

PROJECT MANUAL

Onslow County Courthouse Expansion Courtroom Built-in

Jacksonville, North Carolina

Onslow County

SMITH SINNETT ARCHITECTURE

PROJECT NO. 2015014

DATE: OCTOBER 16, 2017

Owner

Onslow County
234 NW Corridor Blvd.
Jacksonville, North Carolina 28540

Architect

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205
Raleigh, North Carolina 27607

SECTION 00 00 05 – CERTIFICATIONS

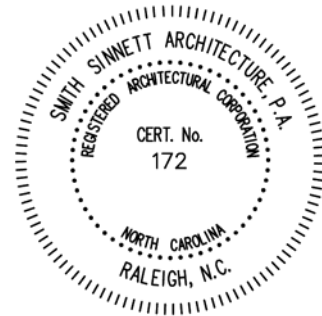
Onslow County Courthouse Expansion Courtroom Built-in
109 Old Bridge Street
Jacksonville, North Carolina 28540

Onslow County

PROJECT NO. 2015014

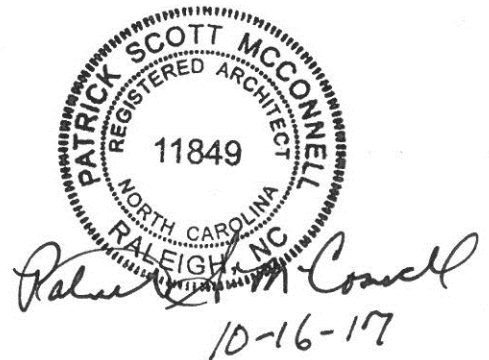
ARCHITECTURE FIRM

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205
Raleigh, North Carolina 27607



ARCHITECT – Patrick S. McConnell, AIA

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205
Raleigh, North Carolina 27607



SECTION 00 01 00 – ADVERTISEMENT FOR BIDS

ADVERTISEMENT FOR BIDS

The County of Onslow will accept sealed bids from single prime contractors for the **Onslow County Courthouse Expansion Courtroom Built-in** located at **109 Old Bridge Street, Jacksonville, NC 28540**.

Bids will be received by the County and publicly opened and read aloud at **2:00PM** on **November 2, 2017** at the **Onslow County Government, Room 111** located at **234 NW Corridor Blvd Jacksonville, NC 28540**. No bid will be accepted after this time.

Bids will be received *for Single Prime*. All proposals shall be lump sum.

The Onslow County Courthouse Expansion Courtroom Built-in project consists of the Courtroom built-in furnishings and finishes as indicated by the drawings for four courtrooms in the Onslow County Courthouse Expansion project: Courtroom 201, 205, 208, 214.

PRE-BID MEETING

A Mandatory Pre-Bid Meeting will be held for all bidders on **October 24, 2017 at 10:00AM** at the Onslow County Government, Room 111 located at **234 NW Corridor Blvd Jacksonville, NC 28540**. The meeting will address project specific questions, issues, bidding procedures and bid forms.

Plans and Specifications can be downloaded from Smith Sinnett Architecture by potential bidders, upon registration with Smith Sinnett Architecture by completing the Intent to Bid Form available at www.smithsinnett.com after October 16, 2017. The full hard copy of the plans and specifications can be purchased at the contractor's expense.

The County of Onslow reserves the right to reject any or all bids and to waive informalities.

END OF SECTION 00 01 00

OCCE Courtroom Built-in
Jacksonville, North Carolina

Smith Sinnett / 2015014
Onslow County

OCCE Courtroom Built-in
2015014
Jacksonville, North Carolina
County

Smith Sinnett /

Onslow

SECTION 00 01 05 – NOTICE TO BIDDERS

The County of Onslow will accept sealed bids from prequalified single prime contractors for the **Onslow County Courthouse Expansion Courtroom Built-in**. The project location is **109 Old Bridge Street, Jacksonville, NC 28540**.

Bids will be received by the County and publicly opened and read aloud at **2:00 PM on November 02, 2017** at the **Onslow County Government, Room 111** located at **234 NW Corridor Blvd Jacksonville, NC 28540**. No bid will be accepted after this time.

The Onslow County Courthouse Expansion Courtroom Built-in project consists of the Courtroom built-in furnishings and finishes as indicated by the drawings for four courtrooms in the Onslow County Courthouse Expansion project: Courtroom 201, 205, 208, 214.

Alternate 1:

Ballistic Paneling UL Level 3 in lieu of Base Bid UL 752 Level 2 at vertical walls of Judge, Witness, Clerk Bench.

Bids will be received *for Single Prime*. All proposals shall be lump sum.

Pre-Bid Meeting

A Mandatory Pre-Bid Meeting will be held for all bidders at **10:00AM on October 24, 2017** at the **Onslow County Government, Room 111** located at **234 NW Corridor Blvd Jacksonville, NC 28540**. The meeting will address project specific questions, issues, bidding procedures and bid forms.

Justification of any approvals will be made available to the public in writing no later than seven (7) days prior to bid date.

Complete plans, specifications and contract documents will be open for inspection in the offices of *Smith Sinnett Architecture, P.A., 4600 Lake Boone Trail, Suite 205, Raleigh, North Carolina 27607* and the *Onslow County Purchasing Office, 234 NW Corridor Blvd Jacksonville, North Carolina 28540*

Plans and Specifications can be downloaded from Smith Sinnett Architecture by potential bidders, upon registration with Smith Sinnett by completing the Intent to Bid Form available at www.smithsinnett.com after October 16, 2017. The full hard copy of the plans and specifications can be purchased at the contractor's expense.

NOTE: The bidder shall include with the bid proposal the form *HUB Certified/Identification of Minority Business Participation* form identifying the minority business participation it will use on the project and shall include either *Affidavit A* or *Affidavit B* as applicable. Forms and instructions are included within the Proposal Form in the bid documents. Failure to complete these forms is grounds for rejection of the bid. (GS143-128.2c Effective 1/1/2002.)

All contractors are hereby notified that they must have the appropriate contractors license as required under the state laws governing their respective trades.

General contractors are notified that Chapter 87, Article 1, General Statutes of North Carolina, will be observed in receiving and awarding general contracts. General contractors submitting bids on this project must have license classification for "Unlimited Building" or "Unclassified," required by the NC General Contractors Licensing Board under G.S. 87-1.)

NOTE: SINGLE PRIME CONTRACTS: Under GS 87-1, a contractor that superintends or manages construction of any building, highway, public utility, grading, structure or improvement shall be deemed a "general contractor" and shall be so licensed. Therefore a single prime project that involves other trades will require the single prime contractor to hold a proper General Contractors license. **EXCEPT:** On public buildings being bid single prime, where the total value of the general construction does not exceed 25% of the

OCCE Courtroom Built-in
2015014
Jacksonville, North Carolina
County

Smith Sinnett /

Onslow

total construction value, contractors under GS87- Arts 2 and 4 (Plumbing, Mechanical & Electrical) may bid and contract directly with the Owner as the SINGLE PRIME CONTRACTOR and may subcontract to other properly licensed trades. GS87-1.1- Rules .0210

Each proposal shall be accompanied by a cash deposit or a certified check drawn on some bank or trust company, insured by the Federal Deposit Insurance Corporation, of an amount equal to not less than five percent (5%) of the proposal, or in lieu thereof a bidder may offer a bid bond of five percent (5%) of the bid executed by a surety company licensed under the laws of North Carolina to execute the contract in accordance with the bid bond. Said deposit shall be retained by the owner as liquidated damages in event of failure of the successful bidder to execute the contract within ten days after the award or to give satisfactory surety as required by law.

- A performance bond and a payment bond will be required for one hundred percent (100%) of the contract price.
- Payment will be made based on ninety-five percent (95%) of monthly estimates and final payment made upon completion and acceptance of work.
- No bid may be withdrawn after the scheduled closing time for receipt of bids for a period of **60** days unless in accordance with G.S.143-129.1.
- The County of Onslow reserves the right to reject any or all bids and to waive informalities.

Designer:

Patrick S. McConnell, AIA,
Smith Sinnett Architecture, P.A.
(Name)

Owner:

David Cotton, County Manager
Onslow County
(Agency/Institution)

4600 Lake Boone Trail, Suite 205
Raleigh, North Carolina 27607
(Address)

234 NW Corridor Blvd.
Jacksonville, North Carolina 28540
(Address)

(919) 781-8582
(Phone)

(910) 347-4717
(Phone)

END OF SECTION 00 01 05

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109 Old Bridge Street
Jacksonville, North Carolina 28540

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*Lift documentation is provided as a basis of design for framing of platform to accommodate future lifts by others. Actual lifts are NOT part of the project.

END OF SECTION 00 01 10



Document A701™ – 1997

Instructions to Bidders

for the following PROJECT:

(Name and location or address)
Onslow County Courthouse Expansion
109 Old Bridge Street
Jacksonville, North Carolina 28540

THE OWNER:

(Name, legal status and address)
Onslow County
234 NW Corridor Blvd
Jacksonville, North Carolina 28540

THE ARCHITECT:

(Name, legal status and address)
Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205
Raleigh, North Carolina 27607

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ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid form, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, or in other Contract Documents are applicable to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 The Bidder by making a Bid represents that:

§ 2.1.1 The Bidder has read and understands the Bidding Documents or Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.

§ 2.1.2 The Bid is made in compliance with the Bidding Documents.

§ 2.1.3 The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents. Failure to do so shall be at the Bidder's risk and the Bidder cannot seek release of responsibility on the plea of error of its bid.

§ 2.1.4 The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

§ 2.1.5 The Bidder has made provisions in its bid for the effect all current federal, state, and local laws and regulations may have regarding the costs, performance and completion of the Work.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 COPIES

§ 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein. The deposit will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten

days after receipt of Bids. The cost of replacement of missing or damaged documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the Bidding Documents and the Bidder's deposit will be refunded.

§ 3.1.2 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the Advertisement or Invitation to Bid, or in supplementary instructions to bidders.

§ 3.1.3 Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

§ 3.1.4 The Owner and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

§ 3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

§ 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered.

§ 3.2.2 Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven days prior to the date for receipt of Bids.

§ 3.2.3 Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

§ 3.3 SUBSTITUTIONS

§ 3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.

§ 3.3.2 No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.3 If the Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

§ 3.3.4 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 ADDENDA

§ 3.4.1 Addenda will be transmitted to all who are known by the issuing office to have received a complete set of Bidding Documents.

§ 3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 PREPARATION OF BIDS

§ 4.1.1 Bids shall be submitted on the forms included with the Bidding Documents. Bids not submitted on the forms provided may be cause of rejection at the sole discretion of the Owner.

§ 4.1.2 All blanks on the bid form shall be legibly executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.

§ 4.1.4 Interlineations, alterations and erasures must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change."

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

§ 4.2 BID SECURITY

§ 4.2.1 Each Bid shall be accompanied by a bid security in the form and amount required if so stipulated in the Instructions to Bidders. The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. The amount of the bid security shall not be forfeited to the Owner in the event the Owner fails to comply with Section 6.2.

§ 4.2.2 An original bid bond is required. Faxed or electronic bid bonds will not be accepted. The bond shall be written on AIA Document A310-2010, unless otherwise provided in the Bidding Documents, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney. The surety shall be qualified and authorized to perform business in the State of North Carolina. The surety bond shall be executed for a period of not less than sixty (60) calendar days starting at the date of the bid opening.

§ 4.2.3 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn or (c) all Bids have been rejected.

§ 4.3 SUBMISSION OF BIDS

§ 4.3.1 All copies of the Bid, the bid security and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof. Bidders submitting its bid by mail or by courier are cautioned to anticipate delivery problems and should take such steps as necessary to ensure its bid is received by the Owner on time and at the proper location.

§ 4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

§ 4.3.3 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.4 Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered.

§ 4.4 MODIFICATION OR WITHDRAWAL OF BID

§ 4.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.

§ 4.4.2 Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date- and time-stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.

§ 4.4.3 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

§ 4.4.4 Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 OPENING OF BIDS

At the discretion of the Owner, if stipulated in the Advertisement or Invitation to Bid, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

§ 5.2 REJECTION OF BIDS

The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

§ 5.3 ACCEPTANCE OF BID (AWARD)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

§ 5.3.2 The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 CONTRACTOR'S QUALIFICATION STATEMENT

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request, a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted as a prerequisite to the issuance of Bidding Documents.

§ 6.2 OWNER'S FINANCIAL CAPABILITY

The Owner shall, at the request of the Bidder to whom award of a Contract is under consideration and no later than seven days prior to the expiration of the time for withdrawal of Bids, furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Unless such reasonable evidence is furnished, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 SUBMITTALS

§ 6.3.1 The Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, after notification of selection for the award of a Contract, furnish to the Owner through the Architect in writing:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the manufacturers, products, and the suppliers of principal items or systems of materials and equipment proposed for the Work; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 BOND REQUIREMENTS

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Bonds may be secured through the Bidder's usual sources.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 If the Owner requires that bonds be secured from other than the Bidder's usual sources, changes in cost will be adjusted as provided in the Contract Documents.

§ 7.2 TIME OF DELIVERY AND FORM OF BONDS

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond. Both bonds shall be written in the amount of the Contract Sum.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

The Agreement for the Work will be written on the Contract for Construction Between Owner and Contractor included within the Bidding Documents.

SECTION 00 42 00 - PROPOSAL FORM

PROJECT: Onslow County Courthouse Expansion Courtroom Built-in
109 Old Bridge Street
Jacksonville, North Carolina 28540

OWNER: Onslow County
234 NW Corridor Blvd.
Jacksonville, North Carolina 28540

ARCHITECT: Smith Sinnett Architecture
4600 Lake Boone Trail, Suite 205
Raleigh, North Carolina 27607

The undersigned, as bidder, hereby declares that the only person or persons interested in this proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this proposal or in the contract to be entered into; that this proposal is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud. The bidder further declares that he has examined the site of the work and the contract documents relative thereto, and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees if this proposal is accepted to contract with **Onslow County** in the form of contract specified below, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary to complete the construction of

Onslow County Courthouse Expansion Courtroom Built-in

in full in complete accordance with the plans, specifications and contract documents, to the full and entire satisfaction of **Onslow County**, and **Smith Sinnett Architecture** with a definite understanding that no money will be allowed for extra work except as set forth in the General Conditions and the contract documents.

The low Bidder will be determined by the total cost of the Contract with the lump sum prices of the alternates accepted being added to or deducted from the Base Bid to give the total cost of the Contract. Bidders are required to give a price for Base Bid and all Alternates as applicable to their Contract. All Bidders are required to be licensed and in good standing with their respective North Carolina Licensing Board.

SINGLE PRIME CONTRACT:

BASE BID:

Total Amount: _____ Dollars (\$ _____)

ALTERNATE 1: Ballistic Paneling UL Level 3 in lieu of Base Bid UL 752 Level 2 at vertical walls of Judge, Witness, Clerk Bench.

Total Amount: _____ Dollars (\$ _____)

SUBCONTRACTORS if applicable (Name, City & State) If not applicable, insert "N/A" under each, otherwise the bidder may be determined to be non-responsive.

