156.16, L04251.
UL Listed 90 Minute Fire Doors 8'0" x 10'0"

FB458 Top or Bottom Bolts

- When the active door is opened, the lever can be moved to the 'up' position, retracting the bolt and allowing the inactive leaf to be opened. When the inactive leaf is closed, the lever can be moved to the 'down' position, projecting the bolt into the strike and securely locking the inactive leaf.
- Simplified installation in metal frames. Round bolt head requires only a punched hole. Use of strike optional. Special design of guide and flat sided bolt tip to prevent bolt rotation.
- Non-handed.
- Bolt tip is 1/2" diameter.
- Bolt throw is 3/4" with a 7/8" vertical adjustment.
- Bolt backset is 3/4"
- Standard Rod Length is 12", which is measured from the center of the flush bolt body to the bolt tip. Optional Rod Lengths available - 6", 9", 18" and 24" for fire rated Doors. Optional Rod lengths available - 6", 9", 18", 24", 30", 36" and 48" for non-fire rated doors.

DP1 or DP2 optional dust proof strike available, see page C11.

Dimensions

Body Size: 1" Wide x 6-3/4" Long x 1-1/8" Deep

Guide Size: 1" Wide x 2" Long x 5/64" Thick

Strike Size: 15/16" Wide x 2-1/4" Long x 5/64" Thick

Finishes

Ives Number	US3	US4	US5	US10	US10B	US15	US26	US26D
BHMA	605	606	609	612	613	619	625	626

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Submittal Date: 6/27/12

DP1

DP2

Meets Meets ANSI/BHMA 156.16, L14011.

DP1
DP2 Dust Proof Strikes

- Designed for use with the bottom bolt of all flush bolts.
- Spring-loaded plunger returns to floor or threshold level anytime flush bolt is retracted, eliminating need to clean standard floor strikes.
- Strike hole is 3/4" Diameter and 1-1/8" Deep

Dimensions

DP1 Face Plate: 1-7/16" Diameter
DP2 Face Plate: 1-5/8" W x 3-1/2" L x 1/8" Thick
Body: 1-3/16" Diameter x 1-7/8" Deep

Finishes

Ives Number	US3	US4	US10	US10B	US26	US26D
BHMA	605	606	612	613	625	626

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COR Series Bar Coodinators

Meets ANSI/BHMA A156.3, Type 21A.
UL Listed for installation on labeled frame.

- The COR Series Coordinators are designed for use on pairs of doors when one door needs to close before the other.
- All COR units function easily. The active door lever, located nearest to the active stop, holds the active door open until the trigger mechanism is released by the closing of the inactive leaf.
- All COR units may not function correctly with swingclear hinges.
- All COR units are equipped with an adjustable override feature which allows the active door to close under extreme pressure.
- All COR units are compatible with Flush Bolts.
- The COR Series is available in five sizes for variable door opening widths.
- The COR Series does not cover the entire length of the stop, so a FL filler bar can be provided to maintain architecturally clean lines.
- COR Series Coordinator Channels and FL fillers are made of aluminum.
- Optional Filler Bars: FL20 - 20", FL32 - 32" and FL44 - 44", available to maintain clean line.
- Optional Mounting Brackets available: MB1, MB2, MB1F, MB2F, MB3F, MB1V, MB2V, and MB3V for other stop applied hardware.

For Openings Where Doors Are Same Size

Coordinator Number	Length of Channel	For Opening Widths	Common Applications
COR32	32"	34" - 52"	Pair of 2'0" Doors
COR42	42"	52" - 72"	Pair of 2'6" Doors
COR52	52"	62" - 92"	Pair of 3'0" Doors
COR60	60"	70" - 108"	Pair of 3'6" Doors
COR72	72"	84" - 132"	Pair of 4'0" Doors

For Openings Where Doors Are Unequal Size

The coordinator length should equal the active door width plus approximately 1/2 the inactive door width. The coordinator must be 6" longer than the active door width and shorter than the overall frame opening between stops.

Finishes

Ives Finish	US28	US26D	315AN
BHMA	628	713	711

FL Series Filler Bars

- The FL Filler Bars are available in three sizes for variable frame openings.
- FL Filler Bars are made of aluminum
- FL Filler Bars are field sized to frame opening.

Filler Bar Number	Length	Dimensions
FL20	20"	1-5/8" W x 5/8" D x 20" L
FL32	32"	1-5/8" W x 5/8" D x 32" L
FL44	44"	1-5/8" W x 5/8" D x 44" L

Finishes

Ives Finish	US28	US26D	315AN
BHMA	628	713	711

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MB1and MB2

Mounting Brackets

- Allows stop mounted hardware to be properly installed without damaging the COR coordinator, such as a parallel arm closer or a non-fire-rated surface vertical rod strike.
- Stop mounted hardware will need to be lowered to compensate for the height of the coordinator and mounting bracket.
- MB mounting brackets are made of aluminum

Product	Jamb Depth	Stop Width	Dimensions
MB1	4-3/4" Min.	Over 2-1/2"	4" W x 3" D x 15/16" T
MB2	4-3/4" Min.	Up to 2-1/2"	4" W x 3-1/4" D x 1-5/8" T

Finishes

Ives Finish	USP	SP28	SPBLK
BHMA	600	689	622

MB1F, MB2F and MB3F MB1V, MB2V and MB3V

MB1V

MB2V

MB3V

Fire Rated Mounting Brackets

- Allows for fire-rated stop mounted hardware to be properly installed without damaging the COR Coordinators, such as fire-rated surface vertical rod exit device strikes.
- Latch will need to be lowered to compensate for the height of the coordinator and mounting bracket.
- MB-V are designed for Von Duprin 8827-F soffit latch.
- Mounting brackets are made of steel.

Product	Jamb Depth	Stop Width	Dimensions
MB1F	5"	1-1/2" - 2-1/4"	4" W x 3" D x 1-5/8" T
MB1V	5"	1-1/2" - 2-1/4"	4" W x 3" D x 1-5/8" T
MB2F	5-7/8"	2-3/8" - 3-1/4"	4"W x 4" D x 1-5/8"T
MB2V	5-7/8"	2-3/8" - 3-1/4"	4"W x 4" D x 1-5/8"T
MB3F	6-7/8"	Over 3-3/8"	4"W x 3-1/2" D x 1"T
MB3V	6-7/8"	Over 3-3/8"	4"W x 3-1/2" D x 1"T

Finishes

Ives Finish	USP	SP28	SPBLK
BHMA	600	689	622

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How to Order COR and Accessories

COR 52 - US28 - FL20 - D - 36"

COR Size:
32, 42, 52, 60, 72

Finishes:
US28, US26D, 315AN

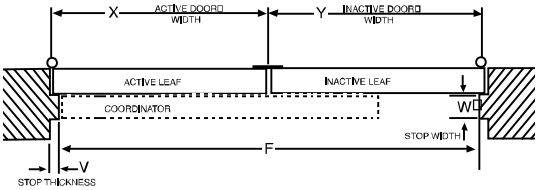
Filler Bar (if desired):
FL20, FL32, FL44

Vertical Rod Exit Device Cutout Type (if applicable):
A, B, C, D, E, F, G
If other Vertical Rod Exit Device not listed on chart, from page C16, include information as shown on page C16.

Active Door Size – Required for ALL Vertical Rod Exit Device Applications

To determine the size COR you need:

1. Start with the active door width (X).
2. Next consider the overall frame opening between stops (F).
3. Preferably, the coordinator would equal the active door width (X) + approximately 1/2 inactive door width (Y). The coordinator must be 6" longer than the active door width (X) and less than the overall frame opening between stop (F).



Examples:

- Pair of 30" Doors, 5/8" Stops
  Active Door Size, X = 30"
  Overall Frame Opening between Stops, F = 58-3/4"
  Recommended Coordinator: COR42

- Pair of 36" Doors, 5/8" Stops
  Active Door Size, X = 36"
  Overall Frame Opening between Stops, F = 70-3/4"
  Recommended Coordinator: COR52

- 36" Active Door, 18" Inactive door, 5/8" Stops
  Active Door Size, X = 36"
  Overall Frame Opening between Stops, F = 52-3/4"
  Recommended Coordinator: COR42

- 48" Active Door, 24" Inactive Door, 5/8" Stops
  Active Door Size, X = 48"
  Overall Frame Opening between Stops, F = 94-3/4"
  Recommended Coordinator: COR60

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Meets ANSI/BHMA 156.16, L12141 for brass or bronze and L32141 for aluminum.

Meets ANSI/BHMA 156.16, L12141 for brass or bronze and L32141 for aluminum.

FS436 Dome Stop
FS438 Dome Stop

- FS436 for doors without threshold.
- FS438 for doors with threshold or undercut doors.
- Heavy-Duty Cast Dome Stops constructed of brass, bronze or aluminum.
- Packed with wood screw and plastic anchor, specify Tampin (TPN) or lead expansion shield (LS), if required.

Replaceable gray, non-marring rubber bumper.

Dimensions

FS436	FS438
Overall Height: 1"	Overall Height: 1-3/8"
Base Height: 3/16"	Base Height: 9/16"
Base Diameter: 1-3/4" x 2" Oval	Base Diameter: 1-3/4" x 2" Oval

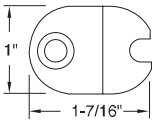
Finishes *brass*

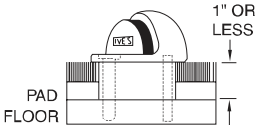
Ives Number	US3	US4	US5	US10	US10B	US15	US620*	US26	US26D	B716
BHMA	605	606	609	612	613	619	620	625	626	

** only available for FS436 in slim pack of 15 per box.*

Finishes *aluminum*

Ives Number	US28
BHMA	628





R435 Riser for FS436 Dome Stop
R437 Riser for FS438 Dome Stop

- Extruded aluminum, mill finish.
- R435 for conversion of FS436 Dome Stop to carpet installation.
- R437 For conversion of FS438 Dome Stop to carpet installation.
- Packed with wood screws, lead shield and stud. Specify Tampin (TPN) if required.

Dimensions

Available in 1/4", 3/8", 1/2", 5/8", 3/4" and 1" height.

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Meets ANSI/BHMA 156.16, L12131 for brass

FS441 Floor Stop

- Designed to blend well with all types of construction and provide a minimum of hindrance to cleaning efforts.
- Accommodates door undercut up to 1-1/2".
- Heavy-Duty cast brass or aluminum construction.
- Replaceable Non-marring rubber bumper.

FS441 packed with expansion shield and tampin, for masonry type mounting.
FS441-WS packed with wood screws, for drywall mounting.

Dimensions

Overall Height: 2-1/8"

Overall Length: 2-7/8"

Base Depth: 1-5/8"

Finishes *brass*

Ives Number	US3	US4	US5	US10	US10B	US15	US26	US26D
BHMA	605	606	609	612	613	619	625	626

FS444
Meets ANSI/BHMA 156.16, L12131 for brass

FS448
Meets ANSI/BHMA 156.16,
L12121 for brass and L32121 for aluminum

FS444 Floor Stop
FS448 Floor Stop

- Ideal for interior or exterior use.
- Cast brass construction.
- Accommodates door undercut up to 2-1/2".
- Replaceable Non-marring rubber tip.

FS444 is packed with expansion shield and lead shield, for masonry type mounting.
FS448 is packed with wood screws, for drywall mounting.

Dimensions

Overall Height: 3"

Base Diameter: 2-1/2"

Finishes *brass*

Ives Number	US3	US4	US5	US10	US10B	US15	US26	US26D
BHMA	605	606	609	612	613	619	625	626

Finishes *aluminum*

Ives Number	US28*
BHMA	628

** only available for FS448*

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WS406CVX & WS407CVX
Meets ANSI/BHMA 156.16 L22201 for brass, and L52101 for stainless steel.

WS406CCV & WS407CCV
Meets ANSI/BHMA 156.16 L22251 for brass and and L52251 for stainless steel.

WS406CVX Wall Bumpers
WS406CCV
WS407CVX
WS407CCV

- Constructed in sturdy yet economical wrought base of brass or stainless steel construction.
- Feature concealed tamper-proof mounting.
- Shipped factory preassembled backplate to reduce installation cost.
- Easy installation by inserting screwdriver through small hole in rubber.

WS406CVX (406) – convex rubber bumper, packed with wood screw and plastic anchor.
WS406CCV (406-1/2) – concave rubber bumper, which avoids damage to locks with projecting buttons, packed with wood screw and plastic anchor.
WS407CVX (407) – convex rubber bumper packed with screw and drywall anchor.
WS407CCV (407-1/2) – concave rubber bumper which avoids damage to locks with projecting buttons and is packed with screw and drywall anchor.

Dimensions

Base Diameter: 2-1/2"

Base Thickness: 3/8"

Overall Projection: 1"

Finishes *brass*

Ives Number	US3	US4	US5*	US10	US10B	US15	US15A**	US26	US26D	B716**
BHMA	605	606	609*	612	613	619	620	625	626	

Finishes *stainless steel*

Ives Number	US32D
BHMA	630

** only available on WS407CVX Slim-Pak of 15*

*** available on WS407CCV or WS407CVX Slim-Pak of 15*

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Meets ANSI/BHMA 156.16, L03011.

SR64 Door Silencer

- For use on metal frames featuring pneumatic design that, once installed, forms an air pocket to absorb shock and reduce noise of door closing.
- Tamper-proof once installed on the frame.
- Proper installation also eliminates door rattle and provides constant tension for door latches or locks.

Packed in bags of 100.
Grey Available in bulk pack of 2500.
Each bag has an installation tool included.

Dimensions

Diameter: 1/2"

Thickness: 1/8"

Finishes

GRY, TAN

Meets ANSI/BHMA 156.16, L03021

SR65 Door Silencer

- For use on wood frames, also feature pneumatic design to cushion shock and absorb noise.
- To prevent removal, a small brad should be driven into stop strip and through stem of silencer, as shown in the detail.

Packed in bags of 100.

Dimensions

Height: 3/4"

Diameter: 3/8"

Thickness: 1/8"

Finishes

GRY

SR66 Door Silencer

- Self Adhesive Rubber Silencers.
- Economical installation requires no drilling of frames.

Packed in sheets (100 minimum).

Dimensions

Diameter: 1/2"

Thickness: 1/8"

Finishes

BRN, GRY, WHT

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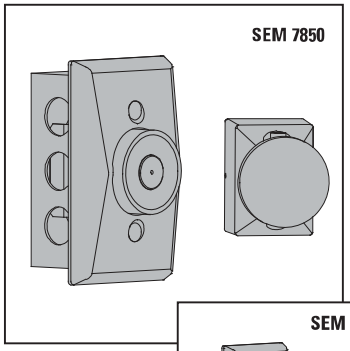
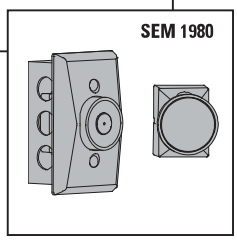
LCN SEM SERIES

FEATURES

SEM 7850 MAGNET

Die cast housing, standard profile recessed wall mount.
2" (51 mm) x 4" (102 mm) x 1 1/2" (38 mm)
NOTE: Outlet box not included.





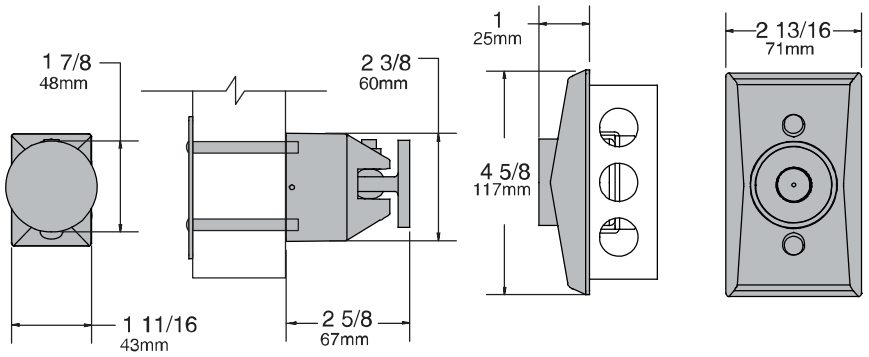
SEM 1980 MAGNET

Plastic housing, standard profile recessed wall mount.
NOTE: Outlet box not included.

SEM FEATURES

- **Tri-voltage design with 35lbs. of holding force.**
- Now available armature extensions from LCN (see page 11).
- SEM 7850 magnets are shipped with die cast housing, cover, armature and WMS screw pack.
- SEM 7850 available in standard powder coat finishes.
- SEM 7850 optional custom powder coat finish available.
- SEM 1980 magnets are shipped with plastic housing, cover, armature and WMS screw pack.
- SEM 1980 available in aluminum and dark bronze finishes only.
- Suitable for use in pocket door installations.
- UL listed for smoke barrier or labeled fire doors.

Total Projection = 3 5/8" (92 mm) **Dimensions apply for both SEM 7850 & SEM 1980**



LCN

8

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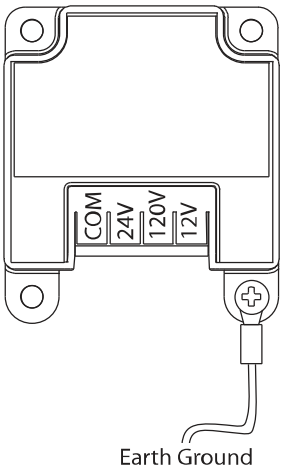
ELECTRICAL DATA

VOLTAGE INPUT



ELECTRICAL DATA

Holding Force: 35lbs. @ Nominal Input Voltage.

Maximum Current Draw: .020A @ 24VAC/DC, 120VAC
.030A @ 12VDC

ELECTRICAL SCHEMATIC

Operation:
Electromagnets are typically used with fire alarm systems. Doors are held open in the non-alarm condition. When the fire alarm panel enters the alarm condition, power to the electromagnets is removed, the doors close under door closer control, and function as a manual door. When the fire alarm panel returns to the non-alarm condition, power is reapplied to the electromagnets and the doors can be held open again.

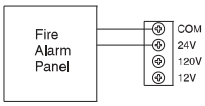


Fig. 1 24VAC/DC Wiring
Polarity is unimportant

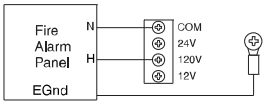


Fig. 2 120VAC Wiring

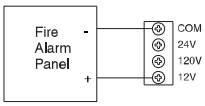


Fig. 3 12VDC Wiring
Polarity as shown

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THE NEW DOVER HIGH SCHOOL
DOVER, DE

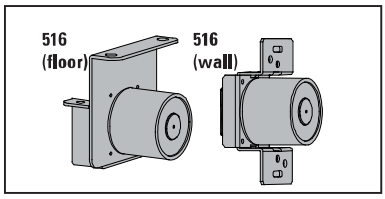
Submittal Date: 6/27/12

LCN SEM SERIES

ACCESSORIES

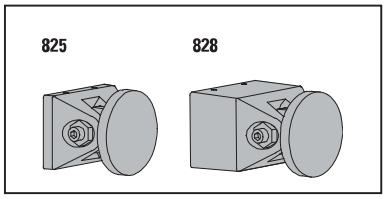
MAGNETS

FLOOR MAGNET, SEM7820-516, SEM7870-516
Standard magnet coil.
WALL MAGNET, SEM7830-516, SEM7840-516, SEM7850-516, SEM1960-516, SEM1970-516, SEM1980-516
Standard magnet coil.

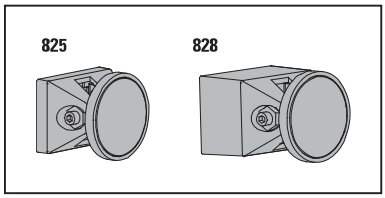


ARMATURES

DOOR ARMATURE, SEM7820-825, SEM7830-825, SEM7840-825, SEM7870-825
Standard, die cast low profile armature.
DOOR ARMATURE, SEM7850-828
Standard, die cast armature.

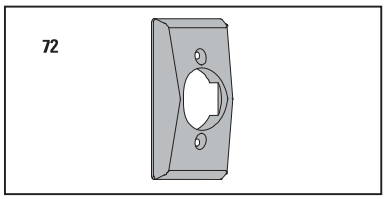


DOOR ARMATURE, SEM1960-825, SEM1970-825
Standard, plastic low profile armature.
DOOR ARMATURE, SEM1980-828
Standard, plastic armature.



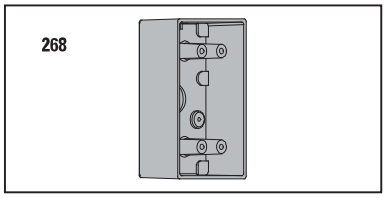
COVER

STANDARD COVER, SEM7830-72, SEM7840-72, SEM7850-72
Standard, die cast cover.
STANDARD COVER, SEM1960-72, SEM1970-72, SEM1980-72
Standard, plastic cover.



BOX

WALL BOX, SEM7830-268
Standard, die cast surface wall mount box.
WALL BOX, SEM1960-268
Standard, plastic surface wall mount box.



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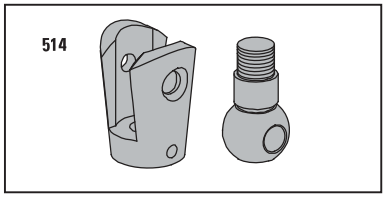
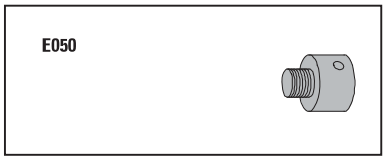
EXTENSIONS

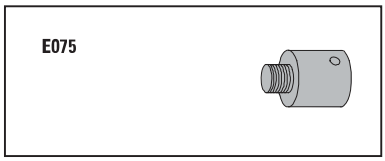
COUPLER ASSEMBLY KIT, SEM7810-514
Coupler assembly is required for each door needing extension(s). Kit includes coupler link and ball pivot (alone serves as a 1 1/2" extension).



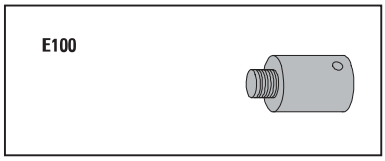
EXTENSION, SEM7810-E050
Standard metal 1/2" extension.



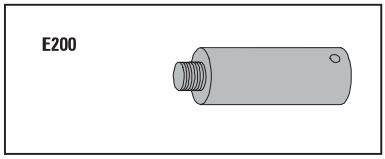
EXTENSION, SEM7810-E075
Standard metal 3/4" extension.



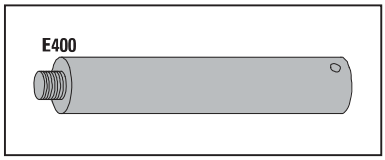
EXTENSION, SEM7810-E100
Standard metal 1" extension.



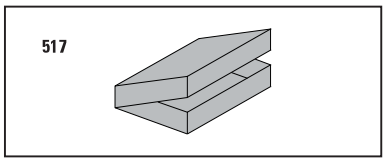
EXTENSION, SEM7810-E200
Standard metal 2" extension.



EXTENSION, SEM7810-E400
Standard metal 4" extension.



EXTENSION KIT, SEM7810-517
Extension kit includes: 10 . . . . . 7810SEM-E050
10 . . . . . 7810SEM-E075
10 . . . . . 7810SEM-E100
5 . . . . . 7810SEM-E200
20 . . . . . 7810SEM-514



NOTE: Using just the Coupler Assembly Kit will create a 1 1/2" link. Extension Links are available in different lengths and can be combined together to achieve the desired length.

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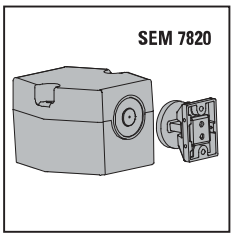
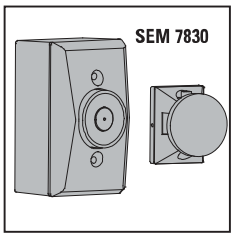
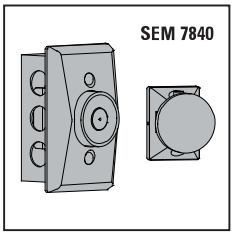
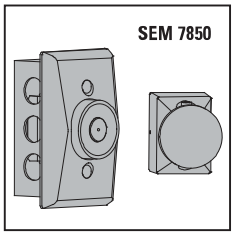
LCN SEM SERIES

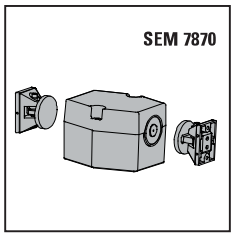
ORDERING INFORMATION











HOW-TO-ORDER SEM 7800 SERIES MAGNETS

1. SELECT MAGNET SERIES.

- ☐ SEM7820
- ☐ SEM7830
- ☐ SEM7840
- ☐ SEM7850
- ☐ SEM7870

2. SPECIFY FINISH

- ☐ Standard Powder Coat _____
  Aluminum, Dark Bronze, Brass.
- ☐ Bright Metalic (MTLPC) _____
- ☐ Custom Powder Coat (RAL) _____

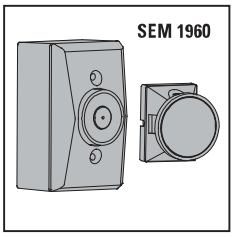
HOW-TO-ORDER SEM 1900 SERIES MAGNETS

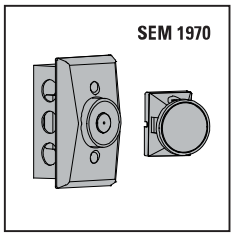
1. SELECT MAGNET SERIES.

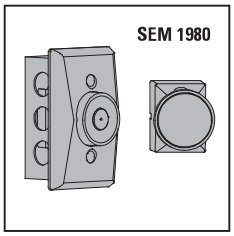
- ☐ SEM1960
- ☐ SEM1970
- ☐ SEM1980

2. SPECIFY FINISH

- ☐ Standard Finish _____
  Aluminum or Dark Bronze







HOW-TO-ORDER SEM 7810 EXTENTIONS

1. SELECT EXTENTIONS.

- ☐ SEM7810-514 (qty.) _____
- ☐ SEM7810-E050 (qty.) _____
- ☐ SEM7810-E075 (qty.) _____
- ☐ SEM7810-E100 (qty.) _____
- ☐ SEM7810-E200 (qty.) _____
- ☐ SEM7810-E400 (qty.) _____
- ☐ SEM7810-517 (qty.) _____

2. SPECIFY FINISH

- ☐ Standard Finish _____
  Aluminum or Dark Bronze

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LCN ELECTROHYDRAULIC POWERED SYSTEMS

ELECTRIC AUTO EQUALIZERS

These Auto Equalizer products are an addition to the original pneumatic drive system. People moving through a door can use it as a normal rack & pinion door closer or, at the touch of a button, open the door automatically. An integrated digital control suite provides all electrical control functions. These self-contained units are suitable for use on single leaf doors or pair of doors where each leaf is equipped with an operator. The operator provides all the control and power elements into a single operator package, only some actuators are required to complete the system.

- Introduced in 1995
- Two surface mount models available. The 4630 mounts on the pull side of the door and the 4640 series mounts on the push side of the door.
- Integrates a modified heavy-duty 4040 series cast iron cylinder. The 4040 series closer has been independently tested to 10 million cycles.
- Mounting plate and cover end caps are only available in a powder coat black finish.
- 4600 Electric Operators are not approved for smoke evacuation systems.

UNIQUE FEATURES

- **Digital Control Box**
  Provides exceptionally precise control of a large range of built-in functions combined with superior durability and performance. Visual indications and digital readouts of all control function settings and activity make adjustments easy, fast and accurate.

- **Dual Independent Program Memories**
  Each unit is pre-programmed to factory default settings. The installer can adjust the unit to meet the job site requirements. These field settings are locked into the computer's memory. Any subsequent field adjustments replace the original field adjustments. The factory settings are always retained in memory and can be recalled to replace the field settings in just seconds, restoring the unit to it's original programming.

- **On-Board Diagnostics**
  Sophisticated built-in diagnostics program monitors the system microprocessor, power supplies, drive system and actuators circuitry. Reduces the time required to make sure the installation is complete and correct.

- **On-Board Power Supply**
  Provides both 12V DC and 24V DC outputs to power card readers, manual actuators and other peripherals.

- **"No Destruct" Drive System**
  Specially designed motor and clutch assembly provide a 'breakaway' function that reduces the chance the operator will be damaged in an abusive application. If a vandal tries to force the door closed while it is trying to open, the clutch mechanism prevents damage. The door is never out of control because the heavy duty 4040 closer is always operable.

- **Electronic Circuit Protection**
  The high voltage input circuit is protected by an electronic circuit breaker. The low voltage output circuits by self-resetting fuses.

- **Visual Function Indicators**
  LED's allow direct observation of these inputs:
  - input power
  - fire alarm input
  - normal trigger (actuator) input
  - sequential trigger (actuator) input
  - hold open/alternate action (actuator) input
  - lockout timer
  - safety sensor (clear) input
  - safety sensor (active) input

- **Programming Mode**
  Allows tailoring the following functions to meet specific site conditions:
  - hold open time
  - 90° slow down time
  - one shot input [ON or OFF]
  - Exterior mode [ON or OFF] function to accommodate momentary resistance, like wind gusts, during the opening swing.
  - electric strike delay timer
  - electric strike 3 second power function [ON or OFF]
  - sequential trigger delay timer
  - alternate action timer
  - lockout timer

ELECTRIC AUTO EQUALIZER SYSTEMS

- Originally introduced in 1995.
- Exceeds proposed ANSI cycle test standard of 300,000 full load automatic operating cycles. Integrated LCN 10 million cycle heavy duty 4040 door closer.
- Power operation plus full door control.
- For all applications, single or multi-door projects.
- Opening time to backcheck no faster than 3 seconds.
- Opening time 4 seconds or more to fully open.
- Must remain fully open for at least 5 seconds.
- Closing time from 90° to 10° no faster than 3 seconds.
- Less than 15 pounds-force to stop door's motion.
- Kinetic energy must not exceed 1.25 lbf-ft.
- In event of failure; less than 15 lbf. to release latch, less than 30 lbf. to put door in motion, less than 15 lbf. to fully open door systems.

Continued on page 34

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LCN ELECTROHYDRAULIC POWERED SYSTEMS

STANDARDS, LISTINGS & APPROVALS

- UL listed for self-closing doors without hold open under "SWINGING DOOR CLOSERS (GVEV)" file R1943.
- Tested and certified under ANSI Standard A156.19. Refer to Section 2.1 and consult factory for details.
- ANSI Standard A117.1, Section 4.13.13
- ADA law, Section 4.13.12.
- UBC 7.2 (1997) for positive pressure plus UL 10B and UL 10C listing.
- Wiring is compliant with both UL 325 and the NEC. Separation of high and low voltage.
- Consult the factory for other listings such as; cUL, Department of Labor and Industry of the Commonwealth of Pennsylvania, The Board of Standards and Appeals of the City of New York, Fire and Panic Safety Standards of the California State Fire Marshal.
- UL Listed for Fire Rated Door Operators with Automatic Closers, File No. (GUJY).

WARRANTY

- 2 year limited warranty. See General Section for complete details.

MAINTENANCE

- Operators mounted according to the LCN installation instructions require no periodic maintenance or adjustments.
- Monthly, quarterly and annual visual inspections are recommended.
- No service contracts.

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LCN ELECTROHYDRAULIC POWERED SYSTEMS

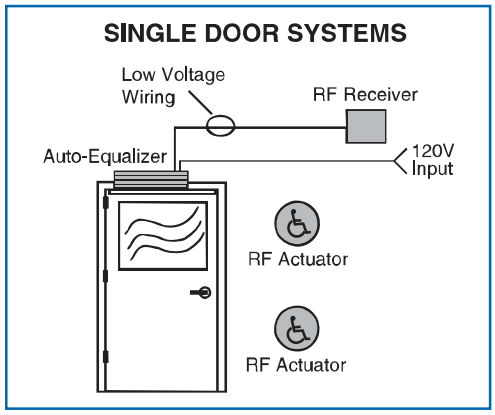
These pages illustrate examples of typical Electric LCN systems. Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

SINGLE DOOR SYSTEM

- An Interior Door.
- No guide rails or safety devices.
- Free Swinging (or Dogged) Door.

How It Works

Wireless RF actuators with receiver, powered by the Auto Equalizer simplify installation and minimize installation costs. For automatic door operation, touching either actuator signals the receiver and controller module to open the door to 90°. The door is held there until the system times out, then full spring power is applied to reliably close and latch the door. Door opening speed and hold open time are adjustable on the controller. Closing power and speed are adjustable on the cylinder assembly. If not actuated, the Auto Equalizer functions as a full featured door closer.



BILL OF MATERIALS

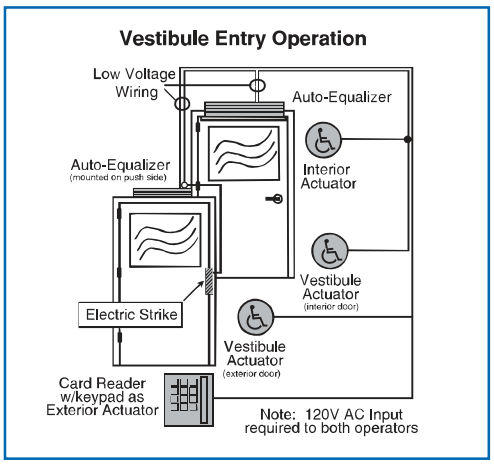
Qty.	Part No.	Description
1	4631	Auto Equalizer
2	8310-3856WS	RF Actuators
1	8310-865	RF Receiver

VESTIBULE ENTRY SYSTEM

- Exterior & Vestibule doors.
- Sequential Operation.
- No guide rails or safety devices.
- Controlled Access, Free Egress.

How It Works

This installation provides both accessibility and security for building occupants. The Auto Equalizer controller module provides both the power and coordination for card reader and electric strike applications. A built-in delay allows the strike to release before the door begins to open. Two interconnected Auto Equalizers provide sequential operation in both directions. Vestibule actuators allow single door ingress/egress from the vestibule as needed. *Note: An EL device requires a separate power supply.* If not actuated, the Auto Equalizer functions as a full featured door closer.



BILL OF MATERIALS

Qty.	Part No.	Description
1	4642	Auto Equalizer (exterior)
1	4631	Auto Equalizer (interior)
3	8310-856	Wall Plate Actuators
	Other products from Von Duprin and Schlage	

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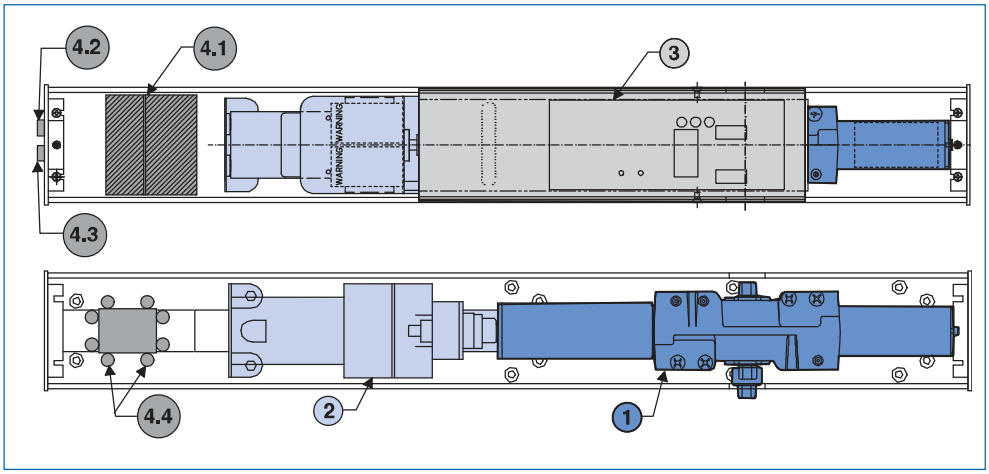
DOVER, DE

Submittal Date: 6/27/12

LCN 4630/4640 ELECTROHYDRAULIC POWERED SYSTEMS



1 DOOR CLOSER ASSEMBLY

- Based on a heavy duty 4040, cast iron cylinder with all-weather fluid for consistency and reliability.
- Rugged drive mechanism provides the connection to the electric motor assembly.
- Fully adjustable, independent hydraulic regulation controls the door to minimize the chance of damage to the door and frame assemblies.

