ADDENDUM No. 02: September 19, 2024

PROJECT: **DELGADO COMMUNITY COLLEGE**
DECKHAND TRAINING CENTER
13200 OLD GENTILLY ROAD
NEW ORLEANS, LOUISIANA 70129

PROJECT NO.: **STBA PROJECT #41177.01**
EDA PROJECT #08-01-05352

FROM: **SIZELER THOMPSON BROWN ARCHITECTS**
300 Lafayette Street, Suite 200
New Orleans, Louisiana 70130
(504) 523-6472

TO: **All Bidders on Record**

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents; Specifications dated 07/11/2024; Drawings: G-sheets and A-sheets dated 07/17/24, C-sheets, S-sheets, M-sheets, P-sheets, and E-sheets dated 07/11/24. The contents of this Addendum shall be included in the Contract Documents when the Agreement is executed. Changes made by this Addendum take precedence of the Documents of earlier date.

Bidders are advised to call the attention of all sub-bidders and suppliers to changes which may affect their work.

Acknowledge receipt of this Addendum in the space provided on the Bid Form.

A revised **BID FORM** with reference to Alternate No. 3 is included in this Addendum.

MODIFICATIONS TO THE SPECIFICATIONS

1. Division 01 - **LOUISIANA UNIFORM PUBLIC WORK BID FORM** has been revised to provide clear space for dollar amounts.

2. SECTION 0-1 3200 CONSTRUCTION PROGRESS DOCUMENTATION
(REPLACE THIS SECTION IN ITS ENTIRETY)

3. SECTION 08 4113 ALUMINUM FRAMED ENTRANCES AND STOREFRONTS
(REPLACE THIS SECTION IN ITS ENTIRETY)

Added to paragraph 2.2

C. Basis of Design for exterior Hung Window:
   1. YKK YVS 410 TUH
   2. Kawneer 8400TL
   3. Approved Equal

4. SECTION 08 7000 DOOR HARDWARE
   (REPLACE THIS SECTION IN ITS ENTIRETY)

   Added hardware set descriptions.

MODIFICATIONS TO THE DRAWINGS

5. The following Architectural Sheets have been revised:
   REPLACE the following sheet in its entirety:

   A902 Revision date 09.19.24
   Identifies hardware sets

6. The following Mechanical Sheets have been revised:
   REPLACE the following sheet in its entirety:

   M201 Revision date 09.18.24

7. The following Structural Sheets have been revised:
   REPLACE the following sheets in their entirety:

   S101 Revision Date 09.19.24
   Changes the section label at the grease trap foundation to 1/S101

   S103 Revision Date 09.19.24
   Identified potential conflicts with existing 8" pvc line and existing water line and indicated how to proceed with identifying conflict
   Identified grease trap foundation and call out to the grease trap foundation detail

   S104 Revision Date 09.19.24
   Placed a reference note for the design criteria of the metal building

   S105 Revision Date 09.19.24
   Provided reference sections on the framing plan and added a section at the stair

   S301 Revision Date 09.19.24
   Indicated notes on how to attach the canopy to the structure

RESPONSES TO QUESTIONS SUBMITTED TO THE ARCHITECT'S OFFICE
The following is a list of questions submitted in writing to the Architect's office. The answers are in bold.

8. Question: The revised bid form provided in Addendum #1 will not work. For the Alternate Prices, the description of the alternate is in the space the contractor needs to write out the dollar amount of the bid for each alternate. Please correct and revise the bid form.

   ANSWER: **The alternate description location on the bid form has been moved to provide clear space for the dollar amounts.**

9. Question: The revised unit price form has check marks in the Base Bid box for the first six

unit price lines/items, but nothing checked in the same boxes of the next four lines/items. I'm assuming there are no unit prices required in the project.

ANSWER: **There are no unit prices called for in the project therefore the unit price form does not need to be included with the bid form.**

10. Question: Is this a sales tax exempt project?

    ANSWER: **NO. Delgado's tax-exempt status does not extend to purchases made by the contractor. The contractor must pay taxes, and those taxes must be included in the cost of the contract. It cannot be a separate line item.**

11. Question: Will a cost loaded schedule be required?

    ANSWER: **Cost loading as defined in 01 3200, 1.3, B. pertains to the Schedule of Values.**

12. Specification section 01 3200 part 1.3 B, calls for the contractor to hire a scheduling consultant for the construction schedule. Is this required?

    ANSWER: **No, a scheduling consultant is not required. The construction schedule is to be prepared by the contractor and provided in an industry standard format. See revised section 01 3200 included in this Addendum No. 02.**

13. Please confirm there are no DBE participation goals or requirements on the project.

    ANSWER: **Confirmed.**

14. There is a door hardware specification and a door schedule, but no door hardware schedule to tell us which door parts go where? Can a door hardware schedule be provided?

    ANSWER: **The Specification and hardware schedule have been revised and are included in this Addendum No. 02.**

15. The door schedule on sheet A902 does not provide hardware set information. Please include a hardware schedule or hardware set information.

    ANSWER: **The door schedule has been revised to include the hardware sets; the revised sheet A902 is included in this Addendum No. 02.**

16. There are few exterior windows appeared in Exterior elevation of the building and first floorplan (Drawing no A201, A302), SF1, But no details or specification for those window type.

    ANSWER: **Details for SF1 are on sheet A903. Basis of designed for the fixed SF1 window is identified in specification section 08 4113, 2.2**

17. In addition to that there is an operable hung window marked in first floor plan, so can get specification related with those SF1 windows and operable hung window.?.

    ANSWER: **Details for the operable window are included on sheet A903. Basis of designed for the fixed SF1 window is identified in specification section 08 4113, 2.2. This specification section has been revised to include basis of design for the operable window and is included in this Addendum No. 02**

18. 39C-18 (HRU-1) - This unit in pantry room 110 "39C-18" is not scheduled. Please advise.

ANSWER: **The VRF cassette unit in Pantry 110 should be labeled 24C-18 in lieu of 39C-18. See attached revised sheet M201.**

PRIOR APPROVALS

The following manufacturers and products, in addition to those specified within the documents, are approved for the product type noted. Manufacturers listed below are recognized as capable of producing materials, manufactured items, and articles of equipment equal to those specified and thus, are subject to compliance with all specifications and requirements of the documents. Those listed below have represented that they meet or exceed the specification requirements, has the capacity and performance requirements, fits the space available to the satisfaction of the Architect, conforms in every respect with the applicable regulatory agencies and for lighting fixtures is also similar in appearance, construction and photometrics (photometric information shall be based on independent laboratory reports).

PRODUCT	SPECIFICATION SECTION	MANUFACTURER
Variable Refrigerant Volume Systems	**23 05 00**	**Samsung**

LIGHITNG

F1	Day Brite
F2	Day Brite
F2E	Day Brite
F3	Ledalite
F3E	Ledalite
F4	Ledalite
F5	Ledalite
F5E	Ledalite
F6	Day Brite
F6A	Day Brite
F7	Truly Green Solutions
F7E	Truly Green Solutions
F8	Gardco
VRF Equipment	Samsung

This ADDENDUM consists of:

FOUR (4) TYPEWRITTEN ADDENDUM PAGES
SEVEN (7) DRAWING SHEETS
THIRTY-SEVEN (44) SPECIFICATION PAGES

For a TOTAL of FORTY-EIGHT (55) DOCUMENT SHEETS.

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: **Delgado Community College**
501 City Park Avenue
New Orleans, LA 70119

(Owner to provide name and address of owner)

BID FOR: **Delgado Community College**
Deckhand Training Center
Delgado Project No. R0024209
13200 Old Gentilly Rd, New Orleans LA 70129

(*Owner to provide name of project and other identifying information)*

The undersigned bidder hereby declares and represents that she/he: a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by:_____ and dated: _____

(Owner to provide name of entity preparing bidding documents.)

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) _____ .

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

_____ Dollars ($ _____)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 ***(Deckhand Training Platform - ADD)*** for the lump sum of:

_____ Dollars ($ _____)

Alternate No. 2 ***(Raised Training Platform - ADD)*** for the lump sum of:

_____ Dollars ($ _____)

Alternate No. 3 ***(Pre-engineered building system wall panels in lieu of specified wall panels - DEDUCT)*** for the lump sum of:

_____ Dollars ($_____)

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

_____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____

DATE: _____

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

**** A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

SECTION 01 3200

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
1. Contractor's Construction Schedule.
2. Submittals Schedule.
3. Daily construction reports.
4. Field condition reports.

B. See Division 01 Section "Payment Procedures" for submitting the Schedule of Values.

1.2 DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
2. Predecessor Activity: An activity that precedes another activity in the network.
3. Successor Activity: An activity that follows another activity in the network.

B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by Architect.

C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

E. Events: The starting or ending point of an activity.

F. Float: The measure of leeway in starting and completing an activity.
1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.

3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

G. Fragnet: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.

H. Major Area: A story of construction, a separate building, or a similar significant construction element.

I. Milestone: A key or critical point in time for reference or measurement.

J. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

K. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.3 SUBMITTALS

A. Submittals Schedule: Submit a digital copy of the schedule in PDF format via email or submittal management software. Arrange the following information in a tabular format:
1. Scheduled date for first submittal.
2. Specification Section number and title.
3. Submittal category (action or informational).
4. Name of subcontractor.
5. Description of the Work covered.
6. Scheduled date for Architect's final release or approval.
7. Monthly report samples.
8. Project analysis plan.

B. Preliminary Network Diagram: Submit a digital copy of the schedule in PDF format via email or submittal management software, large enough to show entire network for entire construction period. Show logic ties for activities.

C. Contractor's Construction Schedule: Submit a digital copy of initial schedule in PDF format via email or submittal management software, large enough to show entire schedule for entire construction period.
1. Submit an electronic copy of schedule, using software indicated, on CD-R, and labeled to comply with requirements for submittals. Include type of schedule (Initial or Updated) and date on label.

D. CPM Reports: Concurrent with CPM schedule, submit a digital copy in PDF format via email or submittal management software of each of the following computer-generated reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.

2. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.
3. Total Float Report: List of all activities sorted in ascending order of total float.

E. Daily Construction Reports: Submit a digital copy in PDF format via email or submittal management software at monthly intervals.

F. Field Condition Reports: Submit a digital copy in PDF format via email or submittal management software at time of discovery of differing conditions.

1.4 SUBMISSION AND REVIEW

A. Preliminary Meeting: Participate in preliminary meeting to discuss proposed schedule, requirements of this Section prior to submission of network.

B. Proposed Plan: Submit a complete schedule for the calendar days indicated in the contract of the work within 14 days of Contract Award, as specified within the Division 01 requirements.

C. Review and Evaluation: Contractor participates in review, evaluation of proposed plan and analysis by Architect and the Owner. Revisions necessary as a result of review resubmittal for acceptance within 10 calendar days after meeting. Accepted schedule to be used for planning, organizing, directing work, reporting progress and requesting payment for work accomplished.

D. Monthly Reports: Submit monthly report of actual construction progress by updating required sorts, time scaled logic diagram. Initially and monthly thereafter, produce projected report of scheduled activities to be started, in process or completed during upcoming reporting period, sorted by early start. At end of reporting period, Contractor shall make entries on preceding Look-Ahead Report to show actual progress. As a minimum, following action will be accomplished:
1. Identify activities started and completed during previous period.
2. Show estimated duration (in work days) to complete each activity started but not completed.
3. Indicate percentage of cost payable for each activity.
4. Reflect changes in network diagram.
5. Show conformed modifications, pending proposed changes on update report. Produce, from marked-up Look-Ahead Report, updated required sorts for project and use accumulated cost for completed and partially completed activities as basis for requesting progress payments. Contract status evaluated on basis of relative float on critical path at time of updating with negative relative float indicating contract is behind schedule and positive relative float indicating status ahead of schedule. (Relative float is the current status of an activity in relation to approved schedule completion date.)

1.5 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
1. Secure time commitments for performing critical elements of the Work from parties involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
2. Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
1. Activity Duration: Define activities so no activity is longer than 14 days, unless specifically allowed by Architect.
2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
4. Startup and Testing Time: Include not less than 15-30 days for startup and testing.
5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.

C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.

2. Work under More Than One Contract: Include a separate activity for each contract.
3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
4. Work Restrictions: Show the effect of the following items on the schedule:
   a. Coordination with existing construction.
   b. Limitations of continued occupancies.
   c. Uninterruptible services.
   d. Partial occupancy before Substantial Completion.
   e. Use of premises restrictions.
   f. Provisions for future construction.
   g. Seasonal variations.
   h. Environmental control.
5. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
   a. Subcontract awards.
   b. Submittals.
   c. Purchases.
   d. Mockups.
   e. Fabrication.
   f. Sample testing.
   g. Deliveries.
   h. Installation.
   i. Tests and inspections.
   j. Adjusting.
   k. Curing.
   l. Startup and placement into final use and operation.
6. Area Separations: Identify each major area of construction for each major portion of the work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
   a. Structural completion.
   b. Permanent space enclosure.
   c. Completion of mechanical installation.
   d. Completion of electrical installation.
   e. Substantial completion.

D. Milestones: Milestones are a key or critical point in time for reference or measurement. The following MANDATORY milestone topics should be including in your critical path project schedule as a condition of acceptance of the project schedule. Include milestones indicated below but not limited to the following:

1. Notice to Proceed
2. Temporary utilities
3. Exterior façade
4. Plumbing rough-in
5. Electrical rough-in
6. Mechanical rough-in
7. Substantial Completion
8. Final Completion

E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within **30** days of date established for the **Notice to Proceed.** Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

1. For construction activities that require 3 months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)

A. General: Prepare network diagrams using AON (activity-on-node) format.

B. Preliminary Network Diagram: Submit diagram within **30** days of date established for the **Notice of Award**. Outline significant construction activities for the first 60 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

C. CPM Schedule Preparation: Prepare Contractor's Construction Schedule using a computerized, cost- and resource-loaded, time-scaled CPM network analysis diagram for the Work.

1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 5 days before the preconstruction meeting.
    a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of Architect's approval of the schedule.
2. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
3. Use "one workday" as the unit of time. Include list of nonworking days and holidays incorporated into the schedule.

D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the preliminary network diagram, prepare a skeleton network to identify probable critical paths.

1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
    a. Preparation and processing of submittals.
    b. Mobilization and demobilization.
    c. Purchase of materials.
    d. Delivery.
    e. Fabrication.

f. Utility interruptions.
g. Installation.
h. Work by Owner that may affect or be affected by Contractor's activities.
i. Testing.

2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
   a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.

E. Initial Issue of Schedule: Prepare initial network diagram from a list of straight "early start-total float" sort. Identify critical activities. Prepare tabulated reports showing the following:
1. Contractor or subcontractor and the Work or activity.
2. Description of activity.
3. Principal events of activity.
4. Immediate preceding and succeeding activities.
5. Early and late start dates.
6. Early and late finish dates.
7. Activity duration in workdays.
8. Total float or slack time.
9. Average size of workforce.

F. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
1. Identification of activities that have changed.
2. Changes in early and late start dates.
3. Changes in early and late finish dates.
4. Changes in activity durations in workdays.
5. Changes in the critical path.
6. Changes in total float or slack time.
7. Changes in the Contract Time.

2.5 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
2. Equipment at Project site.
3. Material deliveries.
4. High and low temperatures and general weather conditions.
5. Accidents.
6. Meetings and significant decisions.
7. Stoppages, delays, shortages, and losses.
8. Meter readings and similar recordings.

9. Emergency procedures.
10. Orders and requests of authorities having jurisdiction.
11. Change Orders received and implemented.
12. Construction Change Directives received.
13. Services connected and disconnected.
14. Equipment or system tests and startups.
15. Partial Completions and occupancies.

B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule 3 days before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
3. As the Work progresses, indicate Actual Completion percentage for each activity.

B. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

1. Post copies in Project meeting rooms and temporary field offices.
2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION

SECTION 08 4113

ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. Exterior and interior storefront framing and doors.
2. Exterior manual-Heavy Duty swing aluminum doors.
3. Exterior aluminum door frames.
4. Interior storefront framing and doors.
5. Exterior aluminum window wall window.

