

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes

- 1. Furnishing and installation of all mechanical and electrical finish hardware necessary for all doors, and hardware as specified herein and as enumerated in hardware sets and as indicated and required by actual conditions at the building. The hardware shall include the furnishing of all necessary screws, bolts, expansion shields, drop plates, and all other devices necessary for the proper application of the hardware.

B. Related Sections

- 1. Division 8 Section - Hollow Metal Doors and Frames

- C. Specific Omissions: Hardware for the following is specified or indicated elsewhere, unless specifically listed in the hardware sets:

- 1. Complete toilet accessories including coat hooks, unless note otherwise.

1.03 REFERENCES

- A. Applicable state and local building codes and standards.

B. UL - Underwriters Laboratories

- 1. UL 1784 - Air Leakage Tests of Door Assemblies
- 2. UL 305 - Panic Hardware

C. Accessibility

- 1. ADA - Americans with Disabilities Act
- 2. ICC (CABO) / ANSI A117.1 - Accessible and Usable Buildings and Facilities

D. DHI - Door and Hardware Institute

- 1. Sequence and Format for the Hardware Schedule
- 2. Recommended Locations for Builders Hardware

E. ANSI - American National Standards Institute

- 1. ANSI/BHMA A156.1 - A156.29, and ANSI A156.31 - Standards for Hardware and Specialties

1.04 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 requirements. Advise architect within the submittal package of incompatibility or issues.
- B. Catalog Cuts: Product data including manufacturers' technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
- C. Final Hardware Schedule Content: Submit schedule with hardware sets in vertical format as illustrated by the Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening, Include the following information:
1. Door Index; include door number, heading number, and Architects hardware set number.
 2. Opening Lock Function Spreadsheet; list locking device and function for each opening.
 3. Type, style, function, size, and finish of each hardware item.
 4. Name and manufacturer of each item.
 5. Fastenings and other pertinent information.
 6. Location of each hardware set cross-referenced to indications on Drawings.
 7. Explanation of all abbreviations, symbols, and codes contained in schedule.
 8. Mounting locations for hardware.
 9. Door and frame sizes and materials.
 10. Name and phone number for the local manufacturer's representative for each product.
 11. Operational Description of openings with any electrified hardware (locks, exits, electromagnetic locks, electric strikes, automatic operators, door position switches, magnetic holders or closer/holder units, and/or access control components). Operational description should include how the door will operate on egress, ingress, and/or fire/smoke alarm connection.
- D. Templates: After final approval of the hardware schedule, provide templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware.
- E. Operations and Maintenance Data: Provide in accordance with Division 1 and include the following:
1. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
 2. Catalog pages for each product.
 3. Name, address, and phone number of local representatives for each manufacturer.
 4. Parts list for each product.
 5. Copy of final approved hardware schedule, edited to reflect "As installed."
 6. Copy of final keying schedule.
 7. As installed "Wiring Diagrams" for each opening connected to power, both low voltage and 110 volts.
 8. One (1) complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
 9. Copy of warranties including appropriate reference numbers for manufacturers to identify the project.

- F. Certificates of Compliance: Upon request of Architect or Authority Having Jurisdiction certificates of compliance for fire-rated hardware and installation instructions shall be made available.

1.05 QUALITY ASSURANCE

- A. Substitutions: No hardware substitutions will be allowed.
 - 1. Items specified as shall be provided exactly as listed.
 - 2. Items listed with no substitute manufacturers listed have been requested by the Owner or Architect to match existing for continuity and/or future performance and maintenance standards or because there is no known equal product.
 - 3. If no other products are listed in a category, then "no substitute" is implied.
- B. Supplier Qualifications: A recognized architectural hardware supplier, with warehousing facilities in the Project's vicinity, that has a record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that provides a certified Architectural Hardware Consultant (AHC) available to the Owner, Architect, and Contractor, at reasonable times during the course of the Work for consultation.
- C. Single Source Responsibility: Obtain each type of hardware (latch and locksets, hinges, exit devices, closers, etc.) from a single manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Tag each item or package separately with identification related to the final hardware schedule, and include installation instructions with each item or package.
- B. Each article of hardware shall be individually packaged in manufacturer's original packaging.
- C. Contractor will provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
- D. Items damaged in shipment shall be replaced promptly and with proper material and paid for by whomever did the damage or caused the damage to occur.
- E. Hardware shall be handled in a manner to avoid damage, marring, or scratching. Irregularities that occur to the hardware after it has been delivered to the Project shall be corrected, replaced, or repaired by the Contractor. Hardware shall be protected against malfunction due to paint, solvent, cleanser, or any chemical agent.
- F. No direct shipments will be allowed unless approved by the Contractor.

