

**Addendum #2**

Date: July 12, 2017

Project: DEMA – New Storage Building

Project #: MJ4501000000

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The work herein shall be considered part of the bid documents for the referenced project and carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Acknowledge receipt of addendum on the bid form as indicated.

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**Clarifications**

1. Provide junction boxes above D01 and D05 with conduit and branch circuit wiring from panel PLA circuit #37. Provide 20 A/1P circuit breaker in panel and 2#12+1#12G-3/4" conduit to this junction boxes above doors.
2. Thermostats to be 7-day programmable.
3. Two cord reels (shown on E9.1) are to be removed from project.
4. New fire alarm system to communicate with fire alarm system in the main building. Provide interconnecting wiring and software/hardware upgrade as necessary.
5. Warranty period of all building components is two years.
6. Concrete ramps (10) for at existing sheds (sheds were removed by owner) to be demolished by contractor. Reference sheet CC-03.
7. Contractor to own all CCR reports and as-builts to satisfy NCC land use requirements.
8. Contractor to furnish and install all piping, valves, regulator, and stem assembly to owner provided propane tank. Concrete pad and bollards by general contractor.
9. Contractor to furnish, import, and install, engineered fill as necessary to achieve finish building slab and ramp elevations.
10. Contractor to furnish and install 2" water line to existing water valve.
11. All vinyl faced fiberglass insulation to fill depth of wall cavity.
12. Roof insulation to be R-38.
13. For sealed concrete in drawings, see specifications 033511 for details.

14. Contractor to provide, furnish, and install all necessary trenching, excavation, backfill, and duct bank as required for the conduits identified on sheet E9.1 extending from the mechanical room in the existing building to new building for electrical, fire alarm, and low voltage wiring.
15. Contractor to furnish and install snow guards equal to Alpine SnowGuards (<http://www.alpinesnowguards.com>) ASG4000G Standing Seam Two-Pipe Snow Guard.

### Changes to Specifications

The following specifications were added:

- Door hardware set and schedule
- Aluminum clad wood window
- Fire alarm

The following specification sections are to be omitted:

- Unit Masonry
- Masonry Mortaring and Grouting
- Aluminum – Framed Entrances and Storefronts

### Changes to Drawings

1. SK-A.1 – Door schedule with updated door material and hardware set. 4/A6.1 updated to show aluminum clad wood frame.
2. SK-A.2 – 5/A6.1 - Garage doors to show pvc trim.
3. E.9.2 – New Fire Alarm Plan.

### Questions

1. Masonry work is mentioned in the bid invitation and addendum #1. Foundation walls are shown as concrete, and the above grade walls are shown as wood framed. Please clarify if any masonry work is required.  
**There is no masonry work required.**
2. Please confirm that testing of concrete, soils, etc. will be performed by the owner.  
**Contractor is responsible for testing concrete only.**
3. Are background checks required?  
**No, not required.**
4. Are photo ID badges required?  
**No, not required.**

5. Is temporary fencing required to contain the LOD?  
**No, not required.**
6. Please provide a door hardware schedule.  
**See specifications.**
7. Please provide a spec for the polycarbonate roof panels.  
**Polycarbonate roof panels to be equal to Coverlite Corrugated Polycarbonate Panel as distributed and fabricated by Amerilux ([www.ameriluxinternational.com](http://www.ameriluxinternational.com)). Contractor to furnish and install 2x6 wood curb at perimeter of skylight/polycarbonate panel 12" above roof. Contractor to furnish and install sheet metal flashing at base and top of curb around entire perimeter and a cricket behind each skylight.**
8. Please provide a wall type for the interior partition in Storage 02.  
**Wall type to be P2.**
9. Ceramic tile walls are noted in Toilet 04. Does the ceramic go full height or is it a wainscot?  
**4'-0" wainscot.**
10. There is one W1 window shown on this project. There is a spec section for Aluminum Windows, but 4/A6.1 references wood window sections. Please clarify the material for window W1. If it is wood, please provide a spec.  
**Aluminum clad wood window. See specifications.**
11. Is the GC responsible for the propane tank?  
**No, owner to procure vendor who will supply propane tank. Contractor to install and hook up as necessary. See clarification.**
12. Site contractor: Is there a striping detail? It is unclear what is being required.  
**See attached marked up drawing CC-04.**
13. On the print door schedule states wood doors but the spec calls for hollow metal doors. Which is it?  
**All doors are hollow metal.**
14. Is Atas roof panels approval on this project?  
**Atas roof panels is an acceptable substitution.**

**End**

## Hardware Schedule DEMA Storage Building

Hardware Set #: 01 - SGL DRS HMD & HMF EXTERIOR

Opening to Have:

Qty Description	Finish	Mfg
3 HINGE CB199 4.5 x 4.5 x SEC. ST. x NRP	630	STANLEY
1 MORTISE CYLINDER (IC) 1E74 x C4 x RP3 x ABC x CORMAX	626	BEST
1 RIM CYLINDER (IC) 1E72 x RP x ABC x CORMAX	626	BEST
1 POWER TRANSFER PT1000 x EZ	628	ABH
1 POWER SUPPLY ELR-151	600	PRECISION
1 RIM EXIT DEVICE ELR-TS-C-2103CD x 4903A x S301	630	PRECISION
1 DOOR CLOSER D-4550 x CS x SRI	689	STANLEY
1 WIRE HARNESS WH-26"		STANLEY
1 WIRE HARNESS WH-192"		STANLEY
1 WIRE HARNESS WH-6E"		STANLEY
1 KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	TRIMCO
1 DOOR CONTACT MC-7 x SPDT x 1" DIA		SDC
1 TEAR DROP SEAL 797B x HEAD & JAMBS	BLK	REESE
1 RAIN DRIP R201A x FULL WIDTH + 4"	628	REESE
1 THRESHOLD S483APR x SRS x FHSL x FULL WIDTH	628	REESE
1 DOOR SWEEP 772A x FULL WIDTH	628	REESE
1 CARD READER BY SECURITY CONTRACTOR		