Subcontractor 1:

_____ Lic _____

Subcontractor 2:

_____ Lic _____

GS143-128(d) requires all single prime bidders to identify their subcontractors for the above subdivisions of work. A contractor whose bid is accepted shall not substitute any person as subcontractor in the place of the subcontractor listed in the original bid, except (i) if the listed subcontractor's bid is later determined by the contractor to be non-responsive or non-responsive or the listed subcontractor refuses to enter into a contract for the complete performance of the bid work, or (ii) with the approval of the awarding authority for good cause shown by the contractor.

The bidder further proposes and agrees hereby to commence work under this contract on a date to be specified in a written order of the designer and shall fully complete all work thereunder within the time specified in the Supplementary General Conditions Article 9. Applicable liquidated damages amount is also stated in the Supplementary General Conditions Article 9.

BIDDERS CHECKLIST

Bidder's are to submit the following documents with their bid. Failure to submit the required forms/documentation may cause bid to be rejected.

- ___ Proposal Form
- ___ Proposal Attachment
- ___ Bid Bond
- ___ Identification of HUB Certified/Minority Business Participation Form
- ___ Affidavit A or Affidavit B
- ___ Acknowledgement of Addendums issued
- ___ Bid Form Signed, Sealed and Attested (or Witnessed)
- ___ E-Verify Affidavit

ALLOWANCES

(Refer to Division 01 Section 01 21 00 – Allowances for amounts to be included in bid)
Acknowledge Allowances have been included with in the Base Bid

BASE BID ALLOWANCES

General Contingency Allowance A-1: \$50,000.00 _____ Place a check mark here to confirm the
General Contingency Allowance amount has
been included in the base bid.

ADDENDUM

(Addendum received and used in computing bid)

Addendum No. 1 _____ Addendum No. 3 _____ Addendum No. 5 _____

Addendum No. 2 _____ Addendum No. 4 _____ Addendum No. 6 _____

PROPOSAL SIGNATURE PAGE

The undersigned further agrees that in the case of failure on his part to execute the said contract and the bonds within ten (10) consecutive calendar days after being given written notice of the award of contract, the certified check, cash or bid bond accompanying this bid shall be paid into the funds of the owner's account set aside for the project, as liquidated damages for such failure; otherwise the certified check, cash or bid bond accompanying this proposal shall be returned to the undersigned. No proposal may be withdrawn after the scheduled closing time for the receipt of Bids for a period of **sixty (60)** days.

Respectfully submitted this day of _____

(Name of firm or corporation making bid)

WITNESS: _____ By: _____
Signature

(Proprietorship or Partnership) Name: _____
Print or type

Title: _____
(Owner/Partner/Pres./V.Pres)

Address: _____

ATTEST: _____

By: _____ License No.: _____

Title: _____ Federal I.D. No.: _____
(Corp. Sec. or Asst. Sec. only)

Email Address: _____

(CORPORATE SEAL)

MINORITY BUSINESS PARTICIPATION REQUIREMENTS

Provide with the bid - Under GS 143-128.2(c) the undersigned bidder shall identify **on its bid** (Identification of Minority Business Participation Form) the minority businesses that it will use on the project with the total dollar value of the bids that will be performed by the minority businesses. **Also** list the good faith efforts (Affidavit A) made to solicit minority participation in the bid effort.

NOTE: A contractor that performs all of the work with its own workforce may submit an Affidavit (B) to that effect in lieu of Affidavit (A) required above. The MB Participation Form must still be submitted even if there is zero participation.

After the bid opening - The Owner will consider all bids and alternates and determine the lowest responsible, responsive bidder. Upon notification of being the apparent low bidder, the bidder shall then file within 72 hours of the notification of being the apparent lowest bidder, the following:

An Affidavit (C) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the 10% goal established. This affidavit shall give rise to the presumption that the bidder has made the required good faith effort and Affidavit D is not necessary;

*** OR ***

If less than the 10% goal, Affidavit (D) of its good faith effort to meet the goal shall be provided. The document must include evidence of all good faith efforts that were implemented, including any advertisements, solicitations and other specific actions demonstrating recruitment and selection of minority businesses for participation in the contract.

Note: Bidders must always submit **with their bid** the Identification of Minority Business Participation Form listing all MB contractors, vendors and suppliers that will be used. If there is no MB participation, then enter none or zero on the form. Affidavit A **or** Affidavit B, as applicable, also must be submitted with the bid. Failure to file a required affidavit or documentation with the bid or after being notified apparent low bidder is grounds for rejection of the bid.

END OF SECTION 00 42 00

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Jacksonville, North Carolina

Smith Sinnett / 2015014
Onslow County

**STATE OF NORTH CAROLINA
COUNTY OF ONSLOW**

AFFIDAVIT OF COMPLIANCE – E-VERIFY

I, _____(the individual attesting below), being duly authorized by and on behalf of _____ (hereinafter "Contractor") after first being duly sworn hereby swears or affirms as follows:

1. Contractor understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with Article 2 of Chapter 65 of the North Carolina General Statutes; and

2. Contractor understands that “Employer”, as defined in NCGS§64-25(4), are required by law to use E-Verify to verify the work authorization of the employee through E-Verify in accordance with NCGS§64-26(a). The term “Employer” does not include State agencies, counties, municipalities, or other governmental bodies.

3. Contractor is a person, business entity, or other organization that transacts business in this State and that employs 25 or more employees in the state of North Carolina. (mark Yes or No)

a. YES _____, or

b. NO _____

4. Contractor will ensure compliance with E-Verify by any subcontractors subsequently hired by Contractor to perform work under Contractor’s contract with Onslow County.

5. Contractor shall keep the County of Onslow informed of any change on its status pursuant to Article 2 of Chapter 64 of the North Carolina Statutes.

This ____ day of _____, 201__.

Signature of Affiant

Print or Type Name: _____

State of _____ County of _____

Signed and sworn to (or affirmed) before me, this the ____
day of _____, 201__.

My Commission Expires:

Notary Public

(Affix Official/Notarial
Seal)



Document A310™ – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Onslow County
234 NW Corridor Blvd
Jacksonville, North Carolina 28540

BOND AMOUNT: \$

PROJECT:

(Name, location or address, and Project number, if any)

Onslow County Courthouse Expansion
109 Old Bridge Street
Jacksonville, North Carolina

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Init.

furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this day of ,

_____	_____
<i>(Witness)</i>	<i>(Contractor as Principal)</i> <i>(Seal)</i>
_____	_____
	<i>(Title)</i>
_____	_____
	<i>(Surety)</i> <i>(Seal)</i>
_____	_____
<i>(Witness)</i>	<i>(Title)</i>

Init.
/

SECTION 00 43 39 - MINORITY BUSINESS

The North Carolina General Statutes require that bids be awarded to the lowest responsible, responsive bidder “without regard to race, religion, color, creed, national origin, sex, age, or handicapping condition.” Also, contractors are not required to make purchases of materials or equipment or award subcontracts to minority businesses that do not submit the lowest responsible bid(s). NCGS 143.128.2 requires each city, county, or other local public entity to adopt a verifiable percentage goal for participation by minority businesses in the total value of work for building projects. **Onslow County** has adopted a goal of ten percent (10%). Public entities shall require contractors to make good faith efforts in the recruitment and selection of minority businesses for participation in building construction projects.

The term “minority business” means a business:

- a. In which at least fifty-one percent (51%) is owned by one or more minority persons or socially and economically disadvantaged individuals, or in the case of a corporation, in which at least fifty-one percent (51%) of the stock is owned by one or more minority persons or socially and economically disadvantaged individuals; and
- b. Of which the management and daily business operations are controlled by one or more of the minority persons or socially and economically disadvantaged individuals who own it.

A “Minority” is a person who is a citizen of lawful permanent resident of the United States and who is:

- a. Black, that is, a person having origins in any of the black racial groups in Africa;
- b. Hispanic, that is, a person of Spanish or Portuguese culture with origins in Mexico, South or Central America, or the Caribbean Islands, regardless of race;
- c. Asian American, that is, a person having origins in any of the original peoples of the Far East, Southeast Asia and Asia, the Indian subcontinent, or the Pacific Islands;
- d. American Indian, that is, a person having origins in any of the original Indian peoples of North America; or
- e. Female

The term “socially and economically disadvantaged individual” means the same as defined in 15 U.S.C. 637. “Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities.” “Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged.”

Each bidder shall identify on its bid the minority businesses that it will use on the project (“Identification of Minority Business Participation”, the total value of the bid that will be performed by the minority businesses, and an affidavit (“Affidavit A”) listing the good faith efforts it has made. A contractor that performs all of the work under a contract with its own workforce may submit an affidavit (“Affidavit B”) in lieu of Affidavit A.

The apparent lowest responsible, responsive bidder shall within 72 hours of being notified of being the low bidder file one of the following:

- a. “Affidavit C” if the portion of the work to be executed by minority businesses is equal to or greater than 10% of the bidders total contract price; or
- b. “Affidavit D” and required documentation of the good faith efforts, if the goal of 10% participation by minority businesses is not achieved.

No subcontractor listed in this documentation may be replaced with a different subcontractor except:

- a. if the subcontractor’s bid is later determined to be non-responsible or non-responsive, or if the subcontractor refuses to enter into a contract for the work, or
- b. With the approval of the Owner for good cause.

END OF SECTION 00 43 39

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Jacksonville, North Carolina

Smith Sinnett / 2015014
Onslow County

OCCE Courtroom Built-in
Jacksonville, North Carolina

Smith Sinnett / 2015014
Onslow County

AFFIDAVIT A – Listing of Good Faith Efforts

County of _____

Affidavit of _____
(Name of Bidder)

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- 1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- 3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- 6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

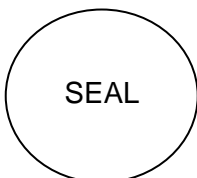
The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

OCCE Courtroom Built-in
Jacksonville, North Carolina

Smith Sinnett / 2015014
Onslow County

AFFIDAVIT B -- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____
(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the
_____ contract.
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

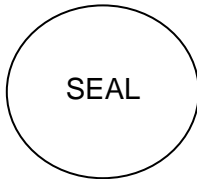
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20__

Notary Public _____

My commission expires _____

Do not submit with bid Do not submit with bid Do not submit with bid Do not submit with bid

**AFFIDAVIT C - Portion of the Work to be Performed by
 HUB Certified/Minority Businesses**

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.
 This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the
 (Name of Bidder)

_____ (Project Name)
 Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below.

Attach additional sheets if required

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

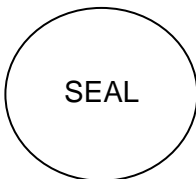
*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____



Signature: _____

Title: _____

State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

Onslow County Courthouse Expansion
Jacksonville, North Carolina

Smith Sinnett / 2015014
Onslow County

Do not submit with bid Do not submit with bid Do not submit with bid Do not submit with bid

Do not submit with bid Do not submit with bid Do not submit with bid Do not submit with bid

AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify
 that on the _____
 (Name of Bidder)

_____ (Project Name)
 Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Do not submit with bid Do not submit with bid Do not submit with bid Do not submit with bid

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

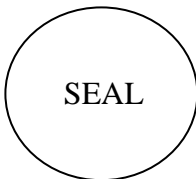
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

TABLE OF ARTICLES

1. GENERAL PROVISIONS
2. OWNER
3. CONTRACTOR
4. ADMINISTRATION OF THE CONTRACT
5. SUBCONTRACTORS
6. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
7. CHANGES IN THE WORK
8. TIME
9. PAYMENTS AND COMPLETION
10. PROTECTION OF PERSONS AND PROPERTY
11. UNCOVERING AND CORRECTION OF WORK
12. MISCELLANEOUS PROVISIONS
13. TERMINATION OR SUSPENSION OF THE CONTRACT
14. SECURITY OF NON-PUBLIC RECORDS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

ARTICLE 1 GENERAL PROVISIONS

1.1 **BASIC DEFINITIONS**

- 1.1.1 Contract for Construction. The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification.
- 1.1.2 Contract Documents. The Contract Documents consist of the Agreement between Owner and Contractor (hereinafter the Agreement), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, addenda issued prior to execution of the Contract, advertisement or invitation to bid, Instructions to Bidders, other documents listed in the Agreement and Modifications issued after execution of the Contract. In the event of conflicts among the contract documents, the Specifications shall take precedence over the Drawings, and the Supplementary Conditions shall take precedence over the General Conditions. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Owner and a Subcontractor or Sub-subcontractor.
- 1.1.3 Contractor. The person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. Unless otherwise stated, the term "Contractor" means the General Contractor or the General Contractor's authorized representative.
- 1.1.4 Drawings. The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.
- 1.1.5 Designer. The Architect or Engineer registered in accordance with the provisions of Chapter 89C of the North Carolina General Statutes, identified as such in the Contract for Construction and is referred to throughout the Contract Documents as if singular in number. The term "Designer" refers to the Designer or the Designer's authorized representative(s). The Designer shall be entitled to performance and enforcement of obligations under the Contract for Construction intended to facilitate performance of the Designers' duties.
- 1.1.6 Modification. A Modification is (1) a written amendment to the Contract signed by the parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Designer.
- 1.1.7 Owner. The person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Owner" means the Owner or the Owner's authorized representative.
- 1.1.8 Project. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

- 1.1.9 Project Manual. The Project Manual is the volume usually assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.
- 1.1.10 Specifications. The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.
- 1.1.11 Work. The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

1.2 EXECUTION, CORRELATION, AND INTENT

- 1.2.1 The Contract Documents shall be signed by the Owner and Contractor as provided in the Agreement. If either the Owner or Contractor or both do not sign all the Contract Documents, the Designer shall identify such unsigned Documents and insure that they are properly signed by the necessary parties.
- 1.2.2 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed, correlated personal observations with requirements of the Contract Documents, has checked and verified all site conditions, and hereby waives any and all claims, present or future, for misrepresentation on the part of the Owner or Designer.
- 1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all.
- 1.2.4 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any Subcontractor.
- 1.2.5 Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

1.3 OWNERSHIP AND USE OF DESIGNER'S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

- 1.3.1 The Drawings, Specifications and other documents prepared by the Designer are instruments of the Designer's service through which the Work to be executed by the Contractor is described. The Contractor may retain one contract record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by the Designer. The Owner will retain all common law, statutory and other reserved rights, in addition to the copyright of the drawings, specifications and other documents prepared by the Designer. All copies of them, except the Contractor's record set, shall be returned or suitably accounted for to the Designer, on request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Designer, and copies thereof furnished to the Contractor, are for use solely with respect to this Project; they are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier

on other projects without the specific written consent of the Owner and Designer. The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Designer appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this license shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Designer. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Owner's copyright or other reserved rights.

1.4 CAPITALIZATION

Terms capitalized in these General Conditions include those which are (1) specifically defined, (2) the titles of numbered articles and identified references to Paragraphs, Subparagraphs and Clauses in the document or (3) the titles of other documents.

1.5 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

ARTICLE 2 **OWNER**

2.1 INFORMATION AND SERVICES REQUIRED OF THE OWNER

- 2.1.1 The Owner shall furnish plan and profile of existing County utilities. The Contractor is responsible for locating all existing utilities prior to Work.
- 2.1.2 Except for permits and fees which are the responsibility of the Contractor under the Contract Documents, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.
- 2.1.3 Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness to avoid delay in orderly progress of the Work.
- 2.1.4 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, such copies of Drawings and Project Manuals as are reasonably necessary for execution of the Work.