2 ELECTRIC MOTOR/CLUTCH ASSEMBLY

- Highly efficient motor combined with a custom designed gear system provides exceptionally quiet and smooth operation.
- Special clutch transmits the power and provides a unique "breakaway" function that prevents damage to the operator, door and frame if a vandal forces the door closed during the powered opening swing.

3 DIGITAL CONTROLLER MODULE

- Digital Control Suite
- Dual Independent Program Memories
- On Board Diagnostics
- Visual Function Indicators
- Adjustable Programming Modes

4.x FIELD WIRING

4.1
- Input power; 120V AC @ 1.5 amperes.
- On-board, low voltage power supply provides both 12V and 24V DC @ 1.0 ampere (maximum combined load) for LCN actuators, RF receivers, and electric strikes or magnetic locks.
- Circuit breaker switch and self-resetting fuses protect input and output power from voltage spikes.
- Terminal strips simplify field wiring.

4.2
- On/Off Switch (red)

4.3
- Hold Open Switch (black)

4.4
- Separate conduits for high voltage power and low voltage power and signal wiring meet UL and National Electrical Code requirements.

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LCN ELECTROHYDRAULIC POWERED SYSTEMS

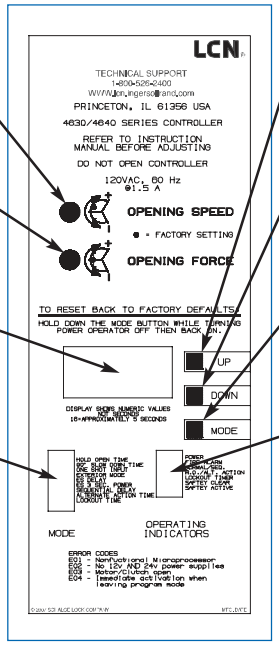
LCN DIGITAL CONTROL BOX

Opening Speed Adjustment
Limited to a minimum of 3 seconds to backcheck (approx. 70°)

Opening Force Adjustment
Maximum of 15 lb-f to stop door swing

Time Display
Displays numeric value relating to timing adjustments (16 = aprox. 5 seconds)

Mode Indicator
Indicates programming mode currently being displayed



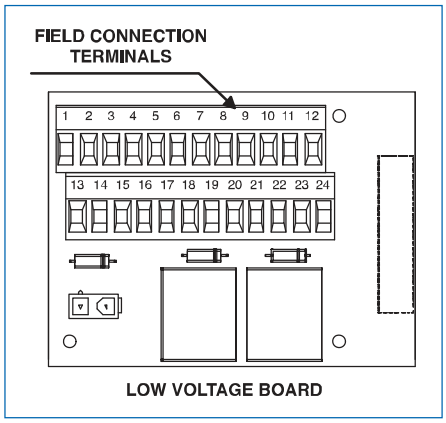
Up Button
Increases time or changes from OFF to ON when programming

Down Button
Decreases time or changes from OFF to ON when programming

Mode Button
Advances through programming setups on Mode Indicator

Operating Indicators
Displays operating information about internal functions and external hardware

LCN LOW VOLTAGE (CLASS 2 NEC) ELECTRICAL CONNECTIONS



FUNCTION	TERMINAL
Actuator - Normal Input (N.O.)	16 & 17 or 18 & 19
Actuator - Sequential Input (N.O.)	8 & 19
Actuator - Alternate Action (N.O.)	15 & 17
Actuator - Continuous (N.O.)	6 & 17
Sequential Output	9
Stop Side Safety (N.O.)	19 & 20
Swing Side Safety (N.O.)	19 & 21
Fire Alarm Contact (N.C.)	13 & 14 (Fire Shunt)
Auxiliary Relay Contacts(5 amp max)	10 - Common
	11 - N.O.
	12 - N.C.
E.S. Relay Contacts(5 amp max)	22 - Common
	23 - N.O.
	24 - N.C.
12V DC & 24V DC Negative*	2, 4, 13, 17, & 19
12V DC Positive*	5 & 7
24V DC Positive*	1 & 3

* Note: 1 Amp max load between 12V and 24V DC outputs

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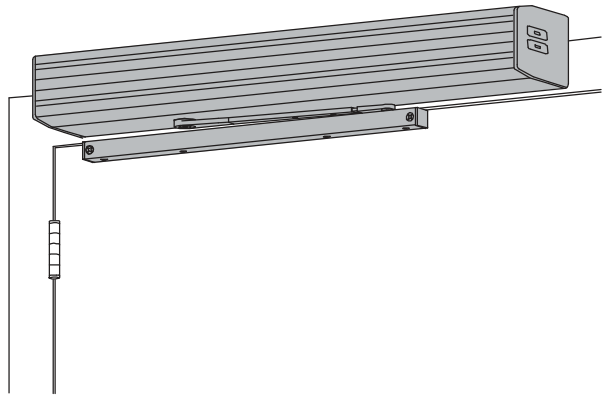
LCN 4630 SERIES

FEATURES

TOP JAMB (PULL SIDE) MOUNTING



4630 shown

The 4630 AUTO EQUALIZER™ is LCN's SMART & RELIABLE electrically powered low-energy power operator. It provides easy access for people with disabilities, the elderly, or the frail. Designed primarily for manual opening applications that occasionally required automatic opening.

- **Digital Control Box**
- **Utilizes a 10,000,000 Cycle Heavy Duty Door Closer**
- **On-Board Diagnostics**
- **On-Board Power Supply**
- **Factory-Default Memory**
- **Plug-and-Play Connections**
- **No Destruct Feature**
- **No Guard Rails or Safety Mats Required**

- Standard, top jamb (pull side) mounted 4630 series closer shipped with single lever (standard) arm, metal cover, standard track, and wood and machine screw pack. Actuators available separately, see page 121.
- Meets ADA requirements (power mode).
- Non-sized cylinders for interior doors to 4'0" and exterior doors to 3'0".
- Non-handed for either right or left swinging door.
- 4630 has easily accessible switches to provide on/off and continuous hold open functions. 4630CS provides concealed on/off power switch. Control module provides all timing and sequential door functions, electric strike controls and adjustments for opening speed and force.
- Standard or optional custom powder coated finish, end caps are black.
- Optional plated finish on cover, arm, and fasteners.

4630 Series is UL and cUL listed with standard arm for self-closing doors and meets the provisions of ANSI Standards A117.1, A156.19, and the Americans with Disabilities Act.

MOUNTING				FINISH		COVER		CYLINDER					*ARM FUNCTION				
TOP JAMB (PULL SIDE)	TOP JAMB (PUSH SIDE)	PARALLEL ARM	CONCEALED	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY*	POWER OPERATOR	HOLD-OPEN	STANDARD (SINGLE)	REGULAR (DOUBLE)	EXTRA DUTY	CUSH-N-STOP	SPRING CUSH
●	○	○	○	●	●	○	●	●	●	♿	●	●**	90°	○	○	○	○

● AVAILABLE
○ NOT AVAILABLE

♿ *Meets ADA requirements (power mode).*
* *See individual series for maximum manual opening.*
** *Switch provided for continuous hold open (4630 only).*

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DOVER, DE

Submittal Date: 6/27/12

LCN 4630 SERIES

MOUNTING DETAILS

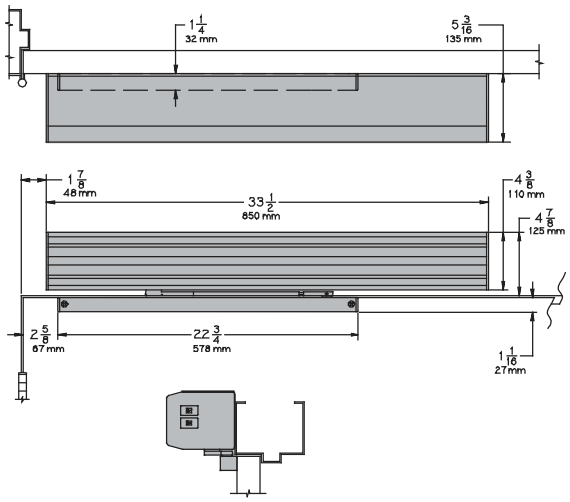
TOP JAMB (PULL SIDE) MOUNTING

MAXIMUM OPENING

Templating allows 90° power opening and 170° manual opening.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180 – 130° range. Consult factory for applications where exterior or large/heavy door must swing 180°.

Consult factory for all pivot mounted installations.



4630 shown

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop is recommended.**
- **Reveal** should not exceed 1/8" (3 mm).
- **Head Frame** minimum 2" (51 mm).
- **Top Rail** minimum 1 1/8" (29 mm).
- **Opening Time and Force** are variable by adjustments to the electronic control module located on the operator assembly. Maximum hold open time adjustable up to approximately five minutes.
- **System Diagram** See "AUTOMATIC OPERATORS" section page 35 for typical system wiring and pages 36-37 for electrical data.

Special Templates
Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

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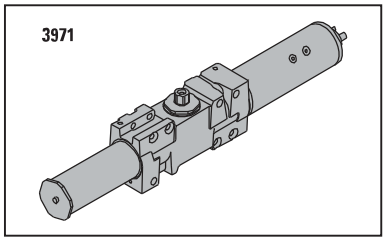
LCN 4630 SERIES

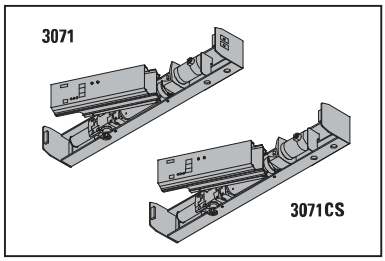
ACCESSORIES

CYLINDERS

CYLINDER ONLY, 4631-3971
Standard, non-handed, cast iron cylinder.



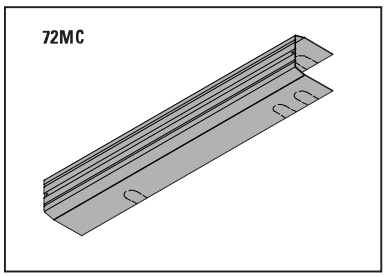
CYLINDER ASSEMBLY, 4631-3071
Standard, non-handed, cast iron cylinder and mounting plate. Includes; 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller.



CYLINDER ASSEMBLY, 4631-3071CS
Standard, non-handed, cast iron cylinder and mounting plate. Includes; 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller. Same as a 4630-3071 assembly except on/off switch is concealed in endcap and no hold open switch is included. (separate key switches suggested)

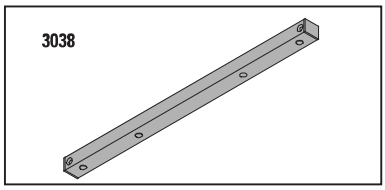
COVERS

COVER, 4630-72MC
Standard, non-handed metal cover.



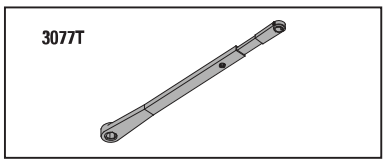
TRACKS

STANDARD TRACK, 4630-3038
Standard non-handed track.
Will not accept hold open clip or bumper assembly.



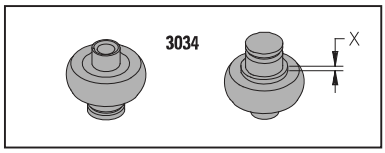
ARMS

STANDARD ARM, 4630-3077T
Non-handed arm.
Track roller not included with arm.



INSTALLATION ACCESSORIES

TRACK ROLLER, 4630-3034
Quiet low friction roller assembly.
Shoulder dimension "X" = 1/8" (3mm).



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ACCESSORIES

INSTALLATION ACCESSORIES

SWITCH END CAP, 4630-334
End cap (black powder coat only) with cut outs for installing on/off and hold open switches.

BLANK END CAP, 4630-334-2
Black powder coat only.

SWITCH END CAP, 4630-334CS
End cap and switch (black powder coat only) for concealed switch option.

ON/OFF SWITCH ASSEMBLY, 4630-3179-1
Red rocker switch. Plugs into high voltage PC board.

HOLD OPEN SWITCH ASSEMBLY, 4630-3179-2
Black rocker switch. Plug into low voltage PC board.

PC BOARD ASSEMBLY, 4630-3180
High and low voltage PC boards connected to mounting bracket.

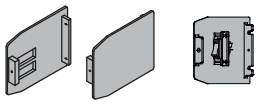
MOTOR/CLUTCH ASSEMBLY, 4630-3454
A geared assembly in an LCN power operator that incorporates a "no destruct" feature.

CONTROL BOX ASSEMBLY, 4630-3462
Digital controller with built-in 12/24 VDC power supply. Programming and timing functions are adjusted on controller.

AC POWER CABLE, 4630-3498-2
2 wire cable to connect 120 VAC from PC board assembly to controller.

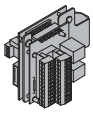
RIBBON CABLE CONNECTOR, 4630-3498-1
16 wire ribbon cable connecting 1-24 pin terminal connectors to controller.

334
334-2
334CS

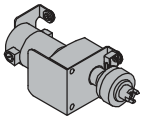


3179-1
3179-2

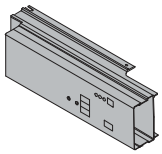
3180



3454



3462



3498-2

3498-1

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LCN 4630 SERIES

ORDERING INFORMATION

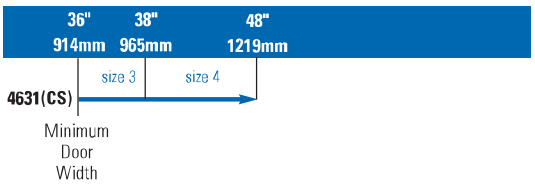
TABLE OF SIZES

Non-Sized 4630 series cylinder is adjustable from size 1 through size 4 and is shipped set to size 3. Closing power of 4630 Series closers may be increased 50%.

→ Indicates recommended range of door width for closer size.
Note: Minimum door width 36" (914 mm).

EXTERIOR (and VESTIBULE) DOOR WIDTH

INTERIOR DOOR WIDTH



HOW-TO-ORDER 4630 SERIES CLOSERS

1. SPECIFY FINISH.

☐ Standard Powder Coat _____
Aluminum, Dark Bronze, Brass.

Closer will be shipped with:
- *STANDARD CYLINDER,*
- *STANDARD METAL COVER,*
- *STANDARD ARM,*
- *TRACK ROLLER,*
- *STANDARD TRACK and*
- *WOOD and MACHINE SCREW PACK,*
unless options listed below are selected.

CLOSER OPTIONS

CYLINDER ASSEMBLY

☐ 4630CS (concealed on/off switch)
(separate key switches suggested)

FINISH

☐ Custom Powder Coat (RAL) _____
☐ Plated Finish, US _____

SCREW PACK

☐ TB*, Wood & Machine Screw (TBWMS)
☐ TORX Machine Screw (TORX)
☐ TB* & TORX Machine Screw (TBTRX)

*Specify door thickness if other than 1 3/4".

SPECIAL TEMPLATE

☐ ST-_____

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AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 4 1/2" Surface and Flush mounts

Actuators & Accessories

The actuators and accessories on the following pages are to be used with LCN automatic operators. When using actuators supplied by others, such as card readers, consult the factory.

The desired function, traffic patterns and physical design of the opening will determine the type of actuators used. Generally, for two-way traffic, an actuator is required on both the interior and exterior side of the door. Each actuator is packaged with a decal to be applied to the controlled door. Scanners operate on 12V or 24V AC/DC and may be powered by the LCN electrohydraulic/electromechanical operators. The 7900 series control box requires separate power supply for scanners. Actuators provide normally open (N.O.) dry contacts.

WALL MOUNTED ACTUATOR, 8310-856
Hardwired low voltage actuator with round, stainless steel touch plate in 4 1/2"" (114mm) diameter. Engraved blue filled handicap symbol conforms to most accessibility codes. Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door. Optional mounting in single gang electrical box (by others). Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard.

WALL MOUNTED ACTUATOR, 8310-856T
Same as the 3810-856, with the added engraving of "Push to Open"

FLUSH MOUNT BOX, 8310-868F
Rugged Plastic Box, 4 1/2" Round, Optional accessory - Can be used w/ any 4 1/2" round actuator

SURFACE MOUNT BOX, 8310-868S
Rugged Plastic Box, 4 1/2" Round, Optional accessory - Can be used w/ any 4 1/2" round actuator

WEATHER RING, 8310-800
Plastic Weather Ring, 4 1/2" Round. Optional accessory - Can be used w/ any 4 1/2" round actuator

TRANSMITTER, 8310-844
Transmitter, Wireless, 1 Channel, 9v battery included. Use to convert standard wall mount actuator to wireless. Requires 8310-865 Receiver

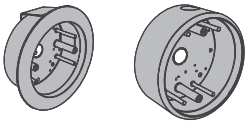
RECEIVER, 8310-865
Receiver, Wireless, 1 Channel, w/Sequencing Feature. Used in conjunction w/ Wireless Actuators & Transmitter(s)

ESCUTCHEON, 8310-874
Tapered stainless steel escutcheon covers the gap between the wall and the back of the wall plate actuators when mounted in electrical boxes(by others) to minimize cart damage or vandalism. Optional accessory - Can be used w/ any 4 1/2" round actuator

856

856T

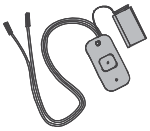
868F



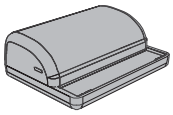
868S

800

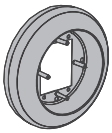
844



865



874



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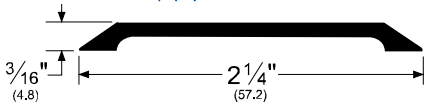
Saddle Thresholds

- To use a saddle threshold in an offset condition, use an elevator (see page 37).

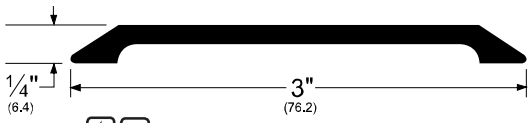
173_ BHMA

AVAILABLE FINISHES: A, B, D, G



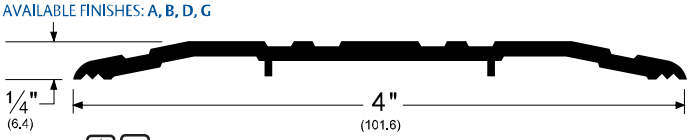
151_ BHMA

AVAILABLE FINISHES: A, B, D, G



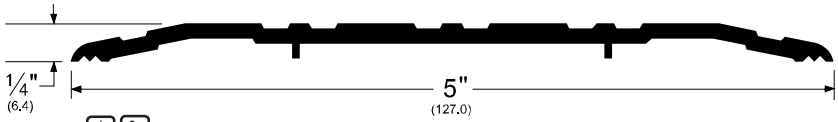
270_ BHMA

AVAILABLE FINISHES: A, B, D, G



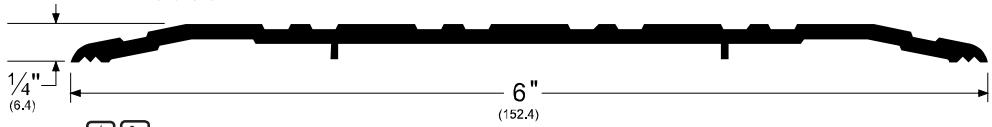
271_ BHMA

AVAILABLE FINISHES: A, B, D, G, SN



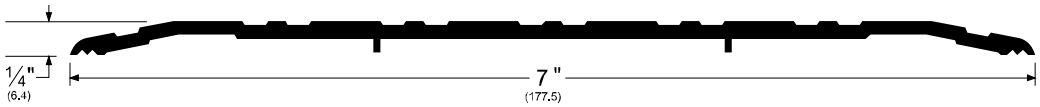
272_ BHMA

AVAILABLE FINISHES: A, B, D, G, SN



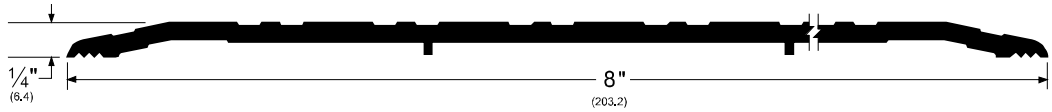
276_ BHMA

AVAILABLE FINISHES: A, B, D, G



2748_ BHMA

AVAILABLE FINISHES: A, D, G



NOTE: Products shown in this section may not be drawn to scale.

▲ **AVAILABLE FINISHES FOR PRODUCTS SHOWN ON THIS PAGE** (see General Information section for finish chart)

A (Mill Finish Aluminum) • **B** (Mill Finish Extruded Bronze [Brass]) • **D** (Dark Bronze Anodized) • **G** (Gold Anodized) • **SN** (Satin Nickel Anodized)
NOTE: **G, SN** are available with limited inventory

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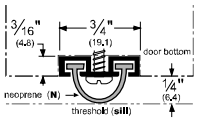
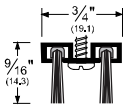
Specialty Door Bottoms

- May be used in many different applications.
- Some of these shapes may be used as meeting stile gasketing, see page 76 for examples.

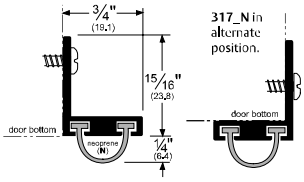
313_N
AVAILABLE FINISHES:
A, D, G



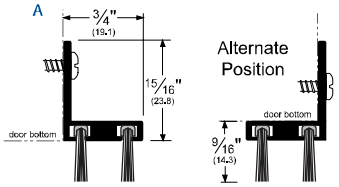
313_P
AVAILABLE FINISH:
A

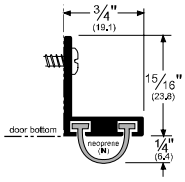


317_N
AVAILABLE FINISHES:
A, D, G

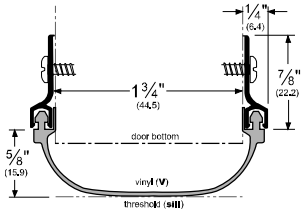


317_P
AVAILABLE FINISH:
A

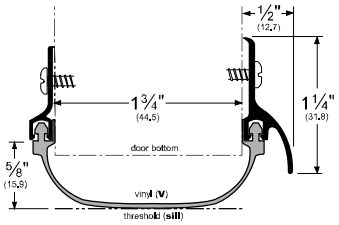




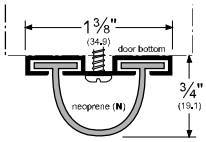
318_V
AVAILABLE FINISHES:
A, BDG, D, G, PW



3185_V
AVAILABLE FINISHES:
A, D



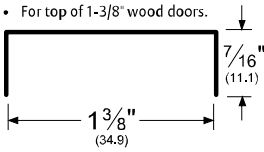
314_N
AVAILABLE FINISHES:
C, D, G



Door Top Weatherstrip

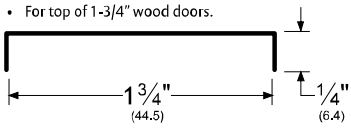
_343
AVAILABLE FINISH: PA
AVAILABLE LENGTHS: 36", 48"

- For top of 1-3/8" wood doors.



_344
AVAILABLE FINISHES: B, PA
AVAILABLE LENGTHS: 36", 48"

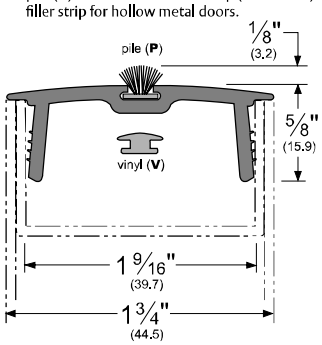
- For top of 1-3/4" wood doors.



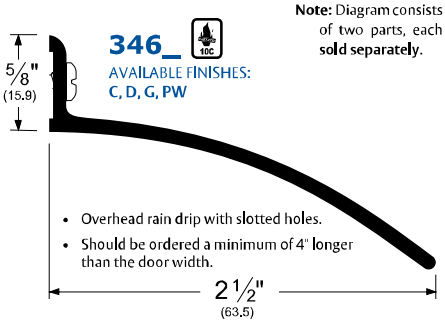
377P
pile seal

377V
vinyl seal

- Rigid tan colored vinyl with vinyl (V) insert or pile (P) insert used as a door top (or bottom) filler strip for hollow metal doors.

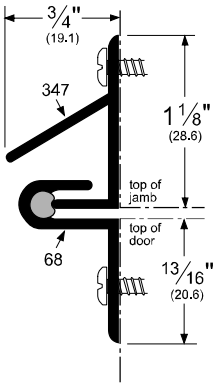


346_
AVAILABLE FINISHES:
C, D, G, PW



- Overhead rain drip with slotted holes.
- Should be ordered a minimum of 4" longer than the door width.

Note: Diagram consists of two parts, each **sold separately**.



347_
68_R
AVAILABLE FINISHES:
A, D, G

- 347 is the raindrip and hook.
- 68_R is the interlock.
- For outswing doors only.
- Should be ordered a minimum of 4" longer than the door width.

▲ **AVAILABLE FINISHES FOR PRODUCTS SHOWN ON THIS PAGE** (see General Information section for finish chart)

A (Mill Finish Aluminum) • **B** (Mill Finish Extruded Bronze [Brass]) • **BDG** (Bright Dip Gold Anodized) • **C** (Clear Anodized) **D** (Dark Bronze Anodized) • **G** (Gold Anodized) • **PA** (Painted Aluminum) • **PW** (Painted White)

UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

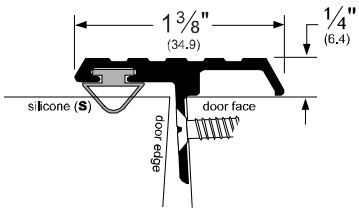
"T" and Overlapping Astragals

355_S

AVAILABLE FINISHES:
B, BDG, C, D, G, PW, SN

Mill finish extruded bronze (brass).

Satin Nickel finished product supplied with BLACK insert. GRAY available upon request.



ALTERNATE INSERTS FOR 355

355_ V

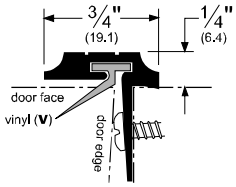
AVAILABLE FINISHES:
B, BDG, C, D, G, PW, SN

355_ P

AVAILABLE FINISHES:
B, BDG, C, D, G, PW, SN

356_V

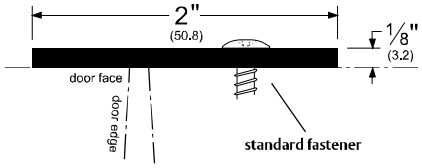
AVAILABLE FINISHES:
A, BDG, D, PW, SN



- Standard fastener is #10 x 1" Truss Head SMS.
- **"ND"** denotes "no drill" (unless specified **"ND"**, astragals are drilled).
- Countersink drilling with countersunk flathead screws also available upon request at no extra charge.

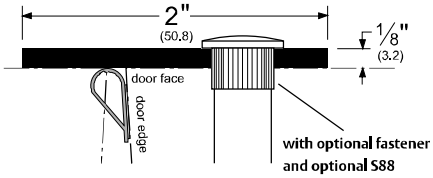
357_

AVAILABLE FINISHES:
C, D, G, SP, SS (#4 Finish & #4 Edge)



357_ with S88

AVAILABLE FINISHES:
SP, SS (#4 Finish & #4 Edge)



357_ND

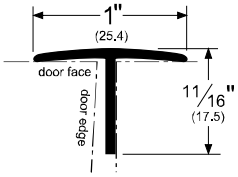
AVAILABLE FINISHES:
C, D, G, SP, SS (#4 Finish & #4 Edge)

- If specifications state that an astragal is required to satisfy a fire and / or smoke rated opening, then a thru-bolted **357SP** or **SS** in conjunction with **S88** seal is the only configuration that can be used.
- 1/4"- 20 machine screws and thru-bolts must be ordered separately at additional cost.
- Standard fastener is #10 x 1" Truss Head SMS.
- **S88** (see Adhesive Gasketing section) must be ordered separately at an additional cost, if required.

359_

AVAILABLE FINISHES:
A, B, BDG, D

For light residential installations. Includes #16 x 7/8" flathead zinc nails.



▲ **AVAILABLE FINISHES FOR PRODUCTS SHOWN ON THIS PAGE** (see General Information section for finish chart)

A (Mill Finish Aluminum) • **B** (Mill Finish Extruded Bronze [Brass]) • **BDG** (Bright Dip Gold Anodized) • **C** (Clear Anodized) • **D** (Dark Bronze Anodized) • **G** (Gold Anodized) **PW** (Painted White) • **SN** (Satin Nickel Anodized) • **SP** (Galvannealed Steel) • **SS** (See Individual Part) • Special finishes available upon request

PEMKO ASSA ABLOY
VENTURA, CA USA PH. 800.283.9988
MEMPHIS, TN USA PH. 800.824.3018
VANCOUVER, BC CANADA PH. 877.535.7888
TORONTO, ON CANADA PH. 866.243.9816

UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

BRUSH GASKETING

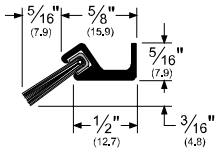
BRUSH GASKETING

35° Aluminum Retainers

- These products have 1/8" drilled fastener holes.

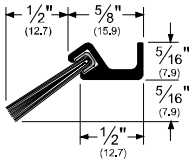
35041_NB

AVAILABLE FINISHES:
C, D, G



35061_NB

AVAILABLE FINISHES:
C, D, G



ALTERNATE INSERT FOR 35041

soft brush (**SB**)

35041_SB

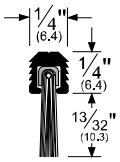
AVAILABLE FINISHES:
C, D, G

Mortise Retainers

- The ultimate design for concealed weatherstrip needs.
- Can be used on doors, windows and more.
- BHMA logo represents products that meet the requirements of **ANSI/BHMA 156.22-2003 for latching force and air infiltration.**
- All clear anodized brush products are supplied with gray brush (available with black brush upon request). Other finishes supplied with black brush.

5041_NB

AVAILABLE FINISH:
A



ALTERNATE INSERT FOR 5041

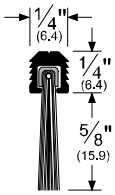
soft brush (**SB**)

5041_SB

AVAILABLE FINISHES:
A

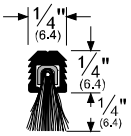
5061_NB

AVAILABLE FINISH:
A



5025_SB

AVAILABLE FINISH:
A

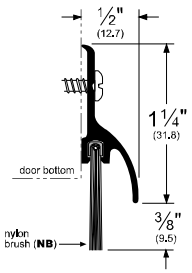


soft brush (**SB**)

Aluminum Retainers with Rain Drip

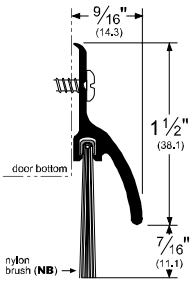
3452_NB

AVAILABLE FINISHES:
BDG, C, D, G, PW, SN



345_NB

AVAILABLE FINISHES:
A, BDG, D, G, PW

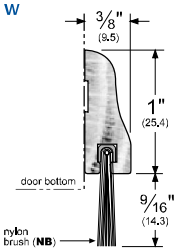


Oak Retainers 36" Wide

- These products have 1/8" drilled fastener holes.

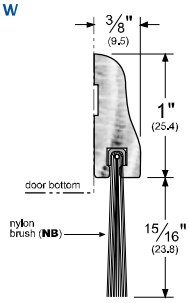
18062WNB

AVAILABLE FINISH:
W



18100WNB

AVAILABLE FINISH:
W



▲ **AVAILABLE FINISHES FOR PRODUCTS SHOWN ON THIS PAGE** (see General Information section for finish chart)

A (Mill Finish Aluminum) • **BDG** (Bright Dip Gold Anodized) • **C** (Clear Anodized) • **D** (Dark Bronze Anodized) • **G** (Gold Anodized)
PW (Painted White) • **SN** (Satin Nickel Anodized) • **W** (Solid Oak)

UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
Since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

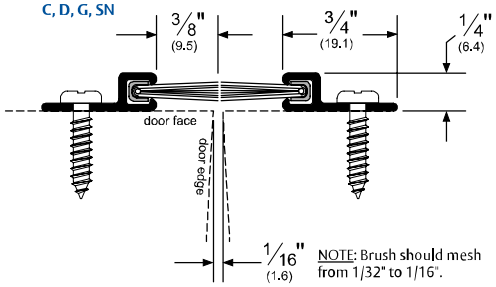
Submittal Date: 6/27/12

Meeting Stiles

- Astragals and meeting stiles on double doors often present problems because of complex conditions and requirements. Pemko offers some simple and inexpensive solutions as well as more detailed ones. Each job should be carefully studied as to the specific requirements when selecting the appropriate gasketing. Note that some astragals consist of two parts, one for each door, and should be ordered as such.
- Astragals and meeting stiles with a fire label may be mounted on pairs of doors wherein the gap meets the requirements of **NFPA 80, 2-3.1.7 " The clearance between...the meeting edges of doors swinging in pairs on the pull side shall be 1/8" ± 1/16" (3.18mm ± 1.59mm) for steel doors and shall not exceed 1/8" (3.18mm) for wood doors."**
- All clear anodized brush products are supplied with gray brush (available with black brush upon request). Other finishes supplied with black brush.
- BHMA logo represents products that meet the requirements of **ANSI/BHMA 156.22-2003 for latching force and air infiltration.**
- Snap covering helps prevent vandalism and adds an attractive finished look by concealing the fasteners.
- NOTE: Although drawn with a gap between the brushes, when these products are installed, brushes SHOULD make slight contact.

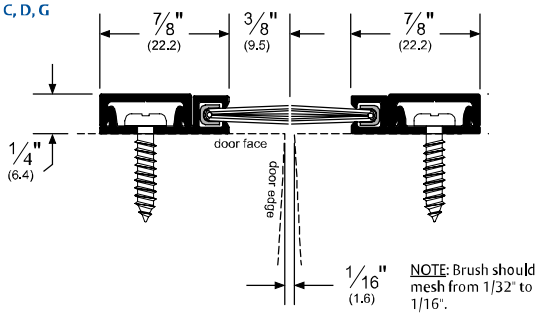
18041_NB

AVAILABLE FINISHES:
C, D, G, SN



29324_NB

AVAILABLE FINISHES:
C, D, G



ALTERNATE INSERT FOR 18041

soft brush (**SB**)

18041_SB

AVAILABLE FINISHES:
C, D, G, SN

ALTERNATE INSERT FOR 29324

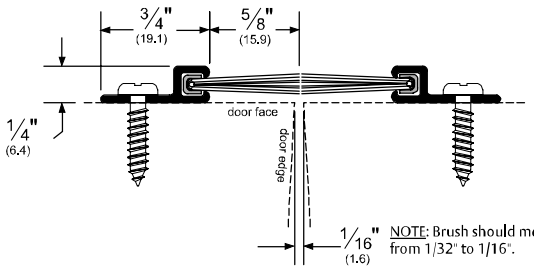
soft brush (**SB**)

29324_SB

AVAILABLE FINISHES:
C, D, G

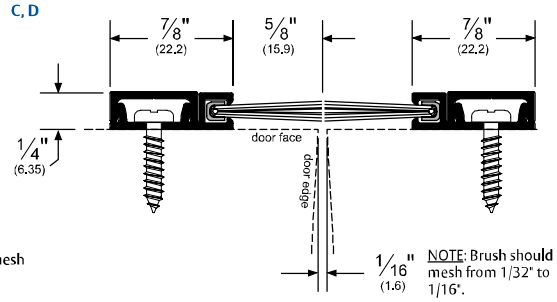
18061_NB

AVAILABLE FINISHES:
C, D, G, SN



29326_NB

AVAILABLE FINISHES:
C, D



▲ **AVAILABLE FINISHES FOR PRODUCTS SHOWN ON THIS PAGE** (see General Information section for finish chart)

C (Clear Anodized) • **D** (Dark Bronze Anodized) • **G** (Gold Anodized) • **SN** (Satin Nickel Anodized)

UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

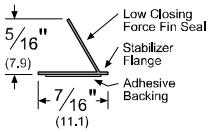
ADHESIVE GASKETING

SiliconSeal™ Adhesive-Backed Fire/Smoke Gasketing

- SiliconSeal™ is extruded from high-temperature silicone; effective between -58°F and 450°F.
- Self-extinguishing and non-toxic. Unaffected by sunlight, ozone and ultraviolet rays.
- Impervious to fungus and mildew; will not deteriorate under normal exposure.
- Meets **FAR 25.853 Airworthiness Standards for Compartment Interiors**.
- Smoke tested in accordance with **UBC 7-2** and **UL 1784-01**; meets the requirements of **NFPA 105 "Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives"**.
- **S44, S77** and **S88** are air infiltration tested in accordance with **ASTM E-283-04**. Air infiltration is only .09 CFM / ft of crack.