Hardware Set #: 02 - SGL DRS HM & HMF

Opening to Have:

Qty Description	Finish	Mfg
3 HINGE CB168 4.5 x 4.5	652	STANLEY
1 OFFICE LOCKSET 93K7-B-15D-S3 x ABC x CORMAX	626	BEST
1 KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	TRIMCO
1 MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	TRIMCO
1 WALL STOP 1270WV	630	TRIMCO
3 SILENCERS 1229A	GRAY	TRIMCO

Hardware Set #: 03 - SGL DRS WD & HMF

Opening to Have:

Qty Description	Finish	Mfg
3 HINGE CB168 4.5 x 4.5 x NRP	652	STANLEY
1 PRIVACY LOCKSET 93K7-D-15D-S3 x ABC x CORMAX	626	BEST
1 KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	TRIMCO
1 MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	TRIMCO
1 WALL STOP 1270WV	630	TRIMCO
3 SILENCERS 1229A	GRAY	TRIMCO

Hardware Set #: 04 - PRS DRS WD & HMF

Opening to Have:

Qty Description	Finish	Mfg
6 HINGE CB168 4.5 x 4.5 x NRP	652	STANLEY
1 FLUSH BOLT 3917 1" x 6-3/4" x 12" x TOP ONLY	626	TRIMCO
1 STOREROOM LOCKSET 93K7-D-15D-S3-7/8 x ABC x CORMAX	626	BEST
1 ASTRAGAL A548B x BEVEL EDGE x FULL HEIGHT	630	ABH
2 KICK PLATE 16" x 1" LDW .050 x B4E x CTSK	630	TRIMCO
2 MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	TRIMCO
2 O/H CONCEALED STOP 4014 x HO (36" TO 48" DR)	630	ABH
2 SILENCERS 1229A	GRAY	TRIMCO

**SECTION 08 52 00**  
**WOOD WINDOWS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Factory fabricated wood windows.
- B. Glazing.
- C. Operating hardware.
- D. Insect screens.
- E. Wood trim for exterior finishing.

**1.02 RELATED REQUIREMENTS**

- A. Section 06 10 00 - Rough Carpentry: Rough opening framing.
- B. Section 07 92 00 - Joint Sealants: Sealing joints between frames and adjacent construction.

**1.03 REFERENCE STANDARDS**

- A. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/Specification for windows, doors, and skylights.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Show component dimensions, anchorage and fasteners, and glass.
- C. Shop Drawings: Indicate opening dimensions, framed opening tolerances, affected related work, and installation requirements.
- D. Test Reports: Prior to submitting shop drawings or starting fabrication, submit test report(s) by independent testing agency showing compliance with performance requirements in excess of those prescribed by specified grade.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with not less than three years of documented experience.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Protect factory finished surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond when exposed to sunlight or weather.

**1.07 FIELD CONDITIONS**

- A. Do not install sealants when ambient temperature is less than 40 degrees F.
- B. Maintain this minimum temperature during and after installation of sealants.

**1.08 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a 2 year period after Date of Substantial Completion.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Aluminum Clad Wood Windows:
  - 1. Andersen Windows, Inc; E-Series Casement Windows: [www.andersenwindows.com/sle](http://www.andersenwindows.com/sle).
  - 2. Pella Corp: [www.pella.com](http://www.pella.com).

## 2.02 WOOD WINDOWS

- A. Wood Windows: Wood frame and sash, factory fabricated and assembled.
  - 1. Color: As selected by Architect from manufacturer's standard range.
  - 2. Configuration: Outward opening casement.
  - 3. Wood Species: Clear pine, preservative treated using treatment type suitable for required finish.
  - 4. Frame and Sash Members: Mortise and tenon joints. Glue and steel pin joints to hairline fit, weather tight.
  - 5. Metal Cladding: Formed aluminum, factory finished, factory fit to profile of wood members.
  - 6. Clearances and Shim Spacing: Minimum required for installation and dynamic movement of perimeter seal.
  - 7. Fasteners: Concealed from view.
  - 8. Internal Drainage of Glazing Spaces to Exterior: Weep holes.
  - 9. Insect Screen: Locate on inside of windows.
  - 10. Operable Units: Double weatherstripped.

## 2.03 COMPONENTS

- A. Glazing: Double glazed, clear, Low-E coated, argon filled, with glass thicknesses as recommended by manufacturer for specified wind conditions.
- B. Insect Screens: Extruded aluminum frame with mitered and reinforced corners; screen mesh taut and secure to frame; secured to window with adjustable hardware allowing screen removal without use of tools.
  - 1. Hardware: Spring loaded steel pins; four per screen unit.
  - 2. Screen Mesh: Vinyl-coated fiberglass, window manufacturer's standard mesh.
  - 3. Frame Finish: Baked enamel, color to match window interior color.
- C. Operable Sash Weatherstripping: Wool pile; permanently resilient, profiled to effect weather seal.
- D. Fasteners: Stainless steel.
- E. Sealant and Backing Materials: As specified in Section 07 92 00 of types as indicated.
- F. Accessories: Provide related flashings, and anchorage and attachment devices.

## 2.04 PERFORMANCE REQUIREMENTS

- A. Comply with AAMA/WDMA/CSA 101/I.S.2/A440 requirements for the specific window type in accordance with the following:
  - 1. Performance Class (PC): R.

## 2.05 ACCESSORIES

- A. Operator: Lever action handle fitted to projecting sash arms with limit stops; baked enamel finish.
- B. Projecting Sash Arms: Cadmium plated steel, friction pivot joints with nylon bearings, removable pivot clips for cleaning.

## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.
- B. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.
- C. Install operating hardware.

**3.02 TOLERANCES**

- A. Maximum Variation from Level or Plumb: 1/16 inch per 3 ft non-cumulative or 1/8 inch per 10 ft, whichever is less.