2.2 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may after such seven-day period, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case, an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Designer's

additional services and expenses made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior review and confirmation by the Designer. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

3.1 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

- 3.1.1 The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the Owner pursuant to Paragraph 2.1, and shall at once report to the Designer errors, inconsistencies or omissions discovered. If the Contractor performs any construction activity knowing or should have known it involves an error, inconsistency or omission in the Contract Documents without such notice to the Designer, the Contractor shall assume full responsibility for such performance and shall bear the full costs for correction.
- 3.1.2 The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Designer immediately.
- 3.1.3 The Contractor shall perform the Work in accordance with the Contract Documents and submittals approved pursuant to Paragraph 3.11.

3.2 SUPERVISION AND CONSTRUCTION PROCEDURES

- 3.2.1 The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless Contract Documents give other specific instructions concerning these matters.
- 3.2.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor.
- 3.2.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Designer in the Designer's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.
- 3.2.4 The Contractor shall be responsible for inspection of portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

3.3 LABOR AND MATERIALS

- 3.3.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper

execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

- 3.3.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.
- 3.3.3 Materials, equipment or items required for a complete job which are shown on the drawings but not mentioned in the specifications or materials, equipment or items required by the specifications but not shown on the drawings, shall be furnished and installed the same as though both shown on the drawings and required by the specifications.

3.4 WARRANTY

- 3.4.1 The Contractor warrants to the Owner and Designer that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents; that the Work will be free from defects not inherent in the quality required or permitted; and that the Work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Designer, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.
- 3.4.2 Except as otherwise specifically stated below, the Contractor shall guarantee his materials and workmanship against defect due to faulty materials or faulty workmanship or negligence for a period of twelve (12) months following Substantial Completion of the Work. Where the manufacturer's warranty on equipment or parts thereof exceeds twelve (12) months, the guarantee period on such equipment or parts thereof shall be extended to include the full warranty of the manufacturer. The Contractor shall repair or replace such defective materials, equipment or workmanship to the full satisfaction of the Owner within the stipulated guarantee period without cost to the Owner.

3.5 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor which are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

3.6 PERMITS, FEES AND NOTICES

- 3.6.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and other permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract for Construction and which are legally required when bids are received or negotiations concluded.
- 3.6.2 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work.
- 3.6.3 It is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. However, if the Contractor observes that portions of the Contract Documents

are at variance therewith, the Contractor shall promptly notify the Designer and Owner in writing, and necessary changes shall be accomplished by appropriate Modification.

- 3.6.4 If the Contractor performs Work the Contractor knows or should have known it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Designer and Owner, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs.

3.7 ALLOWANCES

- 3.7.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities against which the Contractor makes reasonable objection.

- 3.7.2 Unless otherwise provided in the Contract Documents:

- (1) materials and equipment under an allowance shall be selected promptly by the Owner to avoid delay in the Work;
- (2) allowances shall cover the cost to the Contractor of materials and equipment delivered to the site and all required taxes, less applicable trade discounts;
- (3) Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum and not in the allowances;
- (4) whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by a Change Order. The amount of the Change Order shall reflect (a) the difference between actual costs and the allowances under Clause 3.7.2(2) and (b) changes in Contractor's costs under Clause 3.7.2(3). To the extent that any allowance is not fully used, then the unused amount of each allowance shall be credited to the Owner by a Change Order.

3.8 SUPERINTENDENT

The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing upon request.

3.9 CONTRACTOR'S CONSTRUCTION SCHEDULES

- 3.9.1 Promptly after being awarded the Contract, the Contractor shall prepare and submit for the Designer's review and comment a construction schedule for the Work. The schedule shall not exceed time limits provided in the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. If separate prime contracts are awarded by the Owner in connection with this Project, the Contractor shall additionally submit a Contractor's

construction schedule for the Work to the General Contractor in order for the General Contractor to carry out its duties under Article 6.

3.9.2 The Contractor shall prepare and keep current, for the Designer's approval, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Designer reasonable time to review submittals.

3.9.3 The Contractor shall conform to the most recent schedules.

3.10 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one record copy of the Drawings, Specifications, addenda, Change Orders and other Modifications, in good order and marked currently to record changes and selections made during construction, and in addition approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Designer and shall be delivered to the Designer for submittal to the Owner upon completion of the Work.

3.11 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

3.11.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

3.11.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

3.11.3 Samples are physical examples, which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

3.11.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Designer is subject to the limitations of Subparagraph 4.1.6.

3.11.5 The Contractor shall review, approve and submit to the Designer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals made by the Contractor which are not required by the Contract Documents may be returned without action.

3.11.6 The Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been reviewed and approved or other appropriate action taken by the Designer. Such Work shall be in accordance with approved submittals.

3.11.7 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

- 3.11.8 The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Designer's review and approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Designer in writing of such deviation at the time of submittal and the Designer has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Designer's approval thereof.
- 3.11.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Designer on previous submittals.
- 3.11.10 Informational submittals upon which the Designer is not expected to take responsive action may be so identified in the Contract Documents.
- 3.11.11 When professional certification of performance criteria of materials, systems, or equipment is required by the Contract Documents, the Designer shall be entitled to rely upon the accuracy and completeness of such calculations and certificates.

3.12 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

3.13 CUTTING AND PATCHING

- 3.13.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.
- 3.13.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

3.14 CLEANING UP

- 3.14.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials.
- 3.14.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.

3.15 ACCESS TO WORK

The Contractor shall provide the Owner and Designer access to the Work in preparation and progress wherever located.

3.16 ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of patent rights and shall hold the Owner and Designer harmless from loss unless a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Designer.

3.17 INDEMNIFICATION

- 3.17.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Designer, Designer's consultants, and agents and employees of any of them from and against claims, damages, economic losses and expenses of any kind (including but not limited to fees and charges of engineers, attorneys, and other professionals and costs related to court action or arbitration), arising out of or resulting from performance of the Work under this Agreement, provided such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, caused in whole or in part by negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable unless caused in whole or part by the negligence of Owner. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Paragraph 3.17.
- 3.17.2 In claims against any person or entity indemnified under this Paragraph 3.17, by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Paragraph 3.17, shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.
- 3.17.3 The obligations of the Contractor under this Paragraph 3.17, shall not extend to the liability of the Designer, the Designer's consultants, and agents and employees of any of them arising out of (a) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (b) the giving of or the failure to give directions or instructions by the Designer, the Designer's consultants, and agents and employees of any of them provided such giving or failure to give is the primary cause of the injury or damage.

ARTICLE 4 ADMINISTRATION OF THE CONTRACT

4.1 DESIGNER'S ADMINISTRATION OF THE CONTRACT

- 4.1.1 The Designer will provide administration of the Contract as described in the Contract Documents, and will be the Owner's representative during construction through final payment, and with the Owner's concurrence, from time to time during the correction period described in Paragraph 11.2. The Designer will advise and consult with the Owner. The Designer will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument in accordance with other provisions of the Contract.

- 4.1.2 The Designer will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility as provided in Paragraph 3.2. The Designer will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Designer will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.
- 4.1.3 Communications Facilitating Contract Administration. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate through the Designer. Communications by and with the Designer's consultants shall be through the Designer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Designer.
- 4.1.4 Based on the Designer's inspections, observations and evaluations of the Contractor's Applications for Payment, the Designer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.
- 4.1.5 The Designer will have authority to reject Work which does not conform to the Contract Documents. Whenever the Designer considers it necessary or advisable for implementation of the intent of the Contract Documents, the Designer will have authority to require additional inspection or testing of the Work in accordance with Subparagraphs 12.5.2 and 12.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Designer nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Designer to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.
- 4.1.6 The Designer will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Designer's action will be taken with such reasonable promptness as to cause no delay in the Work or in the activities of the Owner, Contractor or separate contractors, while allowing sufficient time in the Designer's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Designer's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Article 3. The Designer's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Designer, of any construction means, methods, techniques, sequences or procedures. The Designer's approval of a specific item shall not indicate approval of an assembly of which the item is a component.
- 4.1.7 The Designer will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Paragraph 7.4.
- 4.1.8 The Designer will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion, will receive and forward to the Owner for the Owner's review and records, written warranties and related documents required by the

Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents.

- 4.1.9 The Designer will interpret and decide matters concerning performance under and requirements of the Contract documents on written request of either the Owner or Contractor. The Designer's response to such requests will be made with reasonable promptness and within any time limits agreed upon. If no agreement is made concerning the time within which interpretations required of the Designer shall be furnished in compliance with this Subparagraph 4.1.9, then delay shall not be recognized on account of failure by the Designer to furnish such interpretations until 15 days after written request is made for them.
- 4.1.10 Interpretations and decisions of the Designer will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Designer will endeavor to secure faithful performance by both Owner and Contractor, and will not show partiality to either.
- 4.1.11 The Designer's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.
- 4.1.12 If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Paragraph 11.2 or persistently fails to carry out Work in accordance with the Contract Documents, the Designer may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Designer to stop the Work shall not give rise to a duty on the part of the Designer to exercise this right for the benefit of the Contractor or any other person or entity.

4.2 CLAIMS AND DISPUTES

- 4.2.1 A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims must be made pursuant to the Dispute Resolution Procedure set forth in Paragraph 4.4. The responsibility to substantiate Claims shall rest with the party making the Claim.
- 4.2.2 **DECISION OF DESIGNER.** Claims, including those alleging an error or omission by the Designer, shall be referred initially to the Designer for action as provided in Paragraph 4.4. A decision by the Designer shall be required as a condition precedent to mediation and litigation of a Claim between any party involved in this construction Project as to all such matters arising prior to the date final payment is due, regardless of whether such matters relate to execution and progress of the Work or the extent to which the Work has been completed. The decision by the Designer in response to a Claim shall not be a condition precedent to litigation in the event (1) the position of Designer is vacant, (2) the Designer has not received evidence or has failed to render a decision within agreed time limits, or (3) 45 days have passed after the Claim has been referred to the Designer.
- 4.2.3 **TIME LIMITS ON CLAIMS.** Claims by the Contractor must be made within 10 days after occurrence of the event giving rise to such Claim or within 10 days after the Contractor first recognizes the condition giving rise to the Claim, whichever is later. Claims must be made by written notice. An additional Claim made after the initial Claim has been implemented by Change Order will not be considered.

- 4.2.4 CONTINUING CONTRACT PERFORMANCE. Pending final resolution of a Claim, unless otherwise agreed in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.
- 4.2.5 WAIVER OF CLAIMS: FINAL PAYMENT. The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:
- (1) unsettled claims arising out of the Contract; or
 - (2) failure of the Work to comply with the requirements of the Contract Documents; or
 - (3) terms of special warranties required by the Contract Documents.
- 4.2.6 CLAIMS FOR CONCEALED OR UNKNOWN CONDITIONS. If conditions are encountered at the site which are (a) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (b) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than 10 days after first observance of the conditions. The Designer will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Designer determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified the Designer shall so notify the Owner and Contractor in writing stating the reasons, Claims by either party in opposition to such determination must be made within 21 days after the Designer has given notice of the decision. If the Owner and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall be referred to the Designer for initial determination, subject to further proceedings pursuant to Paragraph 4.4.
- 4.2.7 CLAIMS FOR ADDITIONAL COST. If the Contractor wishes to make Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Paragraph 10.3. If the Contractor believes additional cost is involved for reasons including but not limited to (a) a written interpretation from the Designer, (b) a written order for a minor change in the Work issued by the Designer, (c) termination of the Contract by the Owner, Claim shall be filed in accordance with the procedure established herein. This Article and Article 7, shall be the exclusive means by which the Contractor may claim additional cost or damages from the Owner, and the Contractor hereby waives any and all right to claim additional cost or damages by any other remedy including, without limitation, quantum meruit, subrogation, or implied contract.
- 4.2.8 CLAIMS FOR ADDITIONAL TIME. If the Contractor wishes to make Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary. Adverse weather conditions shall not be a basis for a Claim for additional costs.

4.3 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, of any of the other party's employees or agents, or of others for whose acts such party is legally liable, written notice as such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 10 days after first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. If a Claim for additional cost or time related to this Claim is to be asserted, it shall be filed as provided in Subparagraphs 4.2.7 or 4.2.8.

4.4 DISPUTE RESOLUTION PROCEDURE

- 4.4.1 To prevent all disputes and litigation, it is agreed by the parties that any claim, question, difficulty or dispute arising from this Agreement or the construction process shall be first submitted to the Designer to address the issue. Upon review of the Claim, the Designer shall take one or more of the following preliminary actions within ten (10) days of receipt of a Claim: (1) request additional supporting data from the claimant, (2) submit a schedule to the parties indicating when the Designer expects to take action, (3) reject the Claim in whole or in part stating reasons for rejection, (4) recommend approval of the Claim by the other party, or (5) suggest a compromise. The Designer may also, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim.
- 4.4.2 If a Claim has been resolved, the Designer will prepare or obtain appropriate documentation.
- 4.4.3 If a Claim has not been resolved, the party making the Claim shall, within ten (10) days after the Designer's preliminary response, take one or more of the following actions: (1) submit additional supporting data requested by the Designer, (2) modify the initial Claim and resubmit it to the Designer, or (3) notify the Designer that the initial Claim stands and submit the Claim to the Onslow County Manager for mediation pursuant to Subparagraph 4.4.4, below.
- 4.4.4 The Onslow County Manager, as mediator, shall address any properly submitted claim, question, difficulty or dispute arising from this Agreement or the construction process, which has not been satisfactorily resolved by the Designer. Such requests shall be made to the Onslow County Manager in writing within ten (10) days after the Designer's preliminary response. The mediator shall notify Contractor in writing of the decision within thirty (30) calendar days from the date of the submission of the claim, question, difficulty or dispute, unless the mediator requires additional time to gather information or allow the parties to provide additional information. The mediator's orders, decisions and decrees shall be non-binding. Mediation, pursuant to this Subparagraph, shall be a pre-condition to initiating litigation concerning the dispute. During the pendency of any dispute and after a determination thereof, the parties to the dispute shall act in good faith to mitigate any potential damages including utilization of construction schedule changes and alternate means of construction.
- 4.4.5 The mediation session shall be private. Prior to commencement of mediation, if requested by either party or the mediator, the parties and the mediator shall execute a written confidentiality agreement in accordance with the provisions of North Carolina law. All such mediation sessions shall be held in Onslow County, North Carolina.
- 4.4.6 If, as a result of mediation, a voluntary settlement is reached and the parties to the dispute agree that such settlement shall be reduced to writing, the mediator shall be deemed

appointed and constituted an arbitrator for the sole purpose of signing the mediated settlement agreement. Such agreement shall be, and shall have the same force and effect as an arbitration award, and judgement may be entered upon it in accordance with applicable law in any court of competent jurisdiction.

- 4.4.7 If the disputed issue cannot be resolved in mediation or either party disagrees with the results of the mediation, the parties may seek resolution in the General Court of Justice in the County of Onslow and the State of North Carolina. If a party fails to comply in strict accordance with the requirements of this Article, the non-complying party specifically waives all of its rights provided hereunder, including its rights and remedies under State law.
- 4.4.8 The dispute resolution procedure set forth in this Paragraph shall be made available to any party involved in this construction project including County, Contractor, Designer, Subcontractors as well as Sub-subcontractors and is a precondition to initiation of litigation concerning the dispute.