B. Door hardware to be furnished and installed by aluminum framed entrance manufacturer, as specified at the end of this section and complying with Division 08 7100 Section “Door Hardware”. Items not listed in this section are to be found in 08 7100.

C. Related Sections:
1. Division 01 Section “Submittal Procedures”
2. Section 05 5000 – Metal Fabrication.
3. Section 07 8400 – Firestopping.
4. Section 07 9200 – Joint Sealants for perimeter sealant around exterior storefront systems and for sealants to the extent not specified in this Section.
5. Section 08 8000 – Glazing for glazing and glazing sealants for doors and storefront systems.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.
1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For aluminum-framed entrances and storefronts. Include plans, elevations, sections, full-size details, and attachments to other work.
1. Include details of provisions for assembly expansion and contraction.
2. Include full-size isometric details of each vertical-to-horizontal intersection of aluminum-framed entrances and storefronts, showing the following:

a. Joinery, including concealed welds.
b. Anchorage.
c. Expansion provisions.
d. Glazing
e. Flashing and drainage.

3. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.

C. Samples for Initial Selection: For units with factory-applied color finishes.

D. Samples for Verification: For each type of exposed finish required, in manufacturer's standard sizes.

E. Entrance Door Hardware Schedule: Prepared by or under supervision of supplier, detailing fabrication and assembly of entrance door hardware, as well as procedures and diagrams. Coordinate final entrance door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of entrance door hardware.

F. Delegated-Design Submittal: Exterior aluminum-framed entrances and storefronts are to comply with performance requirements and structural design criteria indicated in the documents. Submit drawings and analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product Test Reports: For aluminum-framed entrances and storefronts, for tests performed by a qualified testing agency.

C. Quality-Control Program: Developed specifically for Project, including fabrication and installation, according to recommendations in ASTM C 1401. Include periodic quality-control reports.

D. Source quality-control reports.

E. Field quality-control reports.

F. Sample Warranties: For special warranties.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For aluminum-framed entrances and storefronts to include in maintenance manuals.

B. Maintenance Data for Structural Sealant: For structural-sealant-glazed storefront to include in maintenance manuals. Include ASTM C 1401 recommendations for post-installation-phase quality-control program.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.
1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

1.8 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of aluminum-framed entrances and storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
   a. Structural failures including, but not limited to, excessive deflection.
   b. Noise or vibration created by wind and thermal and structural movements.
   c. Deterioration of metals and other materials beyond normal weathering.
   d. Water penetration through fixed glazing and framing areas.
   e. Failure of operating components.
2. Warranty Period: Two years from date of Substantial Completion.

B. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.
1. Deterioration includes, but is not limited to, the following:
   a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
   b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
   c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design aluminum-framed entrances and storefronts.

B. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed entrances and storefronts representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.
1. Aluminum-framed entrances and storefronts shall withstand movements of supporting structure including, but not limited to, story drift, twist, column

shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.

2. Failure also includes the following:
   a. Thermal stresses transferring to building structure.
   b. Glass breakage.
   c. Noise or vibration created by wind and thermal and structural movements.
   d. Loosening or weakening of fasteners, attachments, and other components.
   e. Failure of operating units.

C. Structural Loads:
1. Wind Loads: As indicated on Drawings.

D. Deflection of Framing Members: At design wind pressure, as follows:
1. Deflection Normal to Wall Plane: Limited to 1/175 of clear span for spans up to 13 feet 6 inches (4.1 m) and to 1/240 of clear span plus 1/4 inch (6.35 mm) for spans greater than 13 feet 6 inches (4.1 m) or an amount that restricts edge deflection of individual glazing lites to 3/4 inch (19.1 mm), whichever is less.
2. Deflection Parallel to Glazing Plane: Limited to 1/360 of clear span or 1/8 inch (3.2 mm), whichever is smaller.
   a. Operable Units: Provide a minimum 1/16-inch (1.6-mm) clearance between framing members and operable units.
3. Cantilever Deflection: Where framing members overhang an anchor point, as follows:
   a. Perpendicular to Plane of Wall: No greater than 1/240 of clear span plus 1/4 inch (6.35 mm) for spans greater than 11 feet 8-1/4 inches (3.6 m) or 1/175 times span, for spans less than 11 feet 8-1/4 inches (3.6 m).

E. Structural: Test according to ASTM E 330 as follows:
1. When tested at positive and negative wind-load design pressures, assemblies do not evidence deflection exceeding specified limits.
2. When tested at 150 percent of positive and negative wind-load design pressures, assemblies, including anchorage, do not evidence material failures, structural distress, or permanent deformation of main framing members exceeding 0.2 percent of span.
3. Test Durations: As required by design wind velocity, but not less than 10 seconds.

F. Air Infiltration: Test according to ASTM E 283 for infiltration as follows:
1. Fixed Framing and Glass Area:
   a. Maximum air leakage of 0.06 cfm/sq. ft. (0.30 L/s per sq. m) at a static-air-pressure differential of 1.57 lbf/sq. ft. (75 Pa).

2. Entrance Doors:
   a. Pair of Doors: Maximum air leakage of [1.0 cfm/sq. ft. (5.08 L/s per sq. m)] at a static-air-pressure differential of 1.57 lbf/sq. ft. (75 Pa).
   b. Single Doors: Maximum air leakage of 0.5 cfm/sq. ft. (2.54 L/s per sq. m) <Insert value> at a static-air-pressure differential of 1.57 lbf/sq. ft. (75 Pa).

G. Water Penetration under Static Pressure: Test according to ASTM E 331 as follows:

1. No evidence of water penetration through fixed glazing and framing areas when tested according to a minimum static-air-pressure differential of 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft. (300 Pa).

H. Water Penetration under Dynamic Pressure: Test according to AAMA 501.1 as follows:
1. No evidence of water penetration through fixed glazing and framing areas when tested at dynamic pressure equal to 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft. (300 Pa).
2. Maximum Water Leakage: According to AAMA 501.1. Water leakage does not include water controlled by flashing and gutters, or water that is drained to exterior.

I. Energy Performance: Certify and label energy performance according to NFRC as follows:
1. Thermal Transmittance (U-factor): Fixed glazing and framing areas shall have U-factor of not more than 0.45 Btu/sq. ft. x h x deg F as determined according to NFRC 100.
2. Condensation Resistance: Fixed glazing and framing areas shall have an NFRC-certified condensation resistance rating of no less than 15 as determined according to NFRC 500.

J. Noise Reduction: Test according to ASTM E 90, with ratings determined by ASTM E 1332, as follows.
1. Outdoor-Indoor Transmission Class: Minimum 33.

K. Windborne-Debris Impact Resistance: Pass missile-impact and cyclic-pressure tests when tested according to ASTM E 1886 and testing information in ASTM E 1996 for Wind Zone 3.
1. Line deleted in Addendum No. 2.

L. Thermal Movements: Allow for thermal movements resulting from ambient and surface temperature changes:
1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
2. Thermal Cycling: No buckling; stress on glass; sealant failure; excess stress on framing, anchors, and fasteners; or reduction of performance when tested according to AAMA 501.5.
   a. High Exterior Ambient-Air Temperature: That which produces an exterior metal-surface temperature of 180 deg F (82 deg C).
   b. Low Exterior Ambient-Air Temperature: 0 deg F (minus 18 deg C).
   c. Interior Ambient-Air Temperature: 75 deg F (24 deg C).

M. Structural-Sealant Joints:
1. Designed to carry gravity loads of glazing.
2. Designed to produce tensile or shear stress of less than 20 psi (138 kPa).

N. Structural Sealant: Capable of withstanding tensile and shear stresses imposed by structural-sealant-glazed storefront system without failing adhesively or cohesively. When tested for preconstruction adhesion and compatibility, cohesive failure of sealant shall occur before adhesive failure.

1. Adhesive failure occurs when sealant pulls away from substrate cleanly, leaving no sealant material behind.
2. Cohesive failure occurs when sealant breaks or tears within itself but does not separate from each substrate because sealant-to-substrate bond strength exceeds sealant's internal strength.

2.2 MANUFACTURERS

A. Basis of Design for exterior framing:
1. YKK YHS 50 FI (Basis of Design)
2. Kawneer IR 501 Framing.
3. Approved Equal

B. Basis of Design for exterior Entrance Door System:
1. YKK 50HL
2. Kawneer 350 Heavy Wall IR Entrances
3. Approved Equal

C. Basis of Design for exterior Hung Window:
1. YKK YVS 410 TUH
2. Kawneer 8400TL
3. Approved Equal

D. Source Limitations: Obtain all components of aluminum-framed entrance and storefront system, including framing and accessories, from single manufacturer.

2.3 FRAMING

A. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.
1. Construction: Thermally broken.
2. Glazing System: Retained mechanically with gaskets on four sides.
3. Glazing Plane: Middle.
4. Finish: Clear anodic finish.
5. Fabrication Method: Field-fabricated stick system.

B. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.

C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

D. Materials:
1. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
   a. Sheet and Plate: ASTM B 209 (ASTM B 209M).
   b. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221 (ASTM B 221M).
   c. Extruded Structural Pipe and Tubes: ASTM B 429/B 429M.
   d. Structural Profiles: ASTM B 308/B 308M.

2.4 ENTRANCE DOOR SYSTEMS

A. Entrance Doors: Manufacturer's standard glazed entrance doors for swing operation.
1. Door Construction: 1-3/4-inch overall thickness, with minimum 0.125-inch-thick, extruded-aluminum tubular rail and stile members. Mechanically fasten corners with reinforcing brackets that are deeply penetrated and fillet welded or that incorporate concealed tie rods.
   a. Thermal Construction: High-performance plastic connectors separate aluminum members exposed to the exterior from members exposed to the interior.
2. Door Design: As required to meet wind load requirements.
3. The Door stile and rail face dimensions of the 50HL Entrance doors will be as follows

Door	Vertical Stile	Top Rail	Bottom Rail
50HL	5”	5”	10”

4. Glazing Stops and Gaskets: Beveled, snap-on, extruded-aluminum stops and preformed gaskets.
   a. Provide nonremovable glazing stops on outside of door.

2.5 ENTRANCE DOOR HARDWARE

A. General: Provide entrance door hardware for each entrance door to comply with requirements in this Section.
1. Entrance Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and manufacturers as listed in the Door Hardware section
2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.
3. Opening-Force Requirements:
   a. Egress Doors: Not more than 15 lbf (67 N) to release the latch and not more than 30 lbf (133 N)to set the door in motion.
   b. Accessible Interior Doors: Not more than 5 lbf (22.2 N) to fully open door.

B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of entrance door hardware are indicated in "Entrance Door Hardware Sets" Article. Products are identified by using entrance door hardware designations as follows:
1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in "Entrance Door Hardware Sets" Article.
2. References to BHMA Standards: Provide products complying with these standards and requirements for description, quality, and function.

C. Pivot Hinges: BHMA A156.4, Grade 1.
1. Offset-Pivot Hinges: Provide top, bottom, and intermediate offset pivots at each door leaf.

D. Continuous-Gear Hinges: Manufacturer's standard with stainless-steel bearings between knuckles, fabricated to full height of door and frame.

E. Mortise Auxiliary Locks: BHMA A156.5, Grade 1.

F. Cylinders: provide cylinders to coordinate with existing keying system in building.
1. Keying: Master key system to match existing in building. Permanently inscribe each key with a visual key control number and include notation "DO NOT DUPLICATE".

G. Strikes: Provide strike with black-plastic dust box for each latch or lock bolt; fabricated for aluminum framing.

H. Operating Trim: BHMA A156.6.

I. Closers: BHMA A156.4, Grade 1, with accessories required for a complete installation, sized as required by door size, exposure to weather, and anticipated frequency of use; adjustable to comply with field conditions and requirements for opening force.

J. Concealed Overhead Holders: BHMA A156.8, Grade 1.

K. Surface-Mounted Holders: BHMA A156.16, Grade 1.

L. Door Stops: BHMA A156.16, Grade 1, floor or wall mounted, as appropriate for door location indicated, with integral rubber bumper.

M. Silencers: BHMA A156.16, Grade 1.

N. Finger Guards: Manufacturer's standard collapsible neoprene or PVC gasket anchored to frame hinge-jamb at center-pivoted doors.

2.6 GLAZING

A. Glazing: Comply with Section 088000 "Glazing."

B. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.

C. Glazing Sealants: As recommended by manufacturer.

D. Sealants used inside the weatherproofing system shall have a VOC content of 250 g/L.

2.7 ACCESSORIES

A. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.
1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
2. Reinforce members as required to receive fastener threads.
3. Use exposed fasteners with countersunk Phillips screw heads fabricated from 300 series stainless steel.

B. Anchors: Three-way adjustable anchors with minimum adjustment of 1 inch (25.4 mm) that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.

1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123/A 123M or ASTM A 153/A 153M requirements.

C. Concealed Flashing: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.

D. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos, formulated for 30-mil (0.762-mm) thickness per coat.

2.8 FABRICATION

A. Form or extrude aluminum shapes before finishing.

B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.

C. Fabricate components that, when assembled, have the following characteristics:
1. Profiles that are sharp, straight, and free of defects or deformations.
2. Accurately fitted joints with ends coped or mitered.
3. Physical and thermal isolation of glazing from framing members.
4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
5. Provisions for field replacement of glazing from interior.
6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.

D. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.

E. Structural-Sealant-Glazed Framing Members: Include accommodations for using temporary support device to retain glazing in place while structural sealant cures.

F. Storefront Framing: Fabricate components for assembly using screw-spline system or as necessary to meet wind load requirements.

G. Entrance Door Frames: Reinforce as required to support loads imposed by door operation and for installing entrance door hardware.
1. At exterior doors, provide compression weather stripping at fixed stops.
2. At interior doors, provide silencers at stops to prevent metal-to-metal contact. Install three silencers on strike jamb of single-door frames and two silencers on head of frames for pairs of doors.

H. Entrance Doors: Reinforce doors as required for installing entrance door hardware.
1. At pairs of exterior doors, provide sliding-type weather stripping retained in adjustable strip and mortised into door edge.
2. At exterior doors, provide weather sweeps applied to door bottoms.

I. Entrance Door Hardware Installation: Factory install entrance door hardware to the greatest extent possible. Cut, drill, and tap for factory-installed entrance door hardware before applying finishes.

J. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.9 ALUMINUM FINISHES

A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

2.10 SOURCE QUALITY CONTROL

A. Structural Sealant: Perform quality-control procedures complying with ASTM C 1401 recommendations including, but not limited to, assembly material qualification procedures, sealant testing, and assembly fabrication reviews and checks.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare surfaces that are in contact with structural sealant according to sealant manufacturer's written instructions to ensure compatibility and adhesion. Preparation includes, but is not limited to, cleaning and priming surfaces.

3.3 INSTALLATION

A. General:
1. Comply with manufacturer's written instructions.
2. Do not install damaged components.
3. Fit joints to produce hairline joints free of burrs and distortion.
4. Rigidly secure nonmovement joints.
5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
6. Seal perimeter and other joints watertight unless otherwise indicated.

B. Metal Protection:
1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

C. Install components plumb and true in alignment with established lines and grades.

D. Install operable units level and plumb, securely anchored, and without distortion. Adjust weather-stripping contact and hardware movement to produce proper operation.

E. Install glazing as specified in Section 08 8000 "Glazing."

F. Entrance Doors: Install doors to produce smooth operation and tight fit at contact points.

1. Field-Installed Entrance Door Hardware: Install surface-mounted entrance door hardware according to entrance door hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.