**3.03 ADJUSTING**

- A. Adjust hardware for smooth operation and secure weathertight closure.

**3.04 CLEANING**

- A. Remove protective material from factory finished surfaces.
- B. Wash surfaces by method recommended and acceptable to window manufacturer; rinse and wipe surfaces clean.

**END OF SECTION**

**SECTION 28 31 00**  
**FIRE DETECTION AND ALARM**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Fire alarm system design and installation, including all components, wiring, and conduit.
- B. Circuits from protected premises to supervising station, including conduit.
- C. Maintenance of fire alarm system under contract for specified warranty period.

**1.02 RELATED REQUIREMENTS**

- A. Section [ ]: Materials and methods for work to be performed by this installer.

**1.03 REFERENCE STANDARDS**

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines.
- B. IEEE C62.41.2 - Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and less) AC Power Circuits.
- C. NFPA 70 - National Electrical Code.
- D. NFPA 72 - National Fire Alarm and Signaling Code.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Drawings must be prepared using AutoCAD Release 11\_.
  - 1. Owner will provide floor plan drawings for Contractor's use; verify all dimensions on Owner-provided drawings.
- C. Evidence of designer qualifications.
- D. Design Documents: Submit all information required for plan review and permitting by authorities having jurisdiction, including but not limited to floor plans, riser diagrams, and description of operation:
  - 1. Copy (if any) of list of data required by authority having jurisdiction.
  - 2. NFPA 72 "Record of Completion", filled out to the extent known at the time.
  - 3. Clear and concise description of operation, with input/output matrix similar to that shown in NFPA 72 Appendix A-7-5-2.2(9), and complete listing of software required.
  - 4. System zone boundaries and interfaces to fire safety systems.
  - 5. Location of all components, circuits, and raceways; mark components with identifiers used in control unit programming.
  - 6. Circuit layouts; number, size, and type of raceways and conductors; conduit fill calculations; spare capacity calculations; notification appliance circuit voltage drop calculations.
  - 7. List of all devices on each signaling line circuit, with spare capacity indicated.
  - 8. Manufacturer's detailed data sheet for each component, including wiring diagrams, installation instructions, and circuit length limitations.
  - 9. Description of power supplies; if secondary power is by battery include calculations demonstrating adequate battery power.
  - 10. Certification by either the manufacturer of the control unit or by the manufacturer of each other component that the components are compatible with the control unit.
  - 11. Certification by the manufacturer of the control unit that the system design complies with the contract documents.
  - 12. Certification by Contractor that the system design complies with the contract documents.
- E. Evidence of installer qualifications.

- F. Evidence of instructor qualifications; training lesson plan outline.
- G. Evidence of maintenance contractor qualifications, if different from installer.
- H. Inspection and Test Reports:
  - 1. Submit inspection and test plan prior to closeout demonstration.
  - 2. Submit documentation of satisfactory inspections and tests.
  - 3. Submit NFPA 72 "Inspection and Test Form," filled out.
- I. Operating and Maintenance Data: See Section 01 78 00 for additional requirements; revise and resubmit until acceptable; have one set available during closeout demonstration:
  - 1. Complete set of specified design documents, as approved by authority having jurisdiction.
  - 2. Additional printed set of project record documents and closeout documents, bound or filed in same manuals.
  - 3. Contact information for firm that will be providing contract maintenance and trouble call-back service.
  - 4. List of recommended spare parts, tools, and instruments for testing.
  - 5. Replacement parts list with current prices, and source of supply.
  - 6. Detailed troubleshooting guide and large scale input/output matrix.
  - 7. Preventive maintenance, inspection, and testing schedule complying with NFPA 72; provide printed copy and computer format acceptable to Owner.
  - 8. Detailed but easy to read explanation of procedures to be taken by non-technical administrative personnel in the event of system trouble, when routine testing is being conducted, for fire drills, and when entering into contracts for remodeling.
- J. Project Record Documents: See Section 01 78 00 for additional requirements; have one set available during closeout demonstration:
  - 1. Complete set of floor plans showing actual installed locations of components, conduit, and zones.
  - 2. "As installed" wiring and schematic diagrams, with final terminal identifications.
  - 3. "As programmed" operating sequences, including control events by device, updated input/output chart, and voice messages by event.
- K. Closeout Documents:
  - 1. Certification by manufacturer that the system has been installed in compliance with his installation requirements, is complete, and is in satisfactory operating condition.
  - 2. NFPA 72 "Record of Completion", filled out completely and signed by installer and authorized representative of authority having jurisdiction.
  - 3. Certificate of Occupancy.
  - 4. Maintenance contract.
- L. Maintenance Materials, Tools, and Software: Furnish the following for Owner's use in maintenance of project.
  - 1. Furnish spare parts of same manufacturer and model as those installed; deliver in original packaging, labeled in same manner as in operating and maintenance data and place in spare parts cabinet.
  - 2. In addition to the items in quantities indicated in PART 2, furnish the following:
    - a. All tools, software, and documentation necessary to modify the fire alarm system using Owner's personnel; minimum modification capability to include addition and deletion of devices, circuits, and zones, and changes to system description, operation, and evacuation and instructional messages.
    - b. One copy, on CD-ROM, of all software not resident in read-only-memory.

#### 1.05 QUALITY ASSURANCE

- A. Designer Qualifications: NICET Level III or IV (3 or 4) certified fire alarm technician or registered fire protection engineer, employed by fire alarm control panel manufacturer,

Contractor, or installer, with experience designing fire alarm systems in the jurisdictional area of the authorities having jurisdiction.

- B. Installer Qualifications: Firm with minimum 3 years documented experience installing fire alarm systems of the specified type and providing contract maintenance service as a regular part of their business.
  - 1. Authorized representative of control unit manufacturer; submit manufacturer's certification that installer is authorized; include name and title of manufacturer's representative making certification.
  - 2. Installer Personnel: At least 2 years of experience installing fire alarm systems.
  - 3. Supervisor: NICET level III or IV (3 or 4) certified fire alarm technician; furnish name and address.
- C. Maintenance Contractor Qualifications: Same entity as installer or different entity with specified qualifications.
- D. Instructor Qualifications: Experienced in technical instruction, understanding fire alarm theory, and able to provide the required training; trained by fire alarm control unit manufacturer.