ARTICLE 5 SUBCONTRACTORS

5.1 DEFINITIONS

- 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.
- 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

- 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Designer the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work, including (1) Heating, ventilating, and air conditioning, (2) Plumbing, (3) Electrical, and (4) General. The Designer will promptly reply to the Contractor in writing stating whether or not the Owner or the Designer, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Designer to reply promptly shall constitute notice of no reasonable objection.
- 5.2.2 The Contractor shall NOT substitute any person or company listed in the Contractor's original Bid Proposal, except (1) when one of the listed subcontractor's bid is later determined by the Contractor to be non-responsible or non-responsive or the listed subcontractor refuses to enter into a contract for the complete performance of the Work, or (2) with the approval of the Owner for good cause shown by the Contractor.

5.3 SUBCONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms and conditions of the Contract Documents and Contract for Construction, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these documents, assumes toward the Owner and Designer. Each subcontract agreement shall preserve and protect the rights of the Owner and Designer under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

ARTICLE 6

CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

- 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site.
- 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner- Contractor Agreement.
- 6.1.3 The General Contractor shall provide for coordination of the activities of each separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate Contractors and the General Contractor in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor and separate contractors until subsequently revised.
- 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights which apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10 and 11.
- 6.1.5 The General Contractor shall be responsible for scheduling the work of all contractors; the maintenance of the progress schedule for all prime contractors for this Project; and for the notification of the Designer of any changes in the progress schedule.

6.2 MUTUAL RESPONSIBILITY

- 6.2.1 The Contractor shall afford the Owner and separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.
- 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Designer apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate Contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.
- 6.2.3 Costs caused by delays, by improperly timed activities, defective construction, or any other damages shall be borne by the party responsible therefor. The Owner shall not be liable nor responsible for any delays or damages to the Contractor caused by separate Contractors or the Designer.
- 6.2.4 The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate Contractors as provided in Subparagraph 10.2.5.
- 6.2.5 Claims and other disputes and matters in question between the Contractor and a separate Contractor shall be subject to the provisions of Paragraphs 4.2 and 4.4, provided the separate Contractor has reciprocal obligations.
- 6.2.6 The Owner and each separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Paragraph 3.13.

6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate Contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Paragraph 3.14, the Owner may clean up and allocate the cost among those responsible as the Designer determines to be just.

ARTICLE 7 **CHANGES IN THE WORK**

7.1 CHANGES

- 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive, or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.
- 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Designer; a Construction Change Directive requires agreement by the Owner and

Designer and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Designer alone pursuant to Paragraph 7.4.

- 7.1.3 Changes in the Work shall be performed under applicable Provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.
- 7.1.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are so changed in a proposed Change Order or Construction Change Directive that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.
- 7.1.5 Overhead and profit shall not exceed 15% of the value of labor and material for work performed by any contractor or subcontractor. If the work is performed by a subcontractor, the prime contractor's overhead and profit shall not exceed 5%.

7.2 CHANGE ORDERS

- 7.2.1 A Change Order is a written instrument prepared by the Designer and signed by the Owner, Contractor, and Designer, stating their agreement upon all of the following:
 - (1) a change in the Work;
 - (2) the amount of the adjustment in the Contract Sum, if any; and
 - (3) the extent of the adjustment in the Contract Time, if any.
- 7.2.2 Methods used in determining adjustments to the Contract Sum may include those listed in Subparagraph 7.3.3.

7.3 CONSTRUCTION CHANGE DIRECTIVES

- 7.3.1 A Construction Change Directive is a written order prepared by the Designer and signed by the Owner and Designer, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.
- 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.
- 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:
 - (1) mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
 - (2) unit prices stated in the Contract Documents or subsequently agreed upon;
 - (3) cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

- (4) as provided in Subparagraph 7.3.6.
- 7.3.4 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Designer of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.
- 7.3.5 A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.
- 7.3.6 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by the Designer on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. In such case, and also under Clause 7.3.3(3), the Contractor shall keep and present, in such form as the Designer may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Subparagraph 7.3.6 shall be limited to the following:
- (1) costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
 - (2) costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
 - (3) rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
 - (4) costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
 - (5) additional costs of supervision and field office personnel directly attributable to the change.
- 7.3.7 Pending final determination of cost to the Owner, amounts not in dispute may be included in Applications for Payment. The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Designer. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.
- 7.3.8 If the Owner and Contractor do not agree with the adjustment in Contract Time or the method for determining it, the adjustment or the method shall be referred to the Designer for determination.
- 7.3.9 When the Owner and Contractor agree with the determination made by the Designer concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order.

7.4 MINOR CHANGES IN THE WORK

The Designer will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE 8 **TIME**

8.1 DEFINITIONS

- 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.
- 8.1.2 The date of commencement of the Work is the date established in the Agreement. The date shall not be postponed by the failure to act of the Contractor or of persons or entities for whom the Contractor is responsible.
- 8.1.3 The date of Substantial Completion is the date certified by the Designer in accordance with Paragraph 9.9.
- 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

8.2 PROGRESS AND COMPLETION

- 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work. The Contractor and the Contractor's surety shall be liable for and shall pay the Owner such sums as shall be set forth in the Agreement between Owner and Contractor as liquidated damages each calendar day of delay until the Work is substantially complete.
- 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by the Contract for Construction to be furnished by the Contractor. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by a notice to proceed given by the Designer, the Contractor shall notify the Owner and Designer in writing not less than five days before commencing the Work.
- 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.3 DELAYS AND EXTENSIONS OF TIME

- 8.3.1 If the Contractor is delayed at any time in progress of the Work by an act or neglect of the Owner or Designer, or of an employee of either, or of a separate Contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidably casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner pending litigation, or by other causes which

the Designer determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Designer may determine .

- 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Subparagraph 4.2.8.
- 8.3.3 Should the Work be interrupted or hindered by the Owner or Designer, the Contractor shall be entitled to an extension of time pursuant to Paragraph 4.2 in an amount equal to such interruption or hindrance but such interruption or hindrance shall not constitute a claim for damages nor for loss of anticipated profits by the Contractor.
- 8.3.4 Should the Work be delayed in whole by any act or acts of the Contractor, the Contractor shall not be entitled to an extension of time pursuant to Paragraph 4.2, nor shall such delay constitute a claim either for damages or for loss of anticipated profits by the Contractor. Should the Work be delayed in part by any act or acts of the Contractor and in part by any act or acts of the Owner or Designer, the Contractor shall be entitled to an extension of time pursuant to Paragraph 4.2 in an amount equal to that portion of the delay for which the Contractor is not responsible, but such delay shall not constitute a claim either for damages or for loss of anticipated profits by the Contractor.
- 8.3.5 Should the Work be delayed, interrupted or hindered, in whole or in part, by any act or acts of any separate prime contractors, the Contractor shall be entitled to an extension of time pursuant to Subparagraph 4.2.8 in an amount equal to such delay, interruption or hindrance but such delay, interruption or hindrance shall not constitute a claim for damages nor for loss of anticipated profits by the Contractor.

ARTICLE 9 PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

9.2 SCHEDULE OF VALUES

Before the first Application for Payment, the Contractor shall submit to the Designer a Schedule of Values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Designer may require. This Schedule of Values, unless objected to by the Designer, shall be used as a basis for reviewing the Contractor's Applications for Payment.

9.3 APPLICATIONS FOR PAYMENT

- 9.3.1 At least twenty (20) days before the date established for each progress payment, the Contractor shall submit to the Designer an itemized Application for Payment for operations completed in accordance with the Schedule of Values. Such application shall be notarized, supported by such data substantiating the Contractor's right to payment as the Owner or Designer may require, such as copies of requisitions from subcontractors and material suppliers and reflecting retainage if provided for elsewhere in the Contract Documents.

- 9.3.2 Such applications may include requests for payment on account of changes in the Work which have been properly authorized by Construction Change Directives but not yet included in Change Orders.
- 9.3.3 Such applications may not include requests for payment of amounts the Contractor does not intend to pay to a Subcontractor or material supplier because of a dispute or other reason.
- 9.3.4 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.
- 9.3.5 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests, or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work.
- 9.3.6 Provided an Application for Payment is received by the Designer not later than the tenth (10th) day of a month, the Owner shall make payment to the Contractor pursuant to a Certificate of Payment not later than the thirtieth (30th) day of the month.

9.4 **RETAINAGE**

To ensure proper performance of this Contract, Owner shall retain five percent (5%) of the amount of each approved Application for Payment until the project Work is 50% complete provided that the Contractor continues to perform satisfactorily and any non-conforming Work identified in writing prior to that date has been corrected by the Contractor and accepted by the Owner. If the Owner determines the Contractor's performance is unsatisfactory, the Owner may reinstate retainage in the amount of 5% for each subsequent periodic Application for Payment until the Contractor's performance becomes satisfactory. The project shall be deemed fifty percent (50%) complete when the Contractor's gross project invoices, excluding the value of materials stored off-site, equal or exceed fifty percent (50%) of the value of the contract, except the value of materials stored on-site shall not exceed twenty percent (20%) of the contractor's gross project invoices for the purpose of determining whether the project is fifty percent (50%) complete. Following 50% completion of the project, the Owner may also withhold additional retainage from any subsequent periodic payment, not to exceed 5%, in order to allow the Owner to retain 2 1/2% total retainage through the completion of the project. Within sixty (60) days after the submission of a final pay application, the Owner with written consent of the Surety shall release to the Contractor all retainage on payments held by the Owner if (1) the Owner receives a certificate of substantial completion from the architect, Designer or design consultant in charge of this Project, or (2) the Owner receives beneficial occupancy or use of the project. However, the Owner may retain sufficient funds to secure completion of the project or corrections to any Work. If the Owner retains funds, the amount retained shall not exceed two and one half

times the estimated cost of the Work to be completed or corrected. Any reduction in the amount of retainage on payments shall be with the consent of the Contractor's Surety. Retainer provisions contained in Contractor's subcontracts may not exceed the terms and conditions for retainage provided herein. Contractor is further required to satisfy the retainage provisions of N.C.G.S. §143-134.1(b2) with regard to subcontracts for early finishing trades (structural steel, piling, caisson, and demolition) and to coordinate the release of retainage for such trades from the retainage held by Owner from the Contractor pursuant to statute. Nothing herein shall prevent the Owner from withholding payment to the Contractor in addition to the amounts identified herein for unsatisfactory job progress, defective construction not remedied, disputed Work, or third party claims filed against the owner or reasonable evidence that a third party claim will be filed.

9.5 CERTIFICATES FOR PAYMENT

9.5.1 The Designer will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Designer determines is properly due, or notify the Contractor and Owner in writing of the Designer's reasons for withholding certification in whole or in part as provided in Paragraph 9.6.1.

9.5.2 The Designer's certification for payment shall constitute a representation to the Owner, based on the Designer's inspections at the site and on the data comprising the Contractor's Application for Payment, that the Work has progressed to the point indicated and that the inspections of the construction, repairs, or installations have been conducted with the degree of care and professional skill and judgment ordinarily exercised by a member of his profession; and that to the best of his knowledge and in the professional opinion of the Designer, the Contractor has fulfilled the obligations of such plans, specifications, and contract. The Designer's certification for payment shall be signed and sealed by the Designer and presented to the Owner. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the Designer. The issuance of a Certificate for Payment shall further constitute a representation by the Designer, that the Contractor is entitled to payment in the amount certified.

9.6 DECISIONS TO WITHHOLD CERTIFICATION

9.6.1 The Designer may decide not to certify payment and may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Designer's opinion, the representations to the Owner required by Subparagraph 9.5.2 cannot be made. If the Designer is unable to certify payment in the amount of the Application, the Designer will notify the Contractor and Owner as provided in Subparagraph 9.5.1. If the Contractor and Designer cannot agree on a revised amount, the Designer will promptly issue a Certificate for Payment for the amount for which the Designer is able to make such representations to the Owner. The Designer may also decide not to certify payment or, because of subsequently discovered evidence or subsequent observations, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Designer's opinion to protect the Owner from loss due to:

- (1) defective Work not remedied;
- (2) third party claims filed or reasonable evidence indicating probable filing of such claims;

- (3) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- (4) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- (5) damage to the Owner or another contractor;
- (6) reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- (7) persistent failure to carry out the Work in accordance with the Contract Documents.

9.6.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

9.7 PROGRESS PAYMENTS

9.7.1 After the Designer has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Designer.

9.7.2 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of such Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in similar manner.

9.7.3 The Designer will furnish to a Subcontractor, upon request and if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Designer and Owner on account of portions of the Work done by such Subcontractor.

9.7.4 Neither the Owner nor Designer shall have an obligation to pay or to see to the payment of money to a Subcontractor except as may otherwise be required by law.

9.7.5 Payment to material suppliers shall be treated in a manner similar to that provided in Subparagraphs 9.7.2, 9.7.3, and 9.7.4.

9.7.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

9.8 FAILURE OF PAYMENT

The Contractor shall not stop the Work for the failure of the Designer to issue a Certificate of Payment, or the Owner to make timely payment.

9.9 SUBSTANTIAL COMPLETION

- 9.9.1 Substantial Completion is the stage in the progress of the Project when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents, so the Owner can occupy or utilize the Work for its intended use.
- 9.9.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Designer a comprehensive list of items to be completed or corrected. The Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility for the Contractor to complete all Work in accordance with the Contract Documents. Upon receipt of the Contractor's list, the Designer will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Designer's inspection discloses any item, whether or not included on the Contractor's list, which is not in accordance with the requirements of the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Designer. The Contractor shall then submit a request for another inspection by the Designer to determine Substantial Completion. When the Work or designated portion thereof is substantially complete, the Designer will prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate.
- 9.9.3 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Designer, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof as provided in the Contract Documents.

9.10 PARTIAL OCCUPANCY OR USE

- 9.10.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Designer as provided under Subparagraph 9.9.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Designer.
- 9.10.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Designer shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.10.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

9.11 FINAL COMPLETION AND FINAL PAYMENT

9.11.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Designer will promptly make such inspections and, when the Designer finds the Work acceptable under the Contract Documents and the Contract fully performed, the Designer will promptly issue a Final Certificate for Payment stating that to the best of the Designer's knowledge, information and belief, and on the basis of the Designer's observations and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in said Final Certificate is due and payable. The Designer's Final Certificate for Payment will constitute a further representation that the conditions listed in Subparagraph 9.11.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

9.11.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Designer (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract for Construction to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5) if required by the Owner, other or additional data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances rising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

9.11.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Designer so confirms, the Owner shall, upon application by the Contractor and certification by the Designer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed and accepted is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Designer prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

9.11.4 Acceptance of final payment by the Contractor, Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10
PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

- 10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract and construction of the Project.
- 10.1.2 In the event the Contractor encounters on the site material reasonably believed to be asbestos or polychlorinated biphenyl (hereinafter "APCB") which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and Designer by phone and in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner and Contractor if in fact the material is asbestos or PCB and has not been rendered harmless. The Work in the affected area shall be resumed in the absence of asbestos or PCB, or when it has been rendered harmless, by written agreement of the Owner and Contractor, or in accordance with final determination by the Designer.
- 10.1.3 The Contractor shall not be required to perform without consent of Owner and Designer any Work relating to asbestos or PCB.