1.07 WARRANTY

- A. Provide manufacturer's warranties as specified in Division 1 and as follows:

1. Closers: 10 years, except electronic closers, 2 years.
 2. Other hardware: 1 year.
- B. No liability is to be assumed where damage or faulty operation is due to improper installation, improper use, or abuse.
- C. Products judged to be defective during the warranty period shall be replaced or repaired in accordance with the manufacturer's warranty, at no additional cost to the Owner.

1.08 MAINTENANCE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Approval of manufacturers other than those listed shall be in accordance with paragraph 1.05.A.
- B. Note that even though an acceptable substitute manufacturer may be listed, the product must provide all the functions and features of the specified product or it will not be approved.
- C. Hand of Door: Drawings show direction of slide, swing, or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.
- D. Where the hardware specified is not adaptable to the finished shape or size of the members requiring hardware, furnish suitable types having the same operation and quality as the type specified, subject to the Architect's approval.

2.02 MATERIALS

- A. Fasteners
1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
 2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive painted finish.
 3. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent that no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless their use is the only means of reinforcing the work adequately to fasten the hardware securely. Review door specification and advise Architect if thru-bolts are required.
 4. Hardware shall be installed with the fasteners provided by the hardware manufacturer.

B. Hinges

1. Provide five-knuckle, ball bearing hinges of type, material, and height as outlined in the following guide for this specification:
 - a. 1-3/4 inch thick doors:
Interior and Exterior: heavy weight, stainless steel, 5 inches high
2. Provide three hinges per door leaf for doors 90 inches or less in height, and one additional hinge for each 30 inches of additional door height.
3. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
 - a. Steel Hinges: Steel pins
 - b. Non-Ferrous Hinges: Stainless steel pins
 - c. Out-Swinging Exterior Doors: Non-removable pins
 - d. Out-Swinging Interior Lockable Doors: Non-removable pins
4. The width of hinges shall be 5 inches. Adjust hinge width as required for door, frame, and/or wall conditions to allow proper degree of opening.
5. Acceptable manufacturers and/or products: Ives 5BB series, Hager BB series, McKinney TA/T4A series.

C. Door Closers

1. Provide door closers certified to ANSI/BHMA A156.4 Grade 1 requirements by a BHMA certified independent testing laboratory. Closers shall be ISO 9000 certified. Units shall be stamped with date of manufacture code.
2. Door closers shall have fully hydraulic, full rack and pinion action with a high strength cast iron cylinder, and shall utilize full complement bearings at shaft. Cylinder body shall be 1-1/2 inch diameter, and double heat-treated pinion shall be 11/16 inch diameter.
3. Provide hydraulic fluid requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F. Fluid shall be fireproof and shall pass the requirements of the UL10C "positive pressure" fire test.
4. Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force as required by accessibility codes and standards. Hydraulic regulation shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed, and backcheck.
5. Provide closers with a solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
6. Closers shall not incorporate Pressure Relief Valve (PRV) technology.
7. Closer cylinders, arms, adapter plates, and metal covers shall have a powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or shall have special rust inhibitor (SRI).
8. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other finish hardware items interfering with closer mounting.
9. Mount closers on inside of exterior doors. Closers shall not be visible from exterior.