## **1.06 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Provide control panel manufacturer's warranty that system components other than wire and conduit are free from defects and will remain so for 2 years after date of Substantial Completion.
- C. Provide installer's warranty that the installation is free from defects and will remain so for 2 year after date of Substantial Completion.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Fire Alarm Control Units - Basis of Design: Match existing system in Main Building.
- B. Fire Alarm Control Units - Other Acceptable Manufacturers: Provided their products meet or exceed the performance of the basis of design product, products of the following are acceptable:
  - 1. Honeywell Security & Fire Solutions/Fire-Lite: [www.firelite.com](http://www.firelite.com).
  - 2. Provide all control units made by the same manufacturer.
- C. Initiating Devices, and Notification Appliances:
  - 1. Honeywell Security & Fire Solutions/Fire-Lite: [www.firelite.com](http://www.firelite.com).
  - 2. Same manufacturer as control units.
  - 3. Provide all initiating devices and notification appliances made by the same manufacturer.
- D. Substitutions: See Section 01 60 00 - Product Requirements.
  - 1. For other acceptable manufacturers of control units specified, submit product data showing equivalent features and compliance with contract documents.
  - 2. For substitution of products by manufacturers not listed, submit product data showing features and certification by Contractor that the design will comply with contract documents.

### **2.02 FIRE ALARM SYSTEM**

- A. Fire Alarm System: Provide a new automatic fire detection and alarm system:
  - 1. Provide all components necessary, regardless of whether shown in the contract documents or not.
  - 2. Protected Premises: Entire building shown on drawings.
  - 3. Comply with the following; where requirements conflict, order of precedence of requirements is as listed:

- a. ADA Standards for Accessible Design.
  - b. The requirements of the State Fire Marshal.
  - c. The requirements of the local authority having jurisdiction, which is State Of Delaware Fire Marshall's office.
  - d. Applicable local codes.
  - e. The contract documents (drawings and specifications).
  - f. NFPA 72; where the word "should" is used consider that provision mandatory; where conflicts between requirements require deviation from NFPA 72, identify deviations clearly on design documents.
4. Evacuation Alarm: Multiple smoke zones; allow for evacuation notification of any individual zone or combination of zones, in addition to general evacuation of entire premises.
  5. General Evacuation Zones: Each smoke zone is considered a general evacuation zone unless otherwise indicated, with alarm notification in all zones on the same floor, on the floor above, and the floor below.
- B. Supervising Stations and Fire Department Connections:
1. Public Fire Department Notification: By on-premises supervising station.
- C. Circuits:
1. Initiating Device Circuits (IDC): Class A, Style D.
  2. Signaling Line Circuits (SLC) Within Single Building: Class A, Style 7.
  3. Notification Appliance Circuits (NAC): Class A, Style Z.
- D. Spare Capacity:
1. Initiating Device Circuits: Minimum 25 percent spare capacity.
  2. Notification Appliance Circuits: Minimum 25 percent spare capacity.
  3. Speaker Amplifiers: Minimum 25 percent spare capacity.
  4. Master Control Unit: Capable of handling all circuits utilized to capacity without requiring additional components other than plug-in control modules.
- E. Power Sources:
1. Primary: Dedicated branch circuits of the facility power distribution system.
  2. Secondary: Storage batteries.
  3. Capacity: Sufficient to operate entire system for period specified by NFPA 72.
  4. Each Computer System: Provide uninterruptible power supply (UPS).

## **2.03 FIRE SAFETY SYSTEMS INTERFACES**

- A. Alarm: Provide alarm initiation in accordance with NFPA 72 for the following:

## **2.04 COMPONENTS**

- A. General:
1. Provide flush mounted units where installed in finish areas; in unfinished areas, surface mounted unit are acceptable.
  2. Provide legible, permanent labels for each control device, using identification used in operation and maintenance data.
- B. Fire Alarm Control Units, Initiating Devices, and Notification Appliances: Analog, addressable type; listed by Underwriters Laboratories as suitable for the purpose intended.
- C. Master Control Unit: As specified for Basis of Design above, or equivalent.
- D. Remote Annunciators: \_\_\_\_\_.
- E. Initiating Devices:
1. Manual Pull Stations: \_\_\_\_\_.
  2. Key Operated Pull Stations: \_\_\_\_\_.
  3. Smoke Detectors: \_\_\_\_\_.
  4. Duct Smoke Detectors: \_\_\_\_\_.

5. Heat Detectors: \_\_\_\_\_.
6. Addressable Interface Devices: \_\_\_\_\_.
- F. Notification Appliances:
  1. Bells: \_\_\_\_\_.
  2. Speakers: \_\_\_\_\_.
  3. Strobes: \_\_\_\_\_.
- G. Circuit Conductors: Copper or optical fiber; provide 200 feet extra; color code and label.
- H. Surge Protection: In accordance with IEEE C62.41.2 category B combination waveform and NFPA 70; except for optical fiber conductors.
- I. Locks and Keys: Deliver keys to Owner.
- J. Instruction Charts: Printed instruction chart for operators, showing steps to be taken when a signal is received (normal, alarm, supervisory, and trouble); easily readable from normal operator's station.
  1. Frame: Stainless steel or aluminum with polycarbonate or glass cover.
  2. Provide one for each control unit where operations are to be performed.
  3. Obtain approval of Owner prior to mounting; mount in location acceptable to Owner.
  4. Provide extra copy with operation and maintenance data submittal.

### **PART 3 EXECUTION**

#### **3.01 INSTALLATION**

- A. Install in accordance with applicable codes, NFPA 72, NFPA 70, and the contract documents.
- B. Conceal all wiring, conduit, boxes, and supports where installed in finished areas.
- C. Obtain Owner's approval of locations of devices, before installation.
- D. Install instruction cards and labels.

#### **3.02 INSPECTION AND TESTING FOR COMPLETION**

- A. Notify Owner 7 days prior to beginning completion inspections and tests.
- B. Notify authorities having jurisdiction and comply with their requirements for scheduling inspections and tests and for observation by their personnel.
- C. Provide the services of the installer's supervisor or person with equivalent qualifications to supervise inspection and testing, correction, and adjustments.
- D. Prepare for testing by ensuring that all work is complete and correct; perform preliminary tests as required.
- E. Provide all tools, software, and supplies required to accomplish inspection and testing.
- F. Perform inspection and testing in accordance with NFPA 72 and requirements of local authorities; document each inspection and test.
- G. Correct defective work, adjust for proper operation, and retest until entire system complies with contract documents.

#### **3.03 OWNER PERSONNEL INSTRUCTION**

- A. Provide the following instruction to designated Owner personnel:
  1. Hands-On Instruction: On-site, using operational system.
  2. Classroom Instruction: Owner furnished classroom, on-site or at other local facility.
- B. Administrative: One-hour session(s) covering issues necessary for non-technical administrative staff; classroom:
  1. Initial Training: 1 session pre-closeout.

- C. Basic Operation: One-hour sessions for attendant personnel, security officers, and engineering staff; combination of classroom and hands-on:
  - 1. Initial Training: 1 session pre-closeout.
- D. Furnish the services of instructors and teaching aids; have copies of operation and maintenance data available during instruction.

### **3.04 CLOSEOUT**

- A. Closeout Demonstration: Demonstrate proper operation of all functions to Owner.
  - 1. Be prepared to conduct any of the required tests.
  - 2. Have at least one copy of operation and maintenance data, preliminary copy of project record drawings, input/output matrix, and operator instruction chart(s) available during demonstration.
  - 3. Have authorized technical representative of control unit manufacturer present during demonstration.
  - 4. Demonstration may be combined with inspection and testing required by authority having jurisdiction; notify authority having jurisdiction in time to schedule demonstration.
  - 5. Repeat demonstration until successful.
- B. Occupancy of the project will not occur prior to Substantial Completion.
- C. Substantial Completion of the project cannot be achieved until inspection and testing is successful and:
  - 1. Approved operating and maintenance data has been delivered.
  - 2. Spare parts, extra materials, and tools have been delivered.
  - 3. All aspects of operation have been demonstrated to Owner.
  - 4. Final acceptance of the fire alarm system has been given by authorities having jurisdiction.
  - 5. Occupancy permit has been granted.
  - 6. Specified pre-closeout instruction is complete.

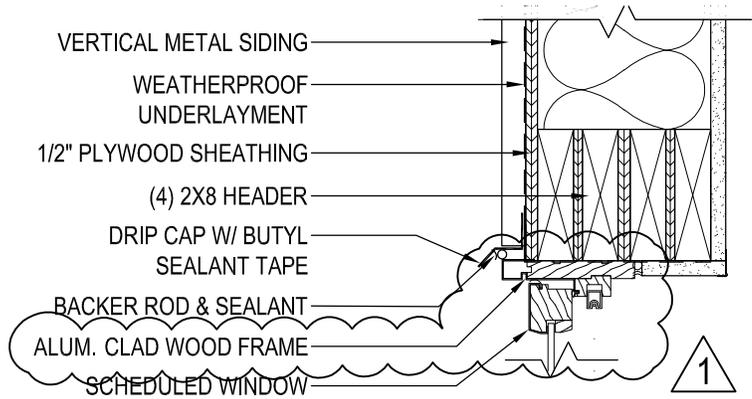
### **3.05 MAINTENANCE**

- A. See Section 01 70 00 - Execution Requirements, for additional requirements relating to maintenance service.
- B. Provide to Owner, at no extra cost, a written maintenance contract for entire manufacturer's warranty period, to include the work described below.
- C. Perform routine inspection, testing, and preventive maintenance required by NFPA 72, including:
  - 1. Maintenance of fire safety interface and supervisory devices connected to fire alarm system.
  - 2. Repairs required, unless due to improper use, accidents, or negligence beyond the control of the maintenance contractor.
  - 3. Record keeping required by NFPA 72 and authorities having jurisdiction.
- D. Provide trouble call-back service upon notification by Owner:
  - 1. Provide on-site response within 2 hours of notification.
  - 2. Include allowance for call-back service during normal working hours at no extra cost to Owner.
  - 3. Owner will pay for call-back service outside of normal working hours on an hourly basis, based on actual time spent at site and not including travel time; include hourly rate and definition of normal working hours in maintenance contract.
- E. Provide a complete description of preventive maintenance, systematic examination, adjustment, cleaning, inspection, and testing, with a detailed schedule.
- F. Maintain a log at each fire alarm control unit, listing the date and time of each inspection and call-back visit, the condition of the system, nature of the trouble, correction performed, and parts

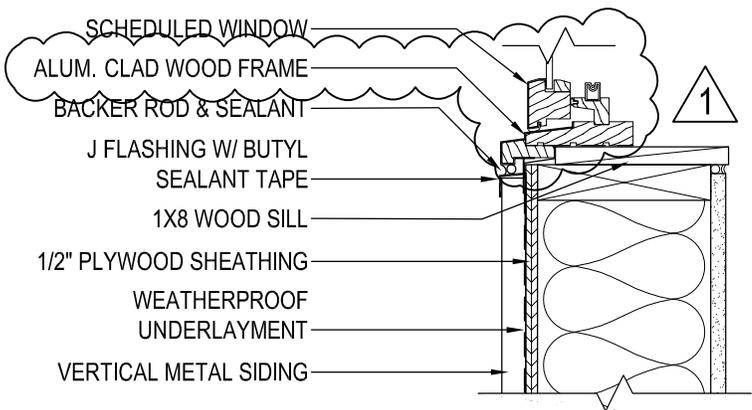
replaced. Submit duplicate of each log entry to Owner's representative upon completion of site visit.