10.2 SAFETY OF PERSONS AND PROPERTY

- 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:
- (1) employees on the working on the Project and other persons who may be affected thereby;
 - (2) the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
 - (3) other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- 10.2.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury, or loss.
- 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including erecting necessary barricades or other temporary walls and structures as required during the period of construction, posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.
- 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

- 10.2.5 The Contractor shall promptly remedy damage and loss to property referred to in Clauses 10.2.1(2) and (3), caused in whole or in part by the Contractor, Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Clauses 10.2.1(2) and (3), except damage or loss attributable to acts or omissions of the Owner or Designer and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Article 3. All costs to repair any damage and loss to property referred to in Clauses 10.2.1(2) and (3), shall be the sole responsibility of the Contractor and such repair or replacement shall be performed expeditiously without cost to the Owner.
- 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's Superintendent, required under Paragraph 3.8, unless otherwise designated by the Contractor in writing to the Owner and Designer.
- 10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.
- 10.2.8 Existing utilities have been identified and described in the Contract Documents insofar as information is reasonably available, however, it is the Contractor's responsibility to verify such information and to preserve all existing utilities whether shown in the Contract Documents or not. If utility conflicts are encountered by the Contractor during construction, Contractor shall file sufficient notice to the owners of the utilities so that they may make the necessary adjustments, as well as the Designer.

10.3 EMERGENCIES

In an emergency affecting the safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Subparagraphs 4.2.7, 4.2.8 and Article 7.

ARTICLE 11 UNCOVERING AND CORRECTION OF WORK

11.1 UNCOVERING OF WORK

- 11.1.1 If a portion of the Work is covered contrary to the Designer's request or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Designer, be uncovered for the Designer's observation and be replaced at the Contractor's sole expense without change in the Contract Time.
- 11.1.2 If a portion of the Work has been covered which the Designer has not specifically requested to observe prior to its being covered, the Designer may request to see such Work and it shall be uncovered by the Contractor. If such Work is not in accordance with the Contract Documents, the Contractor shall pay such costs unless the condition was caused by the Owner or a separate contractor in which event the Owner or separate contractor shall be responsible for payment of such costs. If such Work is in accordance with the Contract Documents, the Owner, by appropriate Change Order, shall be charged with the cost of uncovering and replacement.

11.2 CORRECTION OF WORK

- 11.2.1 The Contractor shall promptly correct Work rejected by the Designer or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear any and all costs of correcting such rejected Work, including additional testing and inspections and compensation for the Designer's services and expenses made necessary thereby.
- 11.2.2 If, within one year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Subparagraph 9.10.1 or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. This period of one year shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work. This obligation under this Subparagraph 11.2.2 shall survive acceptance of the Work under the Contract and termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.
- 11.2.3 The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
- 11.2.4 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Paragraph 2.2. If the Contractor does not proceed with correction of such nonconforming Work within a reasonable time fixed by written notice from the Designer, the Owner may remove it and store the salvageable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten days after written notice, the Owner may upon ten additional days written notice sell such materials and equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including compensation for the Designer's services and expenses made necessary thereby. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contract Sum shall be reduced by the deficiency. If payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.
- 11.2.5 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.
- 11.2.6 Nothing contained in this Paragraph 11.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the time period of one year as described in Subparagraph 11.2.2, relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

11.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 12 **MISCELLANEOUS PROVISIONS**

- 12.1 **GOVERNING LAW.** This Contract for Construction shall be governed by and in accordance with the laws of the State of North Carolina. All actions relating in any way to this Contract, shall be brought in the General Court of Justice in the County of Onslow and the State of North Carolina, after exhausting the dispute resolution procedure set forth in Paragraph 4.4, herein.
- 12.2 **SUCCESSORS AND ASSIGNS.** The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.
- 12.3 **WRITTEN NOTICE.** Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the business address listed in the Contract for Construction.
- 12.4 **RIGHTS AND REMEDIES.** Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.
- 12.5 **WAIVER OF A RIGHTS.** No action or failure to act by the Owner or Designer shall constitute an obligation or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.
- 12.6 **COMPLIANCE WITH LAWS.** Contractor represents that it is in compliance with all Federal, State, and local laws, regulations or orders, as amended or supplemented. The implementation of this contract will be carried out in strict compliance with all Federal, State, or local laws regarding discrimination in employment.

12.7 TESTS AND INSPECTIONS

- 12.7.1 Tests, inspections, and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and the Owner shall bear the costs of tests, inspections, and approvals. Should any retest be necessary due to the failure of the Work to pass the first test or for any other reason

whatsoever, the Contractor shall bear all related costs of retests, inspections or re-inspections, and approvals. The Contractor shall give the Designer timely notice of when and where tests and inspections are to be made so the Designer may observe such procedures.

- 12.7.2 If the Designer, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Subparagraph 12.7.1, the Designer will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Designer of when and where tests and inspections are to be made so the Designer may observe such procedures.
- 12.7.3 If such procedures for testing, inspection or approval under Subparagraphs 12.7.1 and 12.7.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs made necessary by such failure including those of repeated procedures and compensation for the Designer's services and expenses.
- 12.7.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Designer.
- 12.7.5 If the Designer is required by the Contract Documents to observe tests, inspections, or approvals, the Designer will do so promptly and, where practicable, at the normal place of testing.
- 12.7.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

12.8 COMMENCEMENT OF STATUTORY LIMITATION PERIOD

As between the Owner and Contractor:

- (1) Before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;
- (2) Between Substantial Completion and Final Certificate for Payment. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to issuance of the Final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of issuance of the Final Certificate for Payment; and
- (3) After Final Certificate for Payment. As to acts or failures to act occurring after the relevant date of issuance of the Final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any warranty provided under Paragraph 3.4, the date of any correction of the Work or failure

to correct the Work by the Contractor under Paragraph 11.2 or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

ARTICLE 13
TERMINATION OR SUSPENSION OF THE CONTRACT

13.1 TERMINATION BY THE CONTRACTOR

13.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 180 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor, for any of the following reasons:

- (1) issuance of an order of a court or other public authority having jurisdiction;
- (2) an act of government, such as a declaration of national emergency, making material unavailable;
- (3) because the Designer has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Paragraph 9.6.

13.1.2 If one of the above reasons exists, the Contractor may, upon seven (7) additional days written notice to the Owner and Designer, terminate the Contract and recover from the Owner payment for work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, not including overhead, profit, or damages.

13.2 TERMINATION BY THE OWNER FOR CAUSE

13.2.1 The Owner may terminate the Contract if the Contractor:

- (1) persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- (2) fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- (3) persistently disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or
- (4) otherwise is in substantial breach of a provision of the Contract Documents.

13.2.2 When any of the above reasons exist, the Owner, upon certification by the Designer that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days written notice, terminate employment of the Contractor and may, subject to any prior rights of surety:

- (1) take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor; and

(2) finish the Work by whatever reasonable method the Owner may deem expedient.

13.2.3 When the Owner terminates the Contract for one of the reasons stated in Subparagraph 13.2.1, the Contractor shall not be entitled to receive further payment.

13.2.4 If the unpaid balance of the Contract Sum does not cover the cost of finishing the Work, the Contractor shall pay the difference to the Owner. The amount to be paid to the Owner shall be certified by the Designer, upon application, and this obligation for payment shall survive termination of the Contract.

13.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

The Owner may, without cause, order the Contractor in writing to suspend, delay, or interrupt the Work in whole or in part for such period of time as the Owner may determine.

13.4 BANKRUPTCY

13.4.1 The bankruptcy of the Contractor shall not terminate this Contract until such time that it is specifically rejected by the Trustee or Contractor in bankruptcy. During the election period the Contractor has to assume or reject this Contract, the Contractor shall continue to perform its Work under the Contract.

13.4.2 In the event the Contractor in Bankruptcy assumes the Contract, the Contractor shall apply progress payments to all of its unpaid obligations on this project before using any of these monies for either administrative expenses of the bankruptcy or as general assets of the estate.

ARTICLE 14 SECURITY OF NON-PUBLIC RECORDS

14.1 SECURITY OF NON-PUBLIC RECORDS

Pursuant to N.C.G.S. § 132-1.7 entitled, “Sensitive Public Security Information”, public records, as defined in N.C.G.S. § 132-1, shall not include information containing specific details of public security plans and arrangements or the detailed plans and drawings of public buildings and infrastructure facilities. Therefore, all information provided, received, gathered or obtained by Contractor containing specific details of public security plans and arrangements or the detailed plans and drawings of public buildings and infrastructure facilities shall be held confidential and shall be used by the Contractor only for the purpose of fulfilling the terms of this Agreement. All plans and drawings shall be returned to the County, or otherwise destroyed at the direction of the County, upon termination or expiration of this Agreement. Any breach of this Paragraph by Contractor shall result in the immediate termination of this Contract.

SECTION 00 73 00 - SUPPLEMENTARY GENERAL CONDITIONS

The following supplements modify, change, delete from or add to the "General Conditions of the Contract for Construction." Where any article of the General Conditions is modified or any paragraph, subparagraph or clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that article, paragraph, subparagraph or clause shall remain in effect.

ARTICLE 2 OWNER

Paragraph 2.1.4 Information and Services Required of the Owner:

Delete Subparagraph 2.1.4 and substitute the following:

- 2.1.4 Construction Documents are provided as electronic files. The Contractor is responsible for printing hard copies of the Drawings and Project Manuals in the quantities necessary for construction.

ARTICLE 9 PAYMENTS AND COMPLETION

Paragraph 9.9 Substantial Completion:

Add the following subparagraphs 9.9.4 and 9.9.5:

- 9.9.4 The time of completion shall commence on a date to be specified in a written Notice to Proceed from the Architect. The time to **Substantial Completion shall be Thirty (30) consecutive calendar days** from the Date of Commencement for installation indicated in the Notice to Proceed. The Date of Commencement for installation in the building is anticipated to be on or about 03-12-2017. This Date of Commencement is for installation in the building and does not include shop drawings, off-site fabrication and other work which shall be prior to this Date of Commencement. This date may change due to the building contractor's schedule.
- 9.9.5 Liquidated Damages: The Contractor and the Contractor's surety's shall be liable for and shall pay the Owner the sum of **Seven Hundred Fifty Dollars (\$750.00)**, herein stipulated as liquidated damages, for each calendar day of delay until the Work is Substantially Complete.

Paragraph 9.11 Final Completion:

Add the following subparagraph 9.11

- 9.11.5 **Time for Final Completion of final inspection items after Substantial Completion shall be Fifteen (15) Days.**
- 9.11.6 For each consecutive calendar day that the Work remains incomplete after the date established for Final Completion, the Owner will retain from compensation otherwise to be paid to the Contractor the sum of **Five Hundred Dollars (\$500.00)**.

END OF SECTION 00 73 00

**NORTH CAROLINA
ONslow COUNTY**

**CONTRACT for CONSTRUCTION
BETWEEN OWNER AND
CONTRACTOR**

This Contract for Construction is made, and entered into this the | | day of | |, 20| |, by and between the **COUNTY OF ONSLOW**, a political subdivision of the State of North Carolina, (hereinafter “**OWNER**”), and | |, (hereinafter “**CONTRACTOR**”), whose principal place of business is: | |.

The Project:
Name and Location: | |

The Designer is: | |

1. CONTRACT DOCUMENTS. The “Contract Documents” consist of this Contract for Construction, General Conditions, Bid Proposal Package No. | | entitled | |, Contractor Bid Proposal dated | |, Addenda issued prior to execution of this Agreement and listed below, and any Modifications executed by the parties after execution of this Contract. The Contract Documents form the Contract and are fully a part of the Contract as if attached to this Contract or repeated herein. The Contract represents the entire and integrated agreement between the Owner and Contractor hereto and supersedes any and all prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents and other than Modifications, appears in Article 17, herein.

Owner and Contractor agree that should the Contractor utilize the services of a subcontractor for any Work under this Contract, the subcontractor shall be required to comply with all terms and conditions of this Contract and any and all Contract Documents entered into between the Owner and Contractor and any of its contractors or subcontractors shall so require of their subcontractors.

2. WORK. Contractor shall execute all of the Work described collectively in the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others.

3. DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION.

3.1 This Contract shall commence on the date first written above (hereinafter “Commencement Date”). The Contractor shall notify the Owner in writing not less than five (5) days before commencing the Work.

3.2 The Contractor shall achieve Substantial Completion of the entire Work no later than the time established in the Contract Documents; subject to adjustments of the Contract Time as provided in the Contract Documents. In view of the difficulty of estimating damages to the Owner by reason of the failure of the Contractor to complete the work herein proposed within the time limit herein proposed, or within such further time as same may be extended, as provided for, proposed, Owner shall be and hereby is authorized to deduct and retain out of the moneys which may be due or become due to Contractor the sum of | | (\$ |.00) per day for each and every calendar day that the work may be incomplete beyond the time limit

fixed for its completion, or as same may have been extended, which sum per day is hereby agreed upon, fixed and determined by the parties hereto as the ascertained and liquidated damages that the Owner will suffer by reason of such default. The above sum shall be held to include the additional expense to the Owner for loss of interest or investment, for the employment of architects, engineers, inspectors, and other employees, together with their expenses, and all other damages to the Owner by reason of such delay.

4. CONTRACT SUM AND PAYMENT

4.1 Contractor shall receive from Owner a sum not to exceed _____ Dollars (\$ _____), as full compensation for the provision of construction services provided under this Contract, subject to additions and deductions as provided in the Contract Documents. Owner agrees to pay for services, satisfactorily performed, in accordance with the Contract Documents. Unless otherwise specified, Contractor shall submit an Application for Payment in the manner described in Article 9 of the General Conditions. Payment will be processed promptly upon receipt and approval of the Application by Owner.

4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

4.3 Unit prices, if any, are as follows:

5. PROGRESS PAYMENTS. Based upon Applications for Payment submitted to the Designer by the Contractor and Certificates for Payment issued by the Designer, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided in Paragraph 9.3 of the General Conditions.

6. FINAL PAYMENT. Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when (1) the Contract has been fully performed by the Contractor and all requirements imposed by Paragraphs 9.3 and 9.11 of the General Conditions have been satisfied except for those requirements set forth in Paragraphs 11.2 and 11.3 of the General Conditions and any other requirements which necessarily survive final payment; and (2) a final Certificate for Payment has been issued by the Designer; such final payment shall be made by the Owner not more than 30 days after the issuance of the Designer's final Certificate for Payment.

7. INDEMNIFICATION. Contractor shall indemnify and hold harmless the Owner and its officials, agents, and employees from and against all claims, damages, losses, and expenses (including but not limited to fees and charges of engineers, attorneys, and other professionals and costs related to court action or arbitration) arising out of or resulting from the performance of this Contract or the actions of the Contractor or its officials, employees, or contractors under this Contract or under the contracts entered into by the Contractor in connection with the work to be performed and as further set forth in Paragraph 3.17 of the General Conditions.