3.4 ERECTION TOLERANCES

A. Erection Tolerances: Install aluminum-framed entrances and storefronts to comply with the following maximum tolerances:

1. Plumb: 1/8 inch in 10 feet (3.2 mm in 3 m); 1/4 inch in 40 feet (6.35 mm in 12.2 m).
2. Level: 1/8 inch in 20 feet (3.2 mm in 6 m); 1/4 inch in 40 feet (6.35 mm in 12.2 m).
3. Alignment:
   a. Where surfaces abut in line or are separated by reveal or protruding element up to 1/2 inch (12.7 mm) wide, limit offset from true alignment to 1/16 inch (1.6 mm).
   b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch (12.7 to 25.4 mm) wide, limit offset from true alignment to 1/8 inch (3.2 mm).
   c. Where surfaces are separated by reveal or protruding element of 1 inch (25.4 mm) wide or more, limit offset from true alignment to 1/4 inch (6 mm).
4. Location: Limit variation from plane to 1/8 inch in 12 feet (3.2 mm in 3.6 m); 1/2 inch (12.7 mm) over total length.

3.5 MAINTENANCE SERVICE

A. Entrance Door Hardware:

1. 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 entrance door hardware.
2. Initial Maintenance Service: Beginning at Substantial Completion, provide six months' full maintenance by skilled employees of entrance door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper entrance door hardware operation at rated speed and capacity. Use parts and supplies that are the same as those used in the manufacture and installation of original equipment.

END OF SECTION

SECTION 087100
DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes commercial door hardware for the following:

1. Swinging doors.

B. Door hardware includes, but is not necessarily limited to, the following:

1. Mechanical door hardware.
2. Electromechanical door hardware.
3. Cylinders specified for doors in other sections.

C. Related Sections:

1. Division 08 Section “Hollow Metal Doors and Frames”.
2. Division 08 Section “Interior Aluminum Doors and Frames”.
3. Division 08 Section “Flush Wood Doors”.
4. Division 08 Section “Aluminum-Framed Entrances and Storefronts”.

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
2. ICC/IBC - International Building Code.
3. NFPA 70 - National Electrical Code.
4. NFPA 80 - Fire Doors and Windows.
5. NFPA 101 - Life Safety Code.
6. NFPA 105 - Installation of Smoke Door Assemblies.
7. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:

1. ANSI/BHMA Certified Product Standards - A156 Series.
2. UL10C - Positive Pressure Fire Tests of Door Assemblies.

1.3 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."

2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.

3. Content: Include the following information:

   a. Type, style, function, size, label, hand, and finish of each door hardware item.
   b. Manufacturer of each item.
   c. Fastenings and other pertinent information.
   d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
   e. Explanation of abbreviations, symbols, and codes contained in schedule.
   f. Mounting locations for door hardware.
   g. Door and frame sizes and materials.
   h. Warranty information for each product.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Shop Drawings: Details of electrified access control hardware indicating the following:

1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:

a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
b. Complete (risers, point-to-point) access control system block wiring diagrams.
c. Wiring instructions for each electronic component scheduled herein.

2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.

D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

E. Informational Submittals:

1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

1.4 QUALITY ASSURANCE

A. Hardware Supplier and Hardware Installer must obtain a license with the Louisiana Office of State Fire Marshall in accordance to RS 40:1464 and RS 40:1664.

B. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

C. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

D. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

E. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material,

design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

F. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.

1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.

2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.

G. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

H. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:

1. Function of building, purpose of each area and degree of security required.
2. Plans for existing and future key system expansion.
3. Requirements for key control storage and software.
4. Installation of permanent keys, cylinder cores and software.
5. Address and requirements for delivery of keys.

I. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
3. Review sequence of operation narratives for each unique access controlled opening.
4. Review and finalize construction schedule and verify availability of materials.
5. Review the required inspecting, testing, commissioning, and demonstration procedures

J. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.

C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in

materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:

1. Ten years for mortise locks and latches.
2. Five years for exit hardware.
3. Twenty five years for manual overhead door closer bodies.
4. Five years for motorized electric latch retraction exit devices.
5. Two years for electromechanical door hardware, unless noted otherwise.

1.8 MAINTENANCE SERVICE

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

2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:

1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of

requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.

1. Quantity: Provide the following hinge quantity:

   a. Two Hinges: For doors with heights up to 60 inches.
   b. Three Hinges: For doors with heights 61 to 90 inches.
   c. Four Hinges: For doors with heights 91 to 120 inches.
   d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.

2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:

   a. Widths up to 3’0”: 4-1/2” standard or heavy weight as specified.
   b. Sizes from 3’1” to 4’0”: 5” standard or heavy weight as specified.

3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:

   a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
   b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

4. Hinge Options: Comply with the following:

   a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.

5. Manufacturers:

   a. Hager Companies (HA).
   b. Ives (IV).
   c. McKinney (MK).

B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge. with minimum 0.120-inch thick extruded 6063-T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.

1. Manufacturers:

    a. Bommer Industries (BO).
    b. Ives (IV).
    c. Pemko (PE).

2.3 POWER TRANSFER DEVICES

A. Electrified Quick Connect Transfer Hinges: Provide electrified transfer hinges with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets with a 1-year warranty. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

    1. Manufacturers:

        a. Hager Companies (HA) - ETW-QC (# wires) Option.
        b. Ives (IV) - Connect.
        c. McKinney (MK) - QC (# wires) Option.

B. Electrified Quick Connect Continuous Geared Transfer Hinges: Provide electrified transfer continuous geared hinges with a removable service panel cutout accessible without de-mounting door from the frame. Furnish with Molex™ standardized plug connectors with sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

    1. Manufacturers:

        a. Bommer Industries (BO) - SER-QC (# of wires) Option.
        b. Ives (IV) - Connect.
        c. Pemko (PE) - SER-QC (# wires) Option.

C. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.

    1. Provide one each of the following tools as part of the base bid contract:

        a. McKinney (MK) - Electrical Connecting Kit: QC-R001.
        b. McKinney (MK) - Connector Hand Tool: QC-R003.

2. Manufacturers:

    a. Hager Companies (HA) - Quick Connect.
    b. McKinney (MK) - QC-C Series.
    c. Von Duprin (VD) - Connect.

2.4 DOOR OPERATING TRIM

A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.

1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
2. Furnish dust proof strikes for bottom bolts.
3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.

5. Manufacturers:

    a. Ives (IV).
    b. Rockwood (RO).
    c. Trimco (TC).

B. Coordinators: ANSI/BHMA A156.3 certified door coordinators consisting of active-leaf, hold-open lever and inactive-leaf release trigger. Model as indicated in hardware sets.

1. Manufacturers:

    a. Door Controls International (DC).
    b. Rockwood (RO).
    c. Trimco (TC).

C. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls of type and design specified 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, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.

5. Manufacturers:

    a. Hiawatha, Inc. (HI).
    b. Rockwood (RO).
    c. Trimco (TC).

2.5 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.

C. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:

1. Threaded mortise cylinders with rings and cams to suit hardware application.
2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
4. Tubular deadlocks and other auxiliary locks.
5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
6. Keyway: Manufacturer’s Standard.

D. Removable Cores: Provide removable cores as specified, core insert, removable by use of a special key, and for use with only the core manufacturer's cylinder and door hardware.

E. Patented Cylinders: ANSI/BHMA A156.5, Grade 1 Certified Products Directory (CPD) listed cylinders employing a utility patented and restricted keyway requiring the use of a patented key. Cylinders are to be protected from unauthorized manufacture and distribution by manufacturer’s United States patents. Cylinders are to be factory keyed with owner having the ability for on-site original key cutting.

1. Patented key systems shall not be established with products that have an expired patent. Expired systems shall only be specified and supplied to support existing systems.

2. Manufacturers:

    a. Corbin Russwin (RU) - Access 3 AP.
    b. Sargent (SA) - Degree DG1.
    c. Schlage (SC) - Everest 29 SL.

F. Keying System: Each type of lock and cylinders to be factory keyed.

1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. New System: Key locks to a new key system as directed by the Owner.

G. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder: Two (2)
2. Master Keys (per Master Key Level/Group): Five (5).
3. Construction Keys (where required): Ten (10).
4. Construction Control Keys (where required): Two (2).
5. Permanent Control Keys (where required): Two (2).

H. Construction Keying: Provide temporary keyed construction cores.

I. Key Registration List (Bitting List):

1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

2.6 KEY CONTROL

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.

1. Manufacturers:

a. Lund Equipment (LU).
b. MMF Industries (MM).
c. Telkee (TK).

2.7 MECHANICAL LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.

1. Where specified, provide status indicators with highly reflective color and wording for “locked/unlocked” or “vacant/occupied” with custom wording options if required. Indicator to be located above the cylinder with the inside thumb-turn not blocking the visibility of the indicator status. Indicator window size to be a minimum of 2.1” x 0.6” with a curved design allowing a 180 degree viewing angle with protective covering to prevent tampering.

2. Manufacturers:

    a. Corbin Russwin Hardware (RU) - ML2000 Series.
    b. Sargent Manufacturing (SA) - 8200 Series.
    c. Schlage (SC) - L9000 Series.

2.8 ELECTROMECHANICAL LOCKING DEVICES

A. Electromechanical Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed, subject to same compliance standards and requirements as mechanical mortise locksets, electrified locksets to be of type and design as specified below and in the hardware sets.

1. Electrified Lock Options: Where indicated in the Hardware Sets, provide electrified options including: outside door lock/unlock trim control, latchbolt and lock/unlock status monitoring, deadbolt monitoring, and request-to-exit signaling. Support end-of-line resistors contained within the lock case. Unless otherwise indicated, provide electrified locksets standard as fail secure.

2. Energy Efficient Design: Provide lock bodies which have a holding current draw of 15mA maximum, and can operate on either 12 or 24 volts. Locks are to be field configurable for fail safe or fail secure operation.

3. Manufacturers:

    a. Corbin Russwin Hardware (RU) - ML20900 Series.
    b. Sargent Manufacturing (SA) - 8200 Series.
    c. Schlage (SC) - L9000 EL/EU/RX Series.

2.9 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:

1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.

3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

2.10 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:

1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.

2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer’s catalog and template book for specific requirements.

3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.

4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.

5. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.

   a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
   b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.

6. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.

7. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2” wide stiles.

8. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.

9. Rail Sizing: Provide exit device rails factory sized for proper door width application.

10. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

11. Hurricane and Tornado Resistance Compliance: Conventional exit devices are to be U.L. listed for windstorm assemblies where applicable. Provide the appropriate hurricane or tornado resistant products that have been independent third party tested, certified, and labeled to meet state and local windstorm building codes applicable to project.

B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.

1. Manufacturers:

a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
b. Sargent Manufacturing (SA) - 80 Series.
c. Von Duprin (VD) - 35A/98 XP Series.

2.11 ELECTROMECHANICAL EXIT DEVICES

A. Electromechanical Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices subject to same compliance standards and requirements as mechanical exit devices. Electrified exit devices to be of type and design as specified below and in the hardware sets.

1. Energy Efficient Design: Provide devices which have a holding current draw of 15mA maximum, and can operate on either 12 or 24 volts. Locks are to be field configurable for fail safe or fail secure operation.

2. Where conventional power supplies are not sufficient, include any specific controllers required to provide the proper inrush current.

3. Motorized Electric Latch Retraction: Devices with an electric latch retraction feature must use motors which have a maximum current draw of 600mA. Solenoid driven latch retraction is not acceptable.

4. Manufacturers:

a. Corbin Russwin Hardware (RU) - ED5000 Series.
b. Sargent Manufacturing (SA) - 80 Series.
c. Von Duprin (VD) - 35A/98 XP Series.

2.12 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:

1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.

2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.

3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.

4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.

5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.

6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.

1. Manufacturers:

   a. Corbin Russwin Hardware (RU) - DC6000 Series.
   b. LCN Closers (LC) - 4040 Series.
   c. Sargent Manufacturing (SA) - 351 Series.

2.13 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.

2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1” LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side.

Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.

3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.

4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:

   a. Stainless Steel: 300 grade, 050-inch thick.

5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.

6. Manufacturers:

   a. Ives (IV).
   b. Rockwood (RO).
   c. Trimco (TC).

2.14 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

   1. Manufacturers:

      a. Ives (IV).
      b. Rockwood (RO).
      c. Trimco (TC).

C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.

   1. Manufacturers:

      a. Norton Rixson (RF).
      b. Rockwood (RO).

c. Sargent Manufacturing (SA).

2.15 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.

1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.

1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

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

F. Manufacturers:

1. National Guard Products (NG).
2. Pemko (PE).
3. Reese Enterprises, Inc. (RE).

2.16 ELECTRONIC ACCESSORIES

A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.

1. Manufacturers:

a. Sargent Manufacturing (SA) - 3280 Series.
b. Security Door Controls (SD) - DPS Series.
c. Securitron (SU) - DPS Series.

B. Intelligent Switching Power Supplies: Provide power supplies with single, dual or multi-voltage configurations at 12 and/or 24VDC. Power Supply shall have battery backup function with an integrated battery charging circuit. The power supply shall have a standard, integrated Fire Alarm Interface (FAI). The power supply shall provide capability for secondary voltage, power distribution, direct lock control and network monitoring through add on modules. The power supply shall be expandable up to 16 individually protected outputs. Output modules shall provide individually protected, continuous outputs and/or individually protected, relay controlled outputs. Network modules shall provide remote monitoring functions such as status reporting, fault reporting and information logging.

1. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.

2. Manufacturers:

a. Securitron (SU) - AQL Series.
b. Altronix (AS) - Maximal 11F.

2.17 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.18 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. 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

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. DHI TDH-007-20: Installation Guide for Doors and Hardware.
3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections “Closeout Procedures”. Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.

1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
   1. Quantities listed are for each pair of doors, or for each single door.
   2. The supplier is responsible for handing and sizing all products.
   3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
   4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.

B. Manufacturer's Abbreviations:
   1. MK - McKinney
   2. PE - Pemko
   3. RO - Rockwood
   4. SA - SARGENT
   5. MC - Medeco
   6. SU - Securitron
   7. OT - Other

Set: 1.0
Doors: 100A
Description: Ext Pr AL- ELR NL x DT

2	Continuous Hinge	CFM__SLF-HD1 SER*		PE	
1	CVR (MELR x Pull)	LC 55 56 AD8410 106 x 862	US32D	SA	
1	CVR (DT)	55 AD8410 862	US32D	SA	
1	Cylinder as req'd.	Keymark X4 6pin BCJ (match existing)		26	MC
2	Drop Plate	351D	EN	SA	
2	Door Closer	351 CPS spacer/brkt as req	EN	SA	
1	Rain Guard	346C		PE	
2	Sweep	345C		PE	
1	Threshold	By Storefront Manufacturer		OT	
2	ElectroLynx Harness	QC-CxxxP		MK	
2	ElectroLynx Harness	QC-C1500P		MK	
1	Power Supply	AQD series		SU	
1	Seals, Sweeps & Astragals	By Door Mfr.	CL	OT	
1	Card Reader	By Security Contractor		OT	

Notes: Doors are normally secure. Presentation of valid credential will allow entry by pull at active leaf. Push/pull operation by exit device dogging. Free egress at all times
Door closer mounting accessories as required.
Hardware meets Windstorm design intent as tested in an assembly. Confirm hardware meets Windstorm

assembly requirements per door manufacturer. Verify all existing conditions prior to ordering hardware. Confirm hardware compatibility with door manufacturer.

Set: 2.0
Doors: 100B
Description: Pr Ext HM - MELR x DT/RX x KRM

4	Hinge (heavy weight)	T4A3386 NRP	US32D	MK	
2	Hinge, Full Mortise, Hvy Wt	T4A3386 QC	US32D	MK	
1	Removable Mullion	HCL980	PC	SA	
1	Rim Exit Device, Storeroom	HC LC 55 56 8804 ETE	US32D	SA	
1	Rim Exit Device, Dummy	HC 55 8810 ETE	US32D	SA	
2	Cylinder as req'd.	Keymark X4 6pin BCJ (match existing)		26	MC
2	Door Closer	351 CPS spacer/brkt as req	EN	SA	
2	Astragal Set (2)	303AS		PE	
1	Rain Guard	346C		PE	
1	Gasketing	2891APK		PE	
2	Sweep	345C		PE	
1	Threshold	2005AT		PE	
2	ElectroLynx Harness	QC-CxxxP		MK	
2	ElectroLynx Harness	QC-C1500P		MK	
1	Power Supply	AQD series		SU	
1	Card Reader	By Security Contractor		OT	

Notes: Hardware meets Windstorm design intent as tested in an assembly. Confirm hardware meets Windstorm assembly requirements per door manufacturer.
Doors are normally closed and secure. Presentation of valid credential will allow entry by pull. Upon loss of power, doors will remain secure. Free egress at all times.