- G. Comply with Owner's requirements for access to facility and security.

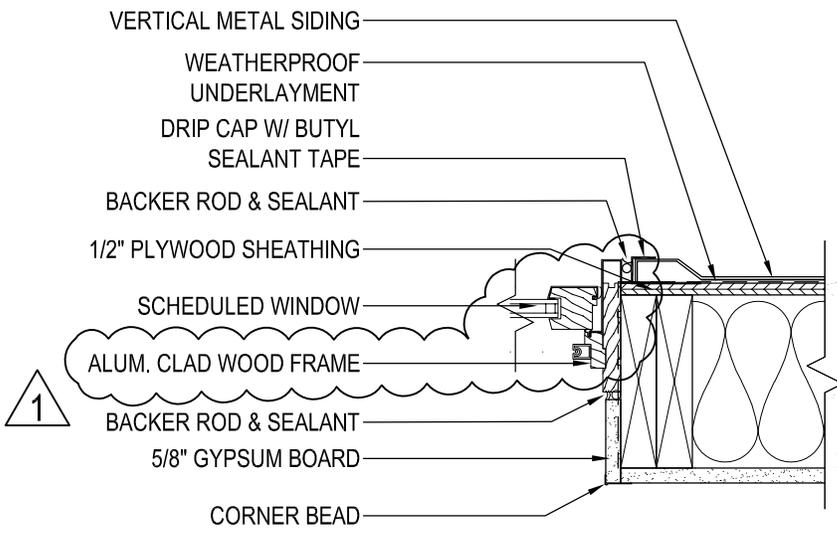
**END OF SECTION**



HEAD



SILL



JAMB

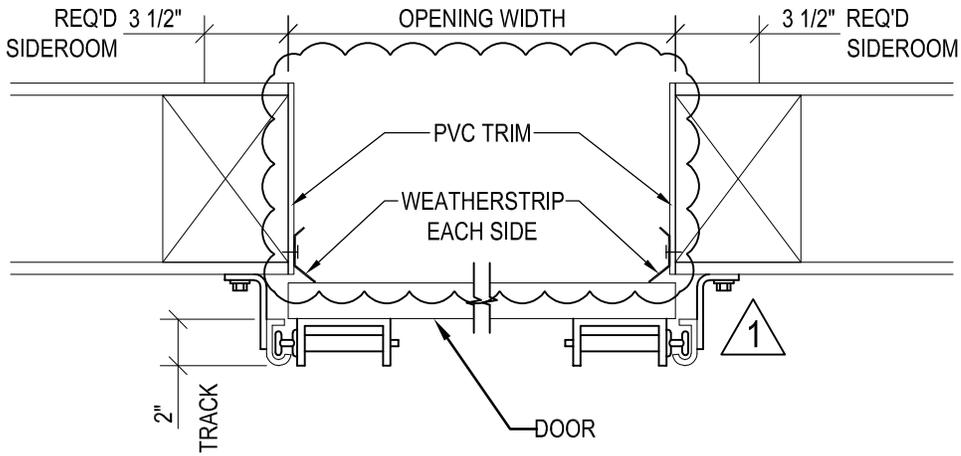
# WINDOW HEAD, JAMB, AND SILL DETAILS

4  
6.1

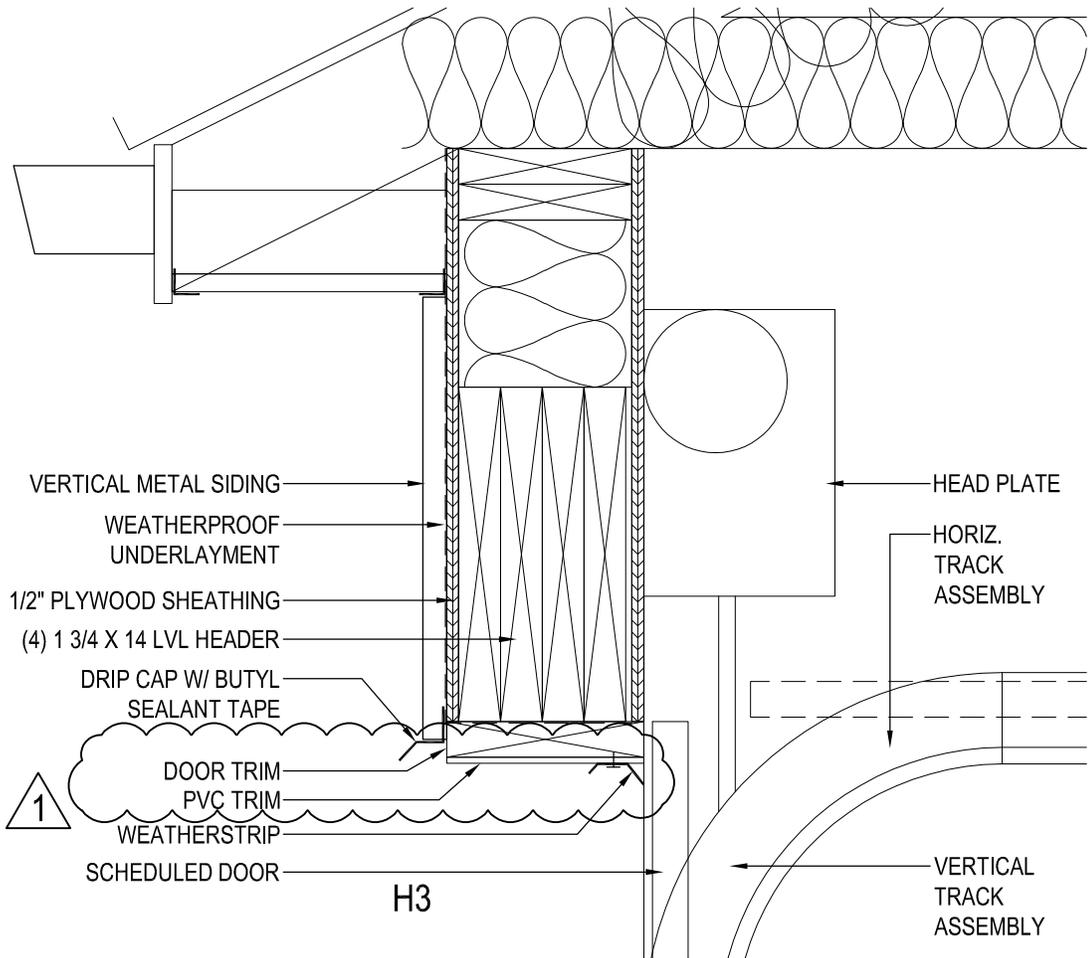
SCALE: 1 1/2" = 1'-0"

**DOOR SCHEDULE**

DOOR NUMBER	WIDTH	HEIGHT	THICKNESS	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	HEAD	JAMB	SILL	HDWR	REMARKS
D01	3'-0"	7'-0"	1 3/4"	A	HM	F1	HM	H1	J1	-	1	
D02	12'-0"	10'-0"	--	D	-	F3A	--	H3	J3	-	-	
D03	12'-0"	12'-0"	--	D	-	F3B	--	H3	J3	-	-	
D04	12'-0"	12'-0"	--	D	-	F3B	--	H3	J3	-	-	
D05	3'-0"	7'-0"	1 3/4"	A	HM	F1	HM	H1	J1	-	1	
D06	6'-0"	7'-0"	1 3/4"	C	HM	F2	HM	H2	J2	-	4	
D07	6'-0"	7'-0"	1 3/4"	C	HM	F2	HM	H2	J2	-	4	
D08	6'-0"	7'-0"	1 3/4"	C	HM	F2	HM	H2	J2	-	4	
D09	3'-0"	7'-0"	1 3/4"	B	HM	F1	HM	H2	J2	-	2	ALTERNATE #2
D10	3'-0"	7'-0"	1 3/4"	B	HM	F1	HM	H2	J2	-	3	ALTERNATE #2
D11	3'-0"	7'-0"	1 3/4"	B	HM	F1	HM	H2	J2	-	2	ALTERNATE #2



J3



# GARAGE DOOR HEAD & JAMB DETAILS

5  
6.1

SCALE: 1 1/2" = 1'-0"

7/12/17  
DATE  
17018  
PROJECT NO.

A6.1  
SHEET NO.  
SK-A.2

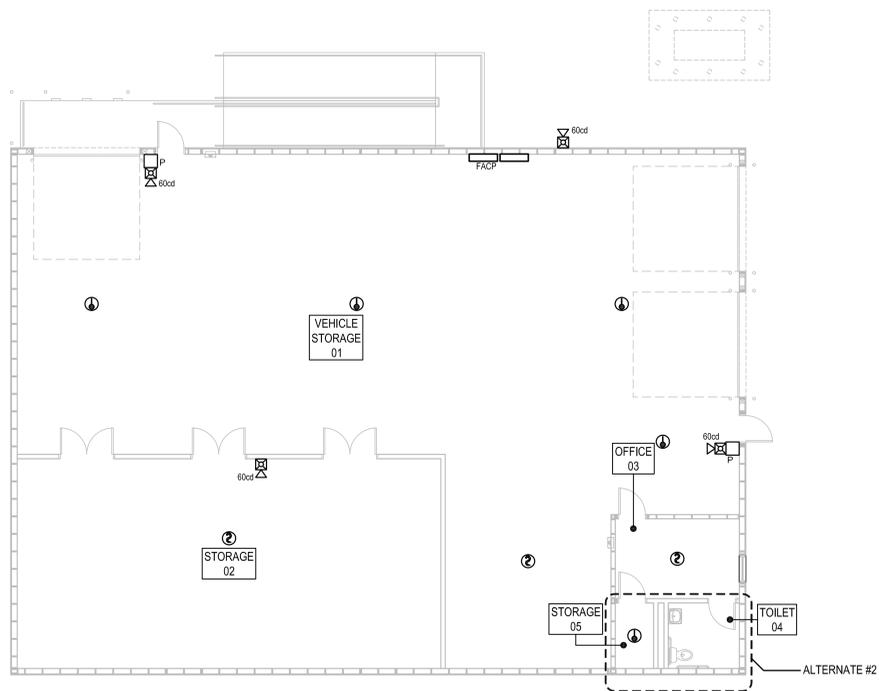
PROJECT: STATE OF DELAWARE  
DELAWARE EMERGENCY MANAGEMENT AGENCY  
OMB/DFM CONTRACT NO. MJ4502000000  
NEW STORAGE BUILDING  
165 RD 488  
SMYRNA, DE 19977

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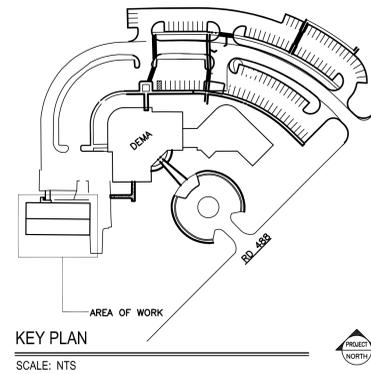
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ADDENDUM #2

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Fire Alarm Devices	
	NOTIFICATION DEVICE (AUDIO/VISUAL) - HORN WITH STROBE AS SINGLE ASSEMBLY, REQUIRED CANDELA RATING "X" (INDICATED "X cd").
	DETECTION DEVICE - SMOKE DETECTOR - PHOTOELECTRIC PRODUCTS OF COMBUSTION DETECTOR
	MANUAL STATION - PULL STATION/FIRE ALARM BOX
	DETECTION DEVICE - HEAT DETECTOR - 130°F RATE OF RISE/FIXED TEMPERATURE - LISTED FOR 25'-30' SPACING
	FIRE ALARM CONTROL PANEL