8. NOTICES. All notices which may be required by this Contract or any rule of law shall be effective when received by certified mail sent to the following addresses:

FOR: **COUNTY OF ONSLOW**

--

FOR: **CONTRACTOR**

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9. **NON-DISCRIMINATION.** Contractor shall not discriminate against any employee or applicant for employment because of age, sex, race, creed, national origin, or disability. Contractor shall take affirmative action to ensure that applicants are employed and that employees are treated fairly and legally during employment with regard to their age, sex, race, creed, national origin, or disability. In the event Contractor is determined by the final order of an appropriate agency or court to be in violation of any non-discrimination provision of federal, state or local law or this provision, this Contract may be canceled, terminated or suspended in whole or in part by Owner, and Contractor may be declared ineligible for further Owner contracts.
10. **HEALTH AND SAFETY.** Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs required by OSHA and all other regulatory agencies while providing services under this Contract.
11. **NON-ASSIGNMENT.** This Contract is not assignable by either party, by operation of law or otherwise.
12. **MODIFICATION.** This Contract may be modified only by a written agreement executed by both parties hereto.
13. **TERMINATION OR SUSPENSION.** This Contract may be terminated by the Owner or the Contractor as provided in Article 13 of the General Conditions. The Work may be suspended by the Owner as provided in Paragraph 13.3 of the General Conditions.
14. **E-VERIFY.** As a condition of payment for services rendered under this agreement, CONTRACTOR shall comply with the requirements of Article 2 of Chapter 64 of the General Statutes. Further, if CONTRACTOR provides the services to the County utilizing a subcontractor, CONTRACTOR shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the General Statutes as well. CONTRACTOR shall verify, by affidavit, compliance of the terms of this section upon request by the COUNTY.
15. **IRAN DIVESTMENT ACT.** Contractor complies that they are not listed on the Final Divestment List created by the State Treasurer pursuant to N.C.G.S. 143-6A-4. Individuals or companies on the Final Divestment List are ineligible to contract or subcontract with Local Government Units. (G.S. 143C-6A-6(a).) It is each vendor's or contractor's responsibility to monitor its compliance with this restriction. Contracts valued at less than \$1,000.00 are exempt from this restriction.
16. **DIVESTMENT FROM COMPANIES THAT BOYCOTT ISRAEL.** The vendor or contractor

certifies that it has not been designated by the North Carolina State Treasurer as a company engaged in the boycott of Israel pursuant to N.C.G.S. 147-86.81. It is the responsibility of each vendor or contractor to monitor compliance with this restriction. Contracts valued at less than \$1,000.00 are exempt from this restriction.

17. INSURANCE AND BONDS

17.1 CONTRACTOR'S LIABILITY INSURANCE. Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in North Carolina such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- (1) claims under workers' compensation, disability benefit and other similar employee benefit acts which are applicable to the work to be performed;
- (2) claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- (3) claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- (4) claims for damages insured by usual personal injury liability coverage which are sustained by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or by another person;
- (5) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- (6) claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; and
- (7) claims involving contractual liability insurance applicable to the Contractor's obligations under Article 3 of the General Conditions.

17.2 The insurance required as stated above shall be written for not less than the limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverage, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment.

17.3 Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. The Certificates and the insurance policies required by this Article 16 shall contain a provision that coverage afforded under the policies will not be canceled or allowed to expire until at least 30 days prior written notice has been given to the Owner. If any of the foregoing insurance coverage are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the Final Application for Payment as required by

Subparagraph 9.11.2 of the General Conditions. Information concerning reduction of coverage shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief.

17.4 BUILDER'S ALL RISK COVERAGE. Unless otherwise provided the Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in North Carolina, Builder's All Risk Coverage, in an amount equal to 100% of the Contract Sum under this Agreement.

17.5 PERFORMANCE BOND AND PAYMENT BOND. The Contractor shall furnish bonds covering the faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or required by North Carolina law.

Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

18. ENUMERATION OF CONTRACT DOCUMENTS

18.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated as follows:

- (1) This executed Contract for Construction between Owner and Contractor.
- (2) The General Conditions of the Contract for Construction. Where reference is made in this Contract to a provision of the General Conditions or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.
- (3) The Supplementary and other Conditions of the Contract are those contained in the Project Manual dated | | | | |.
- (4) The Specifications are those contained in the Project Manual dated as in Paragraph 17.1(3) above, and are as follows:

Section	Title	Pages

(5) The Drawings are as follows, and are dated | | | | |, unless a different date is shown below:

Number	Title	Date

(6) The Addenda, if any, are as follows:

Addendum No. | | | | | Dated: | | | | | Addendum No. | | | | | Dated: | | | | |

Addendum No. | | | | | Dated: | | | | | Addendum No. | | | | | Dated: | | | | |

(7) Other documents, if any, forming part of the Contract Documents are as follows:

Invitation to Bid
Instruction to Bidders

19. This Contract and the Contract Documents described herein set forth the entire agreement between the parties and supersedes any and all other agreements on this subject between the parties.

This Agreement is entered into as of the day and year first written above and is executed in at least three original copies of which one is to be delivered to the Contractor, one to the Designer for use in the administration of the Contract, and the remainder to the Owner.

COUNTY OF ONSLOW

This instrument has been pre-audited
in the manner required by the Local
Government Budget and Fiscal Control Act.

By: _____

Finance Officer

Date: _____

CONTRACTOR

ATTEST:

By: _____

Secretary

Print Name/Title: _____

STATE OF NORTH CAROLINA
COUNTY OF _____

I, a Notary Public in and for the aforesaid County and State, do hereby certify that _____ personally appeared before me this day and acknowledged that he is _____ of _____, a North Carolina corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its _____, sealed with its corporate seal and attested by _____ as its _____.

Witness my hand and notarial seal this ___ day of _____, 20__.

Notary Public
My commission expires: _____

(SEAL)

SECTION 00 90 10 - SPECIAL CONDITIONS

The following requirements are, in fact, Conditions of the Contract, and are in addition to the General Conditions, Supplementary General Conditions and Special Conditions and are not intended to replace or otherwise conflict with those Conditions. These Special Requirements are particular to the Work of this Project and are intended to inform the Contractor of non-standard conditions affecting the Work of the Contract.

ARTICLE 1 - QUALIFICATION OF PROJECT SUPERINTENDENT

The Contractor shall be required to demonstrate his capability to provide a qualified project superintendent for the project who is acceptable to the Owner and Architect. The project superintendent shall have at least five years of successful experience on projects of similar size, scope and nature. Contractor shall be required to substantiate these qualifications with a written submittal within seven calendar days after opening of the Bids. The Contractor is charged with providing a qualified and experienced superintendent for this project to the satisfaction of the Owner and Architect. The Owner reserves the right to disapprove a proposed superintendent who does not appear to be fully qualified and experienced to accomplish the work of this project.

ARTICLE 2 - SINGLE PRIME CONTRACT BIDS

Bids will be received for Single Prime Contracts only. Opening of Bids, as it relates to the number of bids required to allow opening, and award of Contracts, as it relates to low bid and the number of bids required to allow award, shall be governed by the guidelines and procedures recommended by the State Department of Construction of the N.C. Department of Administration for bid openings for single prime contract bids.

Those Bidders submitting Single Prime Contract bids shall be aware that all work of the project is included in the Work of a Single Prime Contractor, regardless of the divisions of work indicated on the Drawings and in the Project Manual.

Single Prime Contract Bidders must include the names of their major subcontractors on the Proposal form as indicated.

Bid Alternates and Unit Prices identified shall be bid, as identified, by the Single Prime Contract Bidder, as indicated on the Proposal form.

All Allowances identified shall all be included in the Single Prime Contract Bid.

ARTICLE 3 - COORDINATION AND COOPERATION WITH OTHER CONTRACTORS

The Contractor shall be aware that the Owner has or may engage other contractors to accomplish work concurrently with the Work of this project, which will have a direct effect on the accomplishment of the Work of this project. Contractors will be required to cooperate and coordinate with these other contractors during the course of the project to avoid delays in the work of this project of that of the other contractors.

ARTICLE 4 - AMERICANS WITH DISABILITIES ACT (ADA)

It is the design intent of this project to comply with the Americans with Disabilities Act and Chapter 11 of the North Carolina Building Code 2012 and ANSI ICC A117.1-2009. All items and assemblies manufactured or fabricated for installation on this project shall be ADA compliant. Shop drawing submittals shall indicate ADA compliance. Installation of all items and assemblies shall be ADA compliant. All contractors shall submit a statement that all work to the best of their knowledge is ADA compliant prior to release of final retainage. Remedy of non-compliant circumstances should they arise shall consist of written notification to the Architect by the Contractor prior installation or fabrication of the respective building component or arrangement. Should any contractor, subcontractor, or regulatory authority having jurisdiction become aware of any non-compliant circumstance he shall notify the Architect at once.

ARTICLE 5 - RESTRICTIONS ON CONSTRUCTION PERSONNEL

Behavior of construction personnel on the site shall be expected to be exemplary. Foul language, rude or crude behavior, suggestive comments or actions, or other behavior considered unacceptable will not be tolerated. Shirts will be required to be worn at all times. Contractors will be responsible to counsel their personnel concerning the above restrictions and will be responsible to insure that these restrictions are enforced. Failure on the part of construction personnel to comply with the intent of these restrictions will be grounds for their permanent removal and banning from the Project site.

ARTICLE 6 – INSURANCE

Certificates of Insurance shall be provided that meet the requirements provided by the County of Onslow and attached herein.

ARTICLE 7 – COOPERATION AND COORDINATION WITH GENERAL CONTRACTOR, TENDER OF CONTRACT.

The most responsible vendor will be required to cooperate and coordinate with the general contractor and, if determined to be beneficial to the County, the contract may be tendered to the general contractor for administration and installation purposes.

ARTICLE 7 – PROTECTION OF WORK.

The Contractor will be working in direct proximity of finished work. Protect all finishes, fixtures, and equipment. Contractor shall replace or a sum of money shall be withheld from final payment to replace damaged finishes, fixtures, and equipment caused by this contractor or sub-contractors of this contractor as determined reasonable by the Owner and Designer.

**COUNTY OF ONSLOW
REQUIREMENTS FOR CERTIFICATE OF INSURANCE**

VENDOR - IMPORTANT - Work will not be permitted until the County of Onslow receives an acceptable Certificate of Insurance. Give this information to your insurance agent/broker.

THE CONTRACTOR, AT ITS SOLE EXPENSE, SHALL PROVIDE AN ORIGINAL SIGNED CERTIFICATE OF INSURANCE.

1. WORKERS' COMPENSATION - STATUTORY LIMITS - EMPLOYERS' LIABILITY - \$1,000,000.
2. COVERAGE SHALL BE PROVIDED UNDER A COMPREHENSIVE GENERAL LIABILITY OR COMMERCIAL GENERAL LIABILITY AND AUTOMOBILE LIABILITY FORM OF INSURANCE, SUCH AS IS USUAL TO THE PRACTICE OF THE INSURANCE INDUSTRY, INCLUDING (BUT NOT LIMITED TO) ALL THE USUAL COVERAGE REFERRED TO AS:
 - *Comprehensive/Commercial Form;
 - *Premises/Operations Liability (M&C);
 - *Underground Explosion & Collapse Hazard;
 - *Products/Completed Operations;
 - *Blanket Contractual;
 - *Broad Form Property Damage;
 - *Personal Injury;
 - *Automobile Liability, Including Coverage for owned, non-owned, leased or hired vehicles, and
 - *Garage/Garage keepers, Bailers, or Ship keepers Liability, if applicable.
3. MINIMUM LIMITS OF PROTECTION MUST BE:
 - \$1,000,000 per occurrence /\$2,000,000 aggregate --- Bodily Injury Liability, and
 - \$ 100,000 --- Property Damage Liability, or
 - \$1,000,000 per occurrence /\$2,000,000 aggregate---Combined Single Limit Bodily Injury and Property Damage
4. BUILDER'S "ALL RISK" COVERAGE:
 - 100% of Contract Sum
5. POLICY PERIOD MUST COVER THE TERM OF CONTRACT.
6. THE COUNTY OF ONSLOW SHALL BE GIVEN NOT LESS THAN 30 DAYS NOTICE OF ANY CHANGE, CANCELLATION, EXPIRATION, OR RENEWAL OF THE POLICY.
7. A. A copy of the fully completed Endorsement must be provided. The Endorsement must name the County of Onslow as an Additional Insured, identify the policy number and be signed by an authorized representative. The Certificate of Insurance and Endorsement must be submitted as one document. To expedite approval, a Binder (ACORD #75) for the Endorsement will be accepted for 90 days until the actual policy is issued.

--Or--

B. The broker/agent submits a certified copy of the insurance policy, which includes the County of Onslow as an additional insured.

Attach a copy of all Insurances with the copies of the Contract between the Owner and General Contractor.

END OF SECTION 00 90 10

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Type of the Contract.
 - 3. Work phases.
 - 4. Owner-furnished products.
 - 5. Use of premises.
 - 6. Owner's occupancy requirements.
 - 7. Work restrictions.
 - 8. Specification formats and conventions.
- B. Related Sections include the following:
 - 1. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: **Onslow County Courthouse Expansion Courtroom Built-in**
 - 1. Project Location: **109 Old Bridge Street, Jacksonville, North Carolina 28540.**
- B. Owner: **Onslow County**
 - 1. Address: **234 NW Corridor Blvd., Jacksonville, North Carolina 28540.**
- C. Architect: **Smith Sinnett Architecture**
 - 1. Address: **4600 Lake Boone Trail, Suite 205, Raleigh, North Carolina 27607.**
- D. The Onslow County Courthouse Expansion Courtroom Built-in project consists of the Courtroom built-in furnishings and finishes as indicated by the drawings for four courtrooms in the Onslow County Courthouse Expansion project: Courtroom 201, 205, 208, 214.
- E. The most responsible vendor will be required to cooperate and coordinate with the general contractor and, if determined to be beneficial to the County, the contract may be tendered to the general contractor for administration and installation purposes.

1.4 TYPE OF CONTRACT

- A. Project will be constructed under a single prime contract. Bidders submitting single prime contract bids, and subsequently successful single prime Contractors, shall be aware that all work of the project is included in the Work of a single prime contractor, regardless of the divisions of work indicated on the Drawings and in the Project Manual. All references and indications in the Drawings and the Project Manual to separate Prime Contracts shall apply to the Single Prime Contract. Bid Alternates and Unit Prices shall apply to the Single Prime Contract. Allowances shall be included in the Single Prime Contract.

1.5 WORK UNDER OTHER CONTRACTS:

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

1.6 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed 7:00 am to 7:00 pm Monday through Friday, except otherwise indicated or as needed to meet the project schedule.
 - 1. Weekend Hours: Coordinate with Owner and General Contractor
 - 2. Early Morning Hours: Coordinate with Owner and General Contractor
 - 3. Hours for Utility Shutdowns: Coordinate with Owner and General Contractor
 - 4. Hours for noisy activity: Coordinate with Owner and General Contractor. Court is usually in session from 9:30am till 5:00pm with a lunch break normally at 12:30pm-2:00pm. Noisy activities during Court sessions may be required to be limited if requested by the Owner and/or Judge. All effort shall be taken to limit noisy activities during active court times to the greatest extent possible.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner:
 - 1. Notify **Architect** and **Owner** not less than **72** hours in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without **Architect's** and **Owner's** written permission.
- C. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor air intakes.

1.7 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and CSI/CSC's "Master Format" numbering system.
- B. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
- C. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
- D. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
- E. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - 1. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 01 21 00 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances.
 - 1. The Contractor shall include in the Contract Sum all allowances states in the Contract Documents. The Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowance, unless indicated otherwise herein. Coordinate allowance work with related work to ensure that each selection is completely integrated and interfaced with related work. Include all allowance amounts as a separate line item amount on each application for payment.
- B. Types of allowances include the following:
 - 1. Contingency Allowances.