Set: 3.0
Doors: 101A, 101B, 104A
Description: Pr - Storeroom - OH Stop MFB

6	Hinge, Full Mortise	TA2714	US26D	MK	
1	Flush Bolt Set (2)	555 12" / 72" AFF	US26D	RO	
1	Dust Proof Strike	570	US26D	RO	
1	Storeroom Lock	LC 8204 LNE	US26D	SA	
1	Cylinder as req'd.	Keymark X4 6pin BCJ (match existing)		26	MC
2	Concealed Overhead Stop	690S	EN	SA	
2	Silencer	608 / 608CA		RO	

Set: 4.0
Doors: 105
Description: Sgl - Storeroom - Closer- Gasket

3	Hinge, Full Mortise	TA2714	US26D	MK	
1	Storeroom Lock	LC 8204 LNE	US26D	SA	
1	Cylinder as req'd.	Keymark X4 6pin BCJ (match existing)		26	MC

1	Door Closer	351 UO	EN	SA	
1	Kick Plate	K1050 10" CSK BEV	US32D	RO	
1	Door Stop	406/441CU as req'd.	US26D	RO	
1	Gasketing	S88BL		PE	

Set: 5.0
Doors: 111
Description: Sgl - Storeroom - Closer / stop

3	Hinge, Full Mortise	TA2714	US26D	MK	
1	Storeroom Lock	LC 8204 LNE	US26D	SA	
1	Cylinder as req'd.	Keymark X4 6pin BCJ (match existing)		26	MC
1	Door Closer	351 PS	EN	SA	
1	Kick Plate	K1050 10" CSK BEV	US32D	RO	
1	Gasketing	S88BL		PE	

Set: 6.0
Doors: 107A
Description: Sgl - Storeroom - OH Stop

3	Hinge, Full Mortise	TA2714	US26D	MK	
1	Storeroom Lock	LC 8204 LNE	US26D	SA	
1	Cylinder as req'd.	Keymark X4 6pin BCJ (match existing)		26	MC
1	Concealed Overhead Stop	690S	EN	SA	
3	Silencer	608 / 608CA		RO	

Set: 7.0
Doors: 101
Description: Sgl - Classroom - Closer - Wide

3	Hinge (heavy weight)	T4A3786 (NRP as req)	US26D	MK	
1	Classroom Lock	LC 8237 LNE	US26D	SA	
1	Cylinder as req'd.	Keymark X4 6pin BCJ (match existing)		26	MC
1	Door Closer	351 UO	EN	SA	
1	Kick Plate	K1050 10" CSK BEV	US32D	RO	
1	Door Stop	406/441CU as req'd.	US26D	RO	
3	Silencer	608 / 608CA		RO	

Set: 8.0
Doors: 104, 107
Description: Sgl - Classroom Security - Closer - Gasket

3	Hinge, Full Mortise	TA2714 NRP	US26D	MK	
1	Classroom Security Intruder Lock	LC 8238 LNE	US26D	SA	
2	Cylinder as req'd.	Keymark X4 6pin BCJ (match existing)		26	MC
1	Door Closer	351 UO	EN	SA	
1	Kick Plate	K1050 10" CSK BEV	US32D	RO	
1	Door Stop	406/441CU as req'd.	US26D	RO	

1	Gasketing	S88BL		PE

Notes: Entry by key when locked, free egress at all times.

Set: 9.0
Doors: 102, 103
Description: Sgl - Push / Pull - RR

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Push Plate	70C-RKW	US32D	RO
1	Pull Plate	107x70C	US32D	RO
1	Door Closer	351 UO	EN	SA
1	Kick Plate	K1050 10" CSK BEV	US32D	RO
1	Mop Plate	K1050 6" CSK BEV	US32D	RO
1	Door Stop	406/441CU as req'd.	US26D	RO
1	Gasketing	S88BL		PE

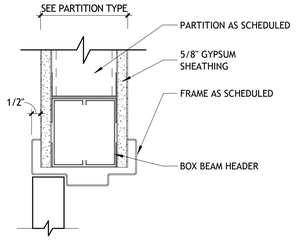
Set: 10.0
Doors: 110
Description: Sgl - Access Control - Closer- Gasket - Wide

2	Hinge (heavy weight)	T4A3786 (NRP as req)	US26D	MK
1	Hinge, Full Mortise, Hvy Wt	T4A3786 QC*	US26D	MK
1	Fail Secure Lock	LC RX 8271 LNE	US26D	SA
1	Cylinder as req'd.	Keymark X4 6pin BCJ (match existing)	26	MC
1	Door Closer	351 UO	EN	SA
1	Kick Plate	K1050 10" CSK BEV	US32D	RO
1	Door Stop	406/441CU as req'd.	US26D	RO
1	Gasketing	S88		PE
1	ElectroLynx Harness	QC-CxxxP		MK
1	ElectroLynx Harness	QC-C1500P		MK
1	Power Supply	AQD series		SU
1	Card Reader	By Security Contractor		OT

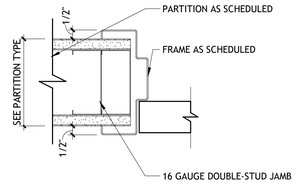
C. Notes: Door is normally closed and secure. Presentation of valid credential allows entry by trim. Upon loss of power, door will remain secure. Free egress at all times.

END OF SECTION 087100

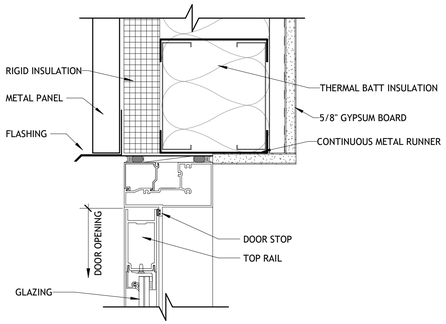
9/17/2024 3:40:14 PM



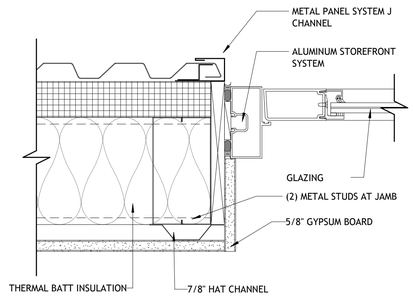
1 H.M. DOOR HEADER
A902 3" = 1'-0"



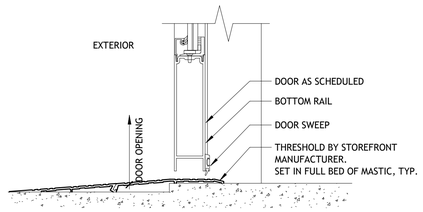
2 H.M. DOOR JAMB
A902 3" = 1'-0"



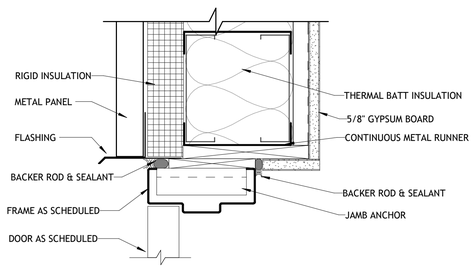
3 STOREFRONT DOOR HEADER
A902 3" = 1'-0"



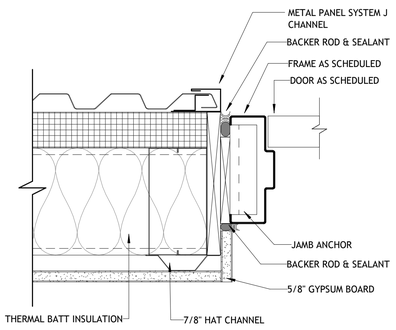
4 STOREFRONT DOOR JAMB
A902 3" = 1'-0"



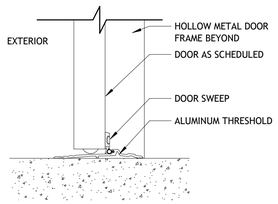
5 STOREFRONT DOOR SILL
A902 3" = 1'-0"



6 H.M. EXTERIOR DOOR HEADER
A902 3" = 1'-0"



7 H.M. EXTERIOR DOOR JAMB
A902 3" = 1'-0"

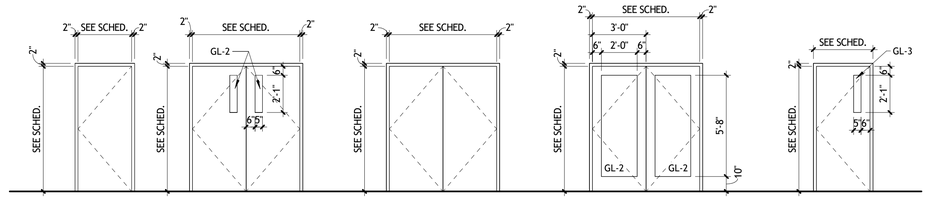


8 H.M. EXTERIOR DOOR SILL
A902 3" = 1'-0"

DOOR SCHEDULE

MARK	TYPE	WIDTH	HEIGHT	PANEL	FRAME	DETAILS HEAD	DETAILS JAMB	DETAILS Sill	HDWR	FIRE RATING	COMMENTS
100A	D	6'-0"	7'-0"	GLASS/ALUM	ALUM.	3/A902	4/A902	5/A902	1.0		ACCESS CONTROL
100B	B	6'-0"	7'-0"	H.M.	H.M.	6/A902	7/A902	8/A902	2.0		ACCESS CONTROL
101	E	3'-6"	7'-0"	WOOD	H.M.	1/A902	2/A902		7.0		
101A	C	4'-0"	7'-0"	WOOD	H.M.	1/A902	2/A902		3.0		
101B	C	4'-0"	7'-0"	WOOD	H.M.	1/A902	2/A902		3.0		
102	A	3'-0"	7'-0"	WOOD	H.M.	1/A902	2/A902		9.0		
103	A	3'-0"	7'-0"	WOOD	H.M.	1/A902	2/A902		9.0		
104	E	3'-6"	7'-0"	WOOD	H.M.	1/A902	2/A902		8.0		
104A	C	4'-0"	7'-0"	WOOD	H.M.	1/A902	2/A902		3.0		
105	A	3'-0"	7'-0"	WOOD	H.M.	1/A902	2/A902		4.0		
107	E	3'-6"	7'-0"	WOOD	H.M.	1/A902	2/A902		8.0		
107A	A	2'-6"	5'-0"	WOOD	H.M.	1/A902	2/A902		6.0		
110	H	3'-6"	7'-0"	WOOD	H.M.	1/A902	2/A902		10.0	45	ACCESS CONTROL
111	A	3'-0"	7'-0"	WOOD	H.M.	1/A902	2/A902		5.0		

1



A SINGLE FLUSH
B DOUBLE FLUSH WITH VISION
C DOUBLE FLUSH
D DOUBLE FULL LITE
E SINGLE FLUSH WITH VISION

DOOR TYPES
1/4" = 1'-0"

GLAZING LEGEND

GL-1	1-5/16" VISION INSULATED GLASS UNIT
GL-2	9/16" LAMINATED GLASS UNIT (EXTERIOR DOORS)
GL-3	1/4" TEMPERED VISION PANEL

SIZELER THOMPSON BROWN ARCHITECTS
300 LAFAYETTE STREET, SUITE 200
NEW ORLEANS, LOUISIANA 70130
(504) 523-6472 FAX (504) 529-1181

Revisions

No.	Description	Date
1	ADDENDUM NO. 02	09/19/24

DELGADO DECKHAND TRAINING CENTER
13200 OLD GENTILLY ROAD

SCHEDULES (DOORS AND WINDOWS)

seal	project number	drawing number
	41177.01	A902
	date 7/17/24	
	phase CD	

5/9/2024 9:27:00 AM

GENERAL NOTES

1. THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND CIVIL DRAWINGS AND SPECIFICATIONS FORM A PART OF THESE DRAWINGS AND SHOULD BE USED ACCORDINGLY.
2. SEE SPECIFICATIONS FOR INFORMATION NOT SHOWN ON DRAWINGS.
3. CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS IN FIELD PRIOR TO FABRICATION AND CONSTRUCTION. ALL DIMENSIONS AND CONDITIONS TYING INTO OR GOVERNED BY EXISTING CONSTRUCTION ARE APPROXIMATE AND ARE NOT CLAIMED TO BE CORRECT. ALL SUCH DIMENSIONS AND CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE PREPARATION OF SHOP DRAWINGS. IF CONDITIONS AND DIMENSIONS VARY FROM THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT BEFORE PREPARATION OF SHOP DWGS.
4. NO PIPING SHALL PASS THROUGH BEAMS WITHOUT THE PERMISSION OF THE ARCHITECT. PIPES THAT PASS THROUGH BEAMS SHALL PASS WITHIN THE MIDDLE THIRD OF THE BEAM LENGTH AND DEPTH.
5. TYPICAL DETAILS: DETAILS LABELED "TYPICAL DETAILS" ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS SHALL APPLY WHETHER OR NOT THEY ARE KEYED IN AT EACH LOCATION. QUESTIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE DETERMINED BY THE ENGINEER.
6. DRAWING CONFLICTS: THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.
7. ALL STRUCTURAL ELEMENTS OF THE PROJECT HAVE BEEN DESIGNED BY THE STRUCTURAL ENGINEER TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES THAT COULD OCCUR IN THE FINAL COMPLETED STRUCTURE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE STRUCTURE IS TIED TOGETHER AND COMPLETED.
8. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE.
9. INTERMITTENT SITE OBSERVATION BY FIELD REPRESENTATIVES OF SCHRENK, ENDOM & FLANAGAN, LLC. IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN GENERAL ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS OR TO CHECK THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR.
10. THE CONTRACTOR SHALL INVESTIGATE THE EXISTING ADJACENT BUILDING, SEWERS AND OTHER UTILITIES AND SHALL TAKE PROPER AND NECESSARY PRECAUTIONS TO PROTECT SAME FROM DAMAGE DUE TO THE EXECUTION OF NEW WORK. SHOULD DAMAGE OCCUR DUE TO THE CONTRACTOR'S NEGLIGENCE, THE COST AND RESPONSIBILITY FOR REPAIRING OR REPLACING THE WORK IN ITS ORIGINAL CONDITION SHALL BE BORNE BY THE CONTRACTOR AT NO COST TO THE OWNER.
11. CONTRACTOR SHALL COORDINATE LOCATIONS, SIZES, EXTENT, ETC. OF CURBS, DEPRESSIONS, SLOPES, RECESSES, EMBEDDED ITEMS, OPENINGS IN SLAB, ETC. WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND OTHER DRAWINGS. THE INFORMATION SHOWN ON THESE DRAWINGS FOR INDICATED ITEMS IS SCHEMATIC IN NATURE AND MAY BE INCOMPLETE.
12. SEE OTHER DRAWINGS (HVAC, PLUMBING, ETC.) FOR THE INSTALLATION OF PIPE AND DUCT SLEEVES. THESE SLEEVES SHALL BE STEEL AND SHALL NOT INTERFERE WITH THE STRUCTURAL FRAMING, NOR SHALL THEY IMPAIR THE STRENGTH OF THE STRUCTURE.
13. PIPE SIZES INDICATED ARE NOMINAL DIAMETERS (TYP).