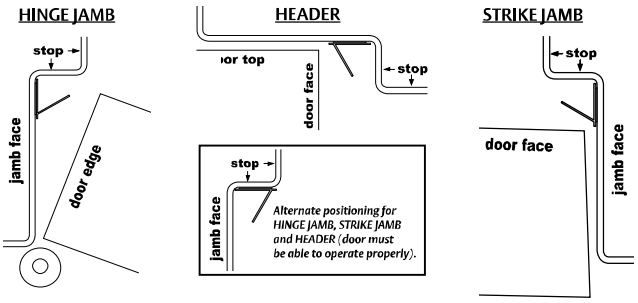
S44_

AVAILABLE FINISHES: **BL, D, W**
AVAILABLE LENGTHS: **17', 18', 20', 21', 25', 510'**



- Designed for tighter frames.
- Demonstrates extremely low closing force.
- Seal begins compressing at 5/16"; compresses to seal up to a 1/16" gap.

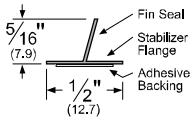
APPLICATION DETAILS FOR S44



Application is acceptable anywhere along jamb face (door must be able to operate properly).

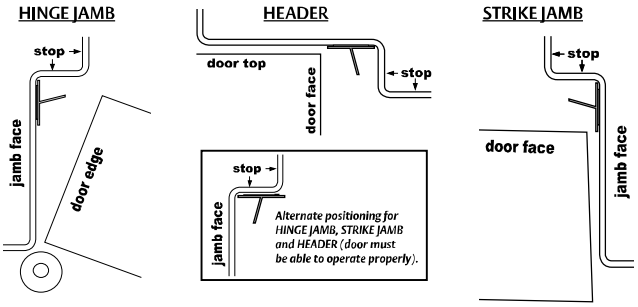
S77_

AVAILABLE FINISHES: **C, D, W**
AVAILABLE LENGTHS: **17', 18', 20', 21', 25'**



- Designed for hollow metal and wood meeting stile applications.
- Seal begins compressing at 5/16"; compresses to seal up to a 1/16" gap.

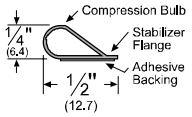
APPLICATION DETAILS FOR S77



Application is acceptable anywhere along jamb face (door must be able to operate properly).

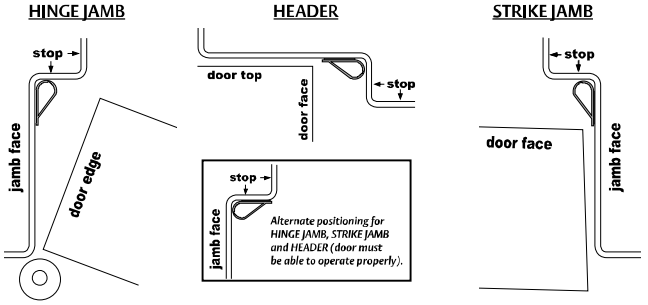
S88_

AVAILABLE FINISHES: **BL, C, D, GR, TAN, W**
AVAILABLE LENGTHS: **17', 18', 20', 21', 25', 30', 204', 510'**



- Seal begins compressing at 1/4"; com presses to seal up to a 1/16" gap.

APPLICATION DETAILS FOR S88



Application is acceptable anywhere along jamb face (door must be able to operate properly).

▲ **AVAILABLE FINISHES FOR PRODUCTS SHOWN ON THIS PAGE** (see General Information section for finish chart)

BL (Black) • **C** (Clear) • **D** (Dark Brown) • **GR** (Light Gray) • **TAN** (Tan) • **W** (White)

ADHESIVE GASKETING

UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

ROCKWOOD
ASSA ABLOY

Flush Pulls

Flush Pulls
No. 94, 94BTB

Material: .125 Aluminum, Brass, Bronze, Stainless Steel

Finishes: Available in standard architectural finishes, US32D**MS**, US32D**316**, and US32**316** (see page 7).

Fastener: No. 94: #8 x ¾ SMS
No. 94BTB: 8-32 x ¾ OHMS with Sleeves Type 10

Options: TORX - security torx screws.

No.	Size	Grip Opening	Depth	Weight	ANSI A156.6
94	3½" x 5"	1¾" x 3⅛"	⅞"	0.6 lbs.	J403
94BTB (pair)	3½" x 5"	1¾" x 3⅛"	1¾"	1.2 lbs.	J403

Flush Pull
No. 94C

Material: .125 Aluminum, Brass, Bronze, Stainless Steel

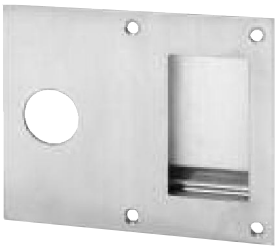
Finishes: Available in standard architectural finishes, US32D**MS**, US32D**316**, and US32**316** (see page 7).

Fastener: #6 x 1 TH SMS

Features: Fasteners concealed in cup.

No.	Size	Grip Opening	Depth	Weight	ANSI A156.6
94C	3½" x 5"	1¾" x 3⅛"	⅞"	0.6 lbs.	J403

Dead Lock Flush Pulls
No. 94DLL, 94DLS



Material: Brass, Bronze, Stainless Steel

Finishes: Available in standard architectural finishes, US32D**MS**, US32D**316**, and US32**316** (see page 7).

Fastener: #8 x ¾ OH SMS

Options:
- TORX - security torx screws.
- Custom sizes.

Features:
- Used with dead bolt lock. 1¼" cylinder hole is standard.
- Vandal resistant.
- Use where projecting trim is an operational problem or an esthetic objection.
- Ideal for use on "exit only" doors where occasional entrance is required (warehouse exits), night latch function exit device openings (classroom exit only doors), mechanical closet doors and anywhere dead locking is approved.

No.	Size	Grip Opening	Depth	Weight	ANSI A156.6
94DLL	6⅛" x 8"	1¾" x 6⅛"	⅞"	1.0 lbs.	J403
94DLS	6⅛" x 5"	1¾" x 3⅛"	⅞"	0.8 lbs.	J403

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UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

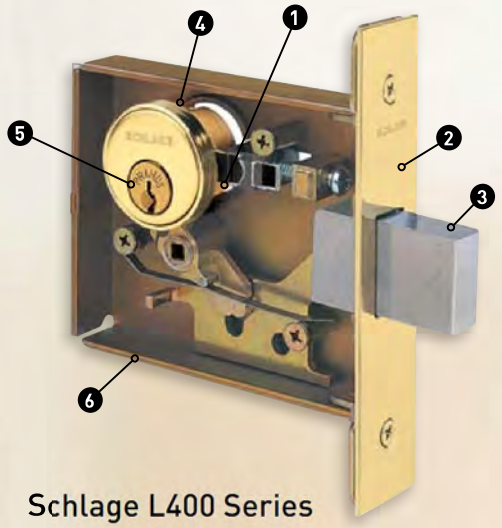
THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

The Right Lock for Every Application

Schlage L9000 Series

Our L9000 Series locks are ideal for use in schools, hospitals and factories, where the finest hardware must also deliver consistent, dependable operation and stand up to constant use and abuse.



Strength and Durability

1. Fully wrapped heavy-gauge steel case protects against door edge attacks
2. All-metal zinc dichromate-plated working parts
3. Inside lock case protects electronic components
4. Two-piece anti-friction tongue reduces wear and tear
5. Outside and inside trim thru-bolted together and through the door

Security Built In

6. Break-away spindle prevents unsecured failures and provides easy spindle replacement
7. Hub blocking plate protects lock against spindle manipulation
8. Spring-loaded fusible link provides fail secure mode in case of fire
9. Inside lever applied by screwless shank mounting – no exposed trim mount screws

Adaptable To Your Application

10. Universal lock case – ten functions in one case
11. Floating mounting tabs automatically adjust to fit a beveled door edge
12. Field-reversible handing without opening lock case
13. External spring cages allow for simple trim retrofit
14. Locking thumbturn on the inside of door visually shows when the door is locked and unlocked
15. Lever rotation in both directions (up and down) for ease of use
16. Independent lever rotation

Schlage L400 Series

Our L400 Series locks are designed for use as primary locks where no latching is required, such as restrooms and small doors to utility spaces. They also offer optimum security when used as auxiliary locks in other applications.

1. High-strength steel alloy cylinder retainer
2. Armored front in brass, bronze or stainless steel; adjustable for door bevel
3. 1" (25 mm) stainless steel throw deadbolt
4. Deeper retainer groove in cylinder shell increases security against wrenching and pullout; all cylinders backward compatible
5. 6-pin Everest® cylinder with patented keys standard
6. Steel case and parts are corrosion resistant

Lever Designs and Finishes

17
Material: Forged brass, bronze and cast stainless steel
Finishes: 605, 606, 609, 610, 611, 612, 613, 616, 619, 625, 626, 629, 630

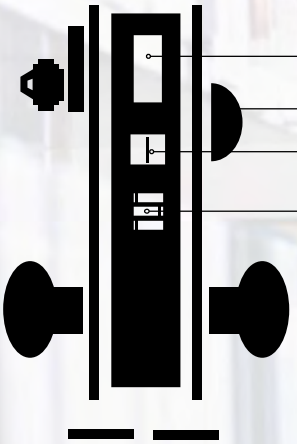
93
Material: Extruded brass, bronze or stainless steel
Finishes: 605, 606, 609, 610, 611, 612, 613, 616, 619, 625, 626, 629, 630

18
Material: Forged brass, bronze and cast stainless steel
Finishes: 605, 606, 609, 610, 619, 625, 626, 629, 630

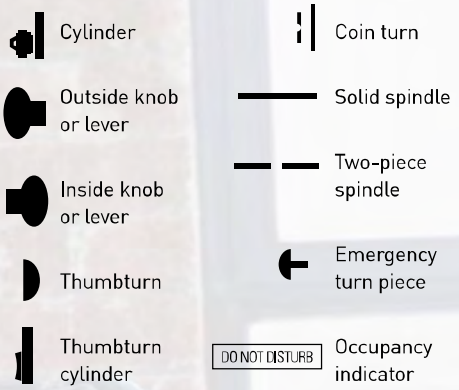
Omega
Material: Forged brass, bronze and cast stainless steel
Finishes: 605, 606, 609, 610, 613, 619, 625, 626, 629, 630

Lock Functions

Lock Components



Symbol Key



Product Identification Guide

L/LV 9 4 5 3 P

Lock series
L = standard
LV = vandlgard

0 = dummy trim without lock case
9 = functions with lock case

0 = no deadbolt
1 = dummy trim
4 = with deadbolt

Function

Cylinder Suffix

P	= 6-pin full-face mortise cylinder with Schlage logo*
L	= less full-face cylinder
C	= concealed mortise cylinder
W	= less concealed cylinder
R	= full-size interchangeable core with Schlage logo
J	= less full-size interchangeable core
F	= full-size interchangeable core less Schlage logo
T	= full-size construction core
BD	= SFIC less core
BDC	= disposable SFIC
GD	= Everest patented SFIC
HD	= construction SFIC

SFIC = Small Format (Best® style) Interchangeable Core

To order less Schlage logo, specify lock "with K510-612 faceplate."

LV = Vandlgard® function allows exterior lever to rotate freely down while remaining securely locked.

*In a double-door application where the dummy will be used as the strike order 10-091 Armored Front Strike separately.

Lock Functions | ANSI A156.13, Series 1000

Schlage	ANSI

L9010 **F01**
Passage Latch
Latchbolt retracted by knob/lever from either side at all times. Inside lever is always free for immediate egress.

L9040 **F22**
LV9040
Bath/Bedroom Privacy Lock
LockLatchbolt retracted by knob/lever from either side unless outside is locked by inside thumbturn.Turning inside knob/lever or closing door unlocks outside knob/lever. To unlock from outside, remove emergency button, insert emergency thumbturn(furnished) in access hole and rotate. Inside lever is always free for immediate egress..

L9044
LV9044
Privacy With Coin Turn Outside
Latchbolt retracted by knob/lever from either side unless outside is locked by inside thumbturn or outside coin turn. Operating inside knob/lever, closing door, rotating inside thumbturn or rotating outside cointurn unlocks outside knob/lever. Specify per L283-056 for Torx® screws. Available with rose trim only. (Previously XL11-868)

L9440
LV9440 **F19**
Privacy With Deadbolt
Latchbolt retracted by knob/lever from either side. Deadbolt thrown or retracted by inside thumbturn. Throwing deadbolt locks outside knob/lever. Rotating inside knob/lever simultaneously retracts deadbolt and latchbolt, and unlocks outside knob/lever. To unlock from outside, remove emergency button, insert emergency thumbturn in access hole and rotate. Inside lever is always free for immediate egress. (Previously XL11-761)

Schlage	ANSI

L9444
LV9444
Privacy with Deadbolt and Coin Turn Outside
Latchbolt retracted by knob/lever from either side. Deadbolt thrown or retracted by inside thumbturn or outside coin turn. Throwing deadbolt locks outside knob/lever. Rotating inside knob/lever simultaneously retracts deadbolt and latchbolt, and unlocks outside knob/lever. Rotating outside coin turn retracts deadbolt and unlocks outside knob/lever. Specify per L283-056 for Torx screws. Available with rose trim only. Inside lever is always free for immediate egress. (Previously XL11-868)

L0170
Half Dummy Trim
Knob/lever on one side fixed by mounting bar.

L0172
Full Dummy Trim
Knob/lever on both sides fixed by mounting bar.

L9175
Half Dummy Trim with Lock Case
Fixed knob/lever on one side inoperable. Includes lock case and armored front. Options same as L9176 below.

L9176
Full Dummy Trim with Lock Case
Fixed knob/lever on both sides. Includes lock case and blank armor front. May be ordered with optional XL11-743 armored front with cutout to receive deadbolt.

Lock Functions | Single Cylinder Non-Deadbolt Functions

Schlage **ANSI**

L9050 **F04**
LV9050
Office and Inner Entry Lock
Latchbolt retracted by knob/lever from either side unless outside is made inoperative by key outside or by turning inside thumbturn. When outside is locked, latchbolt is retracted by key outside or by knob/lever inside. Outside knob/lever remains locked until thumbturn is returned to vertical or unlocked by key. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress.

L9056
LV9056
L9050 with Automatic Unlocking
Latchbolt retracted by knob/lever from either side unless outside is made inoperative by key outside or by rotating inside thumbturn. Outside knob/lever unlocked by key outside or thumbturn. Rotating inside knob/lever simultaneously retracts latchbolt and unlocks outside knob/lever. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress. (Previously XL11-776)

L9070 **F05**
LV9070
Classroom Lock
Latchbolt retracted by knob/lever from either side unless outside is locked by key. Unlocked from outside by key. Inside knob/lever always free for immediate exit. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress.

L9076 **F06**
LV9076
Classroom Holdback Lock
Latchbolt retracted by knob/lever from either side unless outside is locked by key. When locked, latchbolt retracted by key outside or knob/lever inside. Auxiliary latch deadlocks latchbolt when door is closed. Depress inside knob/lever and turn key 360° for holdback feature. Inside lever is always free for immediate egress.

L9080 **F07**
LV9080
Storeroom Lock
Latchbolt retracted by key outside or by knob/lever inside. Outside knob/lever always inoperative. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress.

L9080EL
LV9080EL
Electrically Locked (Fail Safe)
Outside knob/lever continuously locked by 24VAC or DC. Latchbolt retracted by key outside or by knob/lever inside. Switch or power failure allows outside knob/lever to retract latchbolt. Auxiliary latch deadlocks latchbolt when door is closed. Inside knob/lever always free for immediate exit. Inside lever is always free for immediate egress.

Schlage **ANSI**

L9080EU
LV9080EU
Electrically Unlocked (Fail Secure)
Outside knob/lever unlocked by 24VAC or DC. Latchbolt retracted by keyoutside or knob/lever inside. Auxiliarylatch deadlocks latchbolt when door is closed. Inside knob/lever always free for immediate exit. Inside lever is always free for immediate egress.

L9080EL-RX
L9080EU-RX
Request to Exit (RX) Electrified Lock
Same as L9080ELand L9080EU functions. In addition, a micro switch positioned inside the lock case monitors the retractor crank, and is actuated when rotation of the inside or outside knob/lever rotates the retractor hub. The switch signals the use of that opening to security systems, allowing a non-disruptive means of immediate egress. Specify per L283-059 for normally closed contacts (default). Specify L283-125 for normally open contacts. Inside lever is always free for immediate egress. (Previously XL11-807)

Lock Functions |

Double Cylinder Non-Deadbolt Functions

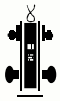
Schlage **ANSI**

L9060 **F09**
LV9060
Apartment Entrance Lock
Latchbolt retracted by knob/lever from either side unless outside is locked by key from inside. When locked, latchbolt retracted by key outside or knob/lever inside. Auxiliary latch deadlocks latch- bolt when door is closed. Inside lever is always free for immediate egress.

L9071
LV9071
Classroom Security Lock
Latchbolt retracted by knob/lever from either side unless outside is locked by key from either side. When locked, latchbolt retracted by key outside or knob/lever inside. Auxiliary latch deadlocks latchbolt when door is locked. Inside lever is always free for immediate egress.

L9077
LV9077
Classroom Security Holdback Lock
Latchbolt retracted by knob/lever from either side unless outside is locked by key from either side. When locked, latchbolt retracted by key outside or knob/lever inside. Auxiliary latch deadlocks latchbolt when door is locked. Depress inside knob/lever and turn key 360° for holdback feature. Inside lever is always free for immediate egress.

L9082 **F30**
LV9082
Institution Lock*
Latchbolt retracted by key from either side. Knob/lever on both sides always inoperative. Auxiliary latch deadlocks latchbolt when door is closed.



L9082EL
L9082EU
L9082 Electrically Locked or Electrically Unlocked Both Sides*
EEL: Outside and inside knob or lever continually locked electrically. Latchbolt retracted by key either side. Switch or power failure allows outside and inside knob/lever to retract latchbolt. Auxiliary latch deadlocks latchbolt when door is closed. EU: Outside and inside knob/lever unlocked electrically. Latchbolt retracted by key either side. Switch or power failure keeps inside and outside knob/lever locked. Auxiliary latch deadlocks latchbolt when door is closed. (Previously XL11-452)

Lock Functions |

Double Cylinder Deadbolt Functions

Schlage **ANSI**

L9457
LV9457
Classroom Security Lock
LLatchbolt retracted by knob/lever from either side. Deadbolt thrown or retracted by key from either side. Throwing deadbolt locks outside knob/lever. Turning inside knob/lever simultaneously retracts deadbolt and latchbolt and unlocks outside knob/lever. Inside lever is always free for immediate egress.

L9466 **F14**
Store/Utility Room Lock*
Latchbolt retracted by knob/lever from either side. Deadbolt thrown or retracted by key from either side.

L9482
LV9482
Institution Lock with Deadbolt*
Latchbolt retracted by key from either side. Knob/lever on both sides always inoperative. Deadbolt thrown or retraced by key either side. Auxiliary latch deadlocks latchbolt when door is closed. Specify per XL11-543.

Lock Functions |

Full Mortise Deadlocks

Schlage **ANSI**

L9460 **F17**
Cylinder x Thumbturn Lock
Deadbolt thrown or retracted by key outside or thumbturn inside.

L9462 **F16**
Double Cylinder Lock*
Deadbolt operated by key from either side.

L9463
Classroom Lock
Deadbolt thrown or retracted by key from outside. Inside thumbturn cylinder retracts deadbolt, but cannot project it.

L9464 **F18**
Cylinder Lock
Deadbolt thrown or retracted by key from one side. No trim on opposite side.

Lock Functions |

Full Mortise Deadlocks Cont.

Schlage **ANSI**

L9460 x XL11-635
L9460 with Pull
Knob/lever both sides fixed. Deadbolt thrown or retracted by key outside or thumbturn inside.

L9460 x XL11-886
Single Cylinder Deadlock with Pull
Deadbolt thrown or retracted by key outside or thumbturn inside. No latch, but inside knob or lever is spring-loaded. Rotating inside knob/lever also retracts deadbolt. Fixed outside knob/lever.

L9462 x XL11-886
Double Cylinder Deadlock with Pull
Deadbolt thrown or retracted by key from either side. No latch, but inside knob/ lever is spring-loaded. Rotating inside knob/lever also retracts deadbolt. Fixed outside knob/lever.

L9464 x XL11-886
Deadlock with Pull
Deadbolt thrown or retracted by key from one side. No latch, but inside knob/ lever is spring-loaded. Rotating inside knob/lever also retracts deadbolt. Fixed outside knob/lever.

Special Functions

L9040
LV9040
Privacy With Turns Both Sides
Latchbolt retracted by knob/lever from either side unless outside is locked by inside or outside thumbturn. Operating inside knob/ lever, closing door or rotating either thumbturn unlocks outside knob/lever. Specify per XL11-446.

L9110 x XL11-741
Full Dummy Trim with Lock Case*
Spring-loaded knob/lever both sides. Includes lock case and blank armored front. May be ordered with optional XL11-743 armored front with cutout to receive deadbolt

Lock Functions |

Small Mortise Deadlocks

Schlage **ANSI**

L460 **E06071**
Cylinder x Thumbturn Lock
Deadbolt thrown or retracted by key outside or thumbturn inside.

L462 **E06061**
Double Cylinder Lock*
Deadbolt operated by key from either side.

L463 **E06091**
Classroom Lock
Deadbolt thrown or retracted by key from outside. Inside thumbturn cylinder retracts deadbolt, but cannot project it.

L464 **E06081**
Cylinder Lock
Deadbolt thrown or retracted by key from one side. No trim on opposite side.

L480
Door Bolt
Deadbolt thrown or retracted by thumbturn from one side. No trim on opposite side.

L496
Deadbolt with "Occupied" Indicator
Deadbolt thrown or retracted by key outside or thumbturn inside. When deadbolt is thrown "OCCUPIED" plate is displayed. (Previously XL11-911)

*In a double-door application where the dummy will be used as the strike order 10-091 Armored Front Strike separately.

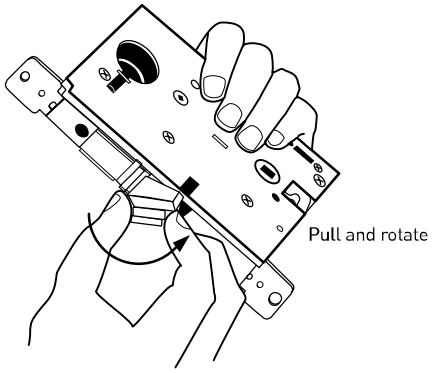
Caution: Double cylinder locks on residences and any door in any structure which is used for egress are a life safety hazard in times of emergency and their use is not recommended. Installation should be in accordance with existing codes only.

Door Handing

One of the revolutionary features of the L-Series mortise lock is that handing can be done by the distributor or installer quickly and easily without opening the lock case. This feature allows a Schlage distributor to order L-Series locks as stock and customize the handing to each order's specification. This means off-the-shelf delivery to meet today's fast-track construction requirements. These mix-and-match lever-with-knob combinations, along with a quickly reversible lock chassis, provide the ultimate in stocking, ordering and installation flexibility. Orders can be filled from stock, minimizing delivery problems.

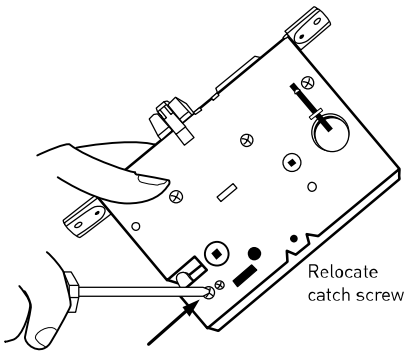
Changing Lock Hand

No more than two simple steps are required to change the hand of any L-Series lock. Rotate the latch unit 180° and/or change the catch screw position.



A. Changing Latchbolt Handing

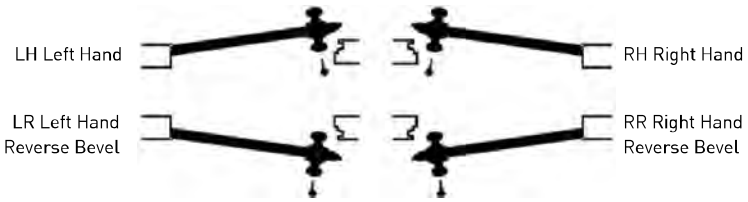
Remove armored front. Pull latchbolt away from chassis and rotate complete unit 180° to reverse the door handing. Reinstall armored front.



B. Change Chassis Handing

Remove catch screw from one side of chassis and install on opposite side. For RH and RR, the catch screw will be on the lock case side. For LH and LR, the catch screw will be on the lock case cover.

*Catch screw location reversed for Vandlgard function. For first time users, an instructional video is available.



The hand is determined by the direction the door swings when viewed from the exterior or corridor side of the door.

How to Order

To order Schlage products, descriptive data should be in the same sequence as shown.

Line Item	Qty	Product	Outside		Inside		Hand	Front	Strike	Door Thickness	Ext	Dim	Additional Details
			Des	Fin	Des	Fin							
1	2	3	4	5	6	7	8	9	10	11	12	13	14

1 Line item number
2 Quality
3 Complete model number with function and cylinder type
To order cylinder options, change "P" at the end of the model number as follows:

L9453**P** Standard
L9453**L** Less standard cylinder. For Primus cylinder, specify this option and order Primus cylinder separately.
L9453**C** With temporary plastic construction cylinder. Double cylinder functions ordered less cylinder are furnished with these construction cylinders to maintain timing of key cams.

L9453**J** Prepared for full size interchangeable core, less core. For Primus core, specify this option and order Primus core separately.
L9453**R** With full-size conventional interchangeable core installed. Order control keys separately.
L9453**T** With full-size (temporary) construction core installed. Order all keys separately.

L9453**BD** Prepared for small format (Falcon, Best, etc.) interchangeable core (SFIC), less core.
L9453**GD** With Everest B Family restricted keyway small format core installed. Order control keys separately.
L9453**HD** With small format keyed brass construction core installed. Order all keys separately.

L9453**BDC** With small format disposable plastic construction core installed.

4/5 Outside design / finish. Specify tactile warning (knurling) here as "8" before lever design, e.g. 803. To specify complete design, combine the numeric knob or lever design with the alpha rose or escutcheon design. Example: 03L, 93A, 42B. When ordering Mediterranean design levers with L escutcheons, specify AST/00L, AVA/00L or MER/00L.
6/7 Inside design/finish. Leave blank if same as outside.
8 Hand. One hand per line item.
9 Front (use "Strike" field on Schlage form). Leave blank for standard armored front or enter number for narrow front.
10 Strike. Leave blank for standard or specify part number for optional strike. LLL = Less Strike.
11 Door thickness, if non-standard. Example: 200 = 2".
12 Extension, to specify whether thick door is extended inside (EI), outside (EO), differently (ED) or equally (EE).
13 Dimension for strike lip lengths. See strike page for availability of specific dimensions with specific strikes.

100 = 1"	114 = 1 1/4"	112 = 1 1/2"	200 = 2"
118 = 1 1/8"	138 = 1 3/8"	134 = 1 3/4"	

14 Keying detail (e.g. key symbol, keyway, bitting) and other special requirements.

Example

Line Item	Qty	Product	Outside		Inside		Hand	Front	Strike	Door Thickness	Ext	Dim	Additional Details
			Des	Fin	Des	Fin							
1	50	L9453P	03A	626			RH		10-091				
2	50	L9453P	03A	626			LH		10-091				
3	10	L9040	03A	626			RH			138			
4	10	L9040	03A	626		625	LH	09-668		138			
5	50	L9456P	07L	626		625	RH	09-668					
6	50	L9456P	07L	626			LH						

Note: Schlage order forms are available at no charge by contacting your IR Security & Safety Consultant or Customer Service.

Keyswitches/ Cylinders

KP1 - Tubular Keyswitch

- For less demanding applications, 2 keys included
- Stainless steel face plates
- 12/24VDC bi-color LED, tubular style keyswitches
- 7 Amp rated SPDT switch
- Momentarily turning the key changes the state of the contacts

Part #	Description
KP1	Tubular Keyswitch Momentary, SPDT, Single Gang
KP1N	Tubular Keyswitch Momentary, SPDT, Narrow Stile
KP1A	Tubular Keyswitch Alternate, SPDT, Single Gang
KP1AN	Tubular Keyswitch Alternate, SPDT, Narrow Stile

KP1

KP1N

MK - Mortise Keyswitch

- Standard with 12 or 24VDC bi-color LED
- Backing bracket permits integration with any 1-1/4" [32mm] or 1-1/8" [28mm] mortise cylinder (not included)
- Additional switch position on backing bracket allows another switch to be activated by turning the key in the opposite direction
- 5 Amp rated plunger switch
- UL Listed

Part #	Description
MK	Mortise Keyswitch Momentary, SPDT
MKA	Mortise Keyswitch Alternate, SPDT
MK2	Mortise Keyswitch Momentary, DPDT
MKA2	Mortise Keyswitch Alternate, DPDT
MKN	Mortise Keyswitch Momentary, SPDT, Narrow Stile
MKAN	Mortise Keyswitch Alternate, SPDT, Narrow Stile
MKN2	Mortise Keyswitch Momentary, DPDT, Narrow Stile
MKAN2	Mortise Keyswitch Alternate, DPDT, Narrow Stile
MKPZ	Mortise Keyswitch Momentary, SPDT, Piezo, Double Gang
MKAPZ	Mortise Keyswitch Alternate, SPDT, Piezo, Double Gang
MKS	Additional Switch Momentary, SPDT, for MK
MKSA	Additional Switch Alternate, SPDT, for MKA
MKS2	Additional Switch Momentary, DPDT, for MK2
MKSA2	Additional Switch Alternate, DPDT, for MKA2

MK

MKN

MK shown with dual switch configuration

MKPZ

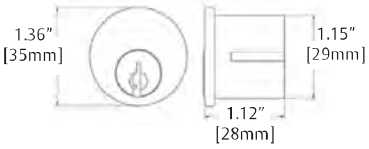
Approvals and Listings

MK - Underwriter's Laboratories: File SA6635 Vol. 2 (UL 294 and NFPA 101)
City of New York MEA: 251-95E and 254-95E
California State Fire Marshal: 3774-0923: 102

MKC - Mortise Cylinder

- Cylinder available for use in the MK
- 1-1/8" Length, 26D Finish
- SC Keyway

Part #	Description
MKC	Mortise Cylinder 1-1/8" 26D Keyway SC, 2 keys
MKCKA	Mortise Cylinder 1-1/8" 26D Keyway SC keyed alike, 2 keys



UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

VON DUPRIN® 98/99™ Finishes

Finishes*

Color	US Number	BHMA Number
Chromium, Polished	US26	625
Anodized, Aluminum	US28	628
Chromium, Dull	US26D	626
Brass, Polished	US3	605
Brass, Dull	US4	606
Bronze, Dull	US10	612
Anodized Duranodic (Dark Bronze)	313AN	710
Anodized Black	315AN	—

Pushpad Options — Knurled
Embossed "Push"
Braille (Caution-Stairwell), satin stainless steel only
SS – (EMERGENCY EXIT – PUSH TO OPEN AND SOUND ALARM) – Red Silkscreen lettering on US32D

* **NOTE:** Durable powder coated finishes available at specific special request. PLEASE CONTACT FACTORY.

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Introduction

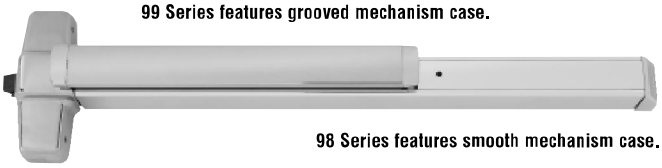
Exit devices are a critical part of the Fire and Life Safety egress system and will provide safe and reliable service when properly applied and maintained. Von Duprin designs and manufactures exit devices in accordance to ISO 9001 Quality Management System and meets or exceeds accepted U.S. domestic and International standards. All 98 and 99 series exit devices are UL listed for Panic Hardware or Fire Hardware, and are certified to ANSI A156.3, 2001, Grade 1. Many models are also certified for Hurricane Resistant Applications. Consult your local IR Security & Safety consultant or the Von Duprin factory for current listings.

It is intended that the information included in this publication, when properly used, will provide clear and reliable guidelines to the proper general selection and application. However, the scope of the information is necessarily limited.

Unusual operating conditions and environments and other external influences can affect the proper application of the products represented. Modifications of these products will also affect UL listings. It is recommended that whenever an unusual application condition exists, or when any modification of a product is considered, that our engineers review the application.

Application engineering services are available to help ensure proper selection or to review any areas where users of Von Duprin products may have questions.

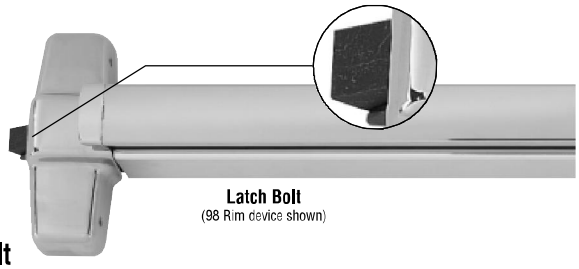
99 Series features grooved mechanism case.



98 Series features smooth mechanism case.

Von Duprin push pad exit devices are available in two external surface styles, designated 98 Series and 99 Series.

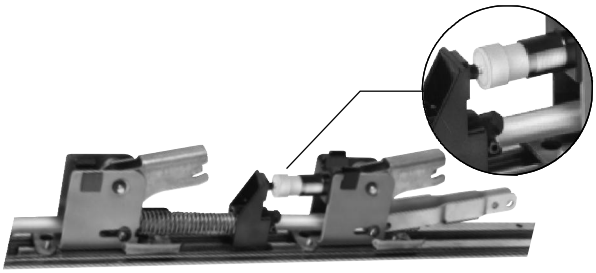
The two styles are mechanically and dimensionally identical and provide a wide selection of appearance options.



Latch Bolt
(98 Rim device shown)

Latch Bolt

Deadlocking latchbolt provides security and improved performance at standard device cost.



The Quiet One®

A fluid dampener decelerates the pushpad on its return stroke and eliminates most noise associated with exit device operations. Furnished on all 98/99™ series exit devices.

VON DUPRIN® 98/99™ Rim Exit Device

299 Strike

98 and 99 rim exit devices for all types of single and double doors with mullion, UL listed for Panic Exit Hardware. Devices are ANSI A156.3 – 2001 Grade 1. The 98 device has a smooth mechanism case and the 99 device has a grooved case. The rim device is non-handed except when the following device options are used: SD (Special Dogging), -2 (Double Cylinder) or SS (Signal Switch). See Opposite page for available outside trim and device functions. Covers stock hollow metal doors with 86 or 161 cutouts on single doors (may cover cutouts on pairs – consult template).

The 98/99 devices are available in the following finishes: US3, US4, US10, US26, US26D, US28, 313AN, 315AN and US32D for the 98 device only. See page 52 for component finishes and the inside cover for finish chips.