1.3 SELECTION AND PURCHASE

- A. Purchase products and systems selected by Architect from the designated supplier.

1.4 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.
- B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.5 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.6 ALLOWANCES

- A. Refer to Schedule of Allowances for Amounts and Quantities
- B. Contingency Allowances
 - 1. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

2. Contractor's related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
3. Allowances for overhead and profit shall be provided within the contract price and not included as part of any change order till the allowance amount has been spent.

1.7 CHANGE ORDER MARK-UP

- A. Except as otherwise indicated, comply with provisions of General Conditions and other requirements stated in this section. For each allowance, Contractor's claims for increased costs (for either purchase order amount or Contractor's handling, labor, installation, overhead, and profit), because of a change in scope or nature of the allowance work as described in contract documents, must be submitted within 60 days of initial change order authorizing work to proceed on that allowance; otherwise, such claims will be rejected.
- B. As a procedural restriction no mark-up (increase or decrease) shall be included in the change order amount for Contractor's increase or decrease in handling, labor, installation, overhead or profit unless purchase order amount varies by more than 15% from allowance amount.
- C. Change orders prepared to return unused allowance amounts to the Owner shall be subject to the same requirements for the return of appropriate profit and overhead as other change orders in accordance with the Conditions of the Contract.

1.8 UNUSED MATERIALS

- A. Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
 1. If requested by Architect, prepare unused material for storage by Owner when it is not economically practical to return the material for credit. If directed by Architect, deliver unused material to Owner's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES – BASE BID

- A. **Allowance No. A-1:** GENERAL CONTINGENCY:
 1. Contingency allowance shall be provided as follows and the price shall be adjusted based on the actual cost of subcontracts, materials, and labor, excluding overhead and profit. Allowances for

overhead and profit shall be provided within the contract price. If there is unused allowance at the conclusion of the project, the unused allowance plus a reasonable amount for profit will be deducted from the contract. **Contingency: \$50,000.00 Include this amount in the base bid price on the Proposal Form.**

END OF SECTION 01 21 00

SECTION 01 23 00 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost or credit for each alternate is the net addition to the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
- B. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- C. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- D. Execute accepted alternates under the same conditions as other work of the Contract.
- E. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. **Alternate No. 1; Owner Preferred Manufacturer(s): Architectural:** State the amount to be added to the Base Bid for providing all labor and materials indicated and required to accomplish Work involved in providing the Owner Preferred Manufacturers Listed Below:

ALTERNATE 1: Ballistic Paneling UL Level 3 in lieu of Base Bid UL 752 Level 2 at vertical walls of Judge, Witness, Clerk Bench.

END OF SECTION 01 23 00

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
 - 1. Division 01 Section "Allowances" for procedural requirements for handling and processing allowances.
 - 2. Division 01 Section "Unit Prices" for administrative requirements for using unit prices.
 - 3. Division 01 Section "Submittal Procedures" for requirements for the Contractor's Construction Schedule.
 - 4. Division 01 Section "Payment Procedures" for administrative procedures governing Applications for Payment.
 - 5. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on appropriate form.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: **Architect** will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
- B. Proposal Requests issued by **Architect** are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
Within **time specified in Proposal Request** after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - 1. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 2. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 3. Include costs of labor and supervision directly attributable to the change.
 - 4. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- C. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to **Architect**.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 4. Include costs of labor and supervision directly attributable to the change.
 5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 6. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
- D. Proposal Request Form: Use AIA Document G709 for Proposal Requests.

1.5 ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, base each Change Order proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
1. Include installation costs in purchase amount only where indicated as part of the allowance.
 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the Purchase Order amount or Contractor's handling, labor, installation, overhead, and profit. Submit claims within (7) **Seven** days of receipt of the Change Order or Construction Change Directive authorizing work to proceed. Owner will reject claims submitted later than (7) **seven** days after such authorization.
1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, **Architect** will issue an electronic Change Order for signing and approval of Owner, and Contractor.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. **Construction** Change Directive: **Architect** may issue a **Construction** Change Directive on **appropriate electronic form**. Directive shall be followed up by a Change Order.
- B. **Construction** Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- C. Documentation: Maintain detailed records on a time and material basis of work required by the **Construction** Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

SECTION 01 29 00 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 01 Section "Allowances" for procedural requirements governing handling and processing of allowances.
 - 2. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittals Schedule.
 - c. Contractor's Construction Schedule.
 - d. List of Subcontractors.
 - e. Schedule of Allowances
 - f. Schedule of Alternates.
 - g. List of Products.
 - h. List of Principal Suppliers and Fabricators.
 - 2. Submit the Schedule of Values to Architect at earliest possible date but no later than (7) seven days before the date scheduled for submittal of initial Applications for Payment.
 - 3. Subschedules: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values correlated with each phase of payment.
- B. Format and Content: Schedule of Values shall be organized by work effort established in the CPM. Use the Project Manual table of contents as a guide to establish line items and organize each work effort for the Schedule of Values.
 - 1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.

- b. Name of Architect.
- c. Architect's project number.
- d. Contractor's name and address.
- e. Date of submittal.
2. Submit draft arranging the Schedule of Values in tabular form with separate columns to indicate the a minimum of the following for each item listed:
 - a. CPM schedule information and work effort
 - b. Related Specification Section or Division.
 - c. Description of the Work.
 - d. Name of subcontractor.
 - e. Name of manufacturer or fabricator.
 - f. Name of supplier.
 - g. Change Orders (numbers) that affect value.
 - h. Dollar value.
 - 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate. **Include separate line items under required principal subcontracts for operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training in the amount of 5 percent of the Contract Sum.**
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. DO NOT bill for off-site stored materials.
6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
9. Schedule Updating: The CPM shall be updated in order to generate the Schedule of Values on each pay application.
10. Shop Drawings and Mobilization- Applications for payment shall not include preparation of shop drawings or mobilization. These items shall be included as part of work-in-place.
11. General Conditions: Applications for Payment for General Conditions shall be paid for in proportion to the amount of work completed.
12. Bonds and Insurance: Applications for Bonds and Insurance shall be accompanied with invoices from the Bond and Insurance provider.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Forms: Use **AIA Document G702 and Contractor's construction schedule (CPM) indicating Item No., % complete, amount earned, amount earned current pay period, and amount remaining** as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. **Architect** will return incomplete applications without action.
 - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit **5** five signed and notarized original copies of each Application for Payment to **Architect** by a method ensuring receipt **within 24 hours**. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit a notarized waiver of mechanic's lien from the Prime Contractor. With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application. With each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - 4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
 - 5. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- G. Bill of Material: With each Application for Payment, submit a bill of materials for each stored material listed for payment on the pay application. The bill of material shall state the quantity of material, stored on site, that is being billed for on the current Application for Payment. The bill of material shall correspond to the actually verified amount stored on site.
- H. NC Sales Tax Form: With each Application for Payment, submit a NC Sales Tax form. Refer to form at end of this section.
- I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. List of subcontractors.
 - 2. Schedule of Values.
 - 3. Contractor's Construction Schedule (preliminary if not final).
 - 4. Products list.
 - 5. Schedule of unit prices.
 - 6. Submittals Schedule (preliminary if not final).
 - 7. List of Contractor's staff assignments.
 - 8. List of Contractor's principal consultants.
 - 9. Copies of building permits.
 - 10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 - 11. Initial progress report.
 - 12. Report of preconstruction conference.
 - 13. Certificates of insurance and insurance policies.
 - 14. Performance and payment bonds.
 - 15. Data needed to acquire Owner's insurance.

16. Initial settlement survey and damage report if required.
- J. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
 1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
 3. Occupancy Permits and similar approvals.
 4. Warranties (guarantees) and maintenance agreements.
 5. Maintenance instructions.
 6. Startup performance reports.
 7. Changeover information related to Owner's occupancy, use, operation, and maintenance.
 8. Final Cleaning.
 9. Application for reduction of retainage and consent of surety.
 10. List of discrepancies (punchlist items), recognized as Owner approved exceptions that shall be completed within 30 days.
 11. Advice on shifting insurance coverages.
- K. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final, liquidated damages settlement statement.
 9. Transmittal of required project construction records to the Owner.
 10. Removal of temporary facilities and services.
 11. Removal of surplus materials, rubbish, and similar elements.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

SECTION 01 42 00 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.
- J. "Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, who performs a particular construction activity including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - 1. The term "experienced," when used with the term "installer," means having successfully completed a minimum of 5 previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.
 - 2. Trades: Using terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as

"carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.

3. Assigning Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. The specialists must be engaged for those activities, and their assignments are requirements over which the Contractor has no option. However, the ultimate responsibility for fulfilling contract requirements remains with the Contractor.

K. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

L. This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing the Work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.

1.3 SPECIFICATION FORMAT AND CONTEC EXPLANATION

A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's "MasterFormat 2004" numbering system.

B. Specification Content: These Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

C. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated as the sense requires. Singular words shall be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.

D. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.

E. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.4 SUBMITTALS

A. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

- B. **Conflicting Requirements:** Where compliance with 2 or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different but apparently equal to the Architect for a decision before proceeding.
 - 1. **Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.
- C. **Publication Dates:** Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- D. **Copies of Standards:** Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.
- E. **Abbreviations and Acronyms for Standards and Regulations:** Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

1.6 ABBREVIATIONS AND ACRONYMS

- A. **Industry Organizations:** Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. **Industry Organizations:** Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.
- C. **Code Agencies:** Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 42 00

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Warranties.
 - 3. Final cleaning.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.

1.3 SUBMITTALS

- A. All closeout submittals, including but not limited to, Maintenance and Operation Manual, Warranties, Bonds, additional closeout submittals required by the Owner or Architect and additional requirements stated in the specifications shall be submitted in the following way:
 - 1. Bind all closeout documents in one uniform color, heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate all contents in 75% of the binder's width and allow of 25% free space for future items, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate section. Mark tab to identify the content of that section. Identify each binder on the front and spine with the typed or printed title of the Binder, Project name, and name of Contractor.

1.4 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Prepare and submit Project Record Documents (marked up and signed plans and specifications), operation and maintenance manuals, and similar final record information.
 - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.

7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
8. Complete final cleaning requirements, including touchup painting.
9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.5 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.6 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - 2. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - 3. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances.
 - 4. Remove labels that are not permanent.
 - 5. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 6. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01 77 00

SECTION 05 52 13 - PIPE AND TUBE RAILINGS

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. This Section includes the following:
 - 1. Interior Stainless-steel pipe hand railings at ramps and as indicated.
- B. Related Sections include the following:
 - 1. Division 06 Section "Rough Carpentry" for wood blocking for anchoring railings.

1.3 PERFORMANCE REQUIREMENTS

- A. General: In engineering railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:
 - 1. Stainless Steel: 60 percent of minimum yield strength.
- B. Structural Performance: Provide railings capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
 - 1. Handrails:
 - a. Uniform load of 50 lbf/ ft. applied in any direction.
 - b. Concentrated load of 200 lbf applied in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.
- C. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.4 SUBMITTALS

- A. Product Data: For the following:
 - 1. Manufacturer's product lines of mechanically connected railings.
 - 2. Grout, anchoring cement, and paint products.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
 - 1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Samples for Initial Selection: For products involving selection of color, texture, or design.
- D. Samples for Verification: For each type of exposed finish required.
 - 1. Sections of each distinctly different linear railing member, including handrails,.
 - 2. Fittings and brackets.
 - a. Show method of finishing members at intersections.
- E. Mill Certificates: Signed by manufacturers of stainless-steel products certifying that products furnished comply with requirements.
- F. Welding certificates.
- G. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of railing through one source from a single manufacturer.
- B. Welding: Qualify procedures and personnel according to the following:
 - 1. AWS D1.6, "Structural Welding Code--Stainless Steel."
- C. Storage: Store handrails and railing systems inside a well-ventilated area, away from uncured concrete and masonry and protected from weather, moisture, soiling, abrasion, extreme temperatures, and humidity.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication and indicate measurements on Shop Drawings.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating railings without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions.
 - 2. Provide allowance for fitting at site.

1.7 COORDINATION AND SCHEDULING

- A. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- B. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not satisfy structural performance requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Stainless-Steel Pipe and Tube Railings:
 - a. Blum, Julius & Co., Inc.
 - b. Paragon Aquatics; Division of Pentair Pool Products, Inc.
 - c. Pisor Industries, Inc.
 - d. Stainless Fabricators, Inc.
 - e. Sterling Dula Architectural Products, Inc.
 - f. Tubular Specialties Manufacturing, Inc.
 - g. Tuttle Aluminum & Bronze.
 - h. Wagner, R & B, Inc.; a division of the Wagner Companies.

2.2 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails, unless otherwise indicated.

2.3 STAINLESS STEEL

- A. Tubing: ASTM A 554, Grade MT **304**.
- B. Pipe: ASTM A 312/A 312M, Grade TP **304**.
- C. Castings: ASTM A 743/A 743M, Grade **CF 8 or CF 20**.
- D. Plate and Sheet: ASTM A 666, Type **304**.

2.4 FASTENERS

- A. General: Provide the following:
 - 1. Stainless-Steel Railings: Type **304 or 316** stainless-steel fasteners.
- B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.
- C. Fasteners for Interconnecting Railing Components:
 - 1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless otherwise indicated.
 - 2. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless exposed fasteners are unavoidable or are the standard fastening method for railings indicated.
 - 3. Provide tamper-resistant flat-head machine screws for exposed fasteners, unless otherwise indicated.
- D. Anchors: Provide cast-in-place or chemical anchors, fabricated from corrosion-resistant materials with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.

2.5 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- C. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.

2.6 FABRICATION

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Connections: Fabricate railings with welded connections, unless otherwise indicated.

- H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove flux immediately.
 - 4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- I. Welded Connections for Aluminum Pipe: Fabricate railings to interconnect members with concealed internal welds that eliminate surface grinding, using manufacturer's standard system of sleeve and socket fittings.
- J. Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.
 - 1. Fabricate splice joints for field connection using an epoxy structural adhesive if this is manufacturer's standard splicing method.
- K. Form changes in direction as follows:
 - 1. As detailed.
 - 2. By bending.
 - 3. By flush bends.
 - 4. By radius bends of radius indicated.
- L. Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
- M. Close exposed ends of railing members with prefabricated end fittings.
- N. Provide wall returns at ends of wall-mounted handrails, unless otherwise indicated. Close ends of returns.
- O. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work, unless otherwise indicated.
 - 1. At brackets and fittings fastened to plaster or gypsum board partitions, provide fillers made from crush-resistant material, or other means to transfer wall loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.
- P. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.

2.7 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

2.8 STAINLESS-STEEL FINISHES

- A. Remove tool and die marks and stretch lines or blend into finish.
- B. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.
- C. 180-Grit Polished Finish: Oil-ground, uniform, directionally textured finish.
- D. 320-Grit Polished Finish: Oil-ground, uniform, fine, directionally textured finish.

- E. Polished and Buffed Finish: Oil-ground, 180-grit finish followed by buffing.
- F. Directional Satin Finish: No. 4.
- G. Dull Satin Finish: No. 6.
- H. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine plaster and gypsum board assemblies, where reinforced to receive anchors, to verify that locations of concealed reinforcements have been clearly marked for Installer. Locate reinforcements and mark locations if not already done.