FOUNDATION NOTES

1. CONSTRUCTION DEWATERING: THE CONTRACTOR SHALL DETERMINE THE EXTENT OF CONSTRUCTION DEWATERING REQUIRED FOR THE EXCAVATION. PROVIDE ADEQUATE DRAINAGE TO DRAIN SURFACE WATER AWAY FROM THE CONSTRUCTION AREA. MOTORIZED EQUIPMENT SHALL NOT BE ALLOWED ON EXPOSED SOIL SURFACES WHEN WET.
2. ALL PILE CAPS ARE TO BE CENTERED UNDER BEAMS AND COLUMNS UNLESS OTHERWISE NOTED.
3. CONDUITS AT THE FIRST FLOOR SLAB SHALL BE PLACED BENEATH THE SLAB AS SHOWN ON THE DRAWINGS. LIKEWISE, CONDUITS SHALL NOT BE PLACED IN GRADE BEAMS.
4. PILING:
   a. TREATED CLASS BTIMBER JOB PILES WITH A COMPRESSIVE DESIGN CAPACITY OF 25 TONS (FACTOR OF SAFETY = 2). TIP ELEVATION = 65'-0" BELOW FINISHED FLOOR. CAPACITY = 25 TONS.
5. GEOFOAM TO BE EXPANDED POLYSTYRENE (EPS) LIGHTWEIGHT FILL MEETING ASTM D6817 REQUIRMENTS. EPS SHALL BE TREATED WITH TERMITE TREATMENT FOR BELOW GRADE APPLICATIONS. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING EPS FLOATATION DURING CONSTRUCTION AND STABILIZING THE EPS INSTALLATION UNTIL COMPLETE WITH FIRST FLOOR SLAB INSTALLATION AND FINAL EXTERIOR GRADING AT THE PERIMETER OF THE BUILDING. ALL EPS FILL MATERIAL SHALL BE OVERBURDENED WITH SOIL FILL AS INDICATED BY THE DRAWINGS. UNDER SLAB PLUMBING WITHIN THE EPS FILL MATERIAL MAY BE INSTALLED BY TRENCH CUTTING THE EPS AND BACKFILLING WITH SPECIFIED SOIL FILL MATERIAL. SEE 2/S103 FOR GEOFOAM AND STRUCTURAL FILL HEIGHT REQUIREMENTS.

CONCRETE & REINFORCING NOTES

1. CONCRETE (SEE SPECS. FOR ADD'L INFORMATION)
   a. 4500 PSI 28 DAY COMP. STRENGTH (NORMAL WEIGHT) U.N.O.
   b. MAX. WATER/CEMENT RATIO AT FIRST FLOOR SLABS = 0.45
   c. ALL PUMPED CONCRETE MUST CONTAIN SUPERPLASTICIZER.
   d. ALL EXTERIOR, EXPOSED-TO-VIEW PILE-SUPPORTED CONCRETE SLABS SHALL CONTAIN A SHRINKAGE INHIBITING ADMIXTURE AND MICROFIBER REINFORCING (IN ADDITION TO THE INDICATED CONVENTIONAL REINFORCING).
   e. SUBMIT PROPOSED CONCRETE MIX DESIGNS TO ARCHITECT AND TESTING LABORATORY CONCURRENTLY FOR REVIEW/APPROVAL.
   f. COORDINATE ALL SLAB FINISHES WITH ARCHITECTURAL DOCUMENTS.
2. ALL CONCRETE TO CONFORM WITH THE LATEST A.C.I. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE. (A.C.I. - 301)
   a. THE DESIGN OF CONCRETE MIXES, LOCATING OF CONSTRUCTION JOINTS IN SLABS, STAGGERING OF POUR PLACEMENTS, LOCATION OF POUR STRIPS, AND PLACEMENT AND CURING PROCEDURES ARE TO BE PERFORMED BY THE CONTRACTOR IN A MANNER THAT WILL MINIMIZE SHRINKAGE CRACKING OF THE SLABS. IN ADDITION TO MATERIALS SPECIFICALLY DESIGNATED TO BE USED IN CONCRETE PLACEMENTS, REINFORCING STEEL MAY BE ADDED TO THE SLAB AND/OR FIBER REINFORCING MAY BE ADDED TO THE CONCRETE MIX AT THE CONTRACTOR'S OPTION. THE CONTRACTOR SHALL REPAIR ALL SHRINKAGE CRACKS DESIGNATED AS UNACCEPTABLE BY THE ARCHITECT BY INJECTION GROUTING WITH NO ADDITIONAL COST TO THE CONTRACT. REPAIR MATERIAL SHALL BE APPROPRIATE FOR THE APPLICATION AS RECOMMENDED BY THE MANUFACTURER. PRODUCTS SHALL BE BY SIKA CORPORATION, OR MASTER BUILDERS. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW PRIOR TO THE DEVELOPMENT OF SLAB REINFORCING SHOP DRAWINGS, A PROPOSED SLAB CONSTRUCTION JOINT LAYOUT PLAN, ALONG WITH PROPOSED METHODS FOR CONTROLLING SHRINKAGE CRACKING IN THE SLABS.
3. FOR PILE CAPS AND GRADE BEAMS, USE CONCRETE WEDGES FOR REINFORCING STEEL SUPPORTS. (BRICK OR MASONRY BLOCK IS NOT ACCEPTABLE). FIRST FLOOR SLAB REINF. TO BE SUPPORTED BY SAND CHAIRS @ 48"o.c. MAX. E.W.
4. SECTIONS DO NOT INDICATE ALL CONCRETE REINFORCING. CHECK SCHEDULES AND NOTES FOR PILE CAPS, BEAM, COLUMN AND SLAB REINFORCING.
5. POUR FIRST FLOOR SLAB AREAS ON VAPOR RETARDER (15 MIL.) OVER COMPACTED FILL.
6. ALL REINFORCING STEEL TO CONFORM WITH REQUIREMENTS OF A.S.T.M. A-615 GRADE 60.
7. PROVIDE REINFORCING BARS AROUND ALL OPENINGS 8" OR GREATER IN SLABS AS SHOWN ON THE DRAWINGS.
8. PROVIDE BAR SUPPORTS AND SPACERS IN ACCORDANCE WITH REQUIREMENTS OF A.C.I. 315 UNLESS NOTED OTHERWISE.

DESIGN CRITERIA

1. DESIGN CRITERIA (2021 IBC)
   a. WIND DESIGN PARAMETERS
      - ULTIMATE DESIGN WIND SPEED V = 144 MPH
      - EXPOSURE D
   b. LIVE LOADS
      - ROOF = 20 PSF
      - FIRST FLOOR (U.N.O.) = 100 PSF
   c. GROUND SNOW LOAD (P_g) = 0 PSF
   d. SEISMIC DESIGN PARAMETERS
      S_S = .087 S_{DS} = .138
      S_1 = .054 S_{D1} = .151
      SITE CLASS E
      SEISMIC DESIGN CATEGORY C
      ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
2. SPECIAL NOTES REGARDING OTHER MECHANICAL OR ELECTRICAL EQUIPMENT:
   a. PRIOR TO THE DETAILING OF ANY STRUCTURAL MATERIALS INVOLVED IN THE SUPPORT OF MECHANICAL OR ELECTRICAL EQUIPMENT, THE GENERAL CONTRACTOR SHALL FURNISH TO THE ARCHITECT ALL INFORMATION RELATIVE TO LOADS AND DIMENSIONS, ETC. OF THE ACTUAL EQUIPMENT WHICH IS TO BE USED. ALL DETAILS SHOWN ON THESE DRAWINGS ARE TENTATIVE UNTIL SUCH TIME THAT THIS INFORMATION IS REVIEWED BY THE ARCHITECT.

STRUCTURAL STEEL NOTES

1. ALL STRUCTURAL STEEL TO CONFORM WITH LATEST REQUIREMENTS OF ASTM AND AISC FOR FABRICATION AND ERECTION OF STRUCTURAL STEEL.
2. STRUCTURAL STEEL:
   a. WIDE FLANGE STRUCTURAL STEEL SHALL CONFORM TO ASTM A992, GRADE 50. ALL OTHER STRUCTURAL SHAPES SHALL CONFORM TO A36, UON.
   b. STEEL TUBE - ASTM A500, GRADE B (F_y = 46KSI)
   c. STEEL PIPE - ASTM A500, GRADE B (F_y = 42KSI)
   d. PLATES AND BARS - ASTM A36, UON.
   e. ALL STRUCTURAL BOLTS SHALL BE A-325 UNLESS OTHERWISE NOTED.
   f. ALL ANCHOR BOLTS SHALL BE F1554 GRADE 36 UNLESS OTHERWISE NOTED.
3. ALL EMBEDDED STEEL ITEMS EXCLUDING COLUMN ANCHOR BOLTS (U.N.O.) SHALL BE FABRICATED IN ACCORDANCE WITH THE LATEST A.I.S.C. STANDARD SPECIFICATIONS AND SHALL BE A.S.T.M. A-36 U.N.O. ALL EMBEDDED STEEL SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
4. ALL WELDING SHALL CONFORM WITH THE LATEST EDITION OF AWS CODE. ALL WELDERS (SHOP & FIELD) SHALL BE AWS CERTIFIED FOR THE TYPE OF WELDING BEING PERFORMED.
5. WELDING INDICATED ON THESE DWGS. MAY BE SHOP OR FIELD PERFORMED AT CONTRACTOR'S OPTION AND AS REQ'D. TO OBTAIN SPECIFIED ALIGNMENT AND FIT-UP. FIELD WELDING MUST BE PERFORMED WHERE SPECIFICALLY NOTED. EDGE OF SLAB AND ROOF BENT PLATES, ANGLES AND OTHER MISC. EXTERIOR OR INTERIOR WALL ALIGNMENT ITEMS SHALL BE FIELD WELDED TO BEAMS. PROVIDE FABRICATION AND ERECTION TOLERANCES MORE STRINGENT THAN SPECIFIED BY AISC WHERE REQUIRED TO ACHIEVE THE DETAILS INDICATED.
6. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, UON.
7. UNLESS OTHERWISE INDICATED AT THE STRUCTURAL DETAILS PROVIDE THE ANGLES, TUBES, PLATES, CHANNELS, AND OTHER STEEL MEMBERS/PIECES SHOWN AT ARCHITECTURAL DETAILS AND CONNECT WITH 1/4" FILLET WELDED AT ALL MATERIAL PIECE INTERFACES. UNLESS OTHERWISE INDICATED THE FOLLOWING ASSUMPTIONS SHALL BE MADE REGARDING SPACING AND MEMBER SIZE IN ORDER TO ESTABLISH AN ALL-INCLUSIVE STRUCTURAL STEEL BID PRICE.
   a. PLATE = 5/16"
   b. CONT. BENT PLATE = 1/4"
   c. ANGLE = L5x5x5/16
   d. CHANNEL (HORIZONTALLY ORIENTED) = C12x30
   e. CHANNEL (VERTICALLY ORIENTED) = C6x8.2
   f. WIDE-FLANGE = W14x22
   g. TUBE = TS6x6x1/4
   h. MEMBERS/PIECES SHOWN IN SECTION SHALL BE ASSUMED AS CONTINUOUS UNLESS OTHERWISE DETAILED.
   i. SPACING INTERVALS OF STIFFENERS, HANGERS, AND KICKERS = 32" O.C.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF ALL MISCELLANEOUS STEEL ITEMS (ANGLES, BRACKETS, TUBES, CHANNELS, RODS, PLATE, BAR, ETC.) INDICATED, DESCRIBED, OR IMPLIED IN THE DRAWINGS WHETHER SHOWN ON THE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS.
9. FOR WORK WHICH WILL BE EXPOSED TO VIEW, USE ONLY MATERIALS WHICH ARE SMOOTH AND FREE OF SURFACE BLEMISHES INCLUDING PITTING, RUST AND SCALE, SEAM MARKS, ROLLER MARKS, ROLLED TRADE NAMES AND ROUGHNESS. REMOVE SUCH BLEMISHES BY GRINDING, OR BY WELDING AND GRINDING PRIOR TO CLEANING, TREATING AND APPLICATION OF SURFACE FINISHES. STRUCTURAL STEEL EXPOSED-TO-VIEW AS A FINAL PRODUCT SHALL COMPLY WITH AISC'S "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS)' SPECIFICATION, CATEGORY AESS 3, INCLUDING THE REMOVAL OF BACKER-BARS AND BACK-GOUGING AT FULL-PENETRATION WELDS, UNLESS NOTED OTHERWISE. ALSO SEE AESS CATEGORY MATRIX.
10. ALL EXPOSED STEEL AND ALL STEEL FOR THE PLATFORM IN ALTERNATE 2 SHALL BE HOT-DIPPED GALVANIZED.

EPOXY

1. ALL BOLTS INTO EXISTING CONCRETE USE HILTI-HY 200 ADHESIVE ANCHOR OR APPROVED EQUAL.

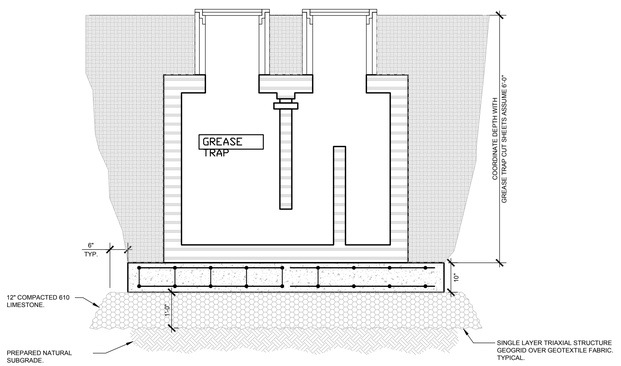
METAL DECK

1. METAL DECK TO BE 1 1/2" TYPE B DECK.
   -THICKNESS = 20 Ga.
   -COATING TO BE G90.
   -Fy = 40ksi
   -SECTION PROPERTIES: I_p = 0.201 I_n = 0.213 S_p = 0.224 S_n = 0.235
2. METAL DECK TO BE ATTACHED TO PURLINS WITH #12 TEK SCREWS IN A 36/7 PATTERN WITH (3) #10 SIDELAP FASTENERS PER SPAN.