1  
 9.2  
**ELECTRICAL FIRE ALARM PLAN**  
 SCALE: 1/8" = 1'-0"



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REVISIONS	
▲	ADDENDUM #2 JULY 12, 2017

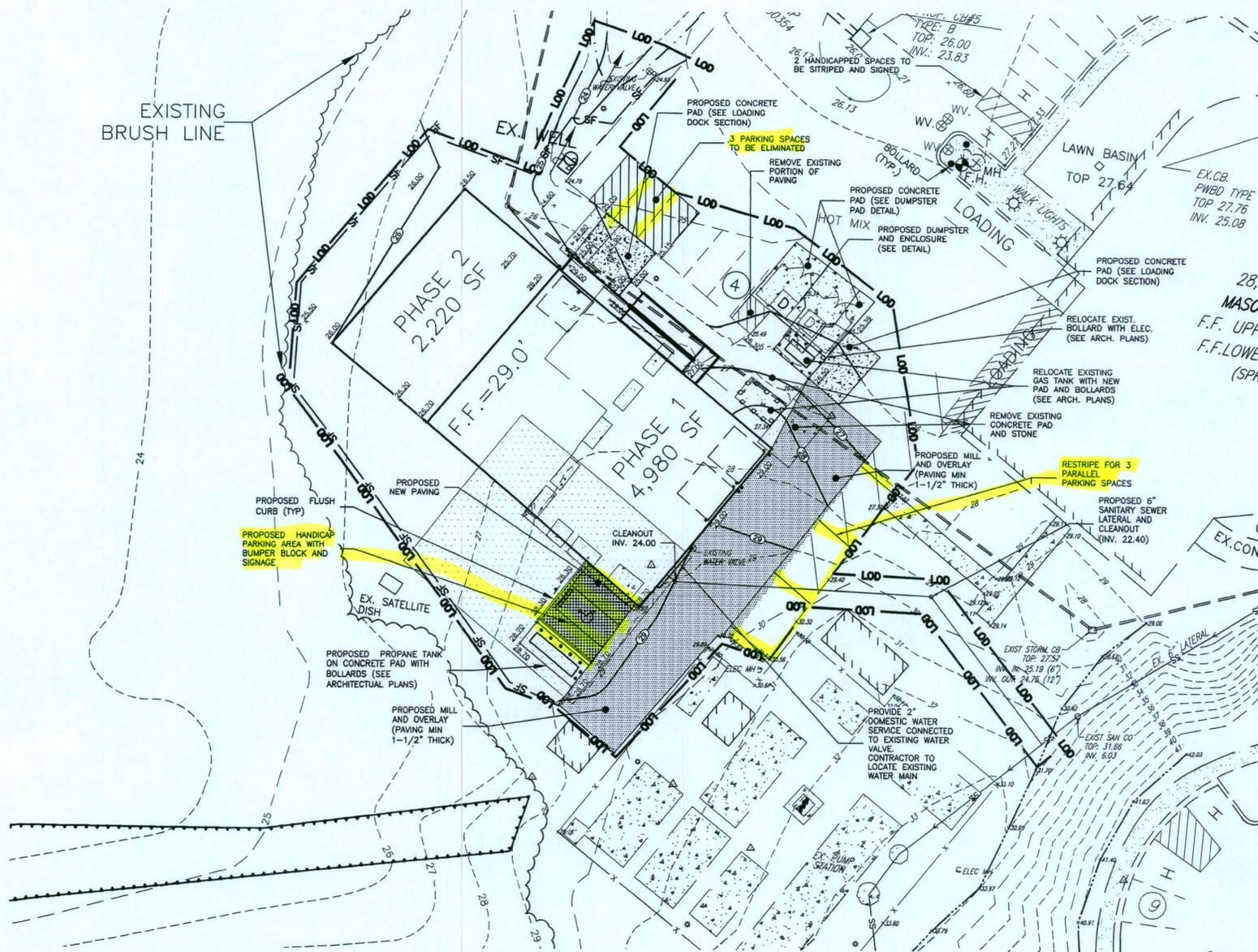
PROJECT  
 STATE OF DELAWARE  
 DIVISION OF FACILITIES MANAGEMENT  
 OMB / DFM PROJECT # MC4501000005  
 DELAWARE EMERGENCY MANAGEMENT AGENCY  
 NEW STORAGE BUILDING  
 165 RD 488  
 SMYRNA, DE 19977

ELECTRICAL FIRE ALARM PLAN

**CONSTRUCTION DOCUMENTS**  
 JUNE 7, 2017  
 DRAWN: JD CHK'D/DESIGNER: PP  
 DISCIPLINE: E SHEET NO: 9.2  
 PROJECT NO: 16075



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LEGEND	
EXISTING	PROPOSED
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	SPOT ELEVATION
	FINISHED FLOOR ELEVATION
	CURB AND GUTTER
	P.C.C. SIDEWALK
	CONCRETE MONUMENT
	IRON PIPE
	UTILITY POLE
	LIGHT POLE
	PARKING COUNT
	SANITARY SEWER AND MANHOLE
	STORM DRAINAGE
	FIRE HYDRANT
	UNDERGROUND ELECTRIC
	100 YEAR FLOOD PLAN
	WETLANDS DELINEATION LINE
	SILT FENCE
	LIMITS OF DISTURBANCE
	RIPIARIAN BUFFER AREA



CHECKED BY: [Signature] DATE: 6/12/17  
 REVISIONS: 1. REVISED PER N.C.C. LTR. DATED 1/29/17

APPLICATION NO. 2016-0792(S)  
 LINES AND GRADES & EROSION AND SEDIMENT CONTROL PLAN  
 FOR  
**DEMA STORAGE BUILDING**  
 BLACKBIRD HUNDRED - NEW CASTLE COUNTY, DELAWARE

DESIGNED BY: MASO  
 F.F. UPF.  
 F.F. LOWE  
 (SPR)

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