3.2 INSTALLATION, GENERAL

- A. Fit exposed connections together to form tight, hairline joints.
- B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
 - 1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
 - 2. Align rails so variations from parallel with rake of ramps for sloping members do not exceed 1/4 inch in 12 feet.
- C. Corrosion Protection: Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- D. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.3 RAILING CONNECTIONS

- A. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in Part 2 "Fabrication" Article whether welding is performed in the shop or in the field.

3.4 ANCHORING POSTS

- A. Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions.
- B. Form or core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with **nonshrink, nonmetallic grout or anchoring cement**, mixed and placed to comply with anchoring material manufacturer's written instructions.
- C. Cover anchorage joint with flange of same metal as post, welded to post after placing anchoring material.
- D. Leave anchorage joint exposed; wipe off surplus anchoring material; and leave 1/8-inch buildup, sloped away from post.
- E. Anchor posts to metal surfaces with oval flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members as follows:

1. For aluminum pipe railings, attach posts using fittings designed and engineered for this purpose.
 2. For stainless-steel pipe railings, weld flanges to post and bolt to supporting surfaces.
 3. For steel pipe railings, weld flanges to post and bolt to metal supporting surfaces.
- F. Install removable railing sections, where indicated, in slip-fit metal sockets cast in concrete.

3.5 ANCHORING RAILING ENDS

- A. Anchor railing ends to concrete and masonry with round flanges connected to railing ends and anchored to wall construction with anchors and bolts.
- B. Anchor railing ends to metal surfaces with flanges bolted to metal surfaces and welded to railing ends.

3.6 ATTACHING HANDRAILS TO WALLS

- A. Attach handrails to wall with wall brackets. Provide brackets with 1-1/2-inch clearance from inside face of handrail and finished wall surface.
 1. Use type of bracket with flange tapped for concealed anchorage to threaded hanger bolt.
 2. Use type of bracket with predrilled hole for exposed bolt anchorage.
- B. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.
- C. Secure wall brackets to building construction as follows:
 1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
 2. For hollow masonry anchorage, use toggle bolts.
 3. For wood stud partitions, use hanger or lag bolts set into wood backing between studs. Coordinate with carpentry work to locate backing members.
 4. For steel-framed **gypsum board** partitions, use hanger or lag bolts set into **fire-retardant-treated** wood backing between studs. Coordinate with stud installation to locate backing members or fasten brackets directly to steel framing or concealed steel reinforcements using self-tapping screws of size and type required to support structural loads.

3.7 ADJUSTING AND CLEANING

- A. Clean aluminum and stainless steel by washing thoroughly with clean water and soap and rinsing with clean water.

3.8 PROTECTION

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.
- B. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION 05 52 13

SECTION 06 10 00- ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
1. Wood furring, grounds, nailers, and blocking.
 2. Blocking with dimensional lumber.
 3. Plywood backing panels.
 4. **Platforms and Stages (Fire-Retardant-Treated). Platforms and stages shall be constructed of fire-retardant-treated wood or other approved non-combustible material.**
 5. **Framing shall be fire-retardant-treated material.**

1.3 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 01 Specification Sections.
- B. Wood treatment data as follows, including chemical treatment manufacturer's instructions for handling, storing, installing, and finishing treated materials:
- C. For each type of preservative-treated wood product, include certification by treating plant stating type of preservative solution and pressure process used, net amount of preservative retained, and compliance with applicable standards.
- D. For waterborne-treated products, include statement that moisture content of treated materials was reduced to levels indicated before shipment to Project site.
- E. Material test reports from a qualified independent testing agency indicating and interpreting test results relative to compliance of fire-retardant-treated wood products with performance requirements indicated.
- F. Warranty of chemical treatment manufacturer for each type of treatment.
- G. **Framing plan for all raised platforms and stages sealed by a licensed engineer in the state of North Carolina. Floor load shall be a minimum of 100psf. Framing plans shall include framing to accommodate future lifts at the Judge and Clerk area as indicated on the drawings. The lift basis of design shall be Lift-U Accessor 1 VMW (Division of Hogan Manufacturing) Accessor Convertible Walkway. Contact: Mark Ramos (markramos@hoganmfg.com), Architectural Product Sales, Lift-U Division of Hogan Manufacturing, Inc, P.O. Box 398, Escalon, CA 95320, 209-83802400, Ext. 141. Also refer to the Appendix for additional information.**

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Keep materials under cover and dry. Protect from weather and contact with damp or wet surfaces. Stack lumber, plywood, and other panels. Provide for air circulation within and around stacks and under temporary coverings.
- B. For lumber and plywood pressure treated with waterborne chemicals, place spacers between each bundle to provide air circulation.

PART 2 - PRODUCTS

2.1 LUMBER, GENERAL

- A. Lumber Standards: Comply with DOC PS 20, "American Softwood Lumber Standard," and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee's (ALSC) Board of Review.
- B. Inspection Agencies: Inspection agencies, and the abbreviations used to reference them, include the following:
 - 1. SPIB - Southern Pine Inspection Bureau.
 - 2. WWPA - Western Wood Products Association.
- C. Grade Stamps: Provide lumber with each piece factory marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill.
- D. For exposed lumber, furnish pieces with grade stamps applied to ends or back of each piece.
- E. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
- F. Provide dressed lumber, S4S, unless otherwise indicated.
- G. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.
- H. Fire-Retardant-Treated Materials:
 - 1. General: Where "treated wood" or "pressure treated wood" is indicated and all other wood blocking or furring located within wall assemblies is indicated comply with the applicable requirements of AWPA C20 (lumber) and AWPA C27 (plywood). Identify fire-retardant-treated wood with appropriate classification marking of UL; U, S. Testing; or Timber Products Inspections, Inc. Provide written statement that the fire retardant chemicals used are compatible with materials to which the treated wood is in contact.
- I. Treatment Type: Interior Type A for protected wood and Exterior for wood exposed to weather.

2.2 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Comply with performance requirements in AWPA C20 (lumber) and AWPA C27 (plywood).
 - 1. Use Interior Type A, unless otherwise indicated.
- B. Identify fire-retardant-treated wood with appropriate classification marking of testing and inspecting agency acceptable to authorities having jurisdiction.
- C. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not bleed through, contain colorants, or otherwise adversely affect finishes.
- D. Application: Treat items indicated on Drawings, and the following:
 - 1. **Framing for raised platforms and stages.**
 - 2. **Concealed blocking.**
 - 3. **Framing for non-load-bearing partitions.**
 - 4. **Plywood backing panels.**

2.3 DIMENSION LUMBER

- A. General: Provide dimension lumber of grades indicated according to the ALSC National Grading Rule (NGR) provisions of the inspection agency indicated.

2.4 MISCELLANEOUS FRAMING

- A. Provide the following grades and species:
 - 1. Grade: No. 2.
 - 2. Species: Southern pine; SPIB.

2.5 BOARDS

- A. Exposed Boards: Where boards will be exposed in the finished work, provide the following:
 - 1. Moisture Content: 19 percent maximum.
 - 2. Species and Grade: Southern pine, C Finish per SPIB rules.
 - 3. Species and Grade: Spruce-pine-fir, C & Btr per WCLIB rules or C Select per NLGA or WWPA rules.
 - 4. Species and Grade: Any species above.
- B. Concealed Boards: Where boards will be concealed by other work, provide lumber with 19 percent maximum moisture content and of following species and grade:
 - 1. Species and Grade: Mixed southern pine, No. 2 per SPIB rules.
 - 2. Species and Grade: Spruce-pine-fir, Standard per WCLIB rules or No. 3 Common per WWPA rules.
 - 3. Species and Grade: Any species above.

2.6 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, nailers, blocking, furring, grounds, stripping, and similar members.
- B. Fabricate miscellaneous lumber from dimension lumber of sizes indicated and into shapes shown.
- C. Moisture Content: 19 percent maximum for lumber items are not specified to receive wood preservative treatment.
- D. Grade: For dimension lumber sizes, provide No. 3 or Standard grade lumber per ALSC's NGRs of any species. For board-size lumber, provide No. 3 Common grade per NELMA, NLGA, or WWPA; No. 2 grade per SPIB; or Standard grade per NLGA, WCLIB or WWPA of any species.

2.7 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
- B. Nails, Wire, Brads, and Staples: FS FF-N-105.
- C. Power-Driven Fasteners: CABO NER-272.
- D. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
- E. Provide fasteners treated or of material to be used in contact with fire-retardant-treated wood.

2.8 METAL FRAMING ANCHORS

- A. General: Provide galvanized steel framing anchors of structural capacity, type, and size indicated and acceptable to authorities having jurisdiction.
- B. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653, G60 coating designation; structural, commercial, or lock-forming quality, as standard with manufacturer for type of anchor indicated.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Discard units of material with defects that impair quality of carpentry and that are too small to use with minimum number of joints or optimum joint arrangement.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted.
- C. Fit carpentry to other construction; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds, and similar supports to allow attachment of other construction.
- D. Apply field treatment complying with AWWPA M4 to cut surfaces of preservative-treated lumber and plywood.
- E. Securely attach carpentry work as indicated and according to applicable codes and recognized standards.
- F. Countersink nail heads on exposed carpentry work and fill holes with wood filler.
- G. Use fasteners of appropriate type and length. Pre-drill members when necessary to avoid splitting wood.

3.2 WOOD GROUNDS, NAILERS, BLOCKING, AND SLEEPERS

- A. Install where shown and where required for screeding or attaching other work. Cut and shape to required size. Coordinate locations with other work involved.
- B. Attach to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

3.3 WOOD FURRING

- A. Install plumb and level with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.

END OF SECTION 06 10 00

SECTION 06 20 23 - INTERIOR FINISH CARPENTRY

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. This Section includes the following:
 - 1. Interior standing and running trim.
 - 2. Board paneling.
- B. Related Sections include the following:
 - 1. Division 06 Section "Rough Carpentry" for furring, blocking, and other carpentry work not exposed to view.
 - 2. Division 06 Section "Interior Architectural Woodwork" for shop-fabricated interior woodwork & interior woodwork not specified in this Section.

1.3 DEFINITIONS

- A. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
 - 2. NHLA: National Hardwood Lumber Association.
 - 3. NLGA: National Lumber Grades Authority.
 - 4. SPIB: The Southern Pine Inspection Bureau.
 - 5. WCLIB: West Coast Lumber Inspection Bureau.
 - 6. WWPA: Western Wood Products Association.
- B. MDF: Medium-density fiberboard.
- C. MDO Plywood: Plywood with a medium-density overlay on the face.

1.4 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials, dimensions, profiles, textures, and colors and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained. Include chemical treatment manufacturer's written instructions for finishing treated material.
 - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.
 - 3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
 - 4. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
- B. Samples for Initial Selection: For each type of paneling indicated.
- C. Samples for Verification:

1. For each species and cut of lumber and panel products with non-factory-applied finish, with 1/2 of exposed surface finished, 50 sq. in. for lumber and 8 by 10 inches for panels.
 2. For each finish system and color of lumber and panel products with factory-applied finish, 50 sq. in. for lumber and 8 by 10 inches for panels.
- D. Shop drawings: Interior elevations, section details showing panel seams, reveals, trim, and fastening details.
- E. Research/Evaluation Reports: Showing that fire-retardant-treated wood complies with building code in effect for Project.
- F. Warranty: Special warranty specified in this Section.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect materials against weather and contact with damp or wet surfaces. Stack lumber, plywood, and other panels flat with spacers between each bundle to provide air circulation. Provide for air circulation within and around stacks and under temporary coverings.
- B. Deliver interior finish carpentry materials only when environmental conditions meet requirements specified for installation areas. If interior finish carpentry materials must be stored in other than installation areas, store only where environmental conditions meet requirements specified for installation areas.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install interior finish carpentry materials until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.
1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Lumber: DOC PS 20 and applicable grading rules of inspection agencies certified by ALSC's Board of Review.
1. Factory mark each piece of lumber with grade stamp of inspection agency indicating grade, species, moisture content at time of surfacing, and mill.
 2. For exposed lumber, mark grade stamp on end or back of each piece
- B. Hardboard: AHA A135.4.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Lumber: AWPAC2. Kiln dry after treatment to a maximum moisture content of 19 percent.
- B. Plywood: AWPAC9. Kiln dry after treatment to a maximum moisture content of 18 percent.
- C. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

- D. For exposed items indicated to receive transparent finish, do not use chemical formulations that contain colorants or that bleed through or otherwise adversely affect finishes.
- E. Do not use material that is warped or does not comply with requirements for untreated material.
- F. Mark lumber with treatment quality mark of an inspection agency approved by ALSC's Board of Review.
 - 1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by inspection agency.
- G. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
 - 1. For exposed plywood indicated to receive a stained or natural finish, mark back of each piece.
- H. Application: Where indicated.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. Lumber: Comply with performance requirements in AWWA C20, Interior Type A. Kiln dry after treatment to a maximum moisture content of 19 percent.
- B. Plywood: Comply with performance requirements in AWWA C27, Interior Type A. Kiln dry after treatment to a maximum moisture content of 15 percent.
- C. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not contain colorants and provide materials that do not have marks from spacer sticks on the exposed face.
- D. Do not use material that does not comply with requirements for untreated material or is warped or discolored.
- E. Identify fire-retardant-treated wood with appropriate classification marking of testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by inspection agency.
 - 2. For exposed plywood indicated to receive a stained or natural finish, mark back of each piece.
- F. Application: Where indicated.

2.4 STANDING AND RUNNING TRIM

- A. Hardwood Lumber Trim for Transparent Finish (Stain or Clear Finish):
 - 1. Species and Grade: Red oak; Clear A finish; NHLA.
 - 2. Maximum Moisture Content: 9 percent.
 - 3. Finger Jointing: Not allowed.
 - 4. Gluing for Width: Not allowed
 - 5. Veneered Material: Not allowed.
 - 6. Face Surface: Surfaced (smooth
 - 7. Matching: Selected for compatible grain and color.
- B. Hardwood Moldings for Transparent Finish (Stain or Clear Finish): WMMPA HWM 2, N-grade wood moldings:
 - 1. Species: Red oak
 - 2. Maximum Moisture Content: 9 percent.
 - 3. Finger Jointing: Not allowed.
 - 4. Matching: Selected for compatible grain and color.
 - 5. Base Pattern: rectangular base as indicated on drawings.
 - 6. Shoe-Mold Pattern: No shoe mold.
 - 7. Casing Pattern: rectangular casing as indicated on drawings.
 - 8. Mull-Casing Pattern: rectangular casing as indicated on drawings.
 - 9. Stop Pattern: no stop.
 - 10. Chair-Rail Pattern: rectangular chair rail as indicated on drawings.

2.5 PANELING

- A. Hardwood Veneer Plywood Paneling: Manufacturer's stock hardwood plywood panels complying with HPVA HP-1, made without urea-formaldehyde adhesive.
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Stephenson Millwork Company Inc
 - b. Herzog Veneers, Inc.
 - c. Wood Products, Inc.
 - d. Bespoke Wood Works
 3. Face Veneer Species and Cut: Rift sawn red oak.
 4. Veneer Matching: Book match, Selected for similar color and grain and as indicated on drawings.
 5. Backing Veneer Species: Any hardwood compatible with face species.
 6. Construction: Veneer core.
 7. Thickness: 7/16 inch.
 8. Panel Size: as indicated on drawings.
 9. Glue Bond: