Hernando County School's

SECTION 087100 - FINISH HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes items known commercially as finish or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same sections as the doors and door frames on which they are installed.

B. This Section includes the following:

1. Hinges.
2. Key control system.
3. Lock cylinders and keys.
4. Lock and latch sets.
5. Bolts.
6. Exit devices.
7. Push/pull units.
8. Closers.
9. Overhead holders.
10. Electromagnetic holders.
11. Multi-technology single gang readers.
10. Miscellaneous door control devices.
11. Door trim units.
12. Protection plates.
13. Weatherstripping for exterior doors.
14. Automatic drop seals (door bottoms).
15. Astragals or meeting seals on pairs of doors.
16. Thresholds.
17. Sliding door hardware.

C. Related Requirements:

1. Section [xxxxx] "Architectural Casework" for cabinet hardware.
2. Section [xxxxx] "Steel Doors and Frames" for silencers integral with hollow metal frames.
3. Section [xxxxx] "Electronic Access Control" for interfacing electronic access control system with electronic hardware specified in this Section.

1.3 SUBMITTALS

A. 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.

B. Final hardware schedule coordinated with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Final Hardware Schedule Content: Based on hardware indicated, organize schedule into "hardware sets" indicating complete designations of every item required for each door or opening. Include the following information:

a. Type, style, function, size, and finish of each hardware item.
b. Name and manufacturer of each item.
c. Fastenings and other pertinent information.
d. Location of each hardware set cross referenced to indications on Drawings and hardware sets in this section.
e. Explanation of all abbreviations, symbols, and codes contained in schedule.
f. Mounting locations for hardware.
g. Door and frame sizes and materials.
h. Keying information.

2. Submittal Sequence: Submit schedule at earliest possible date particularly where acceptance of hardware schedule must precede fabrication of other work that is critical in the Project construction schedule. Include with schedule the product data, samples, shop drawings of other work affected by door hardware, and other information essential to the coordinated review of schedule.

3. Keying Schedule: Submit separate detailed schedule indicating clearly how the Owner's final instructions on keying of locks has been fulfilled.

C. Templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

1.4 QUALITY ASSURANCE

A. Single Source Responsibility: Obtain each type of hardware (latch and lock sets, hinges, closers, etc.) from a single manufacturer.

B. Supplier Qualifications: A recognized architectural door 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 employs an experienced architectural hardware consultant (AHC) who is available to Owner, Architect, and Contractor, at reasonable times during the course of the Work, for consultation.

1. Require supplier to meet with Owner to finalize keying requirements and to obtain final instructions in writing.

C. Fire-Rated Openings: Provide door hardware for fire-rated openings that complies with NFPA Standard No. 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and are identical to products tested by UL, Warnock Hersey, FM, or other testing and inspecting organization acceptable to authorities having jurisdiction for use on types and sizes of doors indicated in compliance with requirements of fire-rated door and door frame labels.

1.5 PRODUCT HANDLING

A. Tag each item or package separately with identification related to final hardware schedule, and include basic installation instructions with each item or package.

B. Packaging of door hardware is responsibility of supplier. As material is received by hardware supplier from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set number to match set numbers of approved hardware schedule. Two or more identical sets may be packed in same container.

C. Inventory door hardware jointly with representatives of hardware supplier and hardware installer until each is satisfied that count is correct.

D. Deliver individually packaged door hardware items promptly to place of installation (shop or Project site).

E. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of the Work will not be delayed by hardware losses both before and after installation.

1.6 WARRANTY

A. The material furnished shall be warranted for one year after installation or longer as the individual manufacturer’s warranty permits.

B. Overhead door closers shall be warranted in writing by the manufacturer against failure due to defective materials and workmanship for a period of ten (10) years commencing on the Date of Final Completion and Acceptance, and in the event of failure, the manufacturer is to promptly repair and replace the defective closers with new closers at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Butt Hinges and Continuous Hinges:
   a. Ives Hardware (Basis of Design)
   b. Hager Hinge Co.
   c. Stanley Hardware.

Description	Catalog #	Finish	Manufacturer
Continuous Hinge	224XY	628	IVE
HW Hinge	3CB1HW 4.5X4.5 NRP	630	IVE
HW Hinge	3CB1HW 4.5X4.5	652	IVE
Hinge	3CB1 4.5X4.5 NRP	630	IVE
Hinge	3CB1 4.5X4.5	652	IVE
Hinge	3PB1 4.5X4.5	652	IVE
Invisible Hinge	204C	626	SOS

2. Key Control System:
   a. Key Control Systems, Inc.
   b. Telkee Inc.

3. Locks and Latches:
   a. Schlage Lock.

Description	Catalog #	Finish	Manufacturer
Primus K-I-L CYL	20-765	626	SCH
FSIC Core	23-030	626	SCH
Primus Core	20-740	626	SCH
Electrified Lock	ND96PEU RHO	626	SCE
Storeroom Lock w/Tac	ND96PD 8RO RHO	626	SCH
Storeroom Lock	ND96PD RHO	626	SCH
Lock Protector	CLP-106	630	DON
Classroom Function	ND70PD RHO	626	SCH
Privacy	ND40S RHO	626	SCH
Exit X Blank Outside	ND25D RHO	626	SCH
Cabinet Latch	CL11	626	IVE

All Classrooms shall receive Secure Classroom Lock (Storeroom) Function.

4. Cylinders:
   a. Schlage Lock.

Description	Catalog #	Finish	Manufacturer
Rim Cylinder	20-057-ICX	626	SCH
Mortise Cylinder	20-061-ICX	626	SCH

5. Surface Bolts and Automatic Flush Bolts:
   a. Rockwood Manufacturing Company.
   b. Glynn-Johnson Corp.
   c. Ives Hardware.

Description	Catalog #	Finish	Manufacturer
Surface Bolt	SB360 12” T	604	IVE
Const Latching Bolt	FB52	630	IVE

6. Exit/Panic Devices:
   a. Von Duprin; Allegion.

Description	Catalog #	Finish	Manufacturer
Delayed Egress Panic	CX-98-L-E996-SNB	626	SCE
Panic Hardware	HH-LD-9847-EO-SNB	626	VON
Fire Exit Hardware	98-L-F-06	626	VON
Panic Hardware	98-EO	626	VON
Panic Hardware	98-DT-990	626	VON
Panic Hardware	98-NL-990	626	VON
Panic Hardware	LD-98-EO	626	VON
Panic Hardware	LD-98-L-NL-06	626	VON
Panic Hardware	98-L-BE-06	626	VON

7. Push/Pulls, Door Trim, Kick Plates:
   a. Rockwood Manufacturing Company.
   b. Quality
   c. Ives Hardware.

Description	Catalog #	Finish	Manufacturer
Push Plate	8200 6” x 16”	630	IVE
Pull Plate	8303 10” x 16”	630	IVE
Kick Plate	8400 10” x 2” LDW B4E	630	IVE

8. Overhead Closers:
   a. LCN.

Description	Catalog #	Finish	Manufacturer
Surface Closer	4111 EDA	689	LCN
Surface Closer	4111 SCUSH	689	LCN
Surface Closer	4040XP RW/62A	689	LCN
Surface Closer	4011	689	LCN

9. Electromagnetic Holders:
   a. LCN.
   b. Rixson.

Description	Catalog #	Finish	Manufacturer
Fire/Life Wall Mag Hold	SEM7830	689	LCN

10. Multi-Technology Single Gang Reader;
    a. Schlage Electronics – MT15

11. Door Control Devices:
    a. Ives Hardware.
    b. Corbin Russwin Architectural Hardware.
    c. Glynn-Johnson Corp.

12. Door Stripping, Seals, Door Bottoms, Rain Drips, Thresholds:
    a. Pemko Manufacturing Co., Inc.
    b. National Guard Products, Inc.
    c. Reese Enterprises, Inc.
    d. Zero International, Inc.

Description	Catalog #	Finish	Manufacturer
Seals	188S	BLK	ZER
Seals	140A	AL	ZER
Threshold	65A MSLA-10	AL	ZER
Rain Drip	142A	AL	ZER
Door Bottom	321AA	AL	ZER
Door Bottom	350A	Al	ZER

13. Sliding Door Hardware:
    a. Hager Companies.
    b. L. E. Johnson Products, Inc.
    c. Stanley Commercial Hardware.

14. Stops:
    a. Ives Hardware

Description	Catalog #	Finish	Manufacturer
Floor Stop	FS18S	BLK	IVE
Wall Stop	WS406/407CCV	630	IVE
Wall Stop Holder	WS45X	626	IVE
Overhead Stop	450S	630	GLY

15. Removable Mullion:
    a. Von Duprin.

Description	Catalog #	Finish	Manufacturer
Keyed Fire Rated Removable Mullion	KR9954-STAB	689	VON

16. Coordinator and Meeting Stile:
    a. Ives Hardware.

Description	Catalog #	Finish	Manufacturer
Coordinator	COR X FL	628	IVE
Meeting Stile	8193AA	AL	ZER

17. Silencers:
    a. Ives Hardware.

Description	Catalog #	Finish	Manufacturer
Silencers	SR64	GRY	IVE

2.2 SCHEDULED HARDWARE

A. Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of finish hardware are indicated in the "Hardware Schedule" at the end of this Section. Products are identified by using hardware designation numbers of the manufacturer first listed above.

1. Manufacturer's Product Designations: The product designation and name of one manufacturer are listed for each hardware type required for the purpose of establishing minimum requirements. Provide either the product designated or, where more than one manufacturer is specified under the Article "Manufacturers" in Part 2 for each hardware type, the comparable product of one of the other manufacturers that complies with requirements.

2. ANSI/BHMA designations used elsewhere in this Section or in schedules to describe hardware items or to define quality or function are derived from the following standards. Provide products complying with these standards and requirements specified elsewhere in this Section.

    a. Butts and Hinges: ANSI/BHMA A156.1.
    b. Bored and Preassembled Locks and Latches: ANSI/BHMA A156.2.
    c. Exit Devices: ANSI/BHMA A156.3.
    d. Door Controls - Closers: ANSI/BHMA A156.4.
    e. Auxiliary Locks and Associated Products: ANSI/BHMA A156.5.
    f. Architectural Door Trim: ANSI/BHMA A156.6.
    g. Template Hinge Dimensions: ANSI/BHMA A156.7.
    h. Door Controls - Overhead Holders: ANSI/BHMA A156.8.
    i. Interconnected Locks and Latches: ANSI/BHMA A156.12.
    j. Mortise Locks and Latches: ANSI/BHMA A156.13.
    k. Sliding and Folding Door Hardware: ANSI/BHMA A156.14.
    l. Closer Holder Release Devices: ANSI/BHMA A156.15.
    m. Auxiliary Hardware: ANSI/BHMA A156.16.
    n. Self-Closing Hinges and Pivots: ANSI/BHMA A156.17.
    o. Materials and Finishes: ANSI/BHMA A156.18.

2.3 MATERIALS AND FABRICATION

A. Manufacturer's Name Plate: Do not use manufacturers' products that have manufacturer's

name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise acceptable to Architect.

1. Manufacturer's identification will be permitted on rim of lock cylinders only.

B. Base Metals: Produce hardware units of basic metal and forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units by applicable ANSI/BHMA A156 series standards for each type of hardware item and with ANSI/BHMA A156.18 for finish designations indicated. Do not furnish "optional" materials or forming methods for those indicated, except as otherwise specified.

C. Fasteners: Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation. Do not provide hardware that has been prepared for self-tapping sheet metal screws, except as specifically indicated.

D. Furnish screws for installation with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. 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.

E. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent 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. Where thru-bolts are used as a means of reinforcing the work, provide sleeves for each thru-bolt or use sex screw fasteners.

2.4 HINGES

A. Templates: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.

B. Screws: Provide Phillips flat-head screws complying with the following requirements:

1. For metal doors and frames install machine screws into drilled and tapped holes.
2. For wood doors and frames install wood screws.
3. For fire-rated wood doors install #12 x 1-1/4-inch, threaded-to-the-head steel wood screws.
4. Finish screw heads to match surface of hinges or pivots.

C. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:

1. Out-Swing Exterior Doors: Nonremovable pins.
2. Interior Doors: Nonrising pins.
3. Tips: Flat button and matching plug, finished to match leaves.

D. Number of Hinges: Provide number of hinges indicated but not less than 3 hinges per door leaf for doors 90 inches or less in height and one additional hinge for each 30 inches of additional height.

1. Fire-Rated Doors: Not less than 3 hinges per door leaf for doors 86 inches or less in height with same rule for additional hinges.
2. Exterior doors shall have non-ferrous non-removable pin hinges.
3. All doors with door closers shall have ball bearing hinges.
4. Provide wide throw hinges where required for 180-degree swing.