ABBREVIATIONS

(B)	BELOW	FF	FAR FACE	OC	ON CENTER
(N)	NEW	FDN	FOUNDATION	OD	OUTSIDE DIAMETER
∅	DIAMETER	FIN	FINISH	OH	OPPOSITE HAND
&	AND	FF	FINISH FLOOR	OPNG	OPENING
@	AT	FLR	FLOOR	OPP	OPPOSITE
		FO	FACE OF		
AA	ADHESIVE ANCHOR	FOC	FACE OF CONCRETE	P	PILE
AB	ANCHOR BOLT	FOM	FACE OF MASONRY	PAF	POWDER ACTUATED FASTENER
ABV	ABOVE	FOS	FACE OF STUDS	PC	PIPE COLUMN, (STEEL)
AC	ASPHALT CONCRETE	FOW	FACE OF WALL	PCS	PIECES
ADDL	ADDITIONAL	FP	FIREPROOFING	PL	PLATE, (STEEL)
ADJ	ADJACENT	FS	FAR SIDE	PERP	PERPENDICULAR
AGGR	AGGREGATE	FT	FOOT or FEET	PP	PARTIAL PENETRATION
AL	ALUMINUM	FTG	FOOTING	PR	PAIR
ALT	ALTERNATE	FJ	FLOOR JOIST	PT	POINT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	GA	GAUGE	PTN	PARTITION
		GB	GRADE BEAM	PSF	POUNDS PER SQ. FT.
APPROX	APPROXIMATE	GALV	GALVANIZED	PSI	POUNDS PER SQ. IN.
ARCH	ARCHITECTURAL	GL	GLASS or GLAZING		
ASTM	AMERICAN SOCIETY for TESTING and MATERIALS	GRND	GROUND	RO	ROUGH OPENING
		GR	GRADE	RAD	RADIUS
ATR	ALL THREAD ROD	GT	GIRDER TRUSS	REF	REFERENCE
AWG	AMERICAN WIRE GAUGE	GYP BD	GYPSUM BOARD	REINF	REINFORCED or REINFORCING
				REM	REMAINDER
BTWN	BETWEEN			REQ	REQUIRED
BLDG	BUILDING	HDG	HOT DIPPED GALVANIZED	REV	REVISION
BM	BEAM,	HDR	HEADER	RFG	ROOFING
BOF	BOTTOM OF FOOTING	HP	HIGH POINT		
BOTT	BOTTOM	HSB	HIGH STRENGTH BOLT	SAD	SEE ARCHITECTURAL DRAWINGS
BP	BASE PLATE	HT	HEIGHT	SCHED	SCHEDULE
BRG	BEARING	HK	HOOK	SECT	SECTION
BS	BOTH SIDES	HORIZ	HORIZONTAL	SHT	SHEET
				SIM	SIMILAR
℄	CENTER LINE	ID	INSIDE DIAMETER	SL	SLOPE
C	CHANNEL	INT	INTERIOR	SMS	SHEET METAL SCREW
CANT	CANTILEVER	in	INCH	SW	SHEAR WALL
CBR	CAMBER	INFO	INFORMATION	SOG	SLAB ON GRADE
CIP	CAST IN PLACE			SPECS	SPECIFICATIONS
CL	CENTER LINE	JST	JOIST	SQ	SQUARE
CJ	CONSTRUCTION JOINT (COLD JOINT)	JT.	JOINT	SS	STAINLESS STEEL
				STAGG	STAGGER or STAGGERED
CLG	CEILING	K	KIP	STD	STANDARD
CLR	CLEAR	KO	KNOCK OUT	STIFF	STIFFENER
CMU	CONCRETE MASONRY UNIT			STIR	STIRRUP
COL	COLUMN	L	ANGLE STEEL	STL	STEEL
CONC	CONCRETE	LAT	LATERAL	STRUCT	STRUCTURAL
CONN	CONNECTION	LBS	POUNDS	SUBST	SUBSTITUTE
CONST	CONSTRUCTION	LD	DEVELOPMENT LENGTH	SUSP	SUSPENDED
CONT	CONTINUOUS	LDB	HOOK DEVELOPMENT LENGTH	SYM	SYMMETRICAL
CP	COMPLETE PENETRATION	LEV	LEVEL		
CNT	CENTER	LLBB	LONG LEG BACK / BACK	T&B	TOP AND BOTTOM
		LLH	LONG LEG HORIZONTAL	THK	THICK
DBL	DOUBLE	LLV	LONG LEG VERTICAL	THRD	THREADED
DK,DKG	DECK, DECKING	LOC	LOCATION	THRU	THROUGH
DEMO	DEMOLITION	LONG	LONGITUDINAL	TO	TOP OF
DET	DETAIL	LP	LOW POINT	TOC	TOP OF CONCRETE
DP	DEEP	LPS	LAP SPLICE LENGTH	TOF	TOP OF FOOTING
DL	DEEP LEG	LT	LIGHT	TOS	TOP OF STEEL
DIAG	DIAGONAL	LGS	LIGHT GAUGE STEEL	TOSLAB	TOP OF STRUCTURAL SLAB
DIA	DIAMETER	LWC	LIGHT WEIGHT CONCRETE	TOW	TOP OF WALL
DIM	DIMENSION			TPL	TRIPLE
DIST	DISTANCE	MAS	MASONRY	TR	TREAD
DN	DOWN	MANUF	MANUFACTURER	TS	TUBE STEEL
DO	DITTO "THE SAME"	MAX	MAXIMUM	TRANS	TRANSVERSE
DR	DROP	MB	MACHINE BOLT	TYP	TYPICAL
DWL	DOWEL	MEZZ	MEZZANINE		
DWG	DRAWING	MECH	MECHANICAL	UON	UNLESS OTHERWISE NOTED
		MEP	MECHANICAL, ELECTRICAL PLUMBING DOCUMENTS	VERT	VERTICAL
EA	EACH			VIF	VERIFY IN FIELD
E.A.	EXPANSIVE ANCHOR	MTL	METAL		
EE	EACH END	MF	MOMENT FRAME		
EF	EACH FACE	MIN	MINIMUM	WF	WIDE FLANGE
EQ	EQUAL	MISC	MISCELLANEOUS	W/	WITH
EQUIP	EQUIPMENT	MTD	MOUNTED	W/O	WITHOUT
ES	EACH SIDE			WP	WORK POINT
EW	EACH WAY	N	NORTH	WT	WEIGHT
ELEC	ELECTRICAL	NF	NEAR FACE	WWF	WELDED WIRE FABRIC
ELEV	ELEVATION	NIC	NOT IN CONTRACT		
EMBED	EMBEDMENT	NS	NEAR SIDE	X HVY	EXTRA HEAVY
EOS	EDGE OF SLAB	NTS	NOT TO SCALE	XX HVY	DOUBLE EXTRA HVY
EJ	EXPANSION JOINT	No or #	NUMBER	X STR	EXTRA STRONG
EV	EVERY	NOM	NOMINAL (DIAMETER)	XX STR	DOUBLE EXTRA STRONG
EPS	EXPANDED POLYSTYRENE	NWC	NORMAL WEIGHT CONCRETE		
EXCAV	EXCAVATION				
EXP	EXPANSION				
EXT	EXTERIOR				

CONCRETE PAD TO BE 10'-0"x10'-0"x10" THICK WITH #3 REINFORCING BARS AT 12" O.C. EACH WAY TOP AND BOTTOM MATS. ATTACH ANCHOR KIT FOR GREASE TRAP TO THE CONCRETE PAD. ATTACHMENT IS REQUIRED TO RESIST 10000 lbs. THE DESIGN OF THE ANCHOR KIT AND ATTACHMENT ANCHORS MUST BE SUBMITTED TO THE ARCHITECT FOR FOR REVIEW BY THE CONTRACTOR. BACKFILL WITH RIVER SAND.



1. GEOGRID TO BE SINGLE LAYER, TRIAXIAL STRUCTURAL GEOGRID (NODAL THICKNESS = .12" MIN.)
2. CLASS D GEOTEXTILE FABRIC SHALL COMPLY WITH LA. D.O.T.D. STANDARD SPEC. SECTION 1019 (2006 OR LATEST EDITION).
3. 610 LIMESTONE TO BE COMPACTED TO 95% MAX. DRY DENSITY AT OPTIMUM MOISTURE CONTENT PER ASTM D-1557.

1 / S101 SECTION AT GREASE TRAP FOUNDATION
1/2" = 1'-0"

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
3+ / S106+	DETAIL NO. / SHEET LOCATION		INDICATES STEP IN SLAB, S.A.D. FOR DIFFERENTIAL AND LOCATION
		W16X40	INDICATES SHEAR STUD LAYOUT PATTERN
3+ / S106+	VIEW DIRECTION (SHADED) / SECTION/ELEVATION NO. / SHEET LOCATION	W16X40 (-2")	INDICATES UPSET (+) OR DEPRESS (-) FROM REFERENCE ELEV.
EL. = 0'-0" / S.A.D.	ELEVATION RELATIVE TO 1ST FLOOR TOP OF SLAB ELEVATION 0'-0" / NOTE	W16X40 C=2"	INDICATES UPWARD/POSITIVE CAMBER AT MIDSPAN OF BEAM
		W.P.	WORK POINT
EL. = 0'-0"	TOP OF PILE CAP ELEVATION	SLOPE (+3")	INDICATES SLOPED BEAM, SLAB, OR DECK WHERE ARROWHEAD INDICATES DOWNWARD (-) OR UPWARD (+) DIRECTON
EL. = 0'-0"	TOP OF GRADE BEAM ELEVATION	E	SHEET NOTE CALLOUT
EL. = 0'-0"	TOP OF PILE ELEVATION	1	REVISION NO.
	INDICATES FIELD WELD, SHOP WELD WHEN NOT SHOWN		AFFECTED REGION DUE TO CURRENT REVISION
TYP. / 5/16 / 3-6	WELD NOTES / CENTER TO CENTER WELD SPACING (INCHES) / WELD LENGTH (INCHES) / WELD TYPE / WELD SIZE	OR	BEAM TO COLUMN MOMENT CONNECTION PER 1/S401
REFER TO AISC, LATEST EDITION, FOR ALL WELD TYPES & SYMBOLS			BEAM TO BEAM MOMENT CONNECTION PER 2/S401

SIZELER THOMPSON BROWN ARCHITECTS
300 LAFAYETTE STREET, SUITE 200
NEW ORLEANS, LOUISIANA 70130
(504) 523-6472 FAX (504) 529-1181

Revisions

No.	Description	Date
1	ADDENDUM No. 02	09-19-2024

DELGADO DECKHAND TRAINING FACILITY

GENERAL NOTES

seal: STATE OF LOUISIANA — JOHN E. ENDOM — 28245 — REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

project number: 41177.01
date: 7/11/24
phase: CD
drawing number: S101

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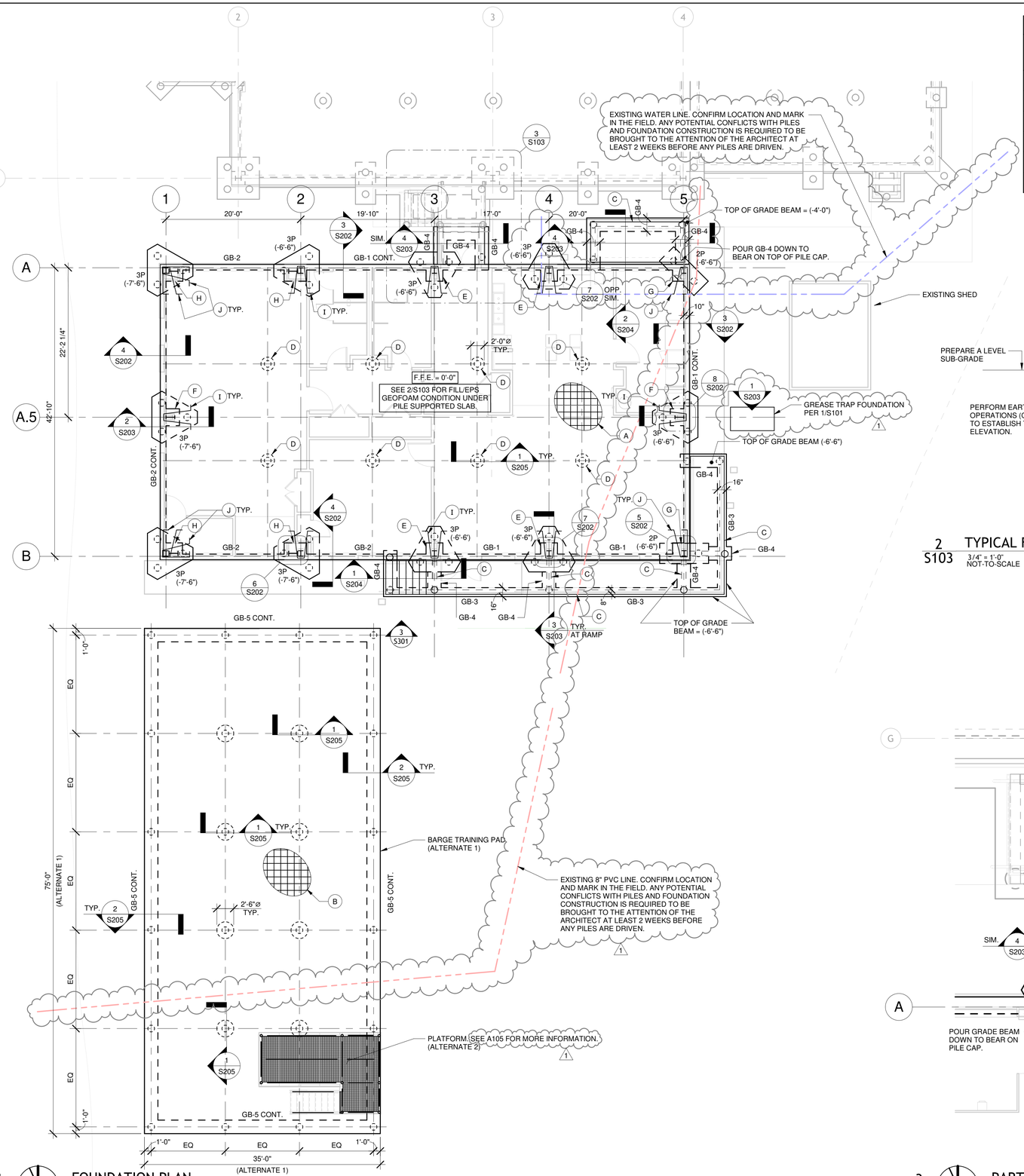
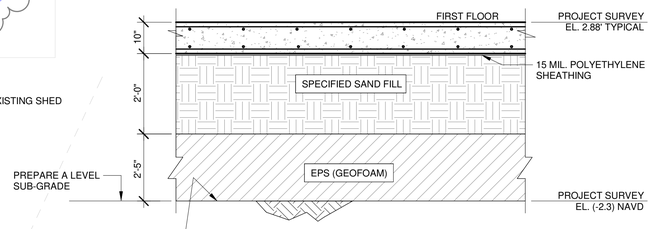


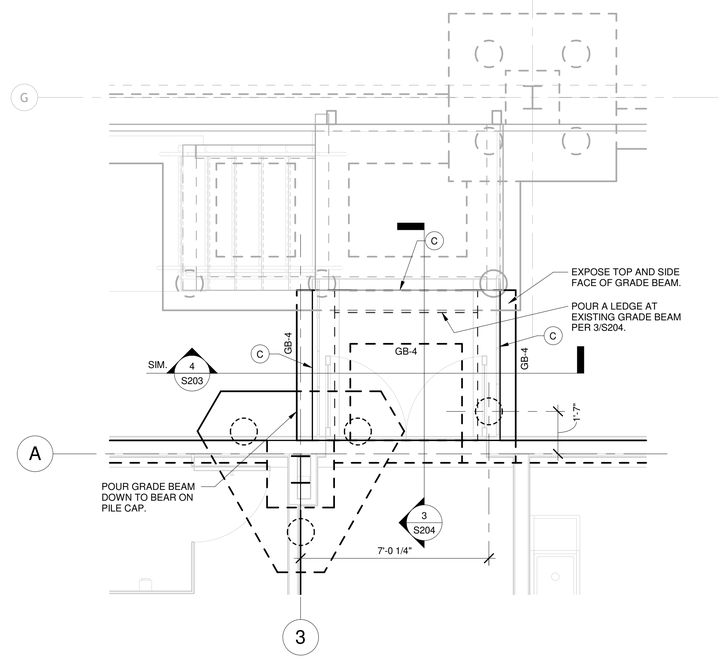
1 S103 FOUNDATION PLAN
1/8" = 1'-0"

GRADE BEAM SCHEDULE							
MARK	SIZE		REINFORCEMENT			#3 STIRRUPS FROM EACH PILE & PILE CAP	REMARKS
	W	D	TOP CONT.	TOP @ SUPPORT	BOT. CONT.		
GB-1	10"	5'-6"	(2) #8		(2) #8	#3 BARS AT 12" O.C.	(4) #4 BARS AT EACH SIDE
GB-2	10"	6'-6"	(2) #8		(2) #8	#3 BARS AT 12" O.C.	(4) #4 BARS AT EACH SIDE
GB-3	1'-4"	1'-6"	(3) #6		(3) #6	#3 BARS AT 6" O.C.	
GB-4	2'-0"	1'-6"	(3) #6		(3) #6	#3 BARS AT 6" O.C.	
GB-5	2'-0"	2'-0"	(3) #7		(3) #7	#3 BARS AT 10" O.C.	ALTERNATE 1



EPS INFORMATION
EXPANDED POLYSTYRENE (EPS) IS REQUIRED BENEATH ALL PILE SUPPORTED CONSTRUCTION, AND SHALL BE DESIGNED AND MANUFACTURED AS A SOIL-FILL REPLACEMENT CONFORMING TO ASTM D6817 - EPS SHALL BE MANUFACTURED WITH TERMITE TREATMENT FOR BELOW GRADE APPLICATIONS. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING EPS FLOTATION DURING CONSTRUCTION AND STABILIZING THE EPS DURING INSTALLATION UNTIL COMPLETE WITH THE FIRST FLOOR SLAB INSTALLATION. UTILITY WORK WITHIN EPS FILL MATERIAL MAY BE INSTALLED BY TRENCH CUTTING THE EPS AND BACKFILLING WITH SPECIFIED FILL MATERIAL. PRODUCT DATA AND SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW.

2 S103 TYPICAL FILL/EPS CONDITION UNDER PILE SUPPORTED CONSTRUCTION
3/4" = 1'-0"
NOT-TO-SCALE



3 S103 PARTIAL FOUNDATION PLAN
3/8" = 1'-0"

FOUNDATION PLAN LEGEND/NOTES	
MARK	DESCRIPTION
A	10" SLAB WITH #4 BARS AT 12" O.C. EACH WAY AT TOP AND BOTTOM MATTS.
B	8" CONCRETE SLAB WITH #4 BARS AT 12" O.C. EACH WAY AT TOP AND BOTTOM MATTS.
C	8" WALL #4 BARS AT 12" O.C. EACH FACE, EACH WAY.
D	JOB PILE WITH TENSION CONNECTION. SEE 9/S202.
E	2'-0" x 2'-0" CONCRETE PEDESTAL FROM TOP OF PILE CAP TO BOTTOM OF SLAB. (8) #7 BARS AND (8) #4 TIES. SEE 7/S202.
F	2'-0" x 2'-0" CONCRETE PEDESTAL FROM TOP OF PILE CAP TO BOTTOM OF SLAB. (8) #7 BARS AND (8) #4 TIES. SEE 8/S202.
G	2'-0" x 2'-0" CONCRETE PEDESTAL FROM TOP OF PILE CAP TO BOTTOM OF SLAB. (8) #7 BARS AND (8) #4 TIES. SEE 5/S202.
H	3'-2 1/2" x 2'-0" CONCRETE PEDESTAL FROM TOP OF PILE CAP TO BOTTOM OF SLAB. (10) #7 BARS AND (8) #4 TIES. SEE 6/S202.
I	#7 BAR (10" 48" 24" 10" 48" 45" 12") AT COLUMNS INSTALL BELOW TOP REINFORCING MATT.
J	#7 BAR (10" 24" 48" 10" 10" 12") AT COLUMNS INSTALL BELOW TOP REINFORCING MATT.
XP (X'-XX")	PILE CAP TYPE. SEE 1/S202. DISTANCE BELOW FINISHED FLOOR NOTED IN PARENTHESES.
	JOB PILE
GBX	GRADE BEAM (REF. SCHEDULE)
F.F.E. = 0'-0". THIS IS EQUAL TO 2.88 NAVD	
SEE 2/S103 FOR FILL/EPS GEOFOAM CONDITION UNDER PILE SUPPORTED SLAB.	

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300 LAFAYETTE STREET, SUITE 200
NEW ORLEANS, LOUISIANA 70130
(504) 523-6472 FAX (504) 529-1181

Revisions		
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DELGADO DECKHAND TRAINING FACILITY

FOUNDATION PLAN

seal	project number	drawing number
STATE OF LOUISIANA JOHN E. HOOPER 38245 REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING	41177.01	S103
	date 7/11/24	
	phase CD	

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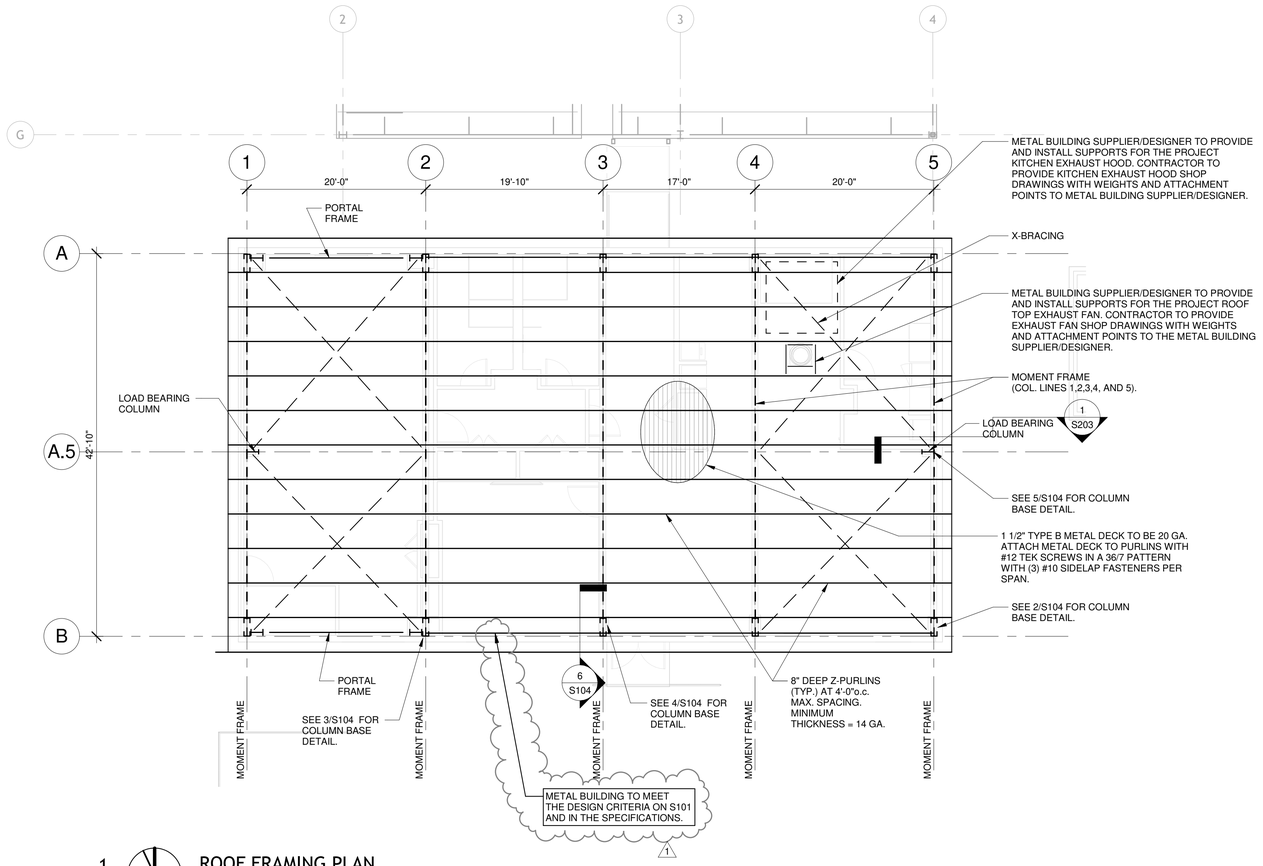
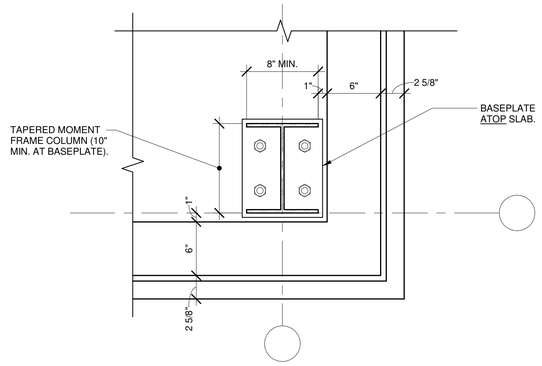
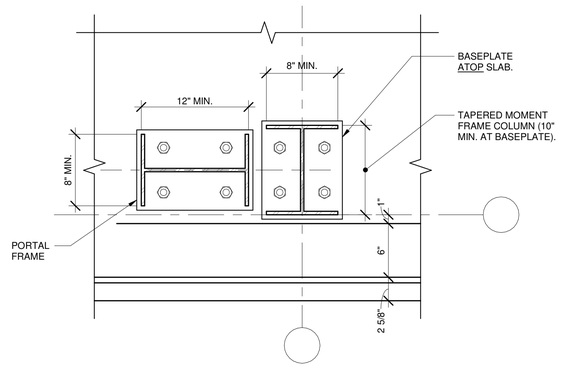


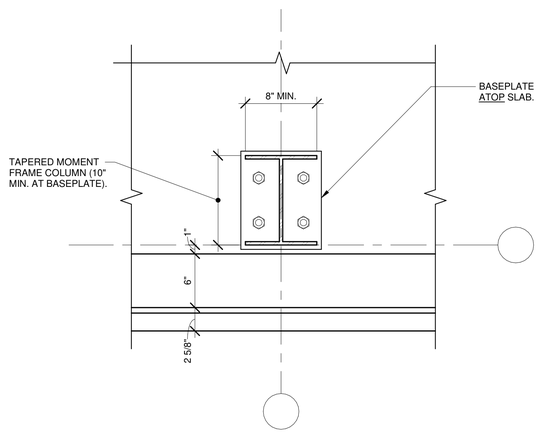
1 S104 ROOF FRAMING PLAN
1/8" = 1'-0"



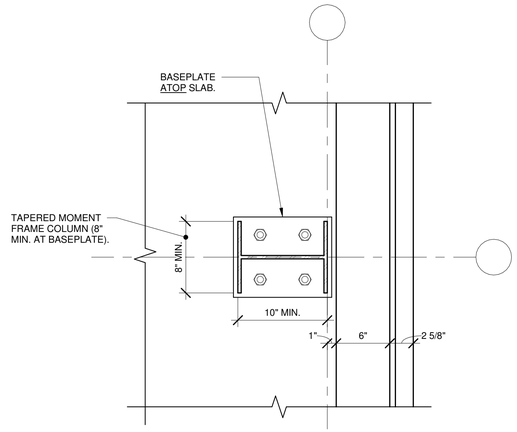
2 S104 PLAN DETAIL
1 1/2" = 1'-0"



3 S104 PLAN DETAIL
1 1/2" = 1'-0"

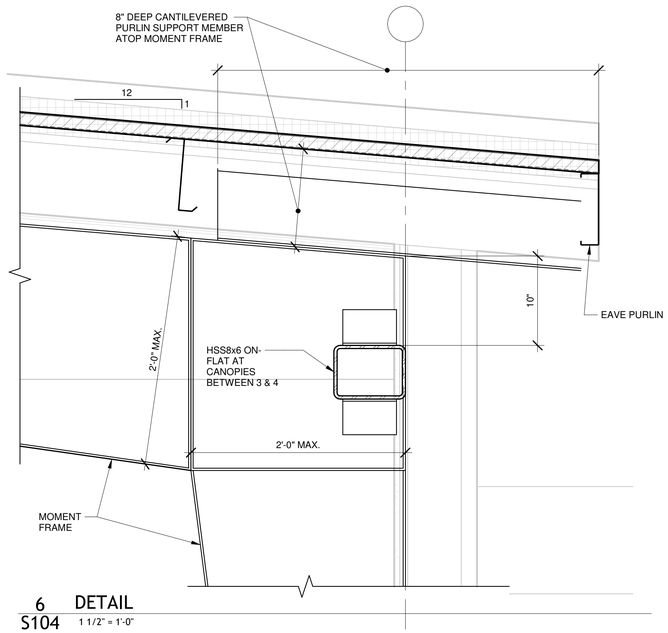


4 S104 PLAN DETAIL
1 1/2" = 1'-0"



5 S104 PLAN DETAIL
1 1/2" = 1'-0"

2ND FLOOR T.O.S.
116' - 9"



6 S104 DETAIL
1 1/2" = 1'-0"

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300 LAFAYETTE STREET, SUITE 200
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Revisions

No.	Description	Date
1	ADDENDUM No. 02	09-19-2024

DELGADO DECKHAND TRAINING FACILITY

ROOF FRAMING PLAN

seal
STATE OF LOUISIANA
JOHN C. THOMPSON
28245
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

project number 41177.01

date 7/11/24

phase CD

drawing number S104

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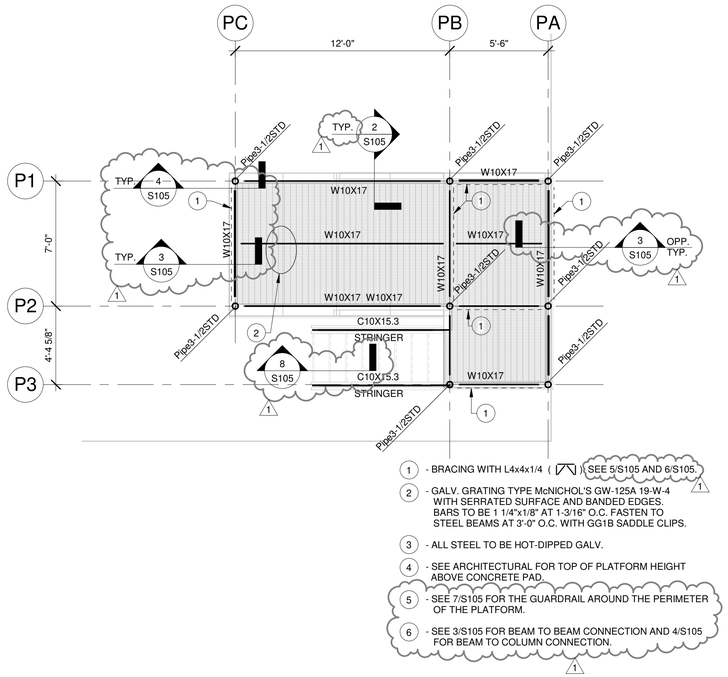
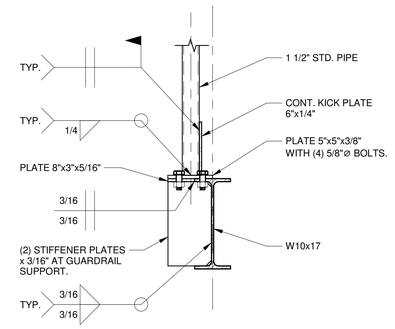
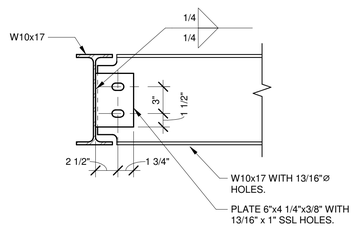


1 S105 PLATFORM FRAMING PLAN (ALTERNATE 2)
1/4" = 1'-0"



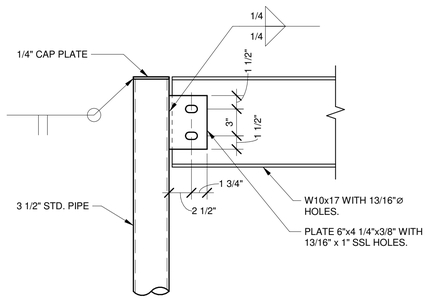
2 S105 TYP. PLATFORM EDGE DETAIL
1 1/2" = 1'-0"



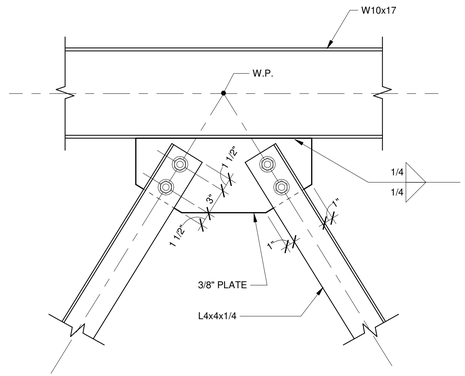
* ALL STEEL TO BE HOT-DIPPED GALVANIZED.

* BOLTS TO BE 3/4"ø A325 WITH NUTS AND WASHERS.

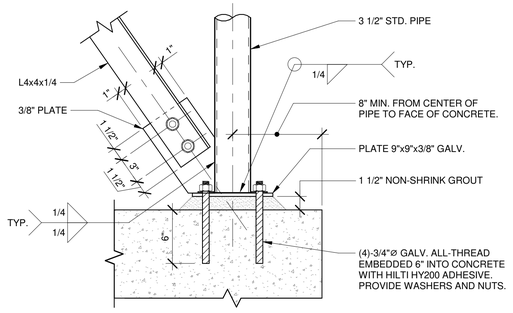
3 S105 SECTION
1 1/2" = 1'-0"



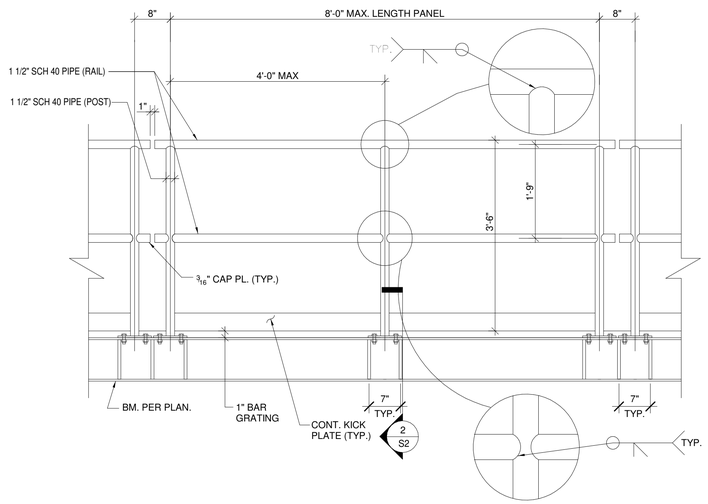
4 S105 SECTION
1 1/2" = 1'-0"



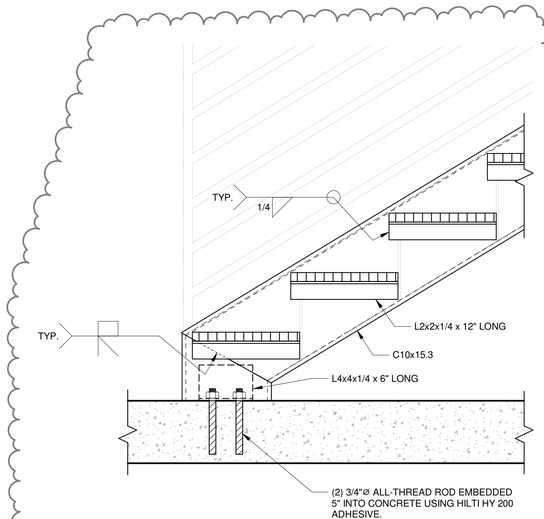
5 S105 DETAIL
1 1/2" = 1'-0"



6 S105 DETAIL AT BRICK
1 1/2" = 1'-0"



7 S105 ELEVATION AT GUARDRAIL
3/4" = 1'-0"



8 S105 SECTION
1 1/2" = 1'-0"

ALTERNATE 2

SIZELER THOMPSON BROWN ARCHITECTS
300 LAFAYETTE STREET, SUITE 200
NEW ORLEANS, LOUISIANA 70130
(504) 523-6472 FAX (504) 529-1181

Revisions		
No.	Description	Date
1	ADDENDUM No. 02	09-19-2024

DELGADO DECKHAND TRAINING FACILITY

PLATFORM FRAMING PLAN (ALTERNATE 2)

seal: STATE OF LOUISIANA JOHN C. HUNT 28245 REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

project number	drawing number
41177.01	S105
date: 7/11/24	
phase: CD	

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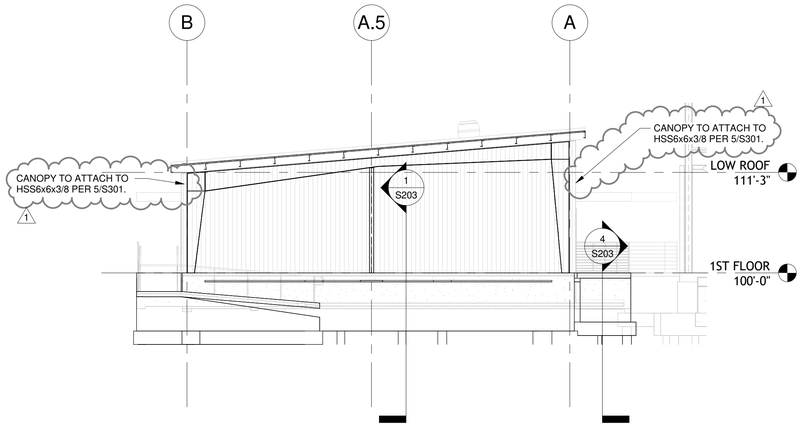
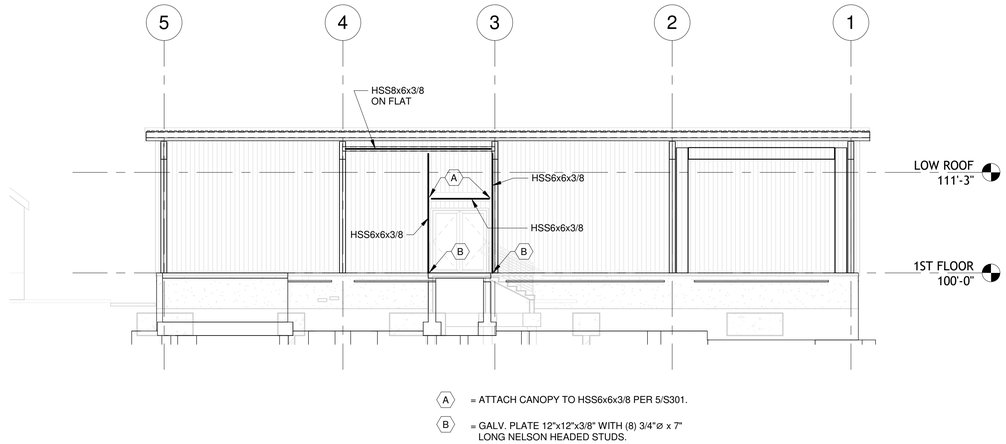
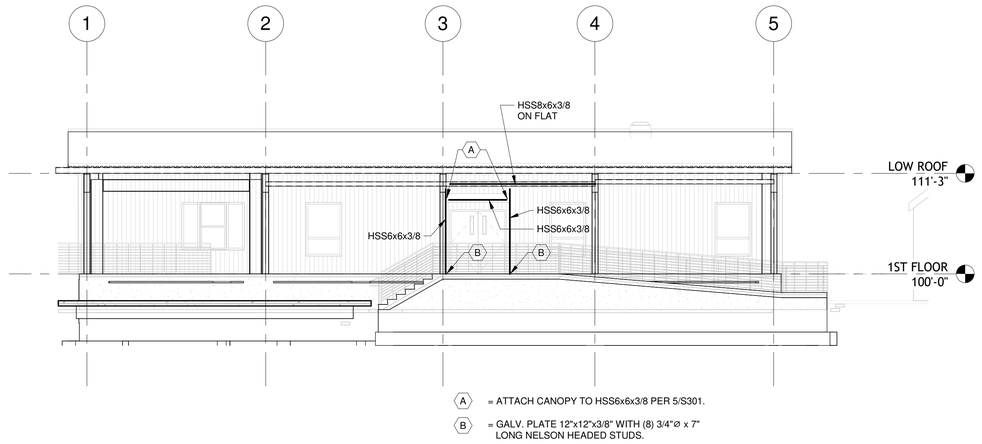


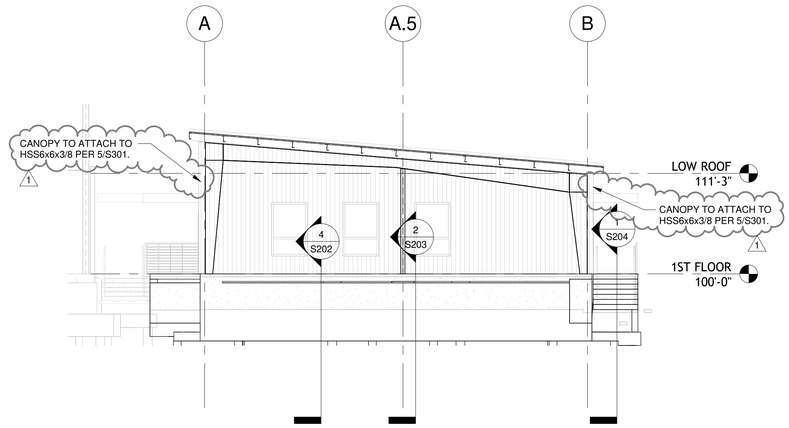
1 EAST ELEVATION
S301 1/8" = 1'-0"



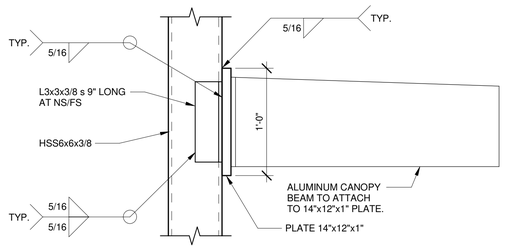
2 NORTH ELEVATION
S301 1/8" = 1'-0"



3 SOUTH ELEVATION
S301 1/8" = 1'-0"



4 WEST ELEVATION
S301 1/8" = 1'-0"



5 DETAIL
S301 1 1/2" = 1'-0"

SIZELER THOMPSON BROWN ARCHITECTS
SIZELER THOMPSON BROWN ARCHITECTS
300 LAFAYETTE STREET, SUITE 200
NEW ORLEANS, LOUISIANA 70130
(504) 523-6472 FAX (504) 529-1181

Revisions		
No.	Description	Date
1	ADDENDUM No. 02	09-19-2024

DELGADO DECKHAND TRAINING FACILITY

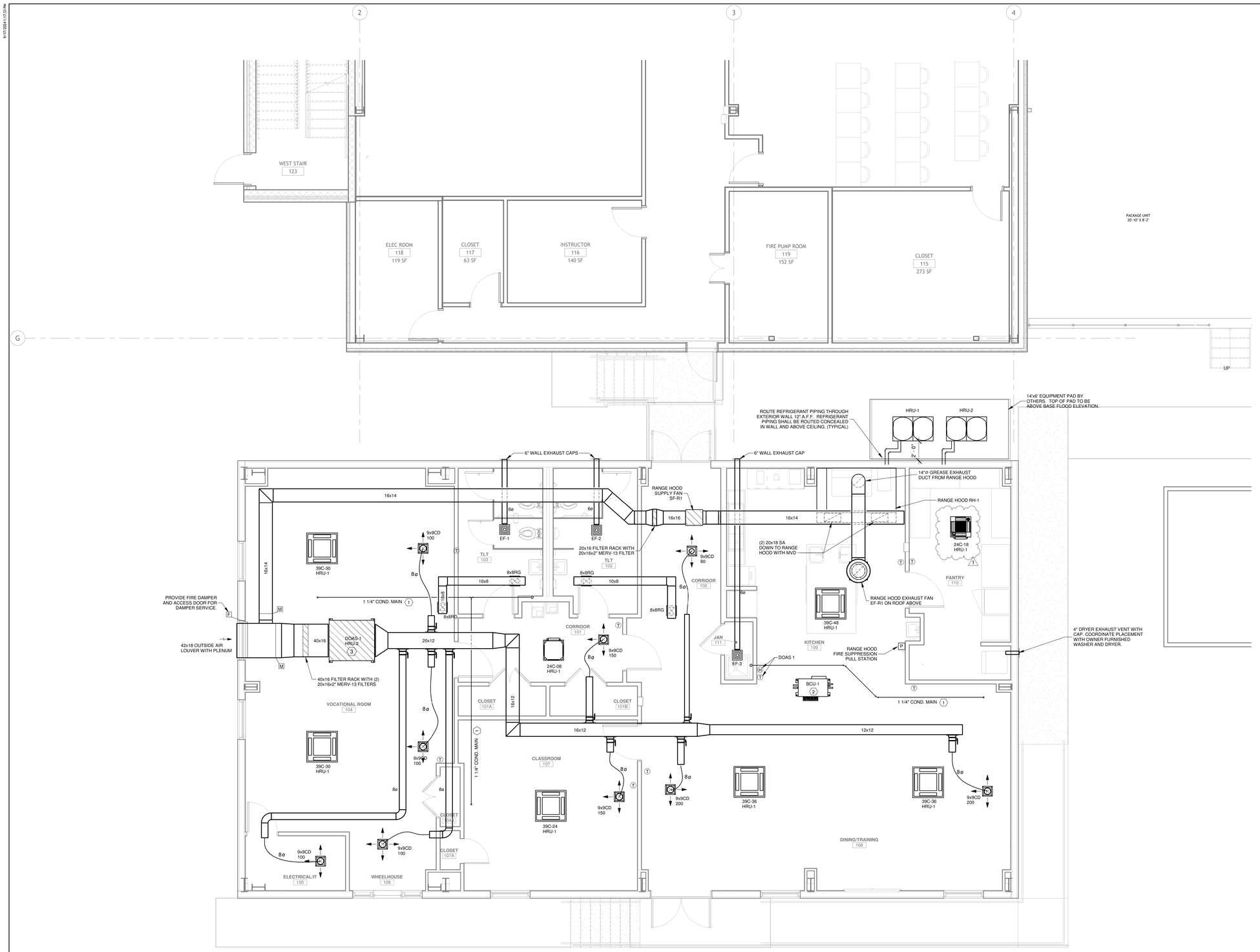
BUILDING ELEVATIONS

seal
STATE OF LOUISIANA
JOHN E. THOMPSON
NO. 28245
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

project number 41177.01
date 7/11/24
phase CD

drawing number S301

9/17/2024 1:17:33 PM



1ST FLOOR - HVAC

SCALE: 1/4" = 1'-0"

SPECIFIC NOTES

1. PROVIDE 1 1/4" AC CONDENSATE P-TRAPS TO RECEIVE ALL CONDENSATE. ROUTE CONDENSATE MAIN IN CEILING WITH CLEANOUTS AT ALL CHANGES IN DIRECTION GREATER THAN 45 DEGREES AND TERMINATE AT PLUMBING P-TRAP. EXTEND AN INDIVIDUAL 3/4 INCH CONDENSATE DRAIN FROM EACH INDOOR DUCTLESS UNIT AND TAP INTO THE TOP OF THE CONDENSATE DRAIN. ALL CONDENSATE DRAIN PIPING SHALL BE SLOPED TO PROVIDE FOR POSITIVE DRAINAGE. THE INTEGRAL CONDENSATE PUMPS SHALL ONLY BE USED TO LIFT THE CONDENSATE FROM EACH INDOOR UNIT TO ALLOW FOR GRAVITY FLOW.
2. PROVIDE REFRIGERANT SHUT OFF VALVES FOR EACH REFRIGERANT PIPING CONNECTION TO THE BRANCH SELECTOR. PROVIDE SAFE PAN BELOW BRANCH SELECTOR AND CONNECT TO GRAVITY DRAIN INTO CONDENSATE DRAIN.
3. SUSPEND DOAS-1 ROME STRUCTURE ABOVE. PROVIDE 1" CONDENSATE TRAP AND EXTEND DISCHARGE TO 1 1/4" CONDENSATE MAIN. PROVIDE GALVANIZED SAFE PAN BELOW UNIT WITH 3/4" DRAIN TO CONDENSATE MAIN.

THESE PLANS HAVE BEEN PREPARED UNDER MY CLOSE PERSONAL SUPERVISION AND, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THEY COMPLY WITH CITY PARISH REQUIREMENTS. I AM GENERALLY ADMINISTERING THE WORK, BUT NOT TO THE EXTENT THAT WILL ELIMINATE THE NEED FOR CITY PARISH INSPECTIONS.

GVA ENGINEERING, L.L.C.
PROJECT No. 4413

SIZELER THOMPSON BROWN ARCHITECTS
300 LAFAYETTE STREET, SUITE 200
NEW ORLEANS, LOUISIANA 70130
(504) 523-6472 FAX (504) 529-1181

Revisions		
No.	Description	Date
1	Addendum No. 02	09.18.24

DELGADO DECKHAND TRAINING CENTER
13200 OLD GENTILLY ROAD

1ST FLOOR PLAN

seal: STATE OF LOUISIANA — DAVID C. CODE — License No. 34961 — PROFESSIONAL ENGINEER — IN — MECHANICAL ENGINEERING — 07-11-2024

project number	drawing number
41177.01	M201
date: 07.11.24	
phase: CD	