Specifications

Device Functions	Device ships EO/DT/NL. Field selectable. For TP,K,or L remove NL drive screw from device		
Device Lengths	3'	2'4" to 3' (711mm to 914 mm) Door Size	
	4'	2'10" to 4' (864 mm to 1219 mm) Door Size	
Strikes	299 – Dull Black		
	Optional Strikes – see page 39		
Dogging Feature	Hex key dogging standard		
Dogging Options	CD	Cylinder Dogging	see page 48
	SD	Special Center Case Dogging	see page 48
	LD	Less Dogging	see page 48
Electric Options	LX	Latchbolt Monitor Switch	see page 42
	RX	Pushpad Monitor Switch	see page 42
	RX2	Double Pushpad Monitor Switch	see page 42
	E	Electric Locking & Unlocking	see page 44
	EL	Electric Latch Retraction	see page 43
	SS	Signal Switch	see page 43
	CX	Chexit Delayed Exit	see page 45
	ALK	Alarm Exit Kit	see page 42
Miscellaneous Options	PN	Pneumatic Latch Retraction	see page 48
	-2	Double Cylinder	see page 48
	GBK	Glass Bead Kit	see page 49
Fasteners & Sex Bolts (SNB)	Includes 1 ¾" (19mm) – 2 ¼" (57mm) Wood & Metal Doors		
	Optional SNB available for device, see next page for quantities		
Latch Bolt	Deadlocking, ¾" (19mm) throw		
Device Centerline from Finished Floor	39 13/16" (1011 mm)		
	39 11/16" (1008 mm) with Mullion		
Center Case Dimensions	8" x 2 ¾" x 2 ⅜" (203mm x 70mm x 60mm)		
Mechanism Case Dimensions	2 ¼" x 2 ¼" (57mm x 57mm)		
Projection	Pushbar Neutral – 3 13/16" (97 mm)		
	Pushbar Depressed – 3 1/16" (78 mm)		

See page 53 for How to Order specification

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VON DUPRIN® 98/99™ Rim Exit Device Standard Trim

	Exit only	**Dummy Trim** Pull when Dogged	**Night Latch** Key Retracts Latchbolt	**Night Latch** Key Retracts Latchbolt Optional Pull Required
Product Description	98EO 99EO	98DT 99DT	98NL 99NL	98NL-OP 99NL-OP
Trim Description	—	990DT	990NL-R/V	110NL-MD 110NL-WD
Escutcheon Plate Size	—	3" x 14 3/16" x 3/32" *(76x360x2mm)*	3" x 14 3/16" x 3/32" *(76x360x2mm)*	—
Pull Center to Center	—	5½" *(140mm)*	5½" *(140mm)*	—
Projection	—	2" *(51mm)*	2" *(51mm)*	—
ANSI Function	01	02	03	03
Cylinder Type	—	—	Rim	Rim
Optional Trim (See pages 32 – 34)	x990EO x992EO x994EO x996EO	x991K-DT x992L-DT x994L-DT x996L-DT x696DT x697DT	x991K-NL x992L-NL x994L-NL x996L-NL x696NL x697NL	
Optional #425 Sex Bolt Quantity for Device	6	2	2	6

	Lever Key Locks & Unlocks	**Lever – Night Latch** Key Retracts Latchbolt	**Lever – Blank Escutcheon** Always operable (No Cylinder)	**Lever Dummy Trim** Pull when Dogged
Product Description	98L 99L	98L-NL 99L-NL	98L-BE 99L-BE	98L-DT 99L-DT
Trim Description	996L-R/V	996L-NL-R/V	996L-BE-R/V	996L-DT-R/V
Escutcheon Plate Size	2¾" x 10¾" x 27/32" *(70x273x21mm)*	2¾" x 10¾" x 27/32" *(70x273x21mm)*	2¾" x 10¾" x 27/32" *(70x273x21mm)*	2¾" x 10¾" x 27/32" *(70x273x21mm)*
Pull Center to Center	—	—	—	—
Projection	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*
ANSI Function	08	09	—	02
Cylinder Type	Rim	Rim	—	—
Optional Trim (See pages 32 – 34)	x992L x994L	x992L-NL x994L-NL	x992L-BE x994L-BE	x992L-DT x994L-DT
Optional #425 Sex Bolt Quantity for Device	2	2	2	2

For optional trims and functions see pages 32-34

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VON DUPRIN® 9827-F/9927-F Surface Mounted Vertical Rod Fire Device

299F
Top Strike

304L
Bottom Strike

499F
Top Strike - LBR

Top Latch

Bottom Latch

9827-F/9927-F fire exit surface mounted vertical rod device pairs of doors up to 8´ x 10´ *(2438mm x 3048mm)* , UL listed for Fire Exit Hardware.**See page 41 for detailed information on UL listed fire exit hardware label and door opening size information.** Devices are ANSI A156.3 – 2001 Grade 1. The 9827-F device has a smooth mechanism case and the 9927-F device has a grooved case. The surface vertical rod device is non-handed except when the following device options are used: SS (Signal Switch). See Opposite page for available outside trim and device functions.

The 9827-F/9927-F devices are available in the following finishes: US3, US4, US10, US26, US26D, US28, 313AN, 315AN and US32D for the 9827-F device only. See page 52 for component finishes and the inside cover for finish chips.

Vertical rod and latch guards are available to protect the bottom rod of the exit device from damage by impacts of carts or gurneys passing through doors. Rod and latch guards can be used on hollow metal or tin clad composite fire doors. ***Refer to page 49***

Specifications

Device Functions	Device ships EO/DT/NL. Field selectable. For TP,K,or L remove NL drive screw from device
Device Lengths	3' 2'4" to 3' (711mm to 914 mm) Door Size 4' 2'10" to 4' (864 mm to 1219 mm) Door Size
Strikes	Top – 299F (499F LBR) – Dull Black, Bottom – 304L - Unfinished Optional Strikes – see page 39
Dogging Feature	No Mechanical Dogging, EL option available
Electric Options	LX Latchbolt Monitor Switch see page 42 RX Pushpad Monitor Switch see page 42 RX2 Double Pushpad Monitor Switch see page 42 EL Electric Latch Retraction see page 43 SS Signal Switch see page 43 CX Chexit Delayed Exit see page 45 ALK Alarm Exit Kit see page 42
Miscellaneous Options	PN Pneumatic Latch Retraction see page 48 **LBR Less Bottom Rod see page 49** GBK Glass Bead Kit see page 49
Fasteners & Sex Bolts (SNB)	Includes 1 ¾" (19mm) – 2 ¼" (57mm) Wood & Metal Doors SNB furnished for top & bottom latches Optional SNB available for device, see next page for quantities Optional SLM Blocking Pkg for wood doors with SLM blocking SNB required for wood doors, unless SLM Blocking Pkg specified
Latch Bolt	Deadlocking Anti-friction Top & Bottom Bolt, ⅝ " (16mm) throw
Device Centerline from Finished Floor	39 ⅝" (1006 mm)
Door Undercut	¼" (7mm)
Center Case Dimensions	8" x 2 ¾" x 2 ⅜" (203mm x 70mm x 60mm)
Mechanism Case Dimensions	2 ¼" x 2 ¼" (57mm x 57mm)
Top & Bottom Latch Case	4 ½" x 2 ⅛" x 1 ½" (114mm x 54mm x 38mm)
Vertical Rods	½" square tubing, standard rods accommodate 7' (2134mm) door Top rod length is 34 15/16" (887mm) Bottom rod length is 31 ¼" (794mm) Extension rods available, 1' (205mm) or 3' (914mm) for doors over 7' One piece top rod available for 8' (2438mm) – 10' (3048mm) door
Projection	Pushbar Neutral – 3 13/16" (97 mm) Pushbar Depressed – 3 1/16" (78 mm)

See page 53 for How to Order specification

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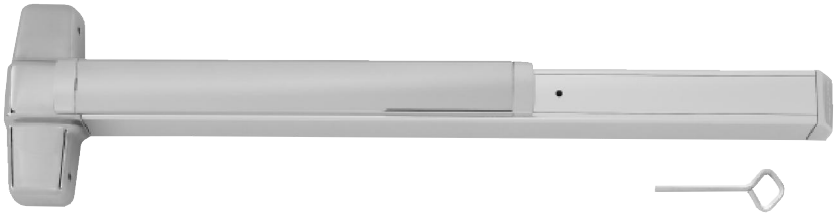
Submittal Date: 6/27/12

338
Top Strike

385A
Bottom Strike



9847/9947 concealed vertical rod device for use on single or double metal doors, UL listed for Panic Exit Hardware. Devices are ANSI A156.3 – 2001 Grade 1. The 9847 device has a smooth mechanism case and the 9947 device has a grooved case. The concealed vertical rod device is non-handed except when the following device options are used: SD (Special Dogging), or SS (Signal Switch). See Opposite page for available outside trim and device functions.

The 9847/9947 devices are available in the following finishes: US3, US4, US10, US26, US26D, US28, 313AN, 315AN and US32D for the 9847 device only. See page 52 for component finishes and the inside cover for finish chips.

Specifications

Device Functions	Device ships EO/DT/NL. Field selectable. For TP,K,or L remove NL drive screw from device		
Device Lengths	3' 2'4" to 3' (711mm to 914 mm) Door Size 4' 2'10" to 4' (864 mm to 1219 mm) Door Size		
Strikes	Top - 338 – Unfinished, Bottom – 385A - Unfinished Optional Strikes – see page 39		
Dogging Feature	Hex key dogging standard		
Dogging Options	CD	Cylinder Dogging	see page 48
	SD	Special Center Case Dogging	see page 48
	LD	Less Dogging	see page 48
Electric Options	LX	Latchbolt Monitor Switch	see page 42
	RX	Pushpad Monitor Switch	see page 42
	RX2	Double Pushpad Monitor Switch	see page 42
	EL	Electric Latch Retraction	see page 43
	SS	Signal Switch	see page 43
	CX	Chexit Delayed Exit	see page 45
	ALK	Alarm Exit Kit	see page 42
Miscellaneous Options	PN	Pneumatic Latch Retraction	see page 48
	LBR	Less Bottom Rod	see page 49
	GBK	Glass Bead Kit	see page 49
	PL	Pullman Latch	see page 49
Fasteners & Sex Bolts (SNB)	Includes 1 ¾" (19mm) – 2 ¼" (57mm) Wood & Metal Doors Optional SNB available for device, see next page for quantities		
Latch Bolt	Deadlocking Top & Bottom Bolt, ⅝" (16mm) throw		
Device Centerline from Finished Floor	39 ⅝" (1006 mm) Standard, Adjustable from 35 ⅝" (905mm) to 49 ⅝" (1260mm)		
Door Undercut	¼" (7mm) maximum		
Center Case Dimensions	8" x 2 ¾" x 2 ⅜" (203mm x 70mm x 60mm)		
Mechanism Case Dimensions	2 ¼" x 2 ¼" (57mm x 57mm)		
Top & Bottom Latch Case	4 ½" x 2 ⅛" x 1 ½" (114mm x 54mm x 38mm)		
Vertical Rods	Round 2 piece adjustable rods Top rod adjustable from 6'8" (2027mm) to 8'4"(2533mm) Bottom rod adjustable 35 ⅝" (905 mm) to 49 ⅝" (1260 mm) Extension rod kits available for doors over 8'4" (2533mm)		
Projection	Pushbar Neutral – 3 13/16" (97 mm) Pushbar Depressed – 3 1/16" (78 mm)		

See page 53 for How to Order specification

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VON DUPRIN® 9847/9947 Concealed Vertical Rod Device Standard Trim

	Exit only	Dummy Trim Pull when Dogged	Night Latch Key Retracts Latchbolt	Night Latch Key Retracts Latchbolt Optional Pull Required	Thumbturn Key Locks & Unlocks (Use with DT Trim)	Thumbturn Blank Escutcheon Always Operable (No Cylinder) (Use with DT Trim)
Product Description	9847EO 9947EO	9847DT 9947DT	9847NL 9947NL	9847NL-OP 9947NL-OP	9847TL 9947TL	9847TL-BE 9947TL-BE
Trim Description	—	990DT	990NL-R/V	110NL-MD	374T x 990DT	374T-BE x 990DT
Escutcheon Plate Size	—	3" x 14 3/16" x 3/32" *(76x360x2mm)*	3" x 14 3/16" x 3/32" *(76x360x2mm)*	—	2 3/4" x 10 3/4" x 27/32" *(70x273x21mm)*	2 3/4" x 10 3/4" x 27/32" *(70x273x21mm)*
Pull Center to Center	—	5 1/2" *(140mm)*	5 1/2" *(140mm)*	—	—	—
Projection	—	2" *(51mm)*	2" *(51mm)*	—	3 1/4" *(83mm)*	3 1/4" *(83mm)*
ANSI Function	01	02	03	03	11	—
Cylinder Type	—	—	Rim	Rim	1 1/4" Mortise	—
Optional Trim (See pages 32 – 34)	x990EO x992EO x994EO x996EO	x991K-DT x992L-DT x994L-DT x996L-DT x696DT x697DT	x991K-NL x992L-NL x994L-NL x996L-NL x696NL x697NL			
Optional #425 Sex Bolt Quantity for Device	6	2	2	6	2	2

	Lever Key Locks & Unlocks	Lever – Night Latch Key Retracts Latchbolt	Lever – Blank Escutcheon Always operable (No Cylinder)	Lever Dummy Trim Pull when Dogged
Product Description	9847L 9947L	9847L-NL 9947L-NL	9847L-BE 9947L-BE	9847L-DT 9947L-DT
Trim Description	996L-CV	996L-NL-CV	996L-BE-CV	996L-DT-CV
Escutcheon Plate Size	2 3/4" x 10 3/4" x 27/32" *(70x273x21mm)*	2 3/4" x 10 3/4" x 27/32" *(70x273x21mm)*	2 3/4" x 10 3/4" x 27/32" *(70x273x21mm)*	2 3/4" x 10 3/4" x 27/32" *(70x273x21mm)*
Pull Center to Center	—	—	—	—
Projection	2 7/8" *(73mm)*	2 7/8" *(73mm)*	2 7/8" *(73mm)*	2 7/8" *(73mm)*
ANSI Function	08	09	—	02
Cylinder Type	Rim	Rim	—	—
Optional Trim (See pages 32 – 34)	x992L x994L	x992L-NL x994L-NL	x992L-BE x994L-BE	x992L-DT x994L-DT
Optional #425 Sex Bolt Quantity for Device	2	2	2	2

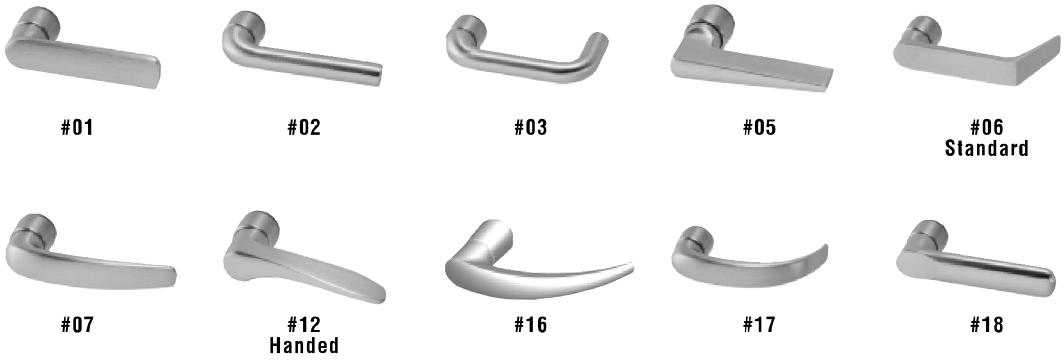
For optional trims and functions see pages 32-34

VON DUPRIN® 98/99™ Optional Trim

Knob and Thumbpiece Trim

	Knob Key Locks & Unlocks	**Knob – Night Latch** Key Retracts Latchbolt	**Knob – Blank Escutcheon** Alwaya Operable (No Cylinder)	**Knob – Dummy Trim** Pull when Dogged	**Thumbpiece** Key Locks & Unlocks	**Thumbpiece Blank Escutcheon** Always Operable (No Cylinder)
Trim Description	991K	991K-NL	991K-BE	991K-DT	990TP	990TP-BE
Escutcheon Plate Size	2¾" x 10¾" x 27/32" (*70x273x21mm*)	2¾" x 10¾" x 27/32" (*70x273x21mm*)	2¾" x 10¾" x 27/32" (*70x273x21mm*)	2¾" x 10¾" x 27/32" (*70x273x21mm*)	2¾" x 10¾" x 27/32" (*70x273x21mm*)	2¾" x 10¾" x 27/32" (*70x273x21mm*)
Pull Center to Center	—	—	—	—	5½" (*140mm*)	5½" (*140mm*)
Projection	3¼" (*83mm*)	3¼" (*83mm*)	3¼" (*83mm*)	3¼" (*83mm*)	2" (*51mm*)	2" (*51mm*)
ANSI Function	08	09	—	02	05	05
Cylinder Type						
Rim or Vertical Rod Device	Rim	Rim	—	—	Rim	—
Mortise Lock Device	1¼" Mortise	1¼" Mortise			1¼" Mortise	—
#425 SNB optionalHMD Req. WD w/o SLM Pkg.	2	2	2	2	2	2
#825 SNB Req. WD w/o SLM Pkg. F Rim device ONLY	2	2	2	2	2	2
#425 SNB Req. w/ 499F	2	2	2	2	2	2

Lever Design Options



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Submittal Date: 6/27/12

996L Trim

The new 996L Breakaway™ trim has become the standard lever trim offering on the 98L/99L series devices. The 996L trim blends two successful Von Duprin designs; the look of the traditional 992L lever trim and the security and durability of the Von Duprin Breakaway™ design. The Breakaway™ design is especially effective in areas where vandalism to door hardware is a problem. The design intent is to discourage costly repairs from becoming necessary. The Breakaway™ feature is not available on the NL (night-latch) or DT (dummy trim) versions.

Optional Lever Trims – 992

	Lever Key Locks and Unlocks 	**Lever – Night Latch** Key Retracts Latchbolt 	**Lever – Blank Escutcheon** Always Operable (No Cylinder) 	**Lever – Dummy Trim** Pull when Dogged (Not recommended for Fire Device)
Trim Description	992L	992L-NL	992L-BE	992L-DT
Escutcheon Plate Size	2¾" x 10¾" x 27/32" *(70x273x21mm)*	2¾" x 10¾" x 27/32" *(70x273x21mm)*	2¾" x 10¾" x 27/32" *(70x273x21mm)*	2¾" x 10¾" x 27/32" *(70x273x21mm)*
Pull Center to Center	—	—	—	—
Projection	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*
ANSI Function	08	09	—	02
Cylinder Type				
Rim or Vertical Rod Device	Rim	Rim	—	—
Mortise Lock Device	1¼" Mortise	1¼" Mortise	—	—

The 992L trim series provides the traditional Von Duprin escutcheon design. Special versions available for doors of over 2 ¼" *(57mm)* thicknesses. Additionally available in an RX and E-locking/unlocking version.

Optional Lever Trims – 994

	Lever Key Locks and Unlocks 	**Lever – Night Latch** Key Retracts Latchbolt 	**Lever – Blank Escutcheon** Always Operable (No Cylinder) 	**Lever – Dummy Trim** Pull when Dogged (Not recommended for Fire Device)
Trim Description	994L	994L-NL	994L-BE	994L-DT
Escutcheon Plate Size	2¾" x 9¼" x 27/32" *(70x235x21mm)*	2¾" x 9¼" x 27/32" *(70x235x21mm)*	2¾" x 9¼" x 27/32" *(70x235x21mm)*	2¾" x 9¼" x 27/32" *(70x235x21mm)*
Pull Center to Center	—	—	—	—
Projection	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*
ANSI Function	08	09	—	02
Cylinder Type				
Rim or Vertical Rod Device	Rim	Rim	—	—
Mortise Lock Device	1¼" Mortise	1¼" Mortise	—	—

Optional Lever Trims – 696/697

	Dummy Trim Pull when Dogged (Not recommended for Fire Device)	**Dummy Trim** Pull when Dogged (Not recommended for Fire Device)	**Night Latch** Key Retracts Latchbolt	**Night Latch** Key Retracts Latchbolt
Trim Description	696DT	697DT	696NL	697NL
Escutcheon Plate Size	1⅝" x 13½" x 3/16" (*41x343x5mm*)	1⅝" x 13½" x 3/16" (*41x343x5mm*)	1⅝" x 13½" x 3/16" (*41x343x5mm*)	1⅝" x 13½" x 3/16" (*41x343x5mm*)
Pull Center to Center	5½" (*140mm*)	5½" (*140mm*)	5½" (*140mm*)	5½" (*140mm*)
Projection	2⅛" (*52mm*)	3" (*76mm*)	2⅛" (*52mm*)	3" (*76mm*)
ANSI Function	02	02	03	03
Cylinder Type				
Rim or Vertical Rod Device	—	—	Rim	Rim
Mortise Lock Device	—	—	1¼" Mortise	1¼" Mortise
#425 SNB optional-HMD Req. WD w/o SLM Pkg.	2	2	2	2
#825 SNB Req. WD w/o SLM Pkg.	2	2	2	2
#425 SNB Req. w/ 499F	2	2	2	2

Optional Lever Trims – 696/697

	Thumbpiece Key Locks & Unlocks	**Thumbpiece** Key Locks & Unlocks	**Thumbpiece - Blank Escutcheon** Always Operable (No Cylinder)	**Thumbpiece - Blank Escutcheon** Always Operable (No Cylinder)
Trim Description	696TP	697TP	696TP-BE	697TP-BE
Escutcheon Plate Size	1⅝" x 13½" x 3/16" (*41x343x5mm*)	1⅝" x 13½" x 3/16" (*41x343x5mm*)	1⅝" x 13½" x 3/16" (*41x343x5mm*)	1⅝" x 13½" x 3/16" (*41x343x5mm*)
Pull Center to Center	5½" (*140mm*)	5½" (*140mm*)	5½" (*140mm*)	5½" (*140mm*)
Projection	2⅛" (*52mm*)	3" (*76mm*)	2⅛" (*52mm*)	3" (*76mm*)
ANSI Function	05	05	05	05
Cylinder Type				
Rim or Vertical Rod Device	Rim	Rim	—	—
Mortise Lock Device	1¼" Mortise	1¼" Mortise	—	—
#425 SNB optional-HMD Req. WD w/o SLM Pkg.	2	2	2	2
#825 SNB Req. WD w/o SLM Pkg.	2	2	2	2
#425 SNB Req. w/ 499F	2	2	2	2

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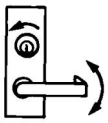
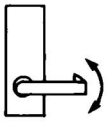
Operation Options

Lever and Knob Operations

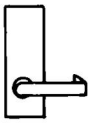


Standard operation, key locks and unlocks lever or knob. e.g., 996L (Classroom)

Night latch, key retracts latch bolt. Lever or knob is rigid. Use NL suffix, e.g. 996LNL. (Storeroom)



Blank escutcheon, lever or knob always active. Use BE suffix, e.g., 996L-BE. (Passage)



Dummy trim, lever or knob rigid for pull operation. Use DT suffix, e.g., 996L-DT.

374T/376T Series Thumbturn Control

(Shown with 990DT Trim)

Standard operation, key locks and unlocks thumbturn. Optional operation, key unlocks thumbturn, re-locks when key is removed. This operation is created by changing the cylinder plate included with control. Use 1¼" mortise cylinder with a straight cam. Schlage cam reference B502-191.

HL6 Exit Device Trim Option

Von Duprin and Glynn-Johnson have collaborated on an exit device trim that answers the problem of accessibility and performance.Using the Von Duprin 98/9975 mortise lock exit device along with the Glynn-Johnson HL6 Push/Pull latch, Ingersoll-Rand has created an exit device with mortise lock durability that utilizes a fully ADA compliant Pull paddle trim. The 98/9975HL device is available in all standard architectural finished and can be found in the Von Duprin device price list for easy ordering.

Vandal Resistant Trim

VR910 & VR914 Series

Features:

- Stainless Steel construction, 11 gage (0.120' thick)
- Thru-bolts and rugged mounting screws for maximum fastening strength.
- 10-24 screws supplied with VR910 & VR914 models.
- Built-in lock protector prevents vandalism to mortise latchbolt (available on certain models).
- Extra-tough stainless steel cylinder collar prevents pipe wrench or similar tool from damaging cylinder. Tapered design prevents side impacts from transferring directly to cylinder. Collar spins freely.
- Furnished with mounting screws for door thicknesses of 1¾" to 2¼"
- Finish: US32D
- VR910 grip coated in black plastisol for softer touch and resilience to temperature extremes. Grip designed for comfortable operation.
- VR914 grip in all stainless steel.
- Meets ANSI/BHMA 156.13, Trim Security Test and California State Accessibility Standards Title 24.
- 1½" (38mm) clearence from grip to door
- 1⅞" (48mm) total projection from door
- Consult IVES catalog for specification/ordering information.

Model	For Use With	Size
VR910DT & VR914DT	98/99 Rim or Vert. Rod Device	5¼" (133mm) w x 11" (279mm) h
VR910NL & VR914NL	98/99 Rim or Vert. Rod Device	5¼" (133mm) w x 11" (279mm) h
VR910M-DT & VR914M-DT	9875/9975 Mortise Device	7¼" (184mm) w x 11" (279mm) h
VR910M-NL & VR914M-NL	9875/9975 Mortise Device	7¼" (184mm) w x 11" (279mm) h

UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

VON DUPRIN® 98/99™ Strike/Stile Information

DEVICE TYPE	STANDARD SINGLE DOOR			STANDARD DOUBLE DOOR			OPTIONAL SINGLE DOOR			OPTIONAL DOUBLE DOOR		
	STRIKE	TRIM/STILE		STRIKE W/MULLION*	TRIM/STILE		STRIKE	TRIM/STILE		STRIKE W/MULLION*	TRIM/STILE	
		990/992 994/996	696/697		990/992 994/996	696/697		990/992 994/996	696/697		990/992 994/996	696/697
98/99	299	4-1/2" (114mm)	4-3/8" (111mm)	299 x 4954	4-7/8" (124mm)	4-3/4" (121mm)	1439 or 1410	3-13/16" (97mm)	3-13/16" (97mm)	299 x 5654	4-7/16" (113mm)	4-1/4" (108mm)
										1408 x 5754	3-13/16" (97mm)	3-13/16" (97mm)
							1606	4-1/16" (103mm)	3-15/16" (100mm)	1606 x 1654	4-7/16" (113mm)	4-1/4" (108mm)
98-F/99-F	299F	4-1/2" (114mm)	4-3/8" (111mm)	499F x 9954	4-7/8" (124mm)	4-3/4" (121mm)	—	—	—	499F x 9854 KR9954	—	—
9875 9975	575	4-3/4" (121mm)	4-3/4" (121mm)	575-2	—	—	—	—	—	576A-576B	4-3/4" (121mm)	4-3/4" (121mm)
9875-F 9975-F	575	4-3/4" (121mm)	4-3/4" (121mm)	575-2	—	—	—	—	—	576A-576B	4-3/4" (121mm)	4-3/4" (121mm)
9857 9957	299 (Top) 299 (Middle) 304L/284-L (Bottom)	4-1/2" (114mm)	4-3/8" (111mm)	299 x 4954	4-7/8" (124mm)	4-3/4" (121mm)	1439 or 1410	3-13/16" (97mm)	3-13/16" (97mm)	299 x 4954	4-7/16" (113mm)	4-1/4" (108mm)
										1408 x 5754	3-13/16" (97mm)	3-13/16" (97mm)
							1606	4-1/16" (103mm)	3-15/16" (100mm)	1606 x 1654	4-7/16" (113mm)	4-1/4" (108mm)
9857-F 9957-F	299F (Top) 299F (Middle) 304L (Bottom)	4-1/2" (114mm)	4-3/8" (111mm)	299F 499F x 9954 304L	4-7/8" (124mm)	4-3/4" (121mm)	—	—	—	—	—	—

	STRIKE	APPLICATION	TRIM/STILE		OPTIONAL STRIKE	APPLICATION	TRIM/STILE	
			990/992 994/996	696/697			990/992 994/996	696/697
9827 9927 LATCH RETRACTION	299 (Top) 304L/248L-4 (Bottom)	Single Door	3-11/16" (94mm)	3-5/8" (92mm)	260U (Top) 385A (Bottom)	Single Door	3-11/16" (94mm)	3-5/8" (92mm)
PL9827/PL9927 PULLMAN LATCH	299 (Top) 304L/248L-4 (Bottom)	Two Vertical Rod Devices	3-11/16" (94mm)	3-5/8" (92mm)		Two Vertical Rod Devices	3-11/16" (94mm)	3-5/8" (92mm)
9827-F 9927-F	299 (Top) 304L (Bottom)				260U (Stainless) 385A (Bottom)			
9847 9947 9848 9948	338 (Top) 385A (Bottom)	Vertical Rod with Mortise Lock Device	4-3/4" (121mm)	4-3/4" (121mm)	304L (Bottom)	Vertical Rod with Mortise Lock Device	4-3/4" (121mm)	4-3/4" (121mm)
9847-F 9947-F 9848-F 9948-F	338 (Top) 385A (Bottom)	Two Vertical Rods	4-1/4" (108mm)	4-1/8" (105mm)	304L (Bottom)	Two Vertical Rods	4-1/4" (108mm)	4-1/8" (105mm)
		Vertical Rod with Mortise Lock Device	4-3/4" (121mm)	4-3/4" (121mm)		Vertical Rod with Mortise Lock Device	4-3/4" (121mm)	4-3/4" (121mm)
9847WDC 9947WDC	338 (Top) 385A (Bottom)	Single Door	4-1/4" (108mm)	4-1/4" (108mm)	304L	Single Door	4-1/4" (108mm)	4-1/4" (108mm)
		Two Vertical Rod Devices	4-1/4" (108mm)	4-1/4" (108mm)		Two Vertical Rod Devices	4-1/4" (108mm)	4-1/4" (108mm)
		Vertical Rod with Mortise Lock Device	4-3/4" (121mm)	4-3/4" (121mm)		Vertical Rod with Mortise Lock Device	4-3/4" (121mm)	4-3/4" (121mm)
9847WDC-F 9947WDC-F	338 (Top) 385A (Bottom)	Two Vertical Rod Devices	4-1/4" (108mm)	4-1/4" (108mm)	304L	Two Vertical Rod Devices	4-1/4" (108mm)	4-1/4" (108mm)

Mullion information–refer to the General and Auxiliary catalog.

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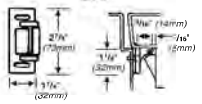
UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

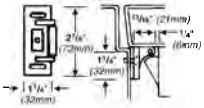
Strikes for rim devices

264



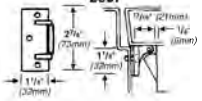
Projection 9/16" (14mm)

299



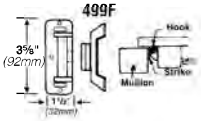
Projection 13/16" (21mm)

299F



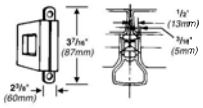
Projection 13/16" (21mm)

499F



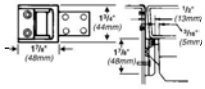
Projection 15/16" (24mm)

1408



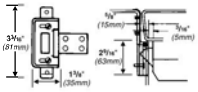
One per pair of doors

1439–Blade Stop



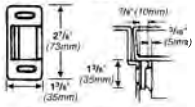
Projection 1/2" (13mm)

1410–Integral Stop



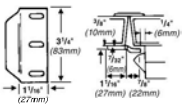
Projection 1/2" (13mm)

1606



Projection 3/8" (10mm)
Panic Devices Only

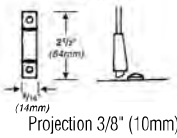
1609



- Requires Coordinator
- For Fire Rated Application, consult factory

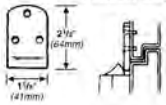
Strikes for vertical rod devices

248L-4



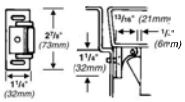
Projection 3/8" (10mm)

260U–Flush Transom Only



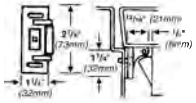
Projection 3/8" (10mm)
For Fire Rated Application, consult factory

299



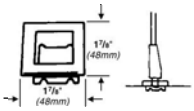
Projection 13/16" (21mm)

299F



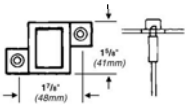
Projection 13/16" (21mm)

304L



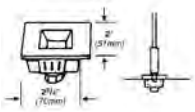
Mortise 13/16" (21mm)

338



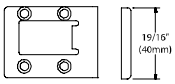
Mortise 5/8" (16mm)

385A



Mortise 2-1/2" (64mm)

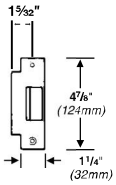
283



For use with WDC devices
when used with wood frames

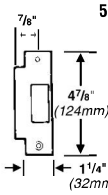
Strikes for mortise lock devices

575



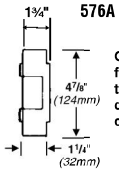
For use on 1³/₄" *(44mm)* or 2¹/₄" *(57mm)* Single door and 2¹/₄" *(57mm)* double door with coordinator.

575-2



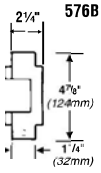
For use on 1³/₄" *(44mm)* thick double door with coordinator and astragal

576A



Open back strike for 1³/₄" *(44mm)* thick double doors without coordinator.

576B



Open back strike for 2¹/₄" *(57mm)* thick double doors without coordinator.

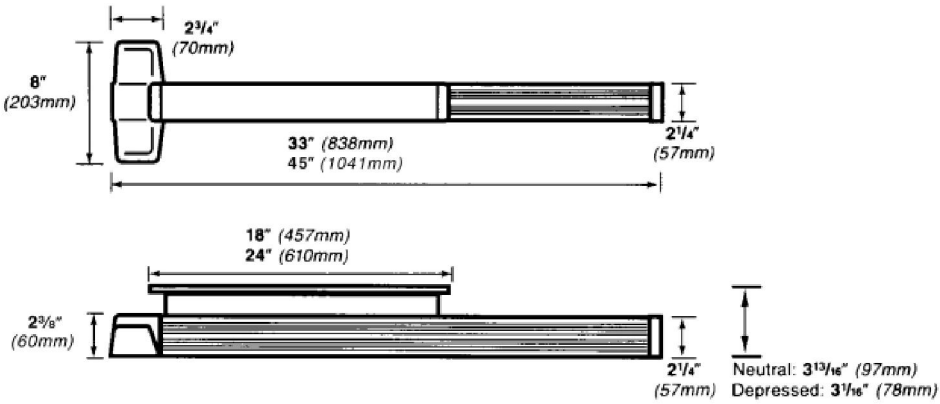
- Not for use with astragals
- Not for use on wood doors
- Acceptable for 90 minute pair of hollow metal doors

ANSI Grade, Type & Function

Function	Grade 1, Type 1	Grade 1, Type 2	Grade 1, Type 3	Grade 1, Type 7	Grade 1, Type 8	Grade 1, Type 9
01	98EO, 98EO-F 99EO, 99EO-F	9827EO, 9827EO-F 9927EO, 9927EO-F	9875EO, 9875EO-F 9975EO, 9975EO-F	9847WDC-EO & EO-F 9947WDC-EO & EO-F	9847EO, 9848EO-F 9947EO, 9947EO-F	9857EO, 9857EO-F 9957EO, 9957EO-F
02	98DT 99DT	9827DT 9927DT	9875DT 9975DT	9847WDC-DT* 9947WDC-DT	9848DT 9948DT	9857DT 9957DT
03	98NL, 98NL-F 99NL,99NL-F	9827NL, 9827NL-F 9927NL, 9927NL-F	9875NL, 9875NL-F 9975NL, 9975NL-F	9847WDC-NL & NL-F 9947WDC-NL & NL-F	9847NL, 9847NL-F 9947NL, 9947NL-F	9857NL, 9857NL-F 9957NL, 9957NL-F
05	98TP, 98TP-F 99TP, 99TP-F	9827TP, 9827TP-F 9927TP, 9927TP-F	9875TP, 9875TP-F 9975TP, 9975TP-F	9847WDC-TP & TP-F 9947WDC-TP & TP-F	9847TP, 9847TP-F 9947TP, 9947TP-F	9857TP, 9857TP-F 9957TP, 9957TP-F
07	98TP-2, 98TP-F-2 99TP-2, 99TP-F-2	— —	— —	— —	— —	— —
08*	98K, 98K-F 99K, 99K-F	9827K, 9827K-F 9927K, 9927K-F	9875K, 9875K-F 9975K, 9975K-F	9847WDC-K & WDC-K-F 9947WDC-K & WDC-K-F	9847K, 9847K-F 9947K, 9947K-F	9857K, 9857K-F 9957K, 9957K-F
08	98L, 98L-F 99L, 99L-F	9827L, 9827L-F 9927L, 9927L-F	9875L, 9875L-F 9975L, 9975L-F	9847WDC-L & WDC-L-F 9947WDC-L & WDC-L-F	9847L, 9847L-F 9947L, 9947L-F	9857L, 9857L-F 9957L, 9957L-F
09*	98K-NL, 98K-NL-F 99K-NL, 99K-NL-F	9827K-NL, 9827K-NL-F 9927K-NL, 9927K-NL-F	9875K-NL, 9875K-NL-F 9975K-NL, 9975K-NL-F	9847WDC-K-NL & WDC-K-NL-F 9947WDC-K-NL & WDC-K-NL-F	9847K-NL, 9847K-NL-F 9947K-NL, 9947K-NL-F	9857K-NL, 9857K-NL-F 9957K-NL, 9957K-NL-F
09	98L-NL, 98L-NL-F 99L-NL, 99L-NL-F	9827L-NL, 9827L-NL-F 9927L-NL, 9927L-NL-F	9875L-NL, 9875L-NL-F 9975L-NL, 9975L-NL-F	9847WDC-L-NL & WDC-L-NL-F 9947WDC-L-NL & WDC-L-NL-F	9847L-NL, 9847L-NL-F 9927L-NL, 9947L-NL-F	9857L-NL, 9857L-NL-F 9957L-NL, 9957L-NL-F
10*	98K-2, 98K-F-2 99K-2, 99K-F-2	— —	— —	— —	— —	— —
10	98K-2, 98K-F-2 99K-2, 99K-F-2	— —	— —	— —	— —	— —
11-12	— —	9827TL, 9827TL-F 9927TL, 9927TL-F	— —	9847WDC-TL & TL-F 9947WDC-TL & TL-F	9847TL, 9847TL-F 9947TL, 9947TL-F	— —

***Device is Grade 1, 991K trim is Grade 2.**

Dimensions



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Alarm Kit – ALK

The ALK battery alarm kit is a simple yet effective way to deter unauthorized use of an opening. While the exit device is still a means of egress, the ALK kit contains an internal horn. When the touch bar is depressed, the horn sounds to provide an audible means of signaling that the opening has been violated. The alarm kit can be armed or disarmed by key. Thus allowing the exit device to be set in an armed or disarmed mode. The horn is rated at 85 decibel.

The key switch uses a standard 1¼" (32mm) mortise cylinder with a straight cam (Schlage Cam reference B502-191). The unit operates on one standard 9-volt alkaline battery. When the battery is weak, the horn will emit an intermittent low battery alert signal.

Also can be powered using the PS9 Power Supply. See PS9 for additional information.

Alarm kits are available with a choice of two switch kits, RX or LX. RX monitors the touchpad and is furnished standard. LX optional latch bolt monitoring is recommended for use with surface vertical rod exit devices. Specify ALK-LX.

Note: For latch bolt monitoring on a 98/9975 with ALK, specify a SS7500 lock. LX switch not available for 98/9975 devices.

The ALK is available in two styles, 33A/99ALK, grooved cover and 35A/98ALK, smooth cover.

The ALK includes "EMERGENCY EXIT ONLY. ALARM WILL SOUND" decal for application on door, or the SS push bar trim can be used instead of the door decal,specify SS push bar trim.

The ALK is available with 2 optional circuit boards. External Inhibit (EI) allows for the use of external switch to be used to arm, disarm and reset the alarm. Auto Reset (AR) rearms the alarm after a preset time. AR is available in three factory set times – 1½, 3 or 6 minutes.

To Order, Specify:

1. External Inhibit – ALK-EI
2. Auto Reset – ALK-AR3

When the ALK is used, standard dogging is removed. If cylinder dogging is required there are two choices. Special center case dogging is available or for 3' or 4' doors the ALK can be moved to the hinge side of the device and standard cylinder dogging can be added.

To Order, Specify:

1. Standard, 98NL ALK
2. Cylinder Dogging, CD98NL ALK
3. Special Center Case Dogging, SD98NL ALK

Minimum Door Opening Sizes on ALK Applications

Device	3' (914mm) Length	4' (1219mm) Length
98/98-F/99/99-F	2'9" (838mm)	3'3" (991mm)
9875/9875-F/9975/9975-F	2'9" (838mm)	3'3" (991mm)
9827/9827-F/9927/9927-F	2'8" (813mm)	3'2" (966mm)
9857/9857-F/9957/9957-F	2'8" (813mm)	3'2" (966mm)
9847/9847-F/9947/9947-F	2'8" (813mm)	3'2" (966mm)
9848/9848-F/9948/9948-F	2'8" (813mm)	3'2" (966mm)

Request to Exit — RX

The RX (Request to Exit) feature is used to signal the use of an opening. This device is equipped with one internal SPDT switch which monitors the pushpad.

The device can be connected to a security console, or may be used as a single door alarm when used with a horn and power supply. A continuous current electric transfer must be used for transferring power from the frame to the door.

The RX switch option should not be used to control a load, but as a signalling switch (0.5 amps. resisitive maximum).

The RX switch is available in a low current (LC) switch. Most commonly used in computer operated monitoring systems.

To Order, Specify:

- Standard – Use prefix RX, example RX99EO
- Low Current – Use prefix RX-LC, example RX-LC98EO

Double Request to Exit — RX2

The RX2 feature uses 2 RX switches. Also available with the Low Current (LC) switch.

To Order, Specify:

- Standard – Use prefix RX2, example RX299EO
- Low Current – Use prefix RX2-LC, example RX2-LC98EO

Latch Bolt Monitoring — LX

The LX feature is used to signal the use of an opening. This device is equipped with one internal SPDT switch which monitors the latch bolt.

The device can be connected to a security console, or may be used as a single door alarm when used with a horn and power supply. A continuous current electric transfer must be used for transferring power from the frame to the door.

The LX switch option should not be used to control a load, but as a signalling switch (0.5 amps. resistive maximum).

The LX switch is available in a low current (LC) switch. Most commonly used in computer operated monitoring systems.

To Order, Specify:

- Standard – Use prefix LX, example LX99EO
- Low Current – Use prefix LX-LC, example LX-LC98EO

Electrical Rating for all Switches:

- Standard – up to 0.5 Amp @ 24VDC Maximum
- Low Current (LC) - up to .05 Amp @ 24VDC Maximum

Note: All Switches can be either factory or field installed

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DOVER, DE

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Electric Latch Retraction — EL

The EL feature allows for the remote unlatching of exit devices. A control station operator can flip a switch to retract the latch bolt and immediately change an exit door to push-pull operation. A powerful, continuous duty solenoid retracts the latch bolt, either for momentary unlatching, or for extended periods of time. The EL feature is an alternative to manual dogging.

If manual hex-key dogging is required, specify HD-EL. If cylinder dogging is required, the standard cylinder dogging is not available, but special center case dogging is available, specify SD-EL. SD-EL is not available on the 9875 or 9975 devices.

EL devices are also useful with automatic door operators, and may be applied to fire-rated applications when under the control of an **automatic fire alarm system.**

UL approved for Class II circuit applications.

The EL option does not include the power transfer from door to frame, the power supply, or the control operator. Refer to EPT-2 power transfer and the PS873 power supply.

The PS873 with the 871-2 option card is minimum option card required. Other option cards available for other functions, see PS873 power supply for additional information.

Solenoid Specifications:

Continuous Duty — 24 VDC

Current Inrush — 16 Amps

Current Holding — 0.3 Amps

To order, specify:

Standard — Use prefix EL, example EL99L.

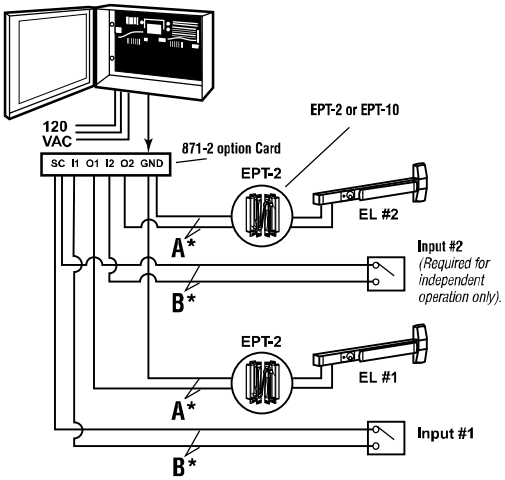
Hex Key dogging — Use prefix HD-EL, example HD-EL99L

Special Center Case Dogging — Use prefix SD-EL, example SD-EL99L

Popular EL Application

Power Supply PS873-2

Electric Power Transfer EPT-2 or EPT-10



Signal Switch — SS

Monitors pushpad and latch bolt

The SS feature is used to signal the unauthorized use of an opening. This device is equipped with two internal SPDT switches. One switch monitors both the pushpad and the latch bolt assembly, making the latch bolt tamper resistant, for positive security. An additional SPDT switch is connected to the 1 ¼" *(32mm)* mortise with straight cam for alarm "bypass." (Schlage cam reference B502-191). The device can be connected to a security console, or may be used as a single door alarm when used with a horn and power supply. A continuous current electric transfer must be used for transferring power from the frame to the door.

Pushpad reads:
"EMERGENCY EXIT ONLY – PUSH TO OPEN AND SOUND ALARM."
Pushpad is only available in US32D finish with red silk-screened lettering.

The SS mortise lock device is furnished with both the signal switch device and the SS7500 mortise lock. The SS7500 mortise lock has the versatility and advantages of the 7500 lock with the addition of signalling functions to monitor latch bolt operation and the trim locking function. The SS7500 mortise lock is supplied standard with the SS mortise lock device.

To Order, Specify:

1. Prefix SS, example SS99L.
2. Handing Required, LHR or RHR.

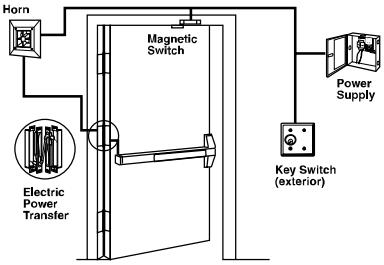
Electrical Ratings:

Up to 2.0 AMPS @ 24VDC

Popular SS Application

Unauthorized use of this opening will activate the local horn.

The key switch permits inhibiting this system for authorized entry.



EL Device Wire Selection Size

A*

Run Length	EL Device w/EPT or Door Loop
0-100 ft.	14 gauge
100-200 ft.	12 gauge

A*

Run Length	EL Device w/Electric Hinge/Pivot
0-75 ft.	14 gauge
75-150 ft.	12 gauge

B*

Wire Selection	Switch Wire Size
1200 ft. Max.	18 gauge

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Electric Mortise Lock Device — E

The electric mortise lock device has all the versatility and advantages of the standard mortise lock device, plus the advantage of being electrically controlled by a remote switching device, an access control system or an automatic fire alarm system. The device features the E7500 mortise lock. The E7500 controls the locking of the outside trim. When unlocked, the door remains latched, preserving the fire rating of the door and making it particularly useful where codes permit locking but require unlocking during a fire emergency. The outside trim cylinder retracts the latch bolt for mechanical override, night latch function. Only available with TP, K or L functions.

The E7500 lock contains a SPDT signal to monitor the outside trim condition (locked or unlocked) and a second SPDT signal switch to monitor the latch bolt.

Standard Features:
- Field reversible handing
- 24 VDC continuous duty solenoid

Optional Features:
- Fail safe (locked when energized, unlocked when de-energized or during power failure). Specify with suffix "FS."
- Fail secure (unlocked when energized, locked when de-energized or during power failure). Specify with suffix "FSE"
- 24 VAC (with SO option)
- 12 VDC
- 12 VAC (with SO option)

Note: Some Fire codes will require "Fail Safe" (FS) operation for stairwell doors. Be sure to specify the correct operation for your application.

Electrical Specifications:
- Solenoid — .60 AMPS @ 12VDC
  .30 AMPS @ 24VDC
- Each switch — Up to 2.0 AMPS @ 24VDC Maximum

The E option does not include the power transfer from door to frame, the power supply or the control operator. (Refer to EPT-10 and PS861 or PS873 power supply)

To Order, Specify:

1. Use prefix "E," example E9975.
2. FS or FSE
3. Voltage and current.

Electric Rim Device — E

The electric rim device provides remote locking and unlocking capabilities. A control station operator can flip a switch to lock or unlock the outside trim condition. The 24 VDC solenoid assembly contains a SPDT signal switch to monitor the outside trim condition (locked or unlocked), and a second SPDT signal switch to monitor the latch bolt.

The device is standard as fail safe (FS). When power is off, the trim is unlocked. The trim may then be relocked electrically by applying power. The device is field convertible for fail secure (FSE) applications.

The outside trim cylinder retracts the latch bolt for mechanical override, night latch function. Only available in TP, K or L function.

This feature does not include the power transfer from doors to frame, the power supply or control operator. Refer to the EPT-10 and PS861 or PS873 power supply.

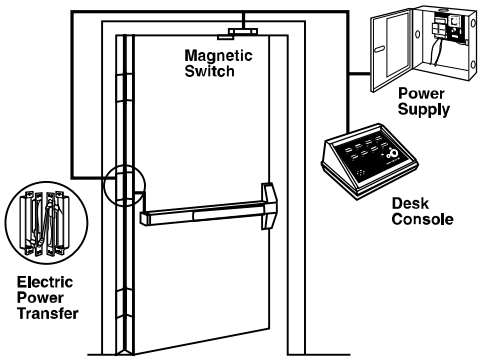
NOTE: LX switch not required for E99 rim device when latch bolt monitoring is required. E99 Rim has standard latch bolt monitoring feature.

Specifications:
- Solenoid – 0.25 AMPS @ 24VDC
- Each switch – Up to 2.0 AMPS @ 24VDC Maximum

UL listed FVSR SA163 panic hardware
And GXHX R4504(N) fire exit hardware

To Order, Specify:

1. Use prefix "E," example E99TP.
2. Handing Required, LHR or RHR.



Electric Mortise Lock Device or Electric Rim Device

Adaptable for openings where continuous latching is required while the trim may be electrically locked or unlocked from a remote location—stairwells, exterior doors, etc.

Minimum System Requirements:
- PS861
- EPT-10

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Submittal Date: 6/27/12

The Chexit®

Designed for use on delayed exit applications, the Chexit system is ideal for controlled areas.

All controls, auxiliary locking, local alarm, and remote signalling are self-contained in the Chexit, providing safe, secure, easy to install and simple to operate door control and exit hardware.

Chexit controlled exit device for use on Panic or Fire Exit hardware applications.

This concept in delayed exit systems combines life safety with the needs of security and meets all requirements of NFPA 101 for "Special Locking Arrangement."

The Chexit device includes decal for application on door.
"PUSH UNTIL ALARM SOUNDS.
DOOR CAN BE OPENED IN 15 SECONDS"

Solenoid Specifications:
- Continuous Duty – 24VDC
- Current Inrush – 16 amperes
- Current Holding – .3 amperes

Requires PS873 Power Supply

Request to Exit Switch:
Built into the device to detect when someone attempts to exit. Pushing the push pad when the device is armed will cause this switch to start an irreversible alarm cycle.

Nuisance Alarm:
When a Chexit is located in a public area, it can be desireable to limit false alarms. If the Nuisance Delay options are set to off, the device will go into alarm as soon as the push pad is touched (when armed). Turning the Nuisance Delay on will require the push pad to be pressed for 2 seconds before the Chexit goes into alarm. If the Nuisance Audible and Nuisance Delay are both on, the alarm will sound as soon as the push pad is pressed, but the alarm sequence will stop unless the push pad is held for 2 seconds or more.

Remote Alarm:
A set of relay contact are provided to give external alarm indication. These contact close when the device is in an irreversible alarm condition. These contact can be used to drive a horn, lamp, or other indicative device.

Key Switch:
The Key Switch provides the means to arm, disarm or reset the Chexit. The key can be removed in either the Arm or Disarm position.

Indicator Lamp:
The status of the Chexit can be determined by the indicator lamp. When the lamp is off, this indicates the device is disarmed and is functioning as a normal exit device (no delay). A continuously on lamp indicates the device has just been armed and as soon as the selectable rearm timer expires, the device will arm. A slow flashing lamp indicates the device is armed. A fast flashing indicator lamp indicates the device is in alarm.

Internal Horn:
Whenever the device is in alarm or the push pad is pressed the internal horn will sound. The volume level of this horn exceeds 85 db at 6 feet.

Door Position Input:
An external door position switch can be connected to the Chexit.

External Inhibit Input:
This optional input is provided to allow remote override of the Chexit in the armed condition. It also allows remoe reset of the Chexit in an alarmed condition.

Fire Alarm Input:
This input disables the Chexit immediately upon a fire alarm.

Internal Auxiliary Lock:
The Auxiliary Lock is engaged when the Chexit is armed. The locking mechanism is specifically designed to hold securely even when the exit device is struck with forceful blows.

User Defineable Rearm Time:
The Rearm time is the amount of time after the device is activated before it arms. It is designed to give someone time to pass through the door before rearming oocurs. Timing can be changed by the user for any time between 2 and 28 seconds in two second increments. There is also an infinite rearm setting that requires the use of an external door position switch. In this setting the door remains in the rearm mode until the door is closed. This can be useful on jet way doors in an airport.

Factory Defineable Delay Time:
Most jurisdictions allow 15 seconds of delay before allowing egress. In those cases where 15 seconds is not appropriate, Von Duprin can set the Chexit for any delay time between 0 and 60 seconds on 2 second increments. For delays greater than 15 seconds a letter from the local authority is required.

Electrical Accessories

Power Supplies

SERIES PS873
The series PS873 power supply is designed to operate a wide variety of electrical products. EL panics require 871-2 PCB minimum. The regulated output power is field selectable for either 24VDC @ 2 ampere or 12VDC @ 4 ampere. Standard input 120VAC @ 1.0 ampere or 240VAC @ 0.5 ampere available. Enclosure is 10" high x 12½" wide x 5" deep *(254mm x 323mm x 127mm)*, gray with a hinged cover and constructed of heavy 19 gauge steel. Five ½" x ¾" *(13mm x 19mm)* knockout holes are provided for conduit connection. Terminal block will accept up to 12 gauge wire.

The PS873 can be ordered with three standard options: **Key lock** secures the cover to eliminate tampering and provides safety; **Battery backup** provides two hours backup power at full load during a A.C. power failure. Batteries will automatically recharge when failed power is restored. **Fire Alarm** provides input for a normally closed fire alarm contact. When the fire alarm contact is "open", power to locks or other component is removed. Restoring power is field selectable for automatic or manual.

Eight standard configurations:

PS873	Standard
PS873K	With keylock
PS873B	With battery
PS873BK	With battery and keylock
PS873FA	With fire alarm
PS873K-FA	With keylock and fire alarm
PS873B-FA	With battery and fire alarm
PS873BK-FA	With battery, keylock and fire alarm

The series PS873 is available with several optional circuit cards to provide system flexibility. The power supply will accept one or a combination of any two cards.

Factory or Field Installed Circuit Cards:

871-2, Two Zone controller provides two inputs and two outputs. Will operate one or two EL exit devices. Use suffix "-2" for factory installed, example PS873-2.

873-AL, Alarm function monitors 1 or 2 zones and provides alarm output, upon detecting a door in the open position. Delayed alarming is selectable from 5 to 75 seconds. Use suffix "-AL" for factory installed, example PS873-AL

873-AO, Auto Operator function coordinates the release of one or two locks and signals an auto-operator to open a door. Signaling the auto operator can be performed in two methods; by receiving a signal from a monitoring switch that the lock is unlatched, or upon expiration of a time delay triggered by a "RX" type input switch. Use suffix "-AO" for factory installed, example PS873-AO

873-SI, Security/Safety Interlock provide interlock function for two zones. When combined with a second 873-SI card, the inter-locking of groups are available in two, three or four zones. Safety interlock is available, consult factory for additional information. Use suffix "-SI" for factory installed, example PS873-SI

873-4TD, Four Zone controller with **Time Delay** provides four inputs and four outputs with time delay. Time delay is field selectable from 0 to 75 seconds, in intervals of 5 seconds. Will operate up to 4 EL devices. Use suffix "-4TD" for factory installed, example PS873-4TD

873-AC, Access Control provides supervision of one zone using an electromagnetic lock. Input signals required are: access control contact, motion detector contact, and motion detector override contact. FA, Fire Alarm option is required. Use suffix "-AC" for factory installed, example PS873-AC

Factory Installed Only Circuit Card

873-DE, Delayed Egress provides 15 second delay release from pushbar activation to electro-magnetic lock release. Ideal function for use with Locknetics electromagnetic locks, will operate two zones simultaneously. To operate two separate zones, a second 873-DE card is required. UL listed component, when used as part of a Von Duprin delayed egress system. Use suffix "- DE", example, PS873-DE.

Note: "DE" cards CANNOT be combined with any other optional cards.

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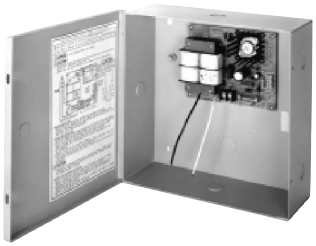
Electrical Accessories

Power Supplies
PS861 Power Supply



Standard
UL Listed
Class 2, Power Supply
UL1012
UL1310

The series PS861 power supply is designed for electric locking or monitoring on single or double door applications. The output power is field selectable for either 24 VDC @ 1 ampere or 12 VDC @ 2 ampere. Standard input 120 VAC @ 0.6 ampere and 240 VAC @ 3.0 ampere available. The terminal block will accept up to 14 gauge stranded wire.

The gray enclosure is 10" x 10" x 4" *(254mm x 254mm x 102mm)*, has a hinged cover, and is constructed of heavy 19 gauge steel. Six ½" *(13mm)* knockout holes are provided for conduit connection.

Options include keylock cover or Battery Backup. The pair of batteries, which are sealed lead acid battery packs, will provide back-up power for three hours at full load or seven hours at half load. Batteries will automatically recharge when failed power is restored.

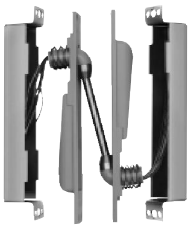
Four Models:

PS861	Standard supply
PS861K	Standard supply with keylock cover
PS861B	Battery backup
PS861FA	Fire Alarm
PS861BK	Battery backup and keylock cover
PS861BKFA	Battery backup and keylock cover with FA board (24VDC only)

PS9 Power Supply

The PS9 is an AC power supply that provides 9 VDC power to operate the ALK alarm kit. The unit will power one or two alarm kits. Included is a 9-volt sealed battery that provides backup power in case of an AC power failure.

Electrical Power Transfer — EPT
Pneumatic Transfer – PNT



Electric Power Transfer provides a means of transferring electrical power from a door frame to the edge of a swinging door. The units are completely concealed when the door is in the closed position, and are ideally suite for installations involving abuse or heavy traffic.

Two models are available; EPT-2, two 18 gauge wires and EPT-10, ten 24 gauge wires. The EPT-2 and EPT-10 are U/L listed as "miscellaneous door accessory".

Pneumatic Controls

PNT-1 is available for pneumatic latch retraction exit devices. Appearance and dimensions are identical to EPT models.

UL Listed for use on firedoors

Door applications:
up to 5" butt hinges – 180° swing,
5 ½" butt hinges – 130° swing,
6" butt hinges – 110° swing,
¾" butt offset pivots 180° swing.

Not for use with swing clear hinges or center-hung pivots.

Finishes

SP28 (sprayed aluminum)

SP313 (sprayed duranodic).

Dimensions

Housing	9" x 1 ¼" x 1 ⅝" *(229mm x 32mm x 38mm)*
EPT-2	Two 18 gauge wires, Up to 2 AMPS @ 24VDC, with a 16 AMPS Maximum Surge
EPT-10	Ten 24 gauge wires, Up to 1 AMPS @ 24VDC, with a 16 AMPS Maximum Surge
PNT-1	5/32" Tubing

To order, specify:

1. EPT-2 ,EPT-10 or PNT-1.
2. Finish, SP28 or SP313.

Pneumatic Controlled Exit Devices–PN

The PN feature provides remote latch bolt retraction in hazardous areas where electrically operated devices would not be permitted. The pneumatic solenoid will retract the latch bolt for momentary or prolonged periods. PN exit devices are particularly suited for use with automatic door operators. The PN feature is available on both Panic and Fire Exit Hardware devices.

The PN feature includes a special actuating linkage that gives building owners the option of mechanically or pneumatically dogging the exit device. If manual hex-key dogging is required, specify HD-PN (Dogging the device, whether mechanically or pneumatically, makes the device function as a push/pull unit and reduces the wear on its moving parts.) If cylinder dogging is required, the standard cylinder dogging is not available, but special center case dogging is available, specify SD-PN. SD-PN is not available on the 9875 or 9975 devices.

When activated pneumatically, the latch bolt(s) of the exit device retract in ½ to 1 ½ seconds. This pneumatic operation uses air pressure ranging from 50 to 100 pounds per square inch.

This product will function only when it is part of a pneumatic system (air compressor, air lines, pneumatic system, etc.). Contact LCN for correct control boxes

To Order, Specify:

- Standard — Use prefix PN, example PN99NL
- Hex Key Dogging — Use prefix HD-PN, example HD-PN99NL
- Special Center Case Dogging — Use prefix SD-PN, example SD-PN99NL

Double Cylinder – 2

Double cylinder features an inside key cylinder which locks or unlocks the outside trim and an outside key cylinder which retracts the latch bolt only(Night Latch Function) . Available on rim or mortise lock device.

Rim requires two rim type cylinders. Mortise device requires 1 rim cylinder and 1 mortise cylinder 1¼" with a straight cam. (Schlage cam reference B502-191.)

Available functions are thumbpiece, knob or lever.

To Order, Specify:

1. Suffix-2 with device/trim number, example 99TP-2.
2. Handing required, LHR or RHR.

Less Dogging – LD

Less Dogging is available in all 98/99™ Panic Exit devices to remove the dogging option.

To Order, Specify:

- Use prefix LD, example LD99L

Special Center Case Dogging – SD

Special cylinder dogging in the center case is available for Chexit, EL, ALK panic devices to allow for mechanical push/pull operation. With this option, the latchbolt is held retracted and pushbar is still operable. Specify handing — RHR or LHR.

SD requires 1 ¼" (32mm) mortise cylinder with a straight cam. (Schlage cam reference B502-191.)

Note: Available on Rim and Vertical Rod Panic Exit Devices only.

To Order, Specify:

- Use prefix SD, example SD99L

Cylinder Dogging — CD

Cylinder dogging is available on all 98/99™ Panic Exit devices to replace the standard hex key dogging. Unit requires a standard 1¼" *(32mm)* mortise cylinder with a straight cam (Schlage Cam B502-191 reference).

To Order, Specify:

- Use prefix, CD, example CD99L

Cylinder Dogging Kit — CDK

For field conversion, a cylinder dogging conversion kit is available. Cannot be added to fire exit hardware.

Order: 33A/99CDK or **35A/98CDK**, specify finish.

Hex Key Dogging Kit — HDK

For field conversion, a hex key dogging conversion kit is available. Cannot be added to fire exit hardware.

Order: 33A/99HDK or **35A/98HDK**, specify finish.

Braille, Embossed and Knurled Touchpads

Braille touchpad is embossed with the message "CAUTION STAIRWELL" in braille and raised letters provides assistance to person with impaired vision. Letters are ½" (13mm) high and braille is #2, raised height is 3/32" (2mm). Other messages are available on special order, limited to 20 characters per line.

Embossed touchpad is embossed with the word "PUSH"
Knurled touchpad is to provide warning to person with impaired vision.

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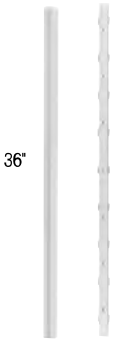
Vertical Rod and Latch Guard — RG-27



Rod Guard

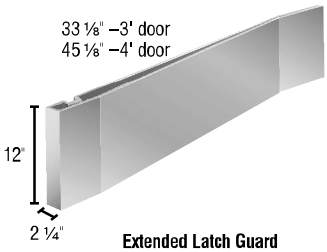
Series RG-27 Vertical Rod and Latch Guards protect the bottom rods of exit devices from the damaging impacts of carts or gurneys passing through doors. (If bottom rods become damaged, the exit device will not function as intended and can jeopardize the ability to exit safely during an emergency.)

In addition to protecting the vertical rod, the guard provides a smooth, unobstructed surface so the door can be pushed open easily with the bumpers of a wheelchair. The latch guard portion is 10" high. The standard latch guard features a 45° ramp. The extended latch guard offers a continuous ramp in 3' or 4' widths.

All stainless steel construction in US32D finish. Latch guards can cover latches as large as 1¼"W x 10"H x 1⅞" projection.

Latch Guard

Models
RGO — Rod guard only (Projection 1 3/16").
RG-27 — Rod and latch guard.
RG-27-3 — 3' *(914mm)* Rod Guard and Extended Latch Guard.
RG-27-4 — 4' *(1219mm)* Rod Guard and Extended Latch Guard.



Extended Latch Guard

LGO — Latch guard only.
LGO-3 — 3' *(914mm)* Extended latch guard only.
LGO-4 — 4' *(1219mm)* Extended latch guard only.

Note: Not for use on wood fire doors

To Order, Specify:

1. Model number.
2. Handing (except on RGO).
3. Door material if other than Hollow Metal.
4. Optional sex bolt mounting available.

Less Bottom Rod – LBR

LBR option is available, using a spring loaded auxiliary latch bolt installed in the lower door edge. When exposed to heat the auxiliary latch bolt releases, keeping the doors in alignment and closed during a fire. UL listed 3 hours on hollow metal doors double egress, 90 minute swinging same direction, and 20 minutes wood doors (consult wood door manufacturer). Fits door stiles as narrow as 3⅝".

LBR devices must be ordered in pairs or must be used in conjunction with an approved automatic or constant latching flush bolt.

Pullman Latch – PL

When PL is specified the standard latches are replaced with pullman style latches. Pullman latches are always extended and are most commonly used in conjunction with electric strikes and LBR-less bottom rod application. Not available with Fire rated devices. Not recommended where security is of the utmost since latches do not deadlock.

Glass Bead Kit – GBK

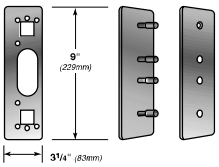
Glass bead conversion kits are available for all 98/99™ Series devices for use on doors with raised glass beads. Each kit consists of ¼" *(6mm)* shim sets. GBK for Surface Vertical Rod ships with ⅛" shims for rod guides.

To order, specify:

1. 99GBK
2. Device type (Rim, Mortise, Surface Vertical Rod, Concealed Vertical Rod)
3. Wood Door, when used with Concealed Vertical Rod

997 Cover Plate Kit

For 99 rim device, kit contains inside and outside plates for hinge stile cutouts, an inside plate for the lock stile, and necessary screws. Plates are designed to cover cutouts required by most existing exit device installations. Specify finish.



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THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

Dummy Pushpad

The 330 dummy pushpad is designed as a companion unit for all 99 devices. The 350 dummy pushpad is a companion unit for all 98 devices. The pushpad is rigid or nonfunctioning. A push/pull operation can be accomplished by using 990DT, 996DT trim or any Ives Pull.

The 330/350 can be equipped with a functional pushpad and will accommodate an RX switch. Specify RX-330. May also be equipped with the RX2, double RX switch. Specify RX2-330

To order, specify:

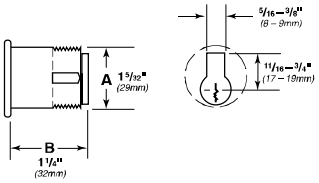
1. 330 or 350.
2. Size 3' or 4' *(914mm or 1219mm)*
3. Finish, US3, US4, US10, US26, US26D, US28, 313AN, 315AN, 350 Only US32D.

Cylinders

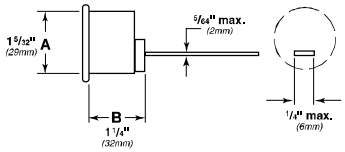
Cylinders are not furnished with device or trim and must be specified when ordering. Refer to trim pages for cylinder type.

Mortise — 3215 (Schlage B502-191 cam)

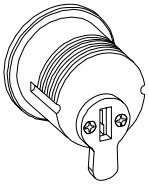
Rim 3216



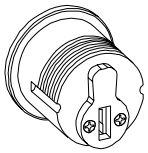
Dogged (Inverted) Cam



Undogged Cam
(Standard Operations)

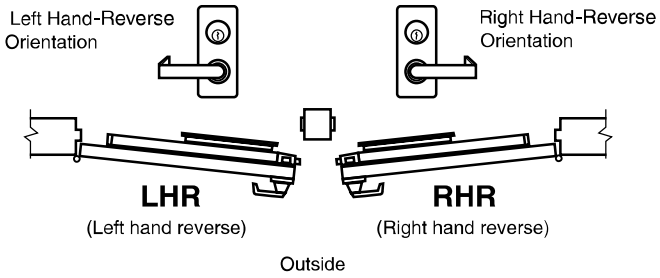


For Cylinder Dogging



For Standard Trim Functions

Door Handing



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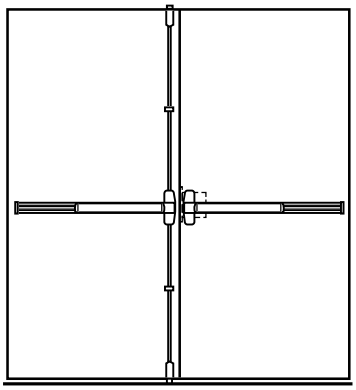
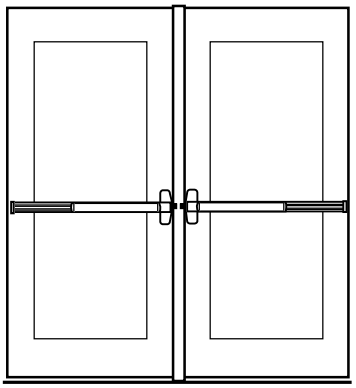
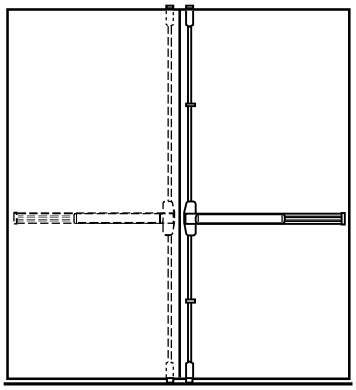
Popular Double Door Applications



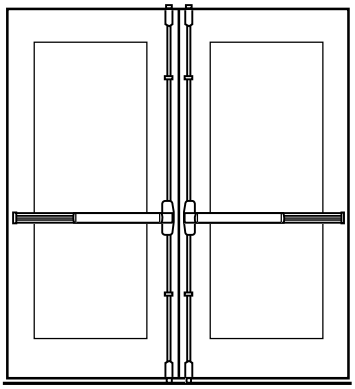
Mortise lock and surface mounted or Concealed Vertical rod device combination—same direction



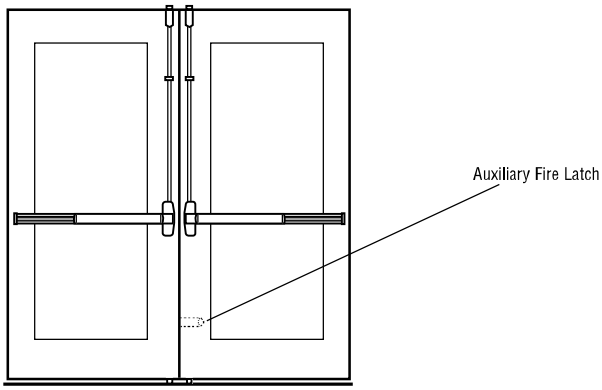
Two rim devices with mullion—same direction



Two vertical rods—double egress



Two surface mounted vertical rod devices—same direction
(do not use with overlapping astragal)



Two FEH vertical rods with auxiliary fire latch—LBR option

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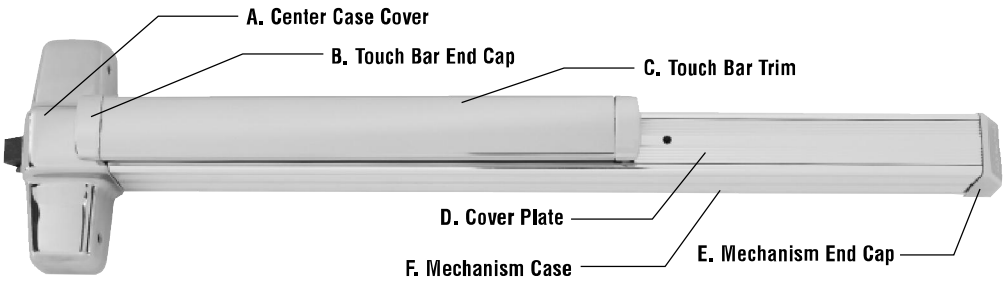
VON DUPRIN® 98/99™ Finishes



Finishes

Color	US Number	BHMA Number	A, B, E	C	D & F
Brass, Polished	US3	605	Plated	Brass, Polished US3, 605	Buffed Anodized
Brass, Satin	US4	606	Plated	Brass, Dull US4, 606	Anodized
Bronze, Satin	US10	612	Plated/Anodized	Bronze, Dull US10, 612	Anodized
Chrome, Polished	US26	625	Plated	Stainless Steel, Polished US32, 629	Buffed Anodized
Chrome, Satin	US26D	626	Plated	Stainless Steel, Satin US32D, 630	Anodized
Stainless Steel, Satin*	US32D	630	Stainless Steel	Stainless Steel, Satin US32D, 630	Anodized
Aluminum, Anodized	US28	628	Powder Coat	Stainless Steel, Satin US32D, 630	Anodized
Duranodic Dark Bronze	313AN	710	Powder Coat	Brown Wrinkle Powder Coat	Anodized
Black Anodized	315AN	–	Powder Coat	Black Wrinkle Powder Coat	Anodized

Special Finishes

Color	US Number	BHMA Number	A, B, E	C	D & F
Bronze, Oil-Rubbed Satin	US10B	613	Plated	Bronze, US10B, 613	Anodized
Powder Coat	RAL #	–	Powder Coat	Stainless Steel, Satin US32D, 630	Powder Coat
Bronze, Polished	US9	611	Plated	Bronze, Polished US9, 611	Buffed Anodized
Nickel, Satin	US15	619	Plated	Stainless Steel, Satin US32D	Anodized

Touch Bar Trim Options:

Knurled
Embossed "Push"
Braille, US32D Only, Embossed "Caution Stairwell"
SS, US32D Only, Red silk screen lettered "EMERGENCY EXIT ONLY – PUSH TO OPEN AND SOUND ALARM."

**US32D Finish—available on Series 98 only*

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Nomenclature – How To Order

EL 99 27 -L -16 -F LBR 3' US3 RHR

SD — Special Dogging - Panic Only
CD — Cylinder Dogging - Panic Only
CX — Chexit
E — Electric Locking (Rim or Mortise)
EL — Electric Latch Retraction
LX — Latch Bolt Monitoring
PL — Pullman Latch
PN — Pneumatic Latch Retraction
RX — Request to Exit
RX2 — Double Request to Exit
SS — Signal Switch

98 — Series 98-smooth
99 — Series 99-grooved

None — Rim Device
27 — Surface Mounted Vertical Rod Device
47 — Concealed Vertical Rod Device
47WDC — Concealed Vertical Rod Wood Door Device
48 — Concealed Vertical Rod Device
57 — Three Point Latch Device
75 — Mortise Lock Device

DT — Dummy Trim
EO — Exit Only
K — Knob (Classroom)
K-BE — Knob-Blank Escutcheoon
K-DT — Knob-Dummy Trim
K-NL — Rigid Knob - NightLatch (Key retracts Latchbolt)
L — Lever (Classroom)
L-BE — Lever-Blank Escutcheon
L-DT — Lever-Dummy Trim
L-NL — Rigid Lever - Night Latch (Key retracts Latchbolt)
NL — Night Latch (Key retracts Latchbolt)
NL-OP — Night Latch Cylinder Assembly — Optional Pull
TL — Turn Lever
TL-BE — Turn Lever-Blank Escutcheon
TP — Thumbpiece
TP-BE — Thumbpiece-Blank Escutcheon

XX — Lever Style 06 standard
optional — 01, 02, 03, 05, 07, 12, 16, 17, 18

F — Fire Exit Device

LBR — Less Bottom Rod
2 — Double Cylinder (Rim & Mortise Only)
ALK — Standard Alarm Kit
ALK-EI — External Inhibit Alarm Kit
ALK-AR1 — Auto-Reset 1½ minute Alarm Kit
ALK-AR3 — Auto-Reset 3 minute Alarm kit
ALK-AR6 — Auto-Reset 6 minute Alarm Kit

3' — 3' Device (2' 4" — 3' Door Size)
4' — 4' Device (2' 10" — 4' Door Size)

US3, US4, US10, US26, US26D, 313AN, 315AN
US32D – 98 ONLY

– HR — Handing – RHR or LHR

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VON DUPRIN®

98/99™ Series Exit Devices

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Canada / Latin America

IR Security & Safety
1076 Lakeshore Road East
Mississauga, Ontario,
L5E 1E4, Canada
(905) 403-1800
(905) 278-1413 FAX
(877) 590-4734

North-East Asia

IR Security & Safety
23/F, 625 King's Road
Northpoint, Hong Kong
+(852) 2235-0600
+(852) 2565-1409 FAX

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IR Architectural Hardware Ltd.
P.O. Box 19-347
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Avondale, Auckland, New Zealand
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www.irarchitecturalhardware.co.nz

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IR Security & Safety
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THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

VON DUPRIN® 6210, 6211, 6211AL, 6211WF Electric Strikes

6210
Electric strike for use with mortise locks **without deadbolt** on single door, hollow metal frame applications and using ANSI prep at standard height. Strike pocket inserts are provided to accommodate different manufacturers deadlocking trigger locations.

6211
Electric strike for use on new installations with mortise locks **without deadbolt** or cylindrical locks on single door, hollow metal frame applications. Designed to replace Von Duprin 3140 or Folger Adam 712.

6211AL
Electric strike for use on new installations with mortise locks **without deadbolt** or cylindrical locks on single door, aluminum frame applications. Designed to replace Folger Adam 722.

6211WF
Electric strike for use on new installations with mortise locks **without deadbolt** or cylindrical locks on single door, wood frame applications. Designed to replace Folger Adam 732.

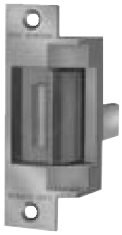
FEATURES
- Stainless Steel Construction
- Accepts ¾" *(19mm)* Throw Latchbolt
- Six Finishes
- Non-handed
- Fail Secure
- Horizontally Adjustable
- Plug Connectors

OPTIONS
- FS (Fail Safe)
- DS or DS-LC (Dual Monitor Switches)
- EB (Entry Buzzer)

6210

6211

6211AL


6211WF

UL listed Burglary Resistant CVXY and Electric Strike for fire doors or frames GXAY (fail secure only). ANSI E59321

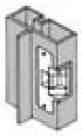
SPECIFICATIONS	12V	24V
Resistance in Ohms±10% @ 70°F	21	82
Watt-seated @ 70°F	7.5	8
Amps-seated @ 70°F	.6	.33
Amps-inrush @ 70°F	.6	.33

DIMENSIONS AND CONFIGURATIONS

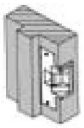
6210

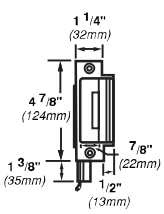
6211

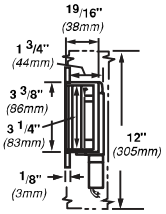
6211AL

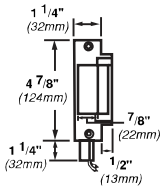


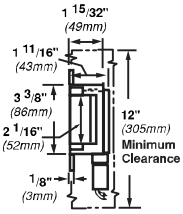
6211WF

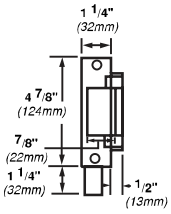


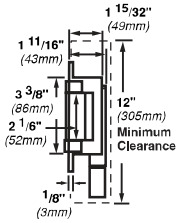


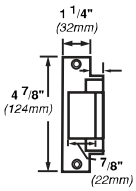


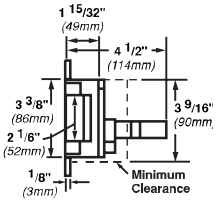












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THE NEW DOVER HIGH SCHOOL
DOVER, DE

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VON DUPRIN® RX330 and RX350 Pushpad

RX330 and RX350 bar features an active push pad with monitoring switch or "request to exit" switch, used to inhibit alarms for authorized exiting. The 330 grooved outer case and the 350 smooth outer case are designed as companion units for series 33A, 35A, 98 and 99 exit devices.

The RX switch option is also available on 55DU and 88DU crossbars, and are designed as companion units for series 55 and 88 exit devices.

The internal SPDT switch should not be used to control a load, but as a signaling switch.

Minimum Door Openings:

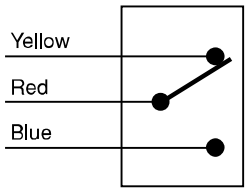
3´ *(914mm)* 2´6˝ *(762mm)* to 3´ *(914mm)*
4´ *(1219mm)* 3´1˝ *(940mm)* to 4´ *(1219mm)*

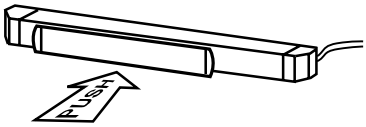
To Order, Specify:

1. Prefix series 330 or 350 with "RX". Example, RX330
2. Size 3´ or 4´ (3´ supplied standard if size not specified)
3. Finish: US3, US4, US10, US28, US26, US26D, 313AN, 315AN

RX330

SPECIFICATIONS
SPDT 0.5 ampere @ 24VDC
Solenoid Draw - 0.22 amp





Supplied with 3´ (914mm) cable at the hinge side of door.

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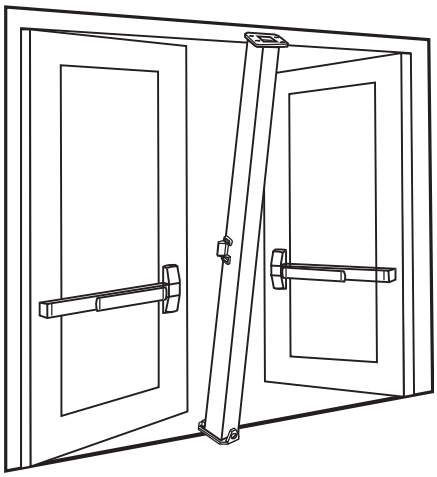
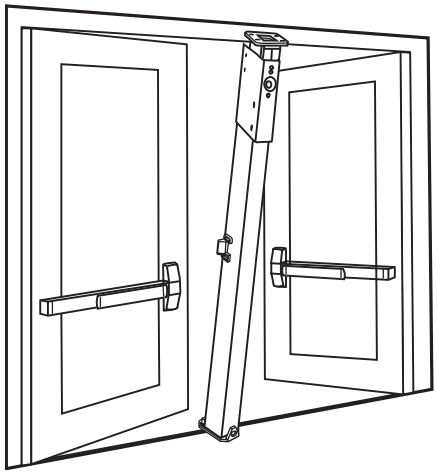
Removable Mullions



Keyed Removable Steel Mullions



Mullions

Removable Steel Mullions Mullions provide single door performance in double door openings with rim devices. Mullions are easily removed by loosening bottom set screw and removing top fitting cover. The top mullion fitting is attached to the frame and is concealed by the fitting cover.

Steel mullions are 2″ *(51mm)* wide and 3″ *(76mm)* deep, with a wall thickness of ⅛″ *(3mm)*.

Mullions are shipped with mounting screws and prepared for strikes. Strikes are not included except where indicated.

Steel mullions are available in SP28 and SP313 finishes. Consult factory for other powder coat finish options.

KR – Keyed Removable Steel Mullions makes removal faster and easier by a single operation of the mortise cylinder. Once mullion is removed, large equipment or furniture can freely pass through the opening. The unit will self lock when re-installed, without use of the cylinder key. Uses a 1¼″ mortise cylinder with a straight cam (Schlage cam reference B502-191). Cylinders are sold separately. Prefix mullion model with "KR".

Removeable Aluminum Mullions are 1¹⁄₁₆″ *(27mm)* wide on face closest to the door and 2⅜″ *(60mm)* at the widest point. The depth is 3⅛″ *(79mm)* with a wall thickness of ⅛″ *(3mm)*.

Aluminum mullions are available in US4, US10, US28, 313AN and 315AN finishes. Consult factory for other powder coat finish options.

Stock Hollow Metal Applications for devices mounted to cover ANSI 161 cutouts are higher than the standard mullion strike location. Consult the factory for special strike preparation or order a blank mullion. See below.

Blank Mullions are furnished without strike preparation. They are used to mount devices at a strike height different from the standard mullion preparation.

To Order, specify

1. For keyed Removable option on steel mullions, prefix model number with "KR"
2. Model number.
3. Height of opening
4. Finish
5. Handing if required.
6. Centerline deviation (refer to device template for standard centerline).
7. Strikes, when required, should be ordered with device.
8. For keyed Removable option on steel mullions, prefix model number with "KR"

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THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

Steel Mullions

1654 Prepared for two 1606 strikes. **If 1606 strikes are not specified on the order, two per mullion will be added. Additional charges apply.**

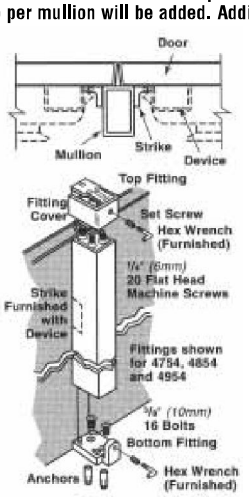
4954 Prepared for 264 or 299 strikes. For use with all Von Duprin Panic rim devices. **Note: specify strike choice with device.**

9954 Prepared for and must be used with two 268 strikes (88-F device), or two 499F (22-F, 98-F, 99F devices). UL fire labeled mullion for up to 3 hour opening using Von Duprin fire exit rim devices. This mullion is not easily removed due to special fittings.

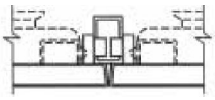
22-F and 88-F devices are rated up to 8´ x 8' *(2438mm x 2438mm).*

98-F and 99-F devices are rated up to 10´0´´ *(3048mm).*

Note: If 268 or 499F strikes are not specified on the order, two per mullion will be added. Additional charges apply.

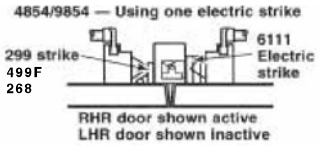


4754 Prepared for two 4263 monitor strikes.



4854 Prepared for one 299 and one 6111 electric strike. Indicate handing for electric strike.

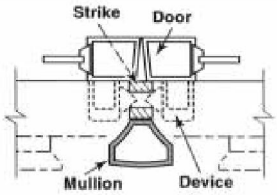
9854 Prepared for one 268 or 499F strike and one 6111 electric strike. Indicate handing for electric strike. UL fire labelled mullion for up to 3 hour openings up to 8' x 8' *(2438mm x 2438mm)* using Von Duprin Fire Exit Rim Devices

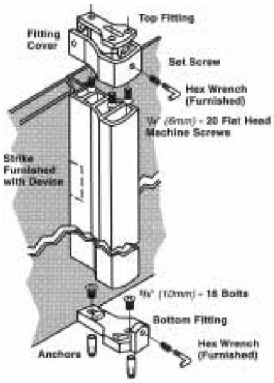


Aluminum Mullions

5654 Prepared for two 264 or 299 strikes with weatherstripping. Includes one set of 154 stabilizers.

5754 Prepared and furnished with one 1408 double door strike. Includes one 154 stabilizer set. **Note: specify device "less strike".**





Sizes for Mullions

1654, 4954, 4754, 4854, 5654, 5754	9854, 9954
7´2´´ *(2184mm)*	7´3´´ *(2210mm)*
*8´2´´ *(2489mm)*	8´3´´ *(2475mm)*
*10´2´´ *(3099mm)*	10´3´´ *(3124mm)*

KR1654, KR4954, KR4754, KR4854	KR9854**, KR9954***
7´6´´ *(2286mm)*	7´5´´ *(2261mm)*
8´6´´ *(2591mm)*	*8´5´´ *(2565mm)*
10´6´´ *(3200mm)*	*10´5´´ *(3175mm)*

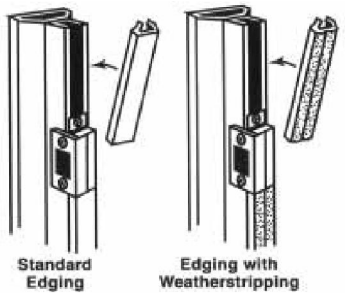
* Only qualifying applications will be provided with UL Label.

** Fire rated same as 9854

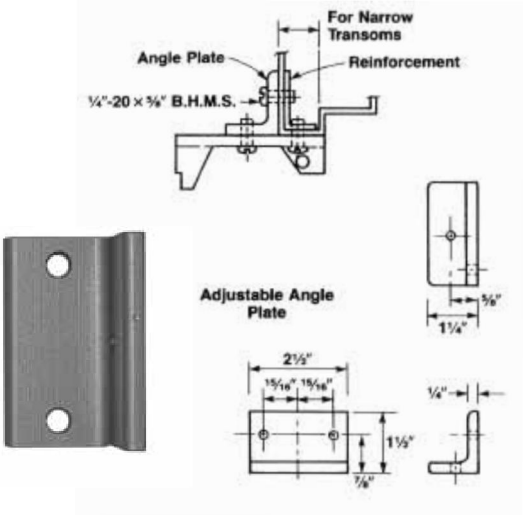
*** Fire rated same as 9954

Weatherstripping

Weatherstripping retards cold air from blowing between doors and mullion. It also serves as a silencer when the door is closed against the mullion. The silicone treated weatherstrip pile is bonded to a polypropylene backing. A slide-in molding houses the weatherstripping, covers mounting screws of the strike and extends to both the top and bottom of the mullion. Available on Aluminum Mullions only.



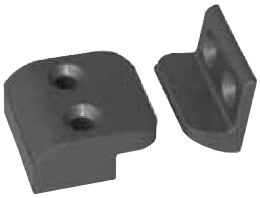
Angle Plate is used with narrow transom frames. The plate attaches to the transom extending the surface area needed to mount the mullion. Must be ordered separately. Specify finish.

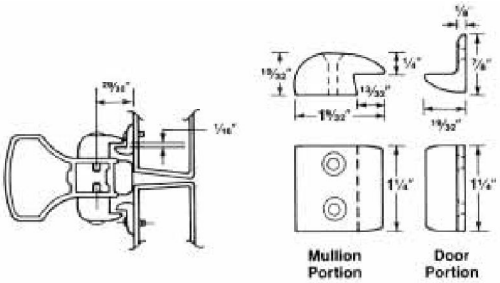


154 Stabilizer is a two-piece interlocking set. One piece mounts on the mullion with the top mounting hole 5³⁄₁₆´´ *(148mm)* below the centerline of the strike; the other piece mounts on the door. Shims are provided to adjust for misalignment between the door and mullion.

The set maintains integrity between the door and mullion to prevent vandalism and to ensure contact between the device and strike as the doors expand and contract with temperature changes.

Furnished standard on aluminum mullions; optional for steel and all blank steel mullions.





MT54 Storage Kit is a set of floor and wall brackets that provide convenient storage of the keyed removable mullion when removed from the opening.

To Order, specify

1. Model MT54.
2. Finish SP28, SP313, or SPBLK

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UNION WHOLESALE ACOUSTICAL SUPPLY COMPANY
since 1956

THE NEW DOVER HIGH SCHOOL
DOVER, DE

Submittal Date: 6/27/12

WALL MOUNTED TELECOMMUNICATIONS OUTLET
FLOOR MOUNTED TELECOMMUNICATIONS OUTLET
CEILING MOUNTED TELECOMMUNICATIONS OUTLET
BLANK FACEPLATE (DUPLEX ELEC)
1 CAT 6 DATA, 1 CAT 6 VOICE (1 DUPLEX ELEC)
2 CAT 6 DATA, 1 CAT 6 VOICE (1 QUAD ELEC)
2 CAT 6 DATA, 1 CAT 6 VOICE, 1 RG-6 COAX (1 QUAD ELEC)
1 CAT 6 DATA (1 QUAD ELEC)
2 CAT 6 DATA (1 QUAD ELEC)
4 CAT 6 DATA (2 QUAD ELEC)
1 CAT 6 DATA, 1 RG-6 COAX (1 DUPLEX ELEC)
2 CAT 6 DATA (2 RJ-45 FEMALE ENDS AND 15' SERVICE LOOP
1 CAT 6 DATA FROM LAN, 1 CAT 6 DATA TO L
1 CAT 6 DATA, 1 CAT 6 VOICE, 1 CAT 6 CONTROL, 1 HDMI, 1 HD-15 VGA, 1 3.5 MM STEREO, RCA A/V, 1 USB, 1 MONITOR OUT (1 QUAD ELEC OUTLET)
1 CAT 6 DATA, 1 HDMI, 1 15-PIN VGA, 1 3.5 MM, 1 RCA, 1 USB, 1 MONITOR OUT (2 DUPLEX ELEC)
1 EXTRON MTP/HDMI UTAD, 1 EXTRON MP101D (1 QUAD ELEC OUTLET)
1 CAT 6 DATA, 1 CAT 6 VOICE, 1 EXTRON POLE VAULT SYSTEM, 1 EXTRON MLC104IP+, 1 EXTRON VOICE LIFT. (1 QUAD ELECTRICAL RECEPTACLE)
2 CAT 6 DATA, 1 CAT 6 A/V, (1 DUPLEX ELECTRICAL RECEPTACLE)
2 CAT 6 DATA, 1 CAT 6 A/V, (1 DUPLEX ELECTRICAL RECEPTACLE)
1 CAT 6 DATA, A/V CABLING FROM LOW INPUT PLATE (1 DUPLEX ELEC)
SOUND REINFORCEMENT SPEAKER
SOUND REINFORCEMENT IR MODULE
24 MULTIMODE 50 MICRON FIBER IN INNDERDUCT WITH SC CONNECTORS, 100 PAIR CAT 5e TIE CABLE AND 2 CAT 6 UTP CABLES.
12" X 2" CABLE TRAY (BID PAC D)
2" SLEEVE (BID PAC D)
4-4" SLEEVES BID PAC D)
12" LADDER RACK (BID PAC D)
TWO 4" CONDUITS BETWEEN FLOORS (BID PAC D)
FLOOR MOUNTED 19" EQUIPMENT RACK (BID PAC D UNLESS OTHERWISE NOTED)
FLOOR MOUNTED 19" EQUIPMENT CABINET (BID PAC D UNLESS OTHERWISE NOTED)
TELECOMMUNICATIONS MAIN GROUNDING BUSBAR BID PAC D)
TELECOMMUNICATIONS GROUNDING BUSBAR (BID PAC D)
30 AMP L30R TWISTLOCK RECEPTACLE (BY ELECTRICAL)
3/4"FIRERATED PLYWOOD WALL BOARD (BID PAC D)
CATV TERMINATOR
CATV BIDIRECTIONAL AMPLIFIER
CATV TAP
CATV SPLITTER
INTERCOM CALL SWITCH AND SPEAKER
INTERCOM CALL SWITCH
INTERCOM CALL SWITCH W/VOLUME CONTROL
INTERCOM ADMIN HANDSET
WALL MOUNTED WIRELESS SLAVE CLOCK (24 VAC POWER)
INTERCOM CEILING MOUNTED SPEAKER
INTERCOM SYSTEM HORN SPEAKER
AUXILIARY SOUND SYSTEM SPEAKER
FLOOR MOUNTED EQUIPMENT CABINET
DUAL XLR/1/4" MIC INPUT
DUAL XLR/1/4" MIC INPUT
DUAL XLR SPEAKER INPUT PLATE
INTRUSION DETECTION DOOR CONTACT
INTRUSION DETECTION KEYPAD
INTRUSION DETECTION PANEL
SECURITY JUNCTION BOX
LONG RANGE MOTION DETECTOR
WIDE ANGLE MOTION DETECTOR
ACCESS CONTROL CARD READER
ACCESS CONTROLLER
CCTV SECURITY CAMERA
ENTRY DOOR VIDEO INTERCOM EXTERIOR STATION
ENTRY DOOR VIDEO INTERCOM INTERIOR STATION

T1 TECHNOLOGY SYMBOLS
NO SCALE

1. ALL ELECTRICAL SYSTEMS, EQUIPMENT, RACEWAYS, CABLING, BOXES, FIRESEALS, GROUNDING AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE NEC GUIDELINES.
2. ALL LOW VOLTAGE CABLING PATHWAYS MUST BE INSTALLED ACCORDING TO BICSI GUIDELINES.
3. CONTRACTOR SHALL NOT INSTALL ANY EQUIPMENT PRIOR TO ITS APPROVAL BY THE ARCHITECT AND ENGINEER. CONTRACTOR WILL BE LIABLE FOR ITS REMOVAL IN ANY SUCH CASE.
4. ANY PENETRATION OF A FIRE-RATED BARRIER MUST BE FIRE-STOPPED IN ACCORDANCE WITH LOCAL AND STATE LAWS AND THE AUTHORITY HAVING JURISDICTION.
5. PRIOR TO BEGINNING ANY WORK, SECURE NECESSARY PERMITS OR CLEARANCES FROM THE AUTHORITIES HAVING JURISDICTION. PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE INSTALLATION. WORK SHALL BE EXECUTED BY EXPERIENCED TRADESMEN WHO ARE LICENSED IN THE JURISDICTION WHERE THE PROJECT IS LOCATED.
6. CONDUITS SHALL BE RUN BEHIND FINISHED SURFACES WHERE POSSIBLE UNLESS OTHERWISE NOTED.
7. THE TELECOMMUNICATION PLANS ARE DIAGRAMMATIC ONLY. COORDINATE TECHNOLOGY EQUIPMENT LOCATION AND INSTALLATION WITH EQUIPMENT BEING SERVED.
8. CONTRACTOR SHALL INFORM THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO COMPLETION OF CONSTRUCTION TO ALLOW SUFFICIENT TIME FOR COORDINATION OF EXISTING BUILDING ACTIVITIES WITH THE CONSTRUCTION WORK.THE CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS (IN ADDITION TO CONTRACT DRAWINGS AND DOCUMENTS), IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, INDICATED AND/OR SPECIFIED.
9. BEFORE SUBMITTING BIDS, THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE ALL ADJOINING EXISTING BUILDINGS, EQUIPMENT AND SPACE CONDITIONS ON WHICH WORK IS ANY WAY DEPENDENT FOR THE BEST WORKMANSHIP AND OPERATION ACCORDING TO THE INTENT OF THE SPECIFICATIONS AND DRAWINGS. CONTRACTOR SHALL REPORT TO THE ARCHITECT/ENGINEER ANY CONDITION WHICH MIGHT PREVENT EQUIPMENT INSTALLATION IN THE MANNER SPECIFIED TEN DAYS PRIOR TO SUBMISSION OF BIDS.
10. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO VISIT THE SITE, NOR FOR ANY ALLEGED MISUNDERSTANDING OF MATERIALS TO BE FURNISHED OR WORK TO BE PERFORMED.
11. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCOVERED CONFLICTS WITHIN THE CONTRACT DOCUMENTS. SUCH NOTIFICATION SHALL BE ACCOMPANIED BY A DRAWING DELINEATING THE PROPOSED SOLUTION PRIOR TO STARTING ANY WORK IN THE AFFECTED AREA.
12. ALL SLAB PENETRATIONS MUST BE X-RAYED AND DOCUMENTED PRIOR TO INSTALLATION.
13. REFER TO ARCHITECTURAL DRAWINGS FOR THE FINISH, EXACT LOCATION, ELEVATION, MOUNTING HEIGHTS AND DETAILS OF ALL LIGHT FIXTURES AND DEVICES WITHIN THE CEILING GRID FOR COORDINATION WITH TECHNOLOGY EQUIPMENT. REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.
14. WHEREVER CONDUITS PENETRATE WALLS OR FLOORS, SPACE REMAINING IN SUCH PENETRATIONS SHALL BE FILLED. FILLING MATERIAL SHALL BE FIRE RESISTIVE WITH RATING EQUAL TO THE RATING OF THE FLOOR OR WALL ITSELF.
15. PROVIDE AND LEAVE ACCESSIBLE PULL STRINGS IN ALL CONDUITS, RACEWAYS, SLEEVES AND CHASES TO LOW VOLTAGE WIRING TO BE INSTALLED.
16. OUTLET BOXES INSTALLED ON OPPOSITE SIDES OF THE SAME PARTITION SHALL BE STAGGERED. DO NOT MOUNT OUTLET BOXES BACK TO BACK.
17. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS, CUT SHEETS, CALCULATIONS AND EQUIPMENT LITERATURE FOR ALL EQUIPMENT BEING PROVIDED AS PART OF THIS SCOPE OF WORK. THE EXACT DEVICE OR PIECE OF EQUIPMENT TO BE INSTALLED MUST BE CLEARLY CALLED OUT FOR THE DESIGN TEAM TO REVIEW. SUBMITTALS WITHOUT THE REQUESTED INFORMATION WILL BE REJECTED.
18. CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT DRAWINGS IN HARDCOPY AND ELECTRONIC FORMAT FOR REVIEW AND APPROVAL BY THE DESIGN TEAM PRIOR TO JOB COMPLETION.
19. CONTRACTOR SHALL PROVIDE A COMPLETE PUNCH LIST OF ALL INSTALLED SYSTEMS TO THE CONSTRUCTION MANAGER WHEN THE INSTALLED WORK IS READY TO BE EXAMINED BY THE DESIGN TEAM. INCOMPLETE SYSTEMS SHALL NOT BE REVIEWED UNTIL IT IS DETERMINED THAT THE SYSTEMS ARE APPROXIMATELY COMPLETE.

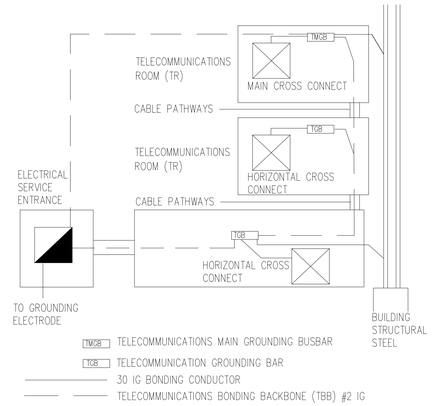
T2 TECHNOLOGY GENERAL NOTES
NO SCALE

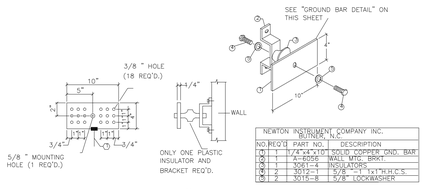
1. ELECTRICAL CONTRACTOR SHALL PROVIDE PATHWAYS FOR LOW VOLTAGE SYSTEMS. ALL PATHWAY SYSTEMS SHALL BE BONDED TO THE BUILDING ELECTRICAL GROUND SYSTEM.
2. TECHNOLOGY BID PAC H SHALL CONSIST OF CABLING AND EQUIPMENT FOR LOW VOLTAGE INFRASTRUCTURE AND SYSTEMS.
3. DATA ELECTRONICS, WIRELESS ELECTRONICS, VOIP ELECTRONICS, IP VIDEO STREAMING ELECTRONICS AND DISPLAY DEVICES ARE NOT PART OF BID PAC H1. ANY ITEMS SHOWN ARE FOR REFERENCE ONLY.
4. PROVIDE A COMPLETE DATA INFRASTRUCTURE SYSTEM INCLUDING BACKBONE CABLES, HORIZONTAL CABLES, PATCH PANELS, CABLE MANAGERS, FACEPLATES, JACKS AND ASSOCIATED COMPONENTS.
5. PROVIDE A COMPLETE VOIP INFRASTRUCTURE SYSTEM INCLUDING BACKBONE CABLES, HORIZONTAL CABLES, PATCH PANELS, CABLE MANAGERS, FACEPLATES, JACKS AND ASSOCIATED COMPONENTS.
6. PROVIDE A COMPLETE IP VIDEO DISTRIBUTION SYSTEM INCLUDING BACKBONE CABLES, HORIZONTAL CABLES, PATCH PANELS, CABLE MANAGERS, FACEPLATES, JACKS AND ASSOCIATED COMPONENTS.
7. PROVIDE A COMPLETE IP INTERCOM/PA AND WIRLESS MASTER CLOCK SYSTEM INCLUDING CABLES, TERMINATIONS, CABLE MANAGERS, CALL SWITCHES, HANDSETS, SPEAKERS, NODES, ELECTRONICS, CLOCKS AND ASSOCIATED COMPONENTS
8. PROVIDE A COMPLETE VIDEO SURVEILLANCE SYSTEM BACKBONE CABLES, HORIZONTAL CABLES, PATCH PANELS, CABLE MANAGERS, JACKS, CAMERAS, MOUNTS, HOUSINGS, NVRs, MONITORS, POWER SUPPLIES, SERVERS, SOFTWARE, VIEWSTATIONS AND ASSOCIATED COMPONENTS.
9. PROVIDE A COMPLETE INTRUSION DETECTION SYSTEM INCLUDING DOOR CONTACTS, MOTION DETECTORS, EXPANSION MODULES, POWER SUPPLIES, CABLES, CONNECTORS, MOUNTS, PANELS, BATTERY BACKUP AND ASSOCIATED COMPONENETS.
10. PROVIDE A COMPLETE ACCESS CONTROL SYSTEM INCLUDING CARD READERS, CABLES, DOOR CONTROLLERS, SERVERS, POWER SUPPLIES AND ASSOCIATED COMPONENTS.
11. PROVIDE A COMPLETE ENTRY DOOR VIDEO INTERCOM SYSTEM INCLUDING EXTERIOR STATIONS, INTERIOR STATIONS, CABLES CONNECTORS, POWER SUPPLIES, DOOR RELEASE AND ASSOCIATED COMPONENTS.
12. PROVIDE EACH LEARNING SPACE WITH AN A/V PRESENTATION CABLING SYSTEM INCLUDING FACEPLATES, CABLES, CONNECTORS, JACKS AND ASSOCIATED COMPONENTS.
13. PROVIDE COMPLETE LARGE SPACE A/V SYSTEMS INCLUDING SPEAKERS, CABLES AMPLIFIERS, PROCESSORS, MIXERS, I/O UNITS, MICS, SCALERS, SIGNAL EXTENDERS, CONTROLLERS, LECTERNS, A/V SWITCHES, CONNECTORS, FACEPLATES, INPUTS AND PROGRAMMING FOR ACTIVE SYSTEMS.
14. COORDINATE EACH SYSTEM WITH ASSOCIATED TRADES DURING INSTALLATION.

T3 TECHNOLOGY SCOPE NOTES
NO SCALE

1. T-000 TECHNOLOGY SYMBOLS AND NOTES
2. T-001 TECHNOLOGY SITE PLAN
3. T-101 TECHNOLOGY OVERALL FLOOR PLANS
4. TF-111 TECHNOLOGY STADIUM FIELD HOUSE PLANS
5. TF-112 TECHNOLOGY MAINTENANCE PLAN
6. T-111 TECHNOLOGY FIRST FLOOR PART A
7. T-112 TECHNOLOGY FIRST FLOOR PART B
8. T-113 TECHNOLOGY FIRST FLOOR PART C
9. T-114 TECHNOLOGY FIRST FLOOR PART D
10. T-115 TECHNOLOGY FIRST FLOOR PART E
11. T-116 TECHNOLOGY FIRST FLOOR PART F
12. T-117 TECHNOLOGY FIRST FLOOR PART G
13. T-118 TECHNOLOGY FIRST FLOOR PART H
14. T-119 TECHNOLOGY FIRST FLOOR PART J
15. T-120 TECHNOLOGY FIRST FLOOR SERVICE YARD
16. T-121 TECHNOLOGY SECOND FLOOR PART A
17. T-122 TECHNOLOGY SECOND FLOOR PART B
18. T-123 TECHNOLOGY SECOND FLOOR PART C
19. T-124 TECHNOLOGY SECOND FLOOR PARTS D & E
20. T-125 TECHNOLOGY SECOND FLOOR PART G
21. T-126 TECHNOLOGY SECOND FLOOR PART H
22. T-131 TECHNOLOGY THIRD FLOOR PART A
23. T-132 TECHNOLOGY THIRD FLOOR PART B
24. T-133 TECHNOLOGY THIRD FLOOR PART C
25. T-400 TECHNOLOGY MAIN TELECOM ROOM DETAILS
26. T-401 TECHNOLOGY TELECOM ROOM DETAILS
27. T-402 TECHNOLOGY FACEPLATES AND WIRING DETAILS
28. T-403 TECHNOLOGY PATHWAYS AND CONDUITS (BID PAC D)
29. T-404 TECHNOLOGY INTERCOM AND CLOCK DETAILS
30. T-405 TECHNOLOGY ACCESS AND INTRUSION SYSTEM DETAILS
31. T-406 TECHNOLOGY CCTV SYSTEM DETAILS
32. T-407 TECHNOLOGY CCTV SCHEDULE
33. T-408 TECHNOLOGY CAFETERIA A/V SYSTEM DETAILS
34. T-409 TECHNOLOGY AUX GYM AND MUSIC ROOM SOUND DETAILS
35. T-410 TECHNOLOGY GYMNASIUM A/V SYSTEM DETAILS 1
36. T-411 TECHNOLOGY GYMNASIUM A/V SYSTEM DETAILS 2
37. T-412 TECHNOLOGY VIDEO WALL AND KITCHEN DEMO DETAILS

T4 TECHNOLOGY DRAWING LIST
NO SCALE





NEWTON INSTRUMENT COMPANY INC. BUTNER, N.C.			
NO.	REQ'D	PART NO.	DESCRIPTION
1	1	1/4"x4"x10'	SOLID COPPER GND. BAR
2	1	A-605E	WALL MTG. BRKT.
3	1	3061-4	INSULATORS
4	2	3012-1	5/8 " - 11 x1"H.C.S.
5	2	3012-8	5/8 LOCKWASHER

NOTES:
① CADWELD #2 AWG INSULATED TINNED SOLID COPPER CONDUCTOR OF LENGTH REQUIRED FOR CONNECTION TO SERVICE GROUND – RUN IN A 1 3/4" CONDUIT.