2.5 LOCKSETS, LOCK CYLINDERS, AND KEYING

A. Standard System: Except as otherwise indicated, provide new masterkey system for Project.

B. Lock Cylinders: Equip locks with Schlage 6-pin tumbler cylinder with construction masterkey feature that permits voiding of construction keys without cylinder removal. Exterior cylinders to have Schlage PRIMUS Level III. Bitting and keys shall be factory master keyed by Schlage in order to preserve integrity of existing Grand Master System. Provide bitting list with 100 percent expansion.

C. Strikes: Provide manufacturer's standard wrought box strike for each latch or lock, with curbed lip extended to protect frame, finished to match hardware set.

D. Lock Throw: Provide minimum 3/4 inch throw of latches and 1 inch throw of deadbolts.

E. Locksets: Shall be Extra Heavy Duty cylindrical type, ND Series, Rhodes Design as manufactured by Schlage, standard cylinders with no interchangeable core cylinders. All locksets shall be 2-3/4 inch backset. No exposed screws will be permitted on lock trim. No hollow or filled levers will be permitted.

1. All Classrooms to have **Secure Classroom** (**STOREROOM)** Function locksets

F. Knurled levers shall be furnished at entry side of doors to mechanical equipment, electrical equipment, janitor, hazardous storage, and other rooms which are potentially dangerous to blind or visually handicapped persons.

G. Metals: Construct lock cylinder parts from brass or bronze, stainless steel, or nickel silver.

H. Comply with Owner's instructions for masterkeying and, except as otherwise indicated, provide individual change key for each lock that is not designated to be keyed alike with a group of related locks.

1. Permanently inscribe each key with number of lock that identifies cylinder manufacturer's key symbol, and notation, "DO NOT DUPLICATE."
2. Permanent keys and bitting list shall be shipped directly from Schlage Lock Co. to the Owner.
3. Provide three (3) each change keys per lock, ten (10) each grand master and master keys and six (6) construction keys.
4. Provide one hundred (100) extra key blanks.

I. Key Material: Provide keys of nickel silver only.

2.6 EXIT DEVICES

A. Devices shall be Von Duprin 98/99 Series in types and functions specified. Trim to be 990NL active and 990DT inactive at exterior openings and 996L at interior fire rated openings.

B. Surface strikes shall be roller type and shall come complete with a plate underneath to prevent movement and shall be provided with a dead latching feature to prevent latchbolt tampering.

2.7 KEY CONTROL SYSTEM

A. Provide a key control system including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150 percent of the number of locks required for the Project.

1. Provide complete cross index system set up by Hardware Supplier, and place keys on markers and hooks in the cabinet as determined by the final key schedule.

2. Provide hinged-panel type cabinet for wall mounting.

2.8 CLOSERS AND DOOR CONTROL DEVICES

A. Door Closer shall be LCN Series 4000 Series with non-ferrous covers, forged steel arms, separate valves for adjusting backcheck, closing and latching cycles and adjustable springs to provide up to 50% increase in spring power. Provide closers with parallel arms mounted on all doors opening into corridors or other public spaces. Mount units to permit 180-degree door swing wherever wall conditions permit. Furnish with non-hold open arms unless indicated.

B. Size of Units: Except as otherwise specifically indicated, comply with the manufacturer's recommendations for size of door control unit depending on size of door, exposure to weather, and anticipated frequency of use.

C. Electronic Security Package: Provide complete Ingersoll Rand SMS access control hardware at scheduled doors including all required Interfaces to TCHW’s Chexits, Power Boosters, transfer hinges, etc. Provide interconnecting cable, SMS Access Controller, Controller IP Interface, Card reader interface, SMS power supply & housing, and door status /position switches. Interface to fire alarm system to release upon alarm signal.

2.9 ELECTROMAGNETIC HOLDERS

A. Electromagnetic Door Holders: BHMA A156.15, Grade 1; wall-mounted electromagnetic single unit with strike plate attached to swinging door; coordinated with fire detectors and interface with fire alarm system for labeled fire-rated door assemblies.

2.10 MULTI-TECHNOLOGY SINGLE GANG READER

A. Description: Uses proximity technology as a smart credentials reader, capable of interfacing with most credential types. Uses an open architecture platform designed to work with industry standards and common access control system interfaces. Single gang design with easy-to-connect wiring harness. Operates on a Wiegand interface and is completely ISO complaint.

2.11 DOOR TRIM UNITS

A. Fasteners: Provide manufacturer's standard exposed fasteners for door trim units consisting of either machine screws or self-tapping screws.

B. Fabricate protection plates not more than 1-1/2 inches less than door width on hinge side and not more than 1/2 inch less than door width on pull side by height indicated.

1. Metal Plates: Stainless steel, 0.050 inch (U.S. 18 gage).

2.12 WEATHERSTRIPPING AND SEALS

A. General: Provide continuous weatherstripping on exterior doors and smoke, light, or sound seals on interior doors where indicated or scheduled. Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

B. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strip is easily replaceable and readily available from stocks maintained by manufacturer.

C. Weatherstripping at Jambs and Heads: Provide bumper-type resilient insert and metal retainer strips, surface applied unless shown as mortised or semimortised, and of following metal, finish, and resilient bumper material:

1. Extruded aluminum with natural anodized finish, 0.062-inch minimum thickness of main walls and flanges.
2. Brush pile insert of polypropylene or nylon woven pile and aluminum strip backing complying with AAMA 701.2.

D. Weatherstripping at Door Bottoms: Provide threshold consisting of contact-type resilient insert and metal housing of design and size shown and of following metal, finish, and resilient seal strip:

1. Extruded aluminum with natural anodized finish, 0.062-inch minimum thickness of main walls and flanges.

2.13 THRESHOLDS

A. General: Except as otherwise indicated, provide standard metal threshold unit of type, size, and profile as shown or scheduled.

2.14 SLIDING DOOR HARDWARE

A. General: BHMA A156.114; complete sets including overhead rails, hangers, supports, bumpers, and accessories indicated.

2.15 ASTRAGALS

A. Provide removable astragals at all double doors. No fixed astragals are permitted.

2.16 HARDWARE FINISHES

A. Match items to the manufacturer's standard color and texture finish for the latch and lock sets (or push-pull units if no latch or lock sets).

B. Provide finishes that match those established by BHMA.

C. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.

D. The designations used in the Hardware Schedule and elsewhere to indicate hardware finishes are the industry-recognized standard commercial finishes, except as otherwise noted.

1. 604 - Zinc Plated and Dichromate Sealed.
2. 626 - Satin Chromium Plate.
3. 628 - Satin Aluminum, Clear Anodized.
4. 630 - Satin Stainless Steel
5. 689 - Aluminum Painted
6. AL - Aluminum
7. BLK - Black
8. GRY – Gray

PART 3 - EXECUTION

3.1 INSTALLATION

A. A **pre-installation meeting** shall be conducted prior to installation of hardware. Hardware manufacturer’s representative shall be present at that meeting to inspect conditions under which installation is to take place and to instruct installers as required. A **post inspection** will be completed to review all openings for proper installation of all hardware and a **substantial completion report** will be provided.

B. Mount hardware units at heights indicated in following applicable publications, except as specifically indicated or required to comply with governing regulations and except as otherwise directed by Architect.

1. "Recommended Locations for Builders Hardware for Standard Steel Doors and

Frames" by the Door and Hardware Institute.
2. NWWDA Industry Standard I.S.1.7, "Hardware Locations for Wood Flush Doors."

C. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Where cutting and fitting is required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation or application of surface protection with finishing work specified in the Division 9 Sections. Do not install surface-mounted items until finishes have been completed on the substrates involved.

D. Set units level, plumb, and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

E. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.

F. Overhead door closers to be through-bolted.

G. Set thresholds for exterior doors in full bed of sealant complying with requirements specified in Section 079200 "Joint Sealants."

H. Weatherstripping and Seals: Comply with manufacturer's instructions and recommendations to the extent installation requirements are not otherwise indicated.

3.2 ADJUSTING, CLEANING, AND DEMONSTRATING

A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.

1. 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 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.

B. Clean adjacent surfaces soiled by hardware installation.

C. Instruct Owner's personnel in the proper adjustment and maintenance of door hardware and hardware finishes.

D. Six-Month Adjustment: Approximately six months after the date of Substantial Completion, the Installer, accompanied by representatives of the manufacturers of latchsets and locksets and of door control devices, and of other major hardware suppliers, shall return to the Project to 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.

3.3 HARDWARE SCHEDULE

A. Hardware Set Schedule to be provided by Architect.

END OF SECTION 087100