10. Door closers meeting this specification: LCN 4010/4110 series, Sargent 4131 series factory assembled.

D. Door Trim

1. Provide push plates 4 inches wide x 16 inches high x 0.050 inch thick and beveled 4 edges. Where width of door stile prevents use of 4 inches wide plate, adjust width to fit.
2. Provide pull plates 4 inches wide x 16 inches high x 0.050 inch thick, beveled 4 edges, and prepped for pull. Where width of door stile prevents use of 4 inches wide plate, adjust width to fit.
3. Acceptable manufacturers and/or products: Ives, Burns, Rockwood.

E. Protection Plates

1. Provide kick plates, mop plates, and armor plates minimum of 0.050 inch thick as scheduled. Furnish with machine or wood screws, finished to match plates. Sizes of plates shall be as follows:
 - a. Kick Plates – 10 inches high x 2 inches less width of door on single doors.
2. Acceptable manufacturers and/or products: Ives, Burns, Rockwood.

F. Door Stops and Holders

1. Provide door stops for all doors in accordance with the following requirements:
 - a. Provide wall stops wherever possible. Provide convex type where mortise type locks are used and concave type where cylindrical type locks are used.
 - b. Where wall stops cannot be used, provide dome type floor stops of the proper height.
 - c. At any opening where a wall or floor stop cannot be used, a medium duty surface mounted overhead stop shall be used.
2. Acceptable manufacturers and/or products: Ives, Burns, Rockwood.

G. Thresholds, Seals, Door Sweeps, Automatic Door Bottoms, and Gasketing

1. Provide thresholds, weatherstripping (including door sweeps, seals, astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items as closely as possible. Size of thresholds shall be as follows:
 - a. Saddle Thresholds – 1/2 inch high x jamb width x door width
2. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.
3. Acceptable manufacturers and/or products: National Guard, Reese, Zero.

H. Door Push Plates and Pulls: ANS/BHMA A156.6 certified door pushes and pulls of type and design specified below or in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.

1. Push/Pull Plates: Minimum .050 inch thick, 4-inches wide by 16-inches high, with square corners and beveled edges, secured with exposed screws unless otherwise indicated. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.

Finish: US32D

2. Acceptable Manufacturers:

Rockwood, 111 x 73C/73CL pull/push bar combo, 1" dia, CTC pull 10", NS mounting
Other acceptable manufactures: Ives, Trimco

2.03 FINISHES

A. Finish of all hardware shall be US26D (BHMA 626/652) with the exceptions as follows:

1. Hinges at Exterior Doors: US32D (BHMA 630).
2. Push Plates, Pulls, and Push Bars: US32D (BHMA 630).
3. Protection Plates: US32D (BHMA 630).
4. Latchset: US32D (BHMA 630)
5. Door Closers: Powder Coat to Match.
6. Weatherstripping: Clear Anodized Aluminum.
7. Thresholds: Mill Finish Aluminum.

2.04 LOCK / LATCHSET

A. Provide Sargent "10 Line" heavy duty commercial with "L" lever handle.

2.05 KEYING

B. Provide cores and cylinders for the Owner's Existing Sargent key system conforming to owner's requirements.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to installation of any hardware, examine all doors, frames, walls and related items for conditions that would prevent proper installation of finish hardware. Correct all defects prior to proceeding with installation.

3.02 INSTALLATION

A. Coordination:

1. Prior to installation of hardware, schedule and hold a meeting for the purpose of instructing installers on proper installation and adjustment of finish hardware. Representatives of locks, exit devices, closers, automatic operators, and electrified hardware shall conduct training; provide at least 10 days notice to representatives. After training a letter of compliance, indicating when the training was held and who was in attendance, shall be sent to the Architect.
2. Prior to ordering electrified hardware, schedule and hold a meeting for the purpose of coordinating finish hardware with security, electrical, doors and frames, and other related suppliers. A representative of the supplier of finish hardware, and doors and frames, the electrical subcontractor, and the Owner's security contractor shall meet with the Owner, Architect, and

General Contractor prior to ordering finish hardware. After meeting a letter of compliance, indicating when the training was held and who was in attendance, shall be sent to the Architect.

- B. Hardware will be installed by qualified tradesmen, skilled in the application of commercial grade hardware. For technical assistance if necessary, installers may contact the manufacturer's rep for the item in question, as listed in the hardware schedule.
- C. Mount hardware units at heights indicated in "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute.
- D. Install each hardware item in compliance with the manufacturer's instructions and recommendations, using only the fasteners provided by the manufacturer.
- E. Do not install surface mounted items until finishes have been completed on the substrate. Protect all installed hardware during painting.
- F. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- G. Operating parts shall move freely and smoothly without binding, sticking, or excessive clearance.

3.03 ADJUSTING, CLEANING, AND DEMONSTRATING

- A. Adjust and check each operating item of hardware and each door, to insure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly.
- B. Where door hardware is installed more than one month prior to acceptance or occupancy of a space or area, return to the installation during the week prior to acceptance or occupancy and make a final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.
- C. Clean adjacent surfaces soiled by hardware installation.
- D. Instruct Owner's personnel in the proper adjustment, lubrication, and maintenance of door hardware and hardware finishes.

3.04 FIELD QUALITY CONTROL

- A. Prior to Substantial Completion, the installer, accompanied by representatives of the manufacturers of locks, exit devices, closer, and any electrified hardware, shall perform the following work:
 - 1. Examine and re-adjust each item of door hardware as necessary to restore function of doors and hardware to comply with specified requirements.
 - 2. Consult with and instruct Owner's personnel in recommended additions to the maintenance procedures.
 - 3. Replace hardware items that have deteriorated or failed due to faulty design, materials, or installation of hardware units.

4. Prepare a written report of current and predictable problems of substantial nature in the performance of the hardware.
5. At completion of project, a qualified factory representative for the manufacturers of locksets, closer, exit devices, and access control products shall arrange and hold a training session to instruct the Owner's personnel on the proper maintenance, adjustment, and/or operation of their respective products. After training a letter of compliance, indicating when the training was held and who was in attendance, shall be sent to the Architect.

3.05 PROTECTION

- A. Provide for the proper protection of complete items of hardware until the Owner accepts the project as complete. Damaged or disfigured hardware shall be replaced or repaired by the responsible party.

3.06 HARDWARE SCHEDULE

- A. Provide hardware for each door to comply with requirements of Section "Finish Hardware," hardware set numbers indicated in door schedule, and in the following schedule of hardware sets.
- B. It is intended that the following schedule includes complete items of finish hardware necessary to complete the work. If a discrepancy is found in the schedule, such as a missing item, improper hardware for a frame, door or fire codes, the preamble will be the deciding document.
- C. Locksets, exit devices, and other hardware items are referenced in the Hardware Sets for series, type, and function. Refer to the preamble for special features, options, cylinders/keying, and other requirements.
- D. Manufacturer's Abbreviations:
 1. MK - McKinney
 2. PE - Pemko
 3. RO - Rockwood
 4. SA - Sargent
 5. HS - HES
 6. RF - Rixson
 7. SU - Securitron
 8. CR - Corbin Russwin
 9. AC - Alarm Controls

E. Hardware Sets

RIDGE ROAD SCHOOL

HW SET: 01 (EXTERIOR- DOUBLE DOOR 01)

6	EA	HINGE	T4A3786 x QC4	US32D	MK
2	EA	ELECTRIC WIRING HARNESS	QC-C003P		MK
2	EA	ELECTRICAL POWER TRANSFER	ELCEPT-32D		SU
1	EA	EXIT DEVICE (EXIT ONLY)	8810 862	US32D	SA
1	EA	EXIT DEVICE	56 16 64 8804 862	US32D	SA
1	EA	CYLINDER		US32D	SA
1	EA	REMOVABLE MULLION	L980	PC	SA
1	EA	MULLION CYLINDER KIT	64 980C1		SA
2	SET	DOOR SEAL	957C		
2	EA	SWEEP	354C	AL	REE
1	EA	THRESHOLD	2705AT	AL	PE
2	EA	SURFACE CLOSER	1431 CPS	EN	SA

HW SET: 02 (INTERIOR- DOUBLE DOOR 01A)

6	EA	HINGE	T4A3386	US32D	MK
2	EA	PULL BAR	862	US32D	RO
2	EA	EXIT DEVICE	8893		SA
2	SET	DOOR SEAL	957C		
2	EA	SURFACE CLOSER	1431 CPS	EN	SA

HW SET: 03 (EXISTING DOOR – 04)

2	EA	EXIT DEVICE	16-56-8804 862 32D 16-8804 862 32D		
1	EA	SWEEP	354C	AL	RE
		ALARM CONTROLS	DL2-Electro		AC
2		WIRE HARNESS	QC-C003P		MK

NOTE: REMOVE: PIR, MAG, EXIT DEVICE, INTERNAL RODS, REX BUTTON

HW SET: 04 (EXTERIOR- DOUBLE DOOR - 13,23, 24)

6	EA	HINGE	T4A3386	US32D	MK
2	EA	EXIT DEVICE	16-56 8804 862 32D 16-8810 862 32D	US32D	SA
2	SET	DOOR SEAL	957C		
2	EA	SWEEP	354C	AL	RE
2	EA	SURFACE CLOSER	1431 CPS	EN	SA
1	EA	THRESHOLD	2705AT	AL	PE

HW SET: 5 (INTERIOR- DOUBLE DOOR – 13A, 24A)

6	EA	HINGE	T4A3386	US32D	MK
2	EA	PULL BAR	862	US32D	SA
2	EA	PUSH BAR	8893 FIX PUSH RAIL	US32D	SA
1	SET	DOOR SEAL	957C		
1	EA	SWEEP	354C		REE
2	EA	SURFACE CLOSER	1431CPS	EN	SA

HW SET: 6 (INTERIOR- DOUBLE DOOR – 21A)

6	EA	HINGE	T4A3386	US32D	MK
2	EA	PULL BAR	862	US32D	SA
2	EA	PUSH BAR	8893 FIX PUSH RAIL	US32D	SA
1	SET	DOOR SEAL	957C		
1	EA	SWEEP	354C		REE
2	EA	SURFACE CLOSER	1431CPS	EN	SA

HW SET: 7 (EXTERIOR- 3 DOORS – 14, 16)

9	EA	HINGE	T4A3386	US32D	MK
1	EA	EXIT DEVICE	16-56 8804 862 32D	US32D	SA
2	EA	EXIT DEVICE	16-8810 862 32D	US32D	SA
3	SET	DOOR SEAL	957C		
3	EA	SWEEP	354C	AL	RE
3	EA	SURFACE CLOSER	1431 CPS	EN	SA
3	EA	THRESHOLD	2705AT	AL	PE

HW SET: 8 (WOOD DOOR - 17)

1	SET	STOREROOM LOCK	10G04LL 613		SA
1		ELECTRIC STRIKE	1500C-613		

HW SET: 9 (EXTERIOR DOOR- 18)

3	EA	HINGE	T4A3386	US32D	MK
3	EA	EXIT DEVICE	16-56-8804 862 32D	US32D	SA
1	EA	CYLINDER		US32D	SA
1	SET	DOOR SEAL	957C		
1	EA	SWEEP	354C	AL	RE
1	EA	SURFACE CLOSER	1431 CPS	EN	SA
1	EA	THRESHOLD	2705AT	AL	PE

HW SET: 10 (EXTERIOR DOOR - 19)

3	EA	HINGE	T4A3386	US32D	MK
1	EA	EXIT DEVICE	16-56-8804 862 32D	US32D	SA
1	SET	DOOR SEAL	957C		
1	EA	SWEEP	354C	AL	RE
1	EA	SURFACE CLOSER	1431 CPS	EN	SA
1	EA	THRESHOLD	2705AT	AL	PE

HW SET: 11 (INTERIOR WOOD DOOR - 20)

1		ELECTRIC STRIKE	1500C-10B		
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HW SET: 12 (EXTERIOR- DOUBLE DOOR-21, 22, 25)

2	EA	HINGE	T4A3386	US32D	MK
1	EA	EXIT DEVICE	16-56 8804 862 32D	US32D	SA
1	EA	EXIT DEVICE	16-8810-862-32D	US32D	SA
2	SET	DOOR SEAL	957C		
2	EA	SWEEP	354C	AL	RE
2	EA	SURFACE CLOSER	1431 CPS	EN	SA
1	EA	THRESHOLD	2705AT	AL	PE
1	EA	REMOVABLE MULLION	L980		
1	EA	MULLION CYLINDER KIT	64 980C1		SA