GROUNDING NOTES:

1. GROUNDING SYSTEM SHALL BE PROVIDED FOR LOW VOLTAGE SYSTEMS.
2. GROUNDING SYSTEM SHALL FOLLOW TELECOMMUNICATIONS PATHWAYS AND SPACES.
3. GROUNDING SYSTEM SHALL BE BONDED TO BUILDING ELECTRICAL GROUND.
4. GROUNDING SYSTEM WIRE SHALL BE SIZED APPROPRIATELY FOR DISTANCE AND LOAD.
5. GROUNDING SYSTEM SHALL COMPLY WITH THE LATEST EDITION OF THE BICSI TDMM.
6. GROUNDING SYSTEM SHALL COMPLY WITH THE LATEST EDITION OF THE NEC.

T5 TECHNOLOGY GROUNDING DETAILS
NO SCALE

1. 270500 – TELECOMMUNICATIONS PATHWAYS AND SPACES (BID PAC D)
2. 271000 – TELECOMMUNICATIONS CABLING (BID PAC H1)
3. 272000 – NETWORK EQUIPMENT (NIC BID PAC H2)
4. 273000 – TELEPHONE EQUIPMENT (NIC BID PAC H2)
5. 274000 – IP VIDEO DISTRIBUTION (NIC BID PAC H2)
6. 274100 – AUDIO VISUAL AND SOUND SYSTEMS (BID PAC H1)
7. 275000 – INTERCOM AND MASTER CLOCK (BID PAC H1)
8. 281000 – ACCESS CONTROL AND INTRUSION DETECTION (BID PAC H1)
9. 282000 – VIDEO SURVEILLANCE (BID PAC H1)

T6 TECHNOLOGY SPECIFICATION SECTIONS
NO SCALE

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WILMINGTON, DE 19805-0697

Educational Systems Planning
Technology Consultant
49 Old Solomons Island Road
Annapolis, MD 21401

PROJECT
THE NEW DOVER HIGH SCHOOL
RT. 8
DOVER, DE

OWNER
CAPITAL SCHOOL DISTRICT
945 FOREST ST.
DOVER, DE 19904

MARK	DATE	DESCRIPTION
1	04-05-2013	BP-H1 ADD
A	03-08-2013	BP-H1 BID SET

PROJECT NUMBER:	1012
FILE NAME:	DHS T Sheets
DRAWN BY:	BTJ
CHECKED BY:	DD

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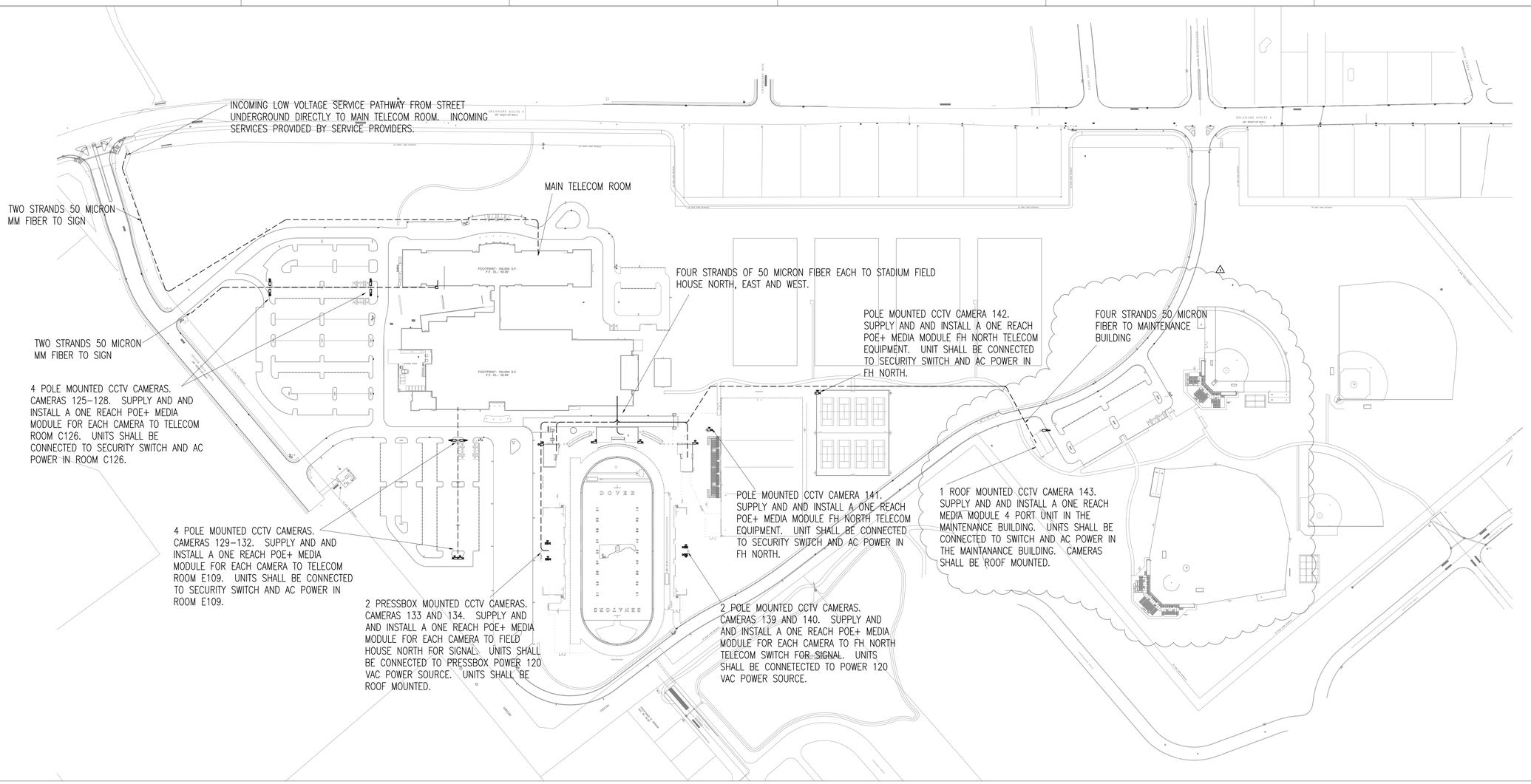
SHEET TITLE
TECHNOLOGY NOTES AND SYMBOLS

T-000



NOTES
1. SEE ELECTRICAL SITE PLAN FOR EXACT ROUTING, LOCATION AND CONDUIT SIZES.
2. PROVIDE AND INSTALL FIBER AND COPPER CABLES IN QUANTITIES SHOWN ON THE SITE PLAN AND RISER PLAN ON SHEET T–400.
3. PROVIDE AND INSTALL POLE MOUNTED CCTV CAMERAS FOR PARKING LOT AND FIELD COVERAGE AS SHOWN ON THE SITE PLAN. CAMERAS SHALL BE MOUNTED TO LIGHT POLES SHOWN ON THE ELECTRICAL SITE PLAN AND DETAILS. SEE SHEETS T–406 AND T–407 FOR CCTV DETAILS.
4. PROVIDE AND INSTALL FIELDHOUSE AND PRESSBOX MOUNTED CAMERAS FOR STADIUM COVERAGE AS SHOWN ON THE PLANS.
5. PROVIE AND INSTALL MAINTENANCE AND REMOTE ATHLETIC BUILDING CAMERAS FOR REMOTE COVERAGE.
6. COORDINATE INSTALLATION WITH BID PAC C AND BID PAC G WORK.

T1 TECHNOLOGY SITE PLAN
$\frac{1}{128}$"=1'

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Technology Consultant
49 Old Solomons Island Road
Annapolis, MD 21401

PROJECT
THE NEW DOVER HIGH SCHOOL

RT. 8
DOVER, DE

OWNER
CAPITAL SCHOOL DISTRICT
945 FOREST ST.
DOVER, DE 19904

MARK	DATE	DESCRIPTION
1	04–05–2013	BP–H1 ADD
A	03–08–2013	BP–H1 BID SET

PROJECT NUMBER:	1012
FILE NAME:	DHS T Sheets
DRAWN BY:	BTJ
CHECKED BY:	DD

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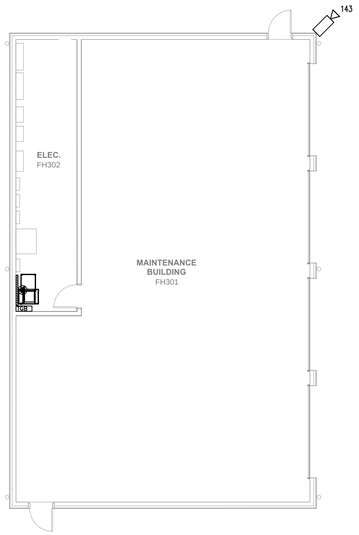
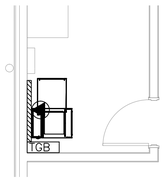
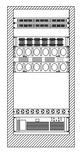
SHEET TITLE
TECHNOLOGY SITE PLAN

T-001



T1 TECHNOLOGY MAINTENANCE BUILDING PLAN
1/8"=1'





HOFFMAN EWMW482430

DATA CABINET NOTES
1. ONE 24 ADAPTOR FIBER CABINET
2. ONE 48 PORT CAT 6 PP
3. ONE 48 PORT POE SWITCHES
4. BOGEN QCRXX NODE
5. 2U HORIZONTAL CABLE MANAGERS
6. APC 3000 120VAC UPS)
7. 10 PORT POWER STRIPS

T2 TECHNOLOGY MAINTENANCE BUILDING TELECOM CABINET
1/8"=1'

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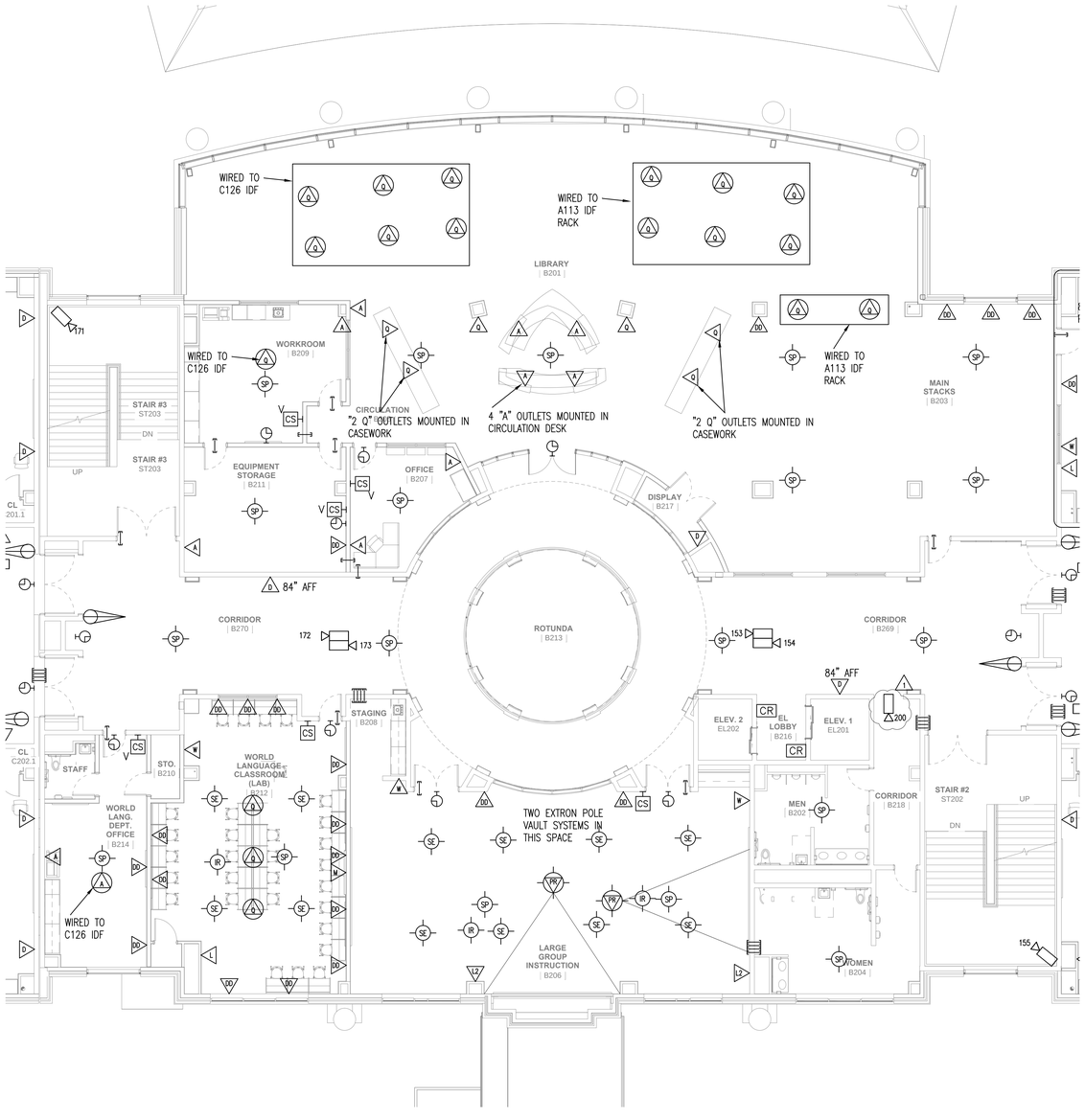
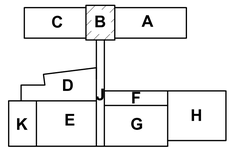
SHEET TITLE
TECHNOLOGY MAINTENANCE PLAN

TF-112



T1 TECHNOLOGY SECOND FLOOR PART B
1/8"=1'



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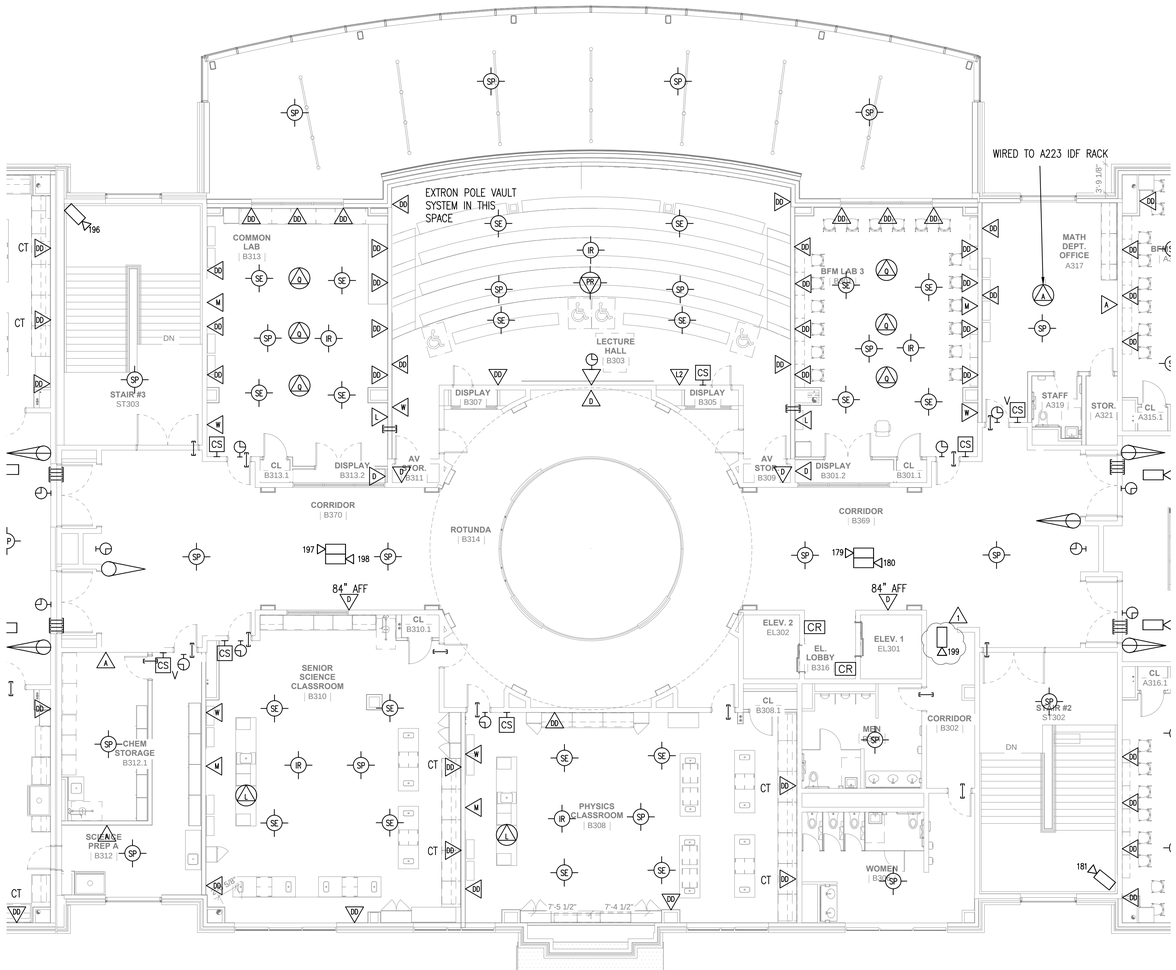
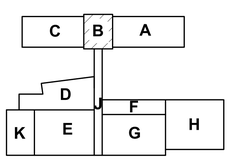
SHEET TITLE

TECHNOLOGY
SECOND FLOOR
PART B LIBRARY

T-122



T1 TECHNOLOGY THIRD FLOOR PART B
1/8"=1'



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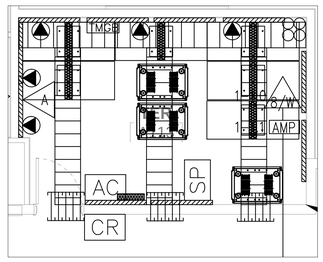
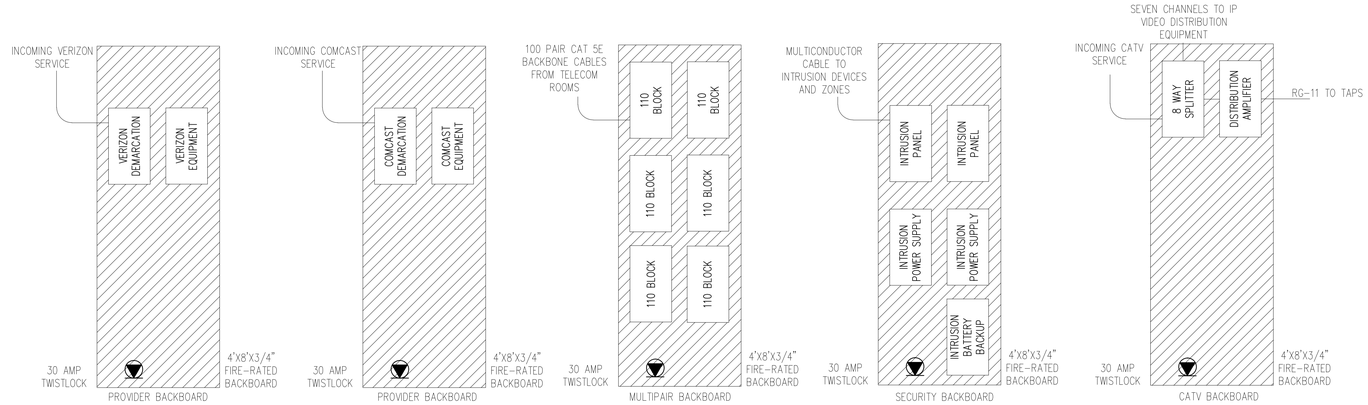
SHEET TITLE

TECHNOLOGY
THIRD FLOOR
PART B
LECTURE HALL AND
SCIENCE

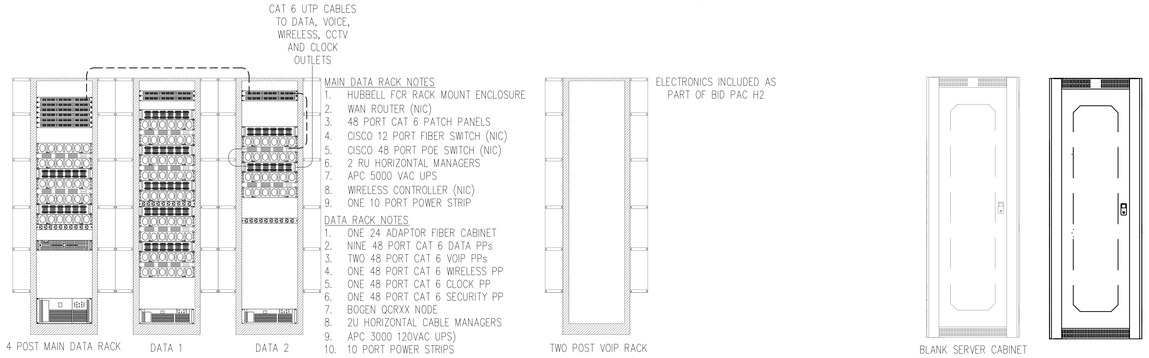
T-132



T1 MAIN TELECOM ROOM A113 DETAILS
1/4"=1'

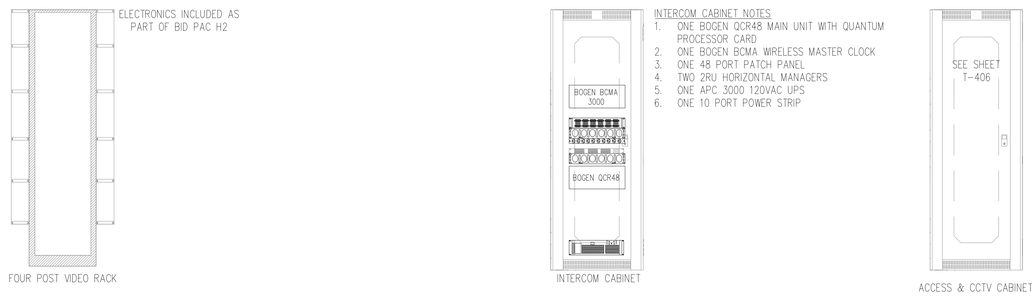


T2 MAIN TELECOM ROOM BACKBOARD DETAILS
NO SCALE



MAIN DATA RACK NOTES
1. HUBBELL FCR RACK MOUNT ENCLOSURE
2. WAN ROUTER (NIC)
3. 48 PORT CAT 6 PATCH PANELS
4. CISCO 12 PORT FIBER SWITCH (NIC)
5. CISCO 48 PORT POE SWITCH (NIC)
6. 2 RU HORIZONTAL MANAGERS
7. APC 5000 VAC UPS
8. WIRELESS CONTROLLER (NIC)
9. ONE 10 PORT POWER STRIP

DATA RACK NOTES
1. ONE 24 ADAPTOR FIBER CABINET
2. NINE 48 PORT CAT 6 DATA PPs
3. TWO 48 PORT CAT 6 VOIP PPs
4. ONE 48 PORT CAT 6 WIRELESS PP
5. ONE 48 PORT CAT 6 CLOCK PP
6. ONE 48 PORT CAT 6 SECURITY PP
7. BOGEN QCRXX NODE
8. 2U HORIZONTAL CABLE MANAGERS
9. APC 3000 120VAC UPS)
10. 10 PORT POWER STRIPS



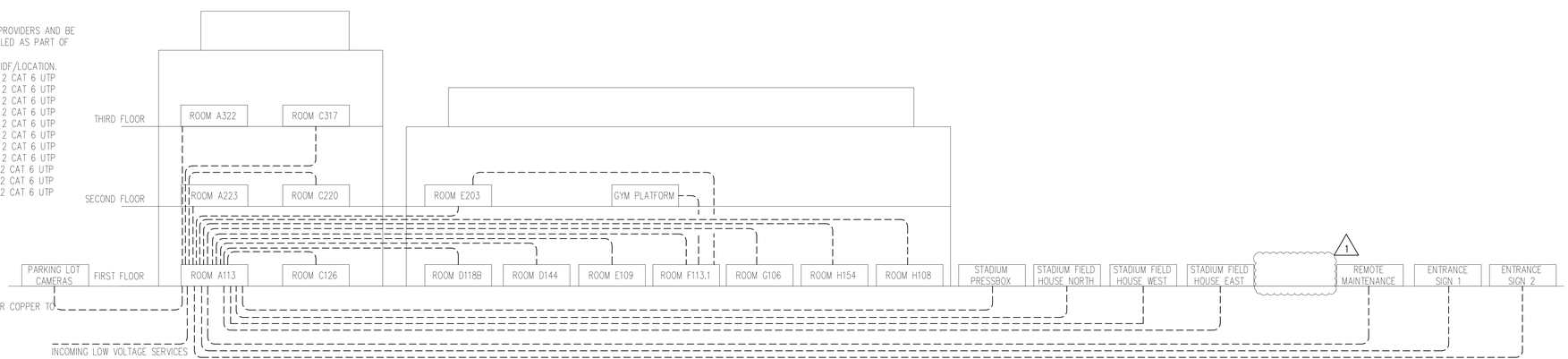
INTERCOM CABINET NOTES
1. ONE BOGEN QCR48 MAIN UNIT WITH QUANTUM PROCESSOR CARD
2. ONE BOGEN BCMA WIRELESS MASTER CLOCK
3. ONE 48 PORT PATCH PANEL
4. TWO 2RU HORIZONTAL MANAGERS
5. ONE APC 3000 120VAC UPS
6. ONE 10 PORT POWER STRIP

T3 MAIN TELECOM ROOM CABINET AND RACK DETAILS
NO SCALE

GENERAL NOTES
1. PROVIDE AND INSTALL WIRING, CROSS-CONNECTS, UPS EQUIPMENT AND ELECTRONICS FOR COMPLETE SYSTEMS
2. DATA SWITCHES ARE NOT IN CONTRACT AND SHALL BE INCLUDED AS PART OF LATER BID PAC H2. DATA SWITCHES ARE SHOWN FOR REFERENCE ONLY.
3. WIRELESS CONTROLLERS AND ACCESS POINTS ARE NOT IN CONTRACT AND SHALL BE INCLUDED AS PART OF LATER BID PAC H2. WIRELESS EQUIPMENT IS SHOWN FOR REFERENCE ONLY.
4. COORDINATE EQUIPMENT INSTALLATION WITH OWNER AT TIME OF CONSTRUCTION.
5. EQUIPMENT SHALL BE INSTALLED WITHIN EXISTING RACKS, CABINETS AND TO WALL BOARDS AND PATHWAYS. WHERE EXISTING INFRASTRUCTURE EQUIPMENT IS INSUFFICIENT, PROVIDE AND INSTALL ADDITIONAL COMPONENTS.
6. WIRING AND CABLES SHALL BE RUN WITHIN PATHWAYS FOR LOW VOLTAGE EQUIPMENT.
7. 3" OF CABLE SLACK SHALL BE LOCATED IN THE CEILING AT THE WORKSTATION END AND 10" IN THE TELECOM ROOM FOR A TOTAL OF 13" OF CABLE SLACK FOR ALL HORIZONTAL CABLES.
8. 10" OF CABLE SLACK SHALL BE LOCATED AT THE TER AND TR FOR ALL BACKBONE CABLES FOR A TOTAL OF 20" OF BACKBONE CABLE SLACK.
9. CABLES SHALL BE NEATLY INSTALLED AND LOOSELY BUNDLED. VELCRO STRAPS MUST BE USED. ZIP TIES ARE NOT ACCEPTABLE FOR USE ON THIS PROJECT.
10. WIRES SHALL NOT BE INSTALLED IN ANY PATHWAYS WITH HIGH VOLTAGE SYSTEMS. CONTRACTOR SHALL MINIMIZE EXPOSURE TO HIGH VOLTAGE CABLES AND OTHER SOURCES OF EMI.
11. COMMUNICATIONS CABLES SHALL BE RUN DIRECTLY TO ELEVATOR EQUIPMENT.
12. ANALOG COMMUNICATIONS LINES SHALL BE INCLUDED WITHIN THIS SCOPE OF WORK. EXACT LOCATIONS SHALL BE DETERMINED BY OWNER DURING CONSTRUCTION. ANALOG LINES SHALL BE PROVIDED FOR FIRE PANELS, SECURITY PANELS, ELEVATOR EQUIPMENT, FAX LOCATIONS, AREAS OF REFUGE SYSTEMS AND OTHER LIFE SAFETY SYSTEMS.
13. PATCH PANELS SHALL BE PROVIDED WITH 20% SPARE CAPACITY. 110 BLOCKS SHALL HAVE SPARE CAPACITY.
14. PATCH CABLES AND FIBER JUMPERS SHALL BE SUPPLIED AS PART OF THIS CONTRACT FOR BOTH ENDS OF THE CABLE. (WORKSTATION AND TELECOM ROOM)
15. INCOMING SERVICES MUST BE COORDINATED WITH SERVICE PROVIDE AND OWNER AS PART OF THIS SCOPE OF WORK. CONTRACTOR SHALL PROVIDE A POINT OF DEMARCATION IN THE MAIN TELECOM ROOM FOR ALL SYSTEMS.
16. PATCH PANELS SHALL BE SEGREGATED FOR DATA, VOIP AND SECURITY EQUIPMENT.
17. DATA SWITCHES FOR THE CCTV SYSTEM SHALL BE INCLUDED IN THE DATA NETWORK ELECTRONICS SCOPE OF WORK (BID PAC H2) BUT SHALL BE SEPARATE FROM OTHER LAN EQUIPMENT. THE CCTV SYSTEM SHALL UTILIZE SEPARATE SWITCHES AND SEPARATE FIBERS TO THE MAIN TELECOM ROOM CCTV HEADEND. THE SYSTEM SHALL BE CROSS-CONNECTED TO THE BUILDING LAN WITHIN THE MAIN TELECOM ROOM.

T4 MAIN TELECOM ROOM NOTES
NO SCALE

BACKBONE RISER NOTES
1. ALL CABLES SHALL BE PLENUM RATED.
2. CABLES THAT EXIT THE FACILITY SHALL BE INDOOR/OUTDOOR RATED CABLES.
3. INCOMING SERVICES SHALL BE INSTALLED WITHIN THE TER ROOM A113 BY SERVICE PROVIDERS AND BE THE POINT OF DEMARCATION. ALL OTHER CABLES SHALL BE PROVIDED AND INSTALLED AS PART OF THIS CONTRACT.
4. THE FOLLOWING BACKBONES CABLES SHALL BE RUN FROM THE TER A113 TO EACH IDF/LOCATION.
   - 4.1. ROOM C126: 24 STRANDS 50 MICRON MM FIBER, 100-PAIR CAT 5E RISER, 2 CAT 6 UTP
   - 4.2. ROOM A223: 24 STRANDS 50 MICRON MM FIBER, 100-PAIR CAT 5E RISER, 2 CAT 6 UTP
   - 4.3. ROOM C220: 24 STRANDS 50 MICRON MM FIBER, 100-PAIR CAT 5E RISER, 2 CAT 6 UTP
   - 4.4. ROOM A322: 24 STRANDS 50 MICRON MM FIBER, 100-PAIR CAT 5E RISER, 2 CAT 6 UTP
   - 4.5. ROOM C317: 24 STRANDS 50 MICRON MM FIBER, 100-PAIR CAT 5E RISER, 2 CAT 6 UTP
   - 4.6. ROOM D118B: 24 STRANDS 50 MICRON MM FIBER, 100-PAIR CAT 5E RISER, 2 CAT 6 UTP
   - 4.7. ROOM D114: 24 STRANDS 50 MICRON MM FIBER, 100-PAIR CAT 5E RISER, 2 CAT 6 UTP
   - 4.8. ROOM E109: 24 STRANDS 50 MICRON MM FIBER, 100-PAIR CAT 5E RISER, 2 CAT 6 UTP
   - 4.9. ROOM G106: 24 STRANDS 50 MICRON MM FIBER, 100 PAIR CAT 5E RISER, 2 CAT 6 UTP
   - 4.10. ROOM H154: 24 STRANDS 50 MICRON MM FIBER, 100 PAIR CAT 5E RISER, 2 CAT 6 UTP
   - 4.11. ROOM H108: 24 STRANDS 50 MICRON MM FIBER, 100 PAIR CAT 5E RISER, 2 CAT 6 UTP
   - 4.12. ROOM F113.1: 4 STRANDS 50 MICRON MM FIBER
   - 4.13. ROOM E203: 4 STRANDS 50 MICRON MM FIBER
   - 4.14. STADIUM PRESSBOX: 4 STRANDS 50 MICRON MM FIBER
   - 4.15. STADIUM FH NORTH: 4 STRANDS 50 MICRON MM FIBER
   - 4.16. STADIUM FH EAST: 4 STRANDS 50 MICRON MM FIBER
   - 4.17. STADIUM FH WEST: 4 STRANDS 50 MICRON MM FIBER
   - 4.18. MAINTENANCE: 4 STRANDS 50 MICRON MM FIBER
   - 4.19. ENTRANCE SIGN 1: 2 STRANDS 50 MICRON MM FIBER
   - 4.20. ENTRANCE SIGN 2: 2 STRANDS 50 MICRON MM FIBER
   - 4.21. PARKING LOT CAMERAS: 2 STRANDS 50 MICRON MM FIBER AND TWO CONDUCTOR COPPER TO EACH CAMERA
5. INSTALL 4 STRANDS OF 50 MICRON MM FIBER FROM PROJECTION TO TV STUDIO
6. INSTALL 2 STRANDS OF 50 MICRON MM FIBER FROM GYM PLATFORM TO F113.1



T5 TELECOM RISER PLAN
NO SCALE

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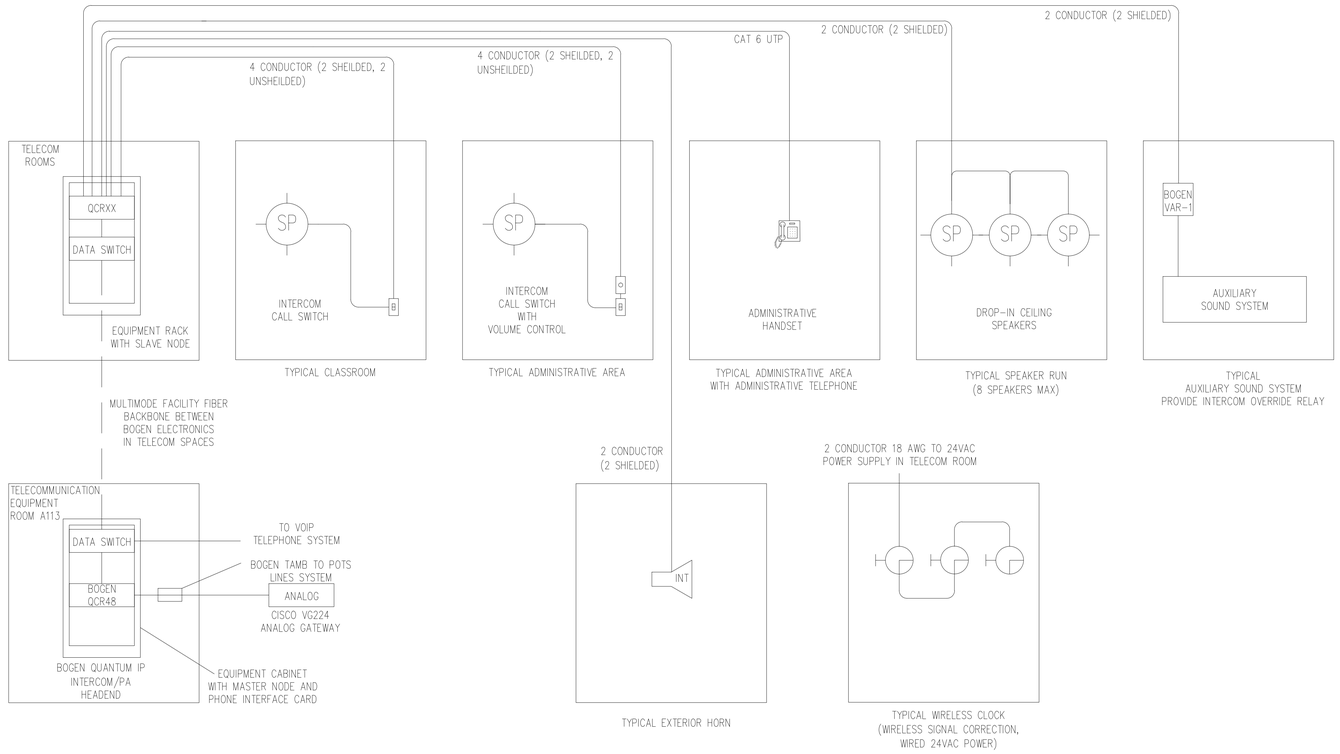
SHEET TITLE
TECHNOLOGY
MAIN TELECOM ROOM
DETAILS