HW SET: 13 (EXTERIOR- DOUBLE DOOR- 26)

6	EA	HINGE	T4A3386	US32D	MK
1	EA	EXIT DEVICE	16-56-8804 862 32D	US32D	SA
1	EA	EXIT DEVICE (RHR EXIT ONLY)	8810	US32D	SA
2	SET	DOOR SEAL	957C		
2	EA	SWEEP	354C	AL	RE
2	EA	SURFACE CLOSER	1431CPS	EN	SA
1	EA	THRESHOLD	2705AT	AL	PE

HW SET: 14 (EXTERIOR- DOUBLE DOOR - 27)

6	EA	HINGE	T4A3386	US32D	MK
1	EA	EXIT DEVICE	56-8804 862 32D	US32D	SA
1	EA	EXIT DEVICE (RHR EXIT ONLY)	8810	US32D	SA
2	SET	DOOR SEAL	957C		
2	EA	SWEEP	354C	AL	RE
2	EA	SURFACE CLOSER	1431CPS	EN	SA

RENOVATIONS TO:
 North Haven Schools Security Upgrades
 Bid Documents
 Addendum No. 2 - October 13, 2020
 JSA Project #2020 | Centek #20092

1	EA	THRESHOLD	2705AT	AL	PE
1	EA	REMOVABLE MULLION	L980		
1	EA	MULLION CYLINDER KIT	64 980C1		SA

NOTE: DOORS HAVE UNEQUAL LEAFS

HW SET: 15 (EXTERIOR DOOR - 28)

1	EA	EXIT DEVICE	56-8804 862 32D	US32D	SA
1	EA	MCKINNEY HARNESS	QC-C0039		MK
3	EA	HINGE	TA2314	US32D	SA
1	SET	DOOR SEAL	957C		
1	EA	SWEEP	354C		
1	EA	THRESHOLD	2705AT	AL	PE
1	EA	SURFACE CLOSER	1431CPS	EN	SA
1	EA	CYLINDER		US34D	SA

GREEN ACRES SCHOOL

HW SET: 1 (EXTERIOR- DOUBLE DOOR - 1)

1	EA	ELECTRIC STRIKE	HES-9600		HE
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HW SET: 2 (EXTERIOR- DOUBLE DOOR - 2)

1	EA	RIM DEVICE	ED-5200-MELR	US26D	CR
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HW SET: 6 (EXTERIOR- DOUBLE DOOR - 6)

1	EA	ELECTRIC STRIKE	1600 CLB		HE
1	EA	DOOR LOOP	TSB-C		SU

HW SET: 7 (EXTERIOR- DOUBLE DOOR - 7)

1	EA	ELECTRIC STRIKE (UPGRADE EX.)	HES-9600		HE
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HW SET: 8 (EXTERIOR- DOUBLE DOOR - 8)

1	EA	HINGE	TA386 4.5x4.5 QC8 32D		MK
1	EA	DOOR LOOP	TSB-C		SU
1	EA	MCKINNEY HARNESS			MK

HW SET: 12 (EXTERIOR- DOUBLE DOOR - 12)

1	EA	RIM DEVICE	ED-5200-MELR	US26D	CR
1	EA	DOOR LOOP	TSB-C		SU

HW SET: 15 (EXTERIOR- DOUBLE DOOR - 15)

DOOR HARDWARE

1	EA	RIM DEVICE	ED-4200-MELR	US26D	CR
1		KEY REMOVABLE MULLION	908 BKM		CR
1	EA	RIM DEVICE	ED-5200		CR

HW SET: 16 (EXTERIOR- DOUBLE DOOR - 16)

1	EA	MOTION SENSOR	SREX-100		AC
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HW SET: 20 (INTERIOR WOOD DOOR - 20)