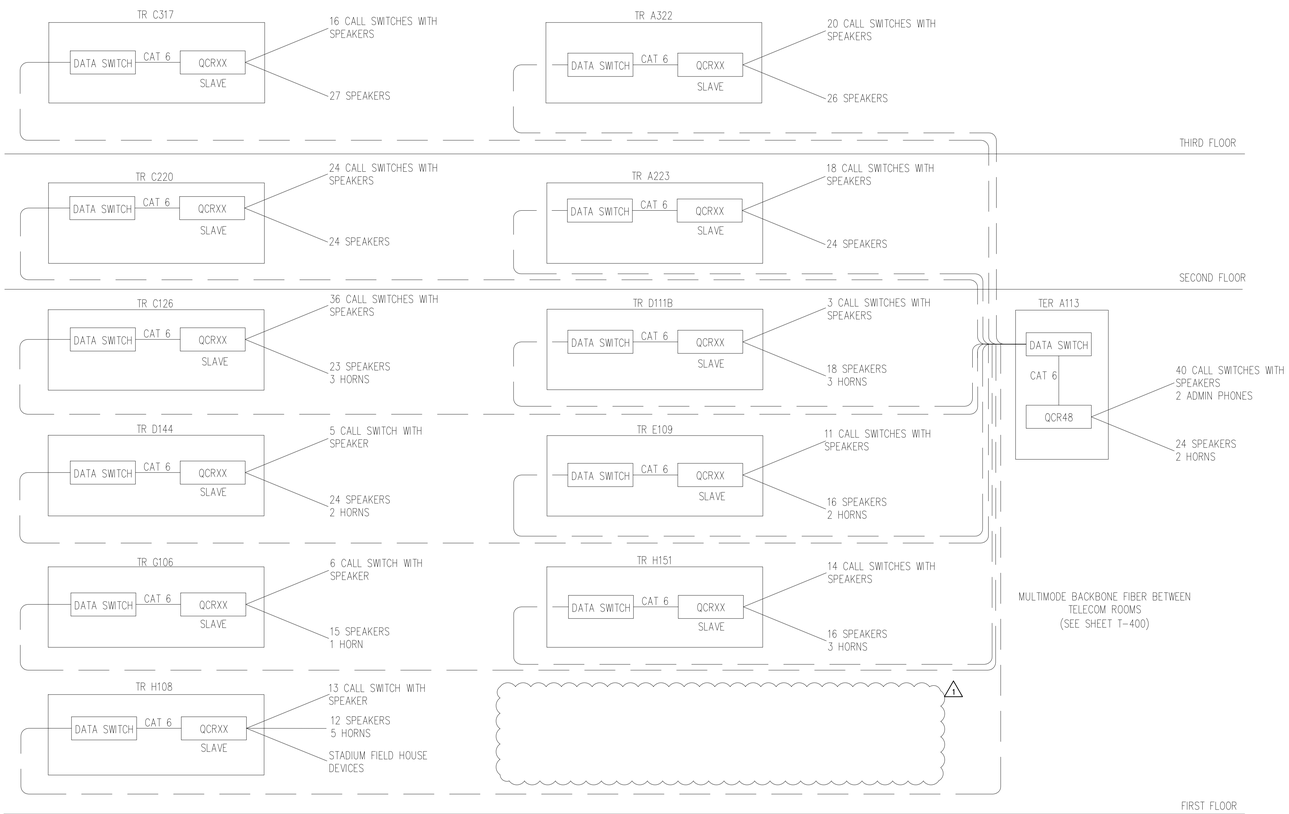
T-400



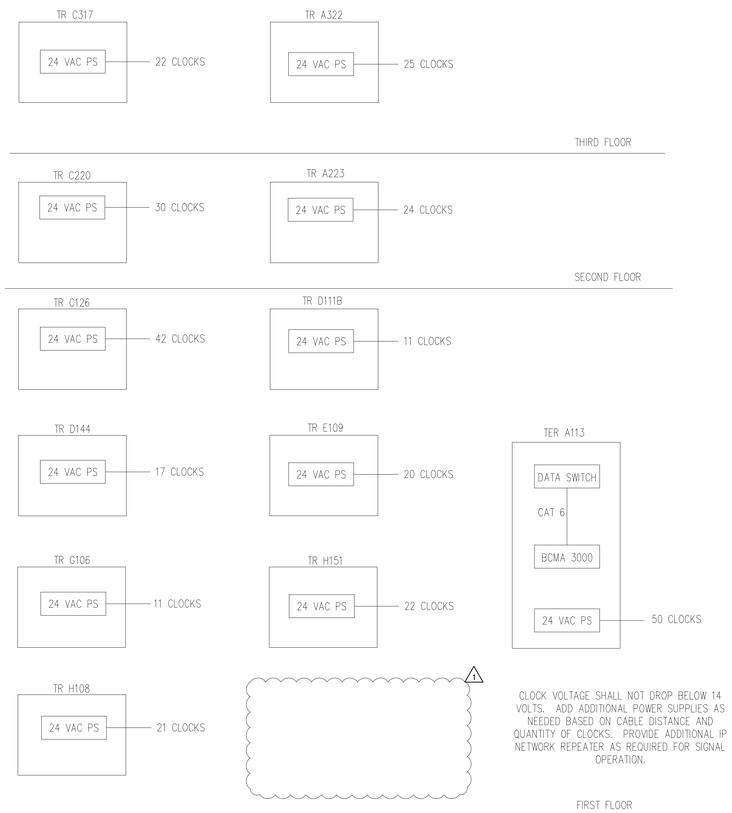
T1 TECHNOLOGY INTERCOM DETAILS
NO SCALE

1. CONTRACTOR SHALL PROVIDE ALL PATHWAYS, CABLING, TERMINATION FIELDS, CALL SWITCHES, HANDSETS, SPEAKERS, CLOCKS AND ELECTRONICS FOR A COMPLETE AND FULLY FUNCTIONAL INTERCOM/PA/MASTER CLOCK SYSTEM.
2. THE INTERCOM SYSTEM SHALL BE CONNECTED TO THE VOIP TELEPHONE SYSTEM THROUGH THE LAN. THE SYSTEM SHALL BE PROGRAMMED TO ALLOW TELEPHONE HANDSETS TO FUNCTION AS PART OF THE INTERCOM SYSTEM.
3. INTERCOM/PA CABLING SHALL BE PER MANUFACTURER'S SPECIFICATIONS AND FOLLOW MANUFACTURER GUIDELINES. PROVIDE A MINIMUM OF 4 CONDUCTOR (2 SHIELDED, 2 UNSHIELDED) 22 AWG WIRING TO ALL CALL SWITCH WITH SPEAKER LOCATIONS. PROVIDE A MINIMUM OF 2 CONDUCTOR (2 SHIELDED) TO ALL CLOCKS AND SPEAKERS WITHOUT CALL SWITCHES. INCREASE WIRE GAUGE BASED WHERE REQUIRED FOR LONGER CABLE RUNS.
4. ALL WIRES SHALL BE RUN TO RACK MOUNTED NODES WITHIN THE DESIGNATED SERVICE AREA. NODES SHALL BE CONNECTED TO EACH OTHER BY FACILITY MULTIMODE FIBER.
5. INTERCOM SYSTEM SHALL BE IP BASED AND UTILIZE THE MULTIMODE FIBER BACKBONE PRESENT IN THE FACILITY TO TRANSMIT SIGNALS FROM THE MAIN INTERCOM HEADEND TO THE INTERCOM ELECTRONICS IN EACH TELECOM ROOM.
6. PROVIDE AND INSTALL ONE COMPACT RACK UNIT (QCRXX) IN EACH TELECOMMUNICATIONS ROOM WITHIN AN EQUIPMENT RACK. (PROVIDE A COMPACT RACK UNIT QCR24 IF LINE CONNECTIONS ARE LESS THAN 24 PORTS.) PROVIDE AND INSTALL ONE MAIN IP INTERCOM HEADEND IN THE TELECOMMUNICATIONS EQUIPMENT ROOM.
7. INTERCOM/PA CABLING SHALL BE PLENUM RATED WHERE REQUIRED.
8. NO MORE THAN 8 SPEAKERS SHALL BE ALLOWED IN A SINGLE SPEAKER RUN.
9. CALL SWITCH/HANDSET LOCATIONS SHALL BE HOMERUNS FROM THE DEVICE TO THE QCRXX UNIT IN EACH TELECOM ROOM THAT SERVES THAT AREA OF THE FACILITY.
10. CALL SWITCH/HANDSET SHALL BE LOCATED ADJACENT TO THE ENTRANCE IN THE EACH ROOM. SEE FLOOR PLANS FOR LOCATIONS.
11. EACH LOCATION WITH A CALL SWITCH/HANDSET SHALL HAVE AT LEAST ONE HANDS-FREE TALK BACK SPEAKER ASSOCIATED WITH THAT LOCATION.
12. SPEAKERS SHALL BE MOUNTED WITHIN THE CEILING GRID UNLESS OTHERWISE NOTED. (SPEAKERS SHALL BE DROP-IN TILE TYPE SPEAKER)
13. ALL CABLES SHALL BE CLEARLY LABELED AT EACH END AND INCLUDE THE DESTINATION LOCATION.
14. PROVIDE AND INSTALL A REMOTE INTERFACE IN THE MAIN OFFICE FOR AM/FM AND CD PLAYER CONTROL BACK TO THE INTERCOM HEADEND LOCATED IN THE TER.
15. PROVIDE AND INSTALL ADMINISTRATIVE HANDSETS AS SHOWN ON THE DRAWINGS.
16. THE CLOCK SYSTEM SHALL BE A WIRELESS CORRECTION SYSTEM WITH 24 VAC POWERED CLOCKS OVER TWO WIRES. MOLEX TYPE CONNECTORS SHALL BE UTILIZED.
17. THE CLOCK HEADEND SHALL BE RACK MOUNTED ADJACENT TO THE INTERCOM HEADEND IN THE MAIN TELECOM ROOM.
18. CLOCKS SHALL BE WIRED INLINE FOR POWER. VOLTAGE MAY NOT DROP BELOW 14 VAC. PROVIDE ADDITIONAL POWER SUPPLIES AS NEEDED BASED ON DISTANCE AND QUANTITY OF CLOCKS. POWER SUPPLIES SHALL BE LOCATED IN TELECOMMUNICATIONS ROOMS CONNECTED TO FACILITY BACKUP POWER.
19. CLOCKS SHALL BE 12" ANALOG TYPE CLOCKS. GYMNASIUMS, CAFETERIA AND AUDITORIUM SHALL RECEIVE 16" CLOCKS.
20. PROVIDE AND INSTALL WIRE GUARDS FOR GYMNASIUM CLOCKS.
21. DOUBLE FACE CLOCKS SHALL BE INSTALLED IN CERTAIN LOCATIONS SHOWN ON THE FLOOR PLAN DRAWINGS.
22. CLOCKS SHALL BE MOUNTED ABOVE ENTRY DOORS AS SHOWN, CENTERED BETWEEN THE TOP OF THE DOOR FRAME AND CEILING UNLESS OTHERWISE SHOWN. CORRIDOR CLOCKS SHALL BE MOUNTED 96" AFF.
23. PROVIDE A WIRE GUARD FOR GYMNASIUM AND CAFETERIA CLOCKS.
24. PROVIDE ADDITIONAL REPEATERS IF REQUIRED FOR SYSTEM OPERATION.
25. CONTRACTOR SHALL PROVIDE ALL PROGRAMMING AND TESTING NECESSARY FOR A FUNCTIONAL SYSTEM.
26. ALL PASSWORDS AND USER SPECIFIC INFORMATION SHALL BE GIVEN TO THE SCHOOL DISTRICT UPON SYSTEM COMPLETION.

T2 TECHNOLOGY INTERCOM/CLOCK NOTES
NO SCALE



T3 IP INTERCOM SYSTEM LINE DIAGRAM
NO SCALE



T4 IP CLOCK SYSTEM DETAILS
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CONSTRUCTION MANAGER
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WILMINGTON, DE 19805-0697

Educational Systems Planning
Technology Consultant
49 Old Solomons Island Road
Annapolis, MD 21401

PROJECT

THE NEW DOVER HIGH SCHOOL

RT. 8
DOVER, DE

OWNER

CAPITAL SCHOOL DISTRICT
945 FOREST ST.
DOVER, DE 19904

MARK	DATE	DESCRIPTION
1	04-05-2013	BP-H1 ADD
A	03-08-2013	BP-H1 BID SET

PROJECT NUMBER:	1012
FILE NAME:	DHS T Sheets
DRAWN BY:	BTJ
CHECKED BY:	DD

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SHEET TITLE

TECHNOLOGY INTERCOM, CLOCK AND PA SYSTEM DETAILS

T-404

CCTV CAMERA
SEE CHART FOR DETAIL

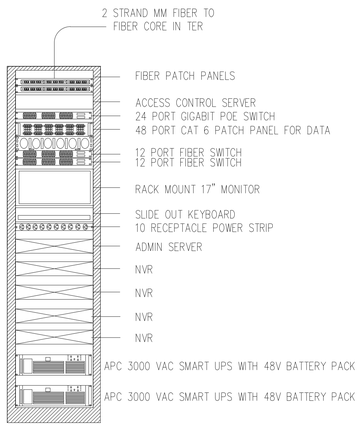
NETWORK VIDEO RECORDER

CCTV WORKSTATION/VIEWSTATION

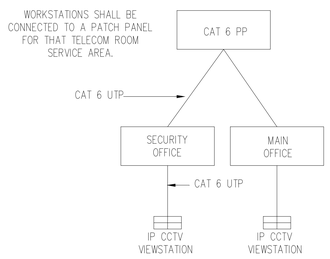
T1 IP CCTV SYSTEM SYMBOLS
NO SCALE

1. CONTRACTOR SHALL PROVIDE AND INSTALL ALL EQUIPMENT, SOFTWARE AND APPLICATIONS FOR A COMPLETE AND FULLY FUNCTIONAL IP SURVEILLANCE SYSTEM. ITEMS INCLUDED BUT NOT LIMITED TO PTZ CAMERAS, FIXED CAMERAS, CAMERA HOUSINGS, NETWORK ELECTRONICS, NETWORK VIDEO RECORDERS, UPS HARDWARE, ACTIVE EQUIPMENT SOFTWARE, SERVERS, MONITORS, WORKSTATIONS, CABLES, CONNECTORS AND ASSOCIATED COMPONENTS.
2. HEADEND ELECTRONICS IN THE MAIN TELECOM ROOM, INCLUDING SWITCHES, SHALL BE PROVIDED AS PART OF THIS CONTRACT.
3. DEDICATED SECURITY SWITCHES IN TELECOM ROOMS SHALL BE PROVIDED BY OTHERS AS PART OF BID PAC H2. CONTRACTOR SHALL COORDINATE INSTALLATION DURING CONSTRUCTION WITH SWITCH PROVIDER AND OWNER.
4. PATHWAYS, INCLUDING BOXES, CONDUITS, SLEEVES AND CABLE TRAY ARE PROVIDED AS PART OF BID PAC D. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL BOXES, CONDUITS, PATHWAYS AND CABLING REQUIRED FOR SYSTEM FUNCTIONALITY. CONTRACTOR SHALL COORDINATE WORK WITH ELECTRICAL TRADE.
5. FIBER AND COPPER CABLES SHALL BE PLENUM RATED. FIBER SHALL BE LOCATED WITHIN INNERDUCT FOR PROTECTION.
6. THE IP CCTV SYSTEM SHALL UTILIZE TWO OF THE 24 STRANDS OF FACILITY 50 MICRON MM FIBER FOR BACKBONE CABLING.
7. HORIZONTAL SECURITY CAMERA CABLING SHALL BE CATEGORY 6 UTP TO IP CAMERAS.
8. HORIZONTAL SECURITY CAMERA CABLING SHALL BE A DISTINCT COLOR AND RUN TO DEDICATED SECURITY PATCH PANELS PROVIDED AS PART OF THIS CONTRACT BY SECURITY CONTRACTOR.
9. PROVIDE AND INSTALL A 3000 VAC UPS FOR EACH SECURITY SWITCH. PROVIDE AND INSTALL TWO 3000 VAC UPSS WITH BATTERY PACKS FOR THE IP CAMERA SERVER STACK IN THE MDF. PROVIDE AND INSTALL A 1500 VAC UPS FOR EACH CCTV WORKSTATION AROUND THE FACILITY.
10. INTERIOR DOME CAMERAS SHALL BE FLUSH MOUNTED IN DROP CEILINGS WHERE POSSIBLE. WHERE NOT POSSIBLE, INTERIOR DOME CAMERAS SHALL BE WALL MOUNTED IN GANG BOXES AND FLUSH MOUNTED..
11. EXTERIOR CAMERA LOCATIONS SHALL HAVE A 1" CONDUIT THROUGH THE BUILDING SHELL, BETWEEN 12' AND 16', FOR THE CCTV INSTALLER TO ATTACH THE NECESSARY HOUSING AND EQUIPMENT. CAMERA MOUNTS SHALL BE LOCATED DIRECTLY OVER CONDUIT SO NO EXTERIOR CABLING IS VISIBLE OR EXPOSED.
12. ALL PTZ CAMERAS SHALL HAVE A LOCAL 120 VAC POWER SUPPLY ON EMERGENCY CIRCUITS LOCATED IN A JUNCTION BOX ON THE INTERIOR OF THE BUILDING ADJACENT TO THE CAMERA LOCATION. SUPPLY AND INSTALL A 120 VAC TO 24 VOLT POWER SUPPLY. IF LOCAL POWER IS NOT PRESENT, EACH PTZ CAMERA SHALL HAVE A POE MIDSPAN POWER INJECTOR RATED TO HANDLE THE PTZ CAMERA ELECTRICAL LOAD.
13. VERIFY CAMERA POSITION AND FIELD OF VIEW PRIOR TO PATHWAY INSTALLATION.
14. EXTERIOR FIXED DOME CAMERAS SHALL BE LOCATED IN ENVIRONMENTAL PENDANT ENCLOSURES WITH GOOSENECK TYPE MOUNTS AND HAVE IR ILLUMINATORS AS PART OF THE CAMERA. FIXED DOME CAMERAS SHALL BE POWERED VIA POE SWITCHES.
15. INTERIOR CAMERAS SHALL BE POWERED VIA POE SWITCHES OR LOCAL POWER WITH A STEP DOWN TRANSFORMER IF REQUIRED FOR PROPER OPERATION.
16. ANY CAMERA THAT EXCEEDS 300 FT. FROM A TELECOM ROOM SHALL HAVE A DEDICATED 2 STRAND FIBER/COPPER ASSEMBLY AND ASSOCIATED MEDIA MODULE AT THE CAMERA END AND ON THE INTERIOR OF THE FACILITY WITHIN A TELECOM ROOM. UNIT SHALL BE SIMILAR TO BERK-TEK ONE REACH COMPONENTS AND MUST PROVIDE POE+ POWER LEVELS. EQUIPMENT SERVING EXTERIOR CAMERAS SHALL BE LOCATED IN THE NEAREST TELECOM ROOM TO THE CAMERA BEING SERVED. COPPER WIRE GAUGE SHALL BE SIZED PROPERLY FOR THE SPECIFIED DISTANCE.
17. POLE MOUNTED CAMERAS SHALL INCLUDE ALL CONDUITS, POLE MOUNTED SERVICE BOXES, POLE STRAPS, ADAPTORS, MOUNTS AND ACCESSORIES FOR A COMPLETE INSTALLATION.
18. EACH IP CAMERA LOCATION SHALL RECEIVE A CATEGORY 6 UTP CABLE TERMINATED IN A DEDICATED CAT 6 PATCH PANEL IN A TELECOM ROOM AND INCLUDE A MALE RJ-45 JACK AT THE CAMERA LOCATION. CABLE SHALL BE TESTED FOR CAT 6 PERFORMANCE. CONTRACTOR TO PROVIDE AN ADDITIONAL 15' SERVICE LOOP COILED NEATLY IN THE CEILING SPACE OF THE CAMERA LOCATION. TOTAL CABLE LENGTH MAY NOT EXCEED 90 METERS. THE CEILING GRID SHALL BE TAGGED AT THE LOCATION OF THE TERMINATED CABLE WITH A TEMPORARY TAG DURING CONSTRUCTION.
19. ALL CABLING SHALL BE CLEARLY LABELED ON BOTH ENDS AND AT ANY TERMINATION FIELD.
20. THE ENTIRE IP CCTV SYSTEM SHALL BE CONNECTED TO UPS EQUIPMENT AND BATTERY BACKUP IN CASE OF POWER FAILURE OR AN EMERGENCY.
21. CCTV CONTRACTOR SHALL PROVIDE A DEDICATED 19" FLOOR MOUNTED DATA RACK/CABINET IN THE TER FOR CCTV ELECTRONICS.
22. CCTV CONTRACTOR SHALL PROVIDE AND INSTALL THE NEW HEADEND ELECTRONICS WITHIN TELECOM ROOMS IN NEW RACKS AND CABINETS.
23. CONTRACTOR SHALL COORDINATE INSTALLATION WITH DOVER SECURITY AND TECHNOLOGY STAFF PRIOR TO AND DURING THE INSTALLATION.
24. SERVERS SHALL RUN ON SERVER LEVEL OPERATING SYSTEMS AND INCLUDE ANTI-VIRUS SOFTWARE. CONFIGURATION MUST BE PER MANUFACTURER STANDARDS.
25. PROVIDE COMPLETE SYSTEM INSTALLATION AND SETUP INCLUDING CAMERA ADDRESSING, CAMERA FIELD OF VIEW, SERVER SETUP, WORKSTATION SETUP AND SYSTEM COMMISSIONING.
26. ALL CABLES SHALL BE RUN IN CABLE TRAY OR J-HOOKS AND HAVE ACCEPTABLE SEPARATION FROM HIGH VOLTAGE ELECTRICAL CABLES.
27. PROVIDE COMPLETE AS-BUILT DRAWINGS INCLUDING CAMERA COUNTS, LOCATIONS, LENSES, ADDRESSES AND SYSTEM ARCHITECTURE. SYSTEM ACCEPTANCE SHALL NOT TAKE PLACE WITHOUT THESE ITEMS.
28. SEE SECTION 28 20 00 FOR EQUIPMENT DETAILS.

T2 IP CCTV SYSTEM NOTES
NO SCALE

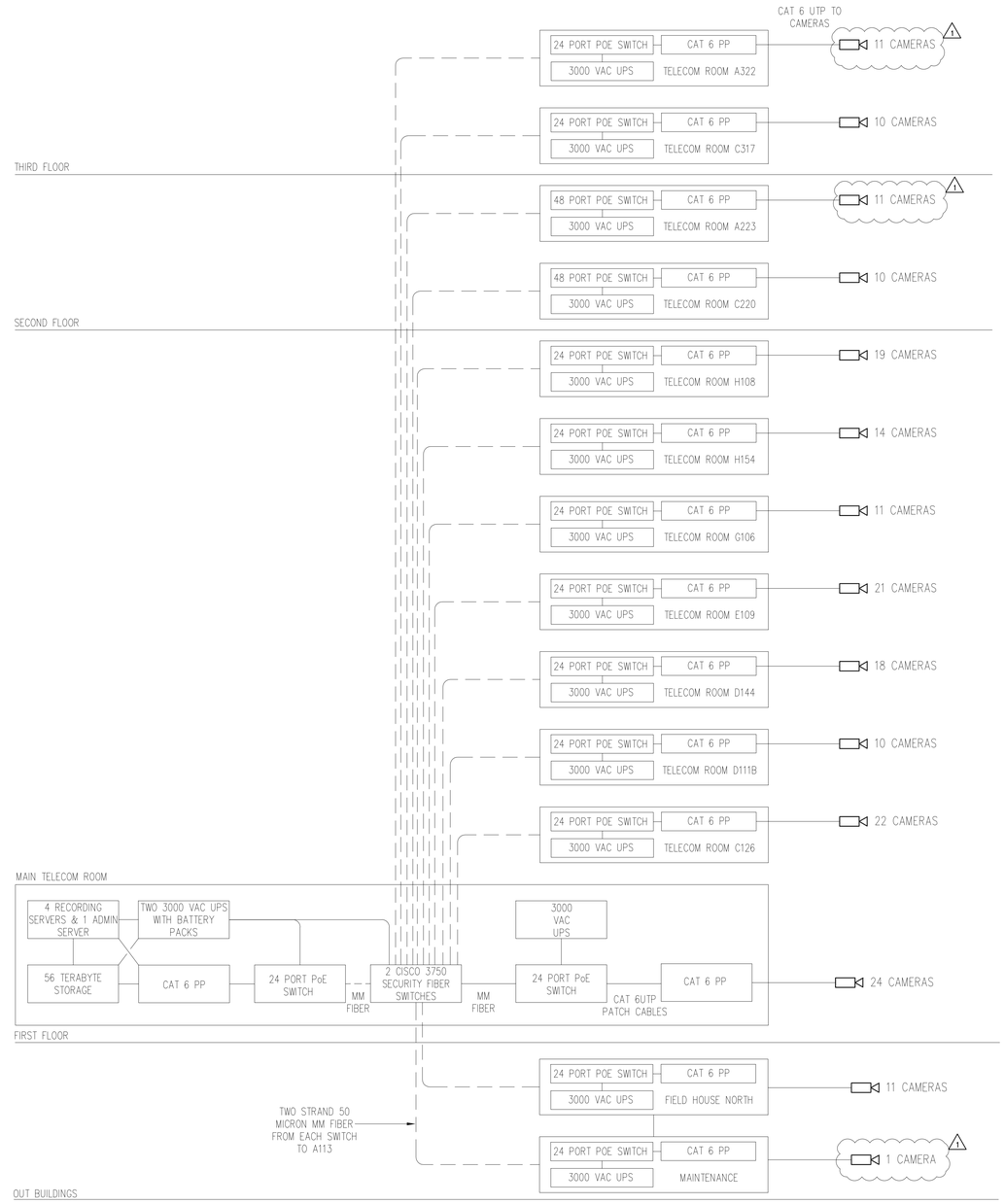


T3 IP CCTV HEADEND
NO SCALE



EACH IP CCTV VIEWSTATION SHALL INCLUDE ONE DELL PRECISION T7500 WITH ONSSI SOFTWARE AND TWO VIDEO CARDS, TWO 24" SAMSUNG BX2450 MONITORS, AN APC UPS RS-1500 AND A ETHERNET KEYBOARD CONTROLLER FOR PTZ CAMERAS.

T4 CCTV VIEWSTATION DETAILS
NO SCALE



T5 IP CCTV SYSTEM RISER
NO SCALE

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SHEET TITLE

TECHNOLOGY
CCTV SYSTEM DETAILS

T-406

CAMERA #	INTERIOR	INTERIOR PTZ	EXTERIOR	EXTERIOR PTZ	180° PANAMORH	WALL	CEILING	PENDANT	TELECOM ROOM
								X	A113
1			X					X	A113
2			X					X	A113
3			X					X	A113
4			X					X	A113
5			X					X	A113
6			X					X	A113
7			X					X	A113
8			X					X	A113
9	X					X			A113
10	X					X			A113
11	X						X		A113
12	X						X		A113
13	X						X		A113
14	X						X		A113
15	X						X		A113
16	X						X		A113
17	X						X		A113
18	X						X		A113
19	X						X		A113
20	X					X			A113
21	X						X		A113
22	X						X		A113
23	X					X			A113
24			X					X	C126
25			X					X	C126
26			X					X	C126
27			X					X	C126
28			X					X	C126
29			X					X	C126
30			X					X	C126
31			X					X	C126
32	X					X			C126
33	X						X		C126
34	X						X		C126
35	X						X		C126
36	X						X		C126
37	X						X		C126
38	X						X		C126
39	X					X			C126
40	X						X		C126
41	X						X		C126
42			X					X	D111b
43			X					X	D111b
44				X				X	D111b
45				X				X	D111b
46			X					X	D111b
47			X					X	D111b
48	X							X	D111b
49	X							X	D111b
50	X						X		D111b
51	X						X		D111b
52			X					X	D144
53			X					X	D144
54	X						X		D144
55	X						X		D144
56	X							X	D144
57	X							X	D144
58	X							X	D144
59	X							X	D144
60	X						X		D144
61	X						X		D144
62	X						X		D144
63	X						X		D144
64	X							X	D144
65	X							X	D144
66	X							X	D144

T1 CCTV CAMERA SCHEDULE
NO SCALE

CAMERA #	INTERIOR	INTERIOR PTZ	EXTERIOR	EXTERIOR PTZ	180° PANAMORH	WALL	CEILING	PENDANT	TELECOM ROOM
									E109
67			X					X	E109
68			X					X	E109
69			X					X	E109
70			X					X	E109
71			X					X	E109
72				X				X	E109
73	X						X		E109
74	X						X		E109
75		X						X	E109
76		X						X	E109
77	X						X		E109
78	X						X		E109
79	X						X		E109
80	X						X		E109
81	X						X		E109
82	X						X		E109
83			X					X	G106
84			X					X	G106
85			X					X	G106
86			X					X	G106
87			X					X	G106
88					X			X	G106
89	X						X		G106
90	X						X		G106
91	X						X		G106
92	X						X		G106
93	X						X		G106
94								X	H154
95			X					X	H154
96	X						X		H154
97	X						X		H154
98	X						X		H154
99	X						X		H154
100	X						X		H154
101	X						X		H154
102	X						X		H154
103	X						X		H154
104	X						X		H154
105	X						X		H154
106			X					X	H108
107			X					X	H108
108			X					X	H108
109			X					X	H108
110			X					X	H108
111			X					X	H108
112			X					X	H108
113			X					X	H108
114	X						X		H108
115	X						X		H108
116	X					X			H108
117	X					X			H108
118	X						X		H108
119	X						X		H108
120	X					X			H108
121	X					X			H108
122							X		H108
123	X						X		H108
124	X						X		H108
125					X			X	C126
126					X			X	C126
127					X			X	C126
128					X			X	C126
129					X			X	E109
130					X			X	E109
131					X			X	E109
132					X			X	E109

1. PTZ CAMERAS SHALL HAVE A TRANSFORMER CONNECTED TO LOCAL POWER AT THE CAMERA LOCATION OR A POE INJECTOR INLINE OF SUFFICIENT WATTAGE TO POWER THE CAMERA AND PTZ FUNCTION.
2. REMOTE FIXED CAMERAS SHALL HAVE A BERK-TEK ONE REACH POE+ MEDIA MODULE AND ASSOCIATED FIBER/COPPER CABLE TO THE NEAREST TELECOM ROOM ONE REACH POE+ INTERIOR MODULE FOR SIGNAL AND POWER.

CAMERA #	INTERIOR	INTERIOR PTZ	EXTERIOR	EXTERIOR PTZ	180° PANAMORH	WALL	CEILING	PENDANT	TELECOM ROOM
									FH NORTH
133				X				X	FH NORTH
134				X				X	FH NORTH
135					X			X	FH NORTH
136			X					X	FH NORTH
137			X					X	FH NORTH
138			X					X	FH NORTH
139				X				X	FH NORTH
140				X				X	FH NORTH
141			X					X	FH NORTH
142			X					X	FH NORTH
143			X					X	MAINTENANCE
NOT USED									
NOT USED									
NOT USED									
NOT USED									
NOT USED									
NOT USED									
NOT USED									
NOT USED									
NOT USED									
153	X								A223
154	X								A223
155	X						X		A223
156	X							X	A223
157	X							X	A223
158	X							X	A223
159	X							X	A223
160	X							X	A223
161	X							X	A223
162	X						X		A223
163	X						X		C220
164	X							X	C220
165	X							X	C220
NOT USED									
167	X							X	C220
168	X							X	C220
169	X							X	C220
170	X							X	C220
171	X						X		C220
172	X							X	C220
173	X							X	C220
174		X						X	D144
175		X						X	D144
176		X						X	D144
177		X						X	H154
178		X						X	H154
179	X							X	A322
180	X							X	A322
181	X						X		A322
182	X							X	A322
183	X							X	A322
184	X							X	A322
185	X							X	A322
186	X							X	A322
187	X							X	A322
188	X						X		A322
189	X						X		C317
190	X							X	C317
191	X							X	C317
192	X							X	C317
193	X							X	C317
194	X							X	C317
195	X							X	C317
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197	X							X	C317
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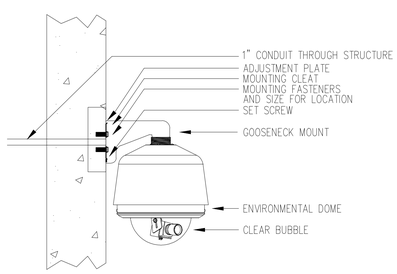
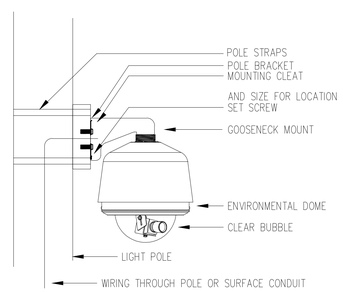
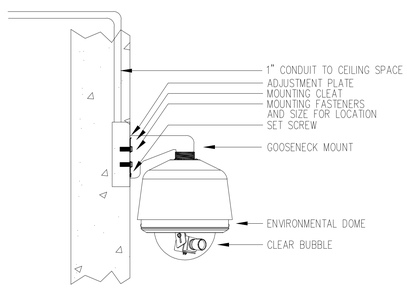
199	X							X	A332
200	X							X	A223



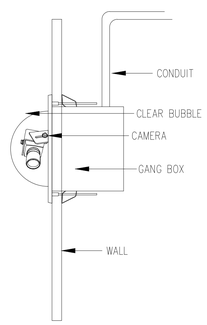
EXTERIOR CAMERA DETAIL



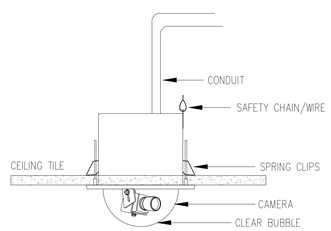
EXTERIOR POLE CAMERA DETAIL



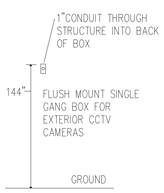
INTERIOR PTZ CAMERA DETAIL



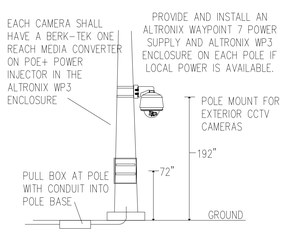
INTERIOR WALL CAMERA DETAIL



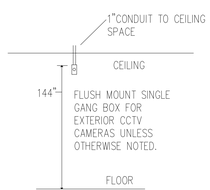
INTERIOR CEILING CAMERA DETAIL



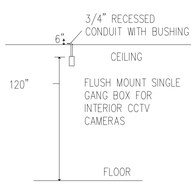
PATHWAY DETAIL FOR EXTERIOR WALL MOUNTED CCTV CAMERAS



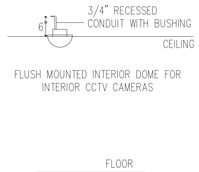
PATHWAY DETAIL FOR EXTERIOR POLE MOUNTED CCTV CAMERAS



PATHWAY DETAIL FOR INTERIOR WALL MOUNTED PTZ CCTV CAMERAS



PATHWAY DETAIL FOR INTERIOR WALL MOUNTED CCTV CAMERAS



PATHWAY DETAIL FOR INTERIOR CEILINGL MOUNTED CCTV CAMERAS

T2 CCTV CAMERA PATHWAYS
NO SCALE

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