1	EA	ELECTRIC STRIKE	1500C	630	HE
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HW SET: 22 (EXTERIOR DOOR - 22)

1	EA	ELECTRIC STRIKE	HES-9600		HE
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HW SET: 23 (INTERIOR WOOD DOOR - 23)

1	EA	LOCKSET	CL3357	NZD26D	CR
1	EA	ELECTRIC STRIKE	1500C	US26D	HE

Clintonville Elementary School

HW SET: 1 (EXTERIOR - DOUBLE DOOR - 1)

1	EA	MOTION SENSOR	SREX-100		AC
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HW SET: 2 (INTERIOR DOOR - 2A/2B)

1	EA	ELECTRIC STRIKE	1500C	US26D	HE
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HW SET: 6 (EXTERIOR - DOUBLE DOOR - 6)

1	EA	(ETR) EXISTING TO REMAIN	HES-9400		HE
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HW SET: 8 (EXTERIOR - DOUBLE DOOR - 8,14)

1	EA	ELECTRIC STRIKE	HES-9600		HE
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HW SET: 12 (EXTERIOR - DOUBLE DOOR - 12)

1	EA	(ETR) EXISTING TO REMAIN	9400		
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HW SET: 16 (EXTERIOR - DOUBLE DOOR - 16)

1	EA	MAGNALOCK	M62	SU
1	EA	MOTION SENSOR	SREX-100	AC
1	EA	PUSH TO EXIT	TS14	AC

HW SET: 18 (INTERIOR DOOR)

1	EA	LOCKSET	CL3357	NZD26D	CR
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Montowese Elementary School

HW SET: 1 (EXTERIOR DOOR - 1,7)

1	EA	MOTION SENSOR	SREX-100	AC
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HW SET: 4

1	EA	RIM DEVICE	ED-5200-MELR-K157-P12	US26D	CR
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HW SET: 10

2	EA	RIM DEVICE	ED-5200-XK157XP12 32D	CR
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HW SET: 12

1	EA	RIM DEVICE	ED-5200-MELR XK157XP12 32D	CR
1	EA	DOOR LOOP	TSB-C	SU
1	EA	MCKINNEY HARNESS		MK

HW SET: 16

1	EA	RIM DEVICE	ED-5200-MELR XK157XP12 32D	CR
1	EA	DOOR LOOP	TSB-C	SU

HW SET: 19A (INTERIOR DOOR)

1	EA	LOCKSET	CL3357	NZDUS3	CR
1	EA	ELECTRIC STRIKE	1500C	US3	SAR

HW SET: 19B (INTERIOR DOOR-19B)

1	EA	LOCKSET	CL3357	CR
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North Haven Middle School

HW SET: 1 (MAIN OFFICE)

1	EA	MORTISE LOCK	ML2057	CR
1	EA	ELECTRIC STRIKE	1600 CLB	HE

North Haven High School

HW SET: 1 (EXTERIOR - TRIPLE DOOR-1)

1	EA	RIM DEVICE	ED-5200-MELR XM52	CR
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HW SET: 2 (EXTERIOR DOOR - 2)

1	EA	ELECTRIC STRIKE	HES-9600	HES
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HW SET: 8 (EXTERIOR - DOUBLE DOOR - 8)

1	EA	ELEC. MORTISE LOCK	ML20905	CR
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HW SET: 21 (EXTERIOR - DOUBLE DOOR - 21)

1	EA	RIM DEVICE	ED-5820-MELRXM55XM52	CR
1	EA	DOOR LOOP	TSB-C	SU
1	EA	1 AMP POWER SUPPLY	AQD2	SU

HW SET: 22 (EXTERIOR - DOUBLE DOOR - 22)

1	EA	RIM DEVICE	ED-5200 MELR-M52	CR
1	EA	1 AMP POWER SUPPLY	AQD2	SU

HW SET: 23 (INTERIOR DOOR - 23)

1	EA	ELECTRIC STRIKE	1600 CLB	HE
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Town Annex

HW SET: 1 (REAR STAIRWELL FIRE RATED)

1	EA	ELECTRIC STRIKE	1600 CLB	612	HE
1	EA	DOOR POSITION SWITCH	DPS-M		SU

END OF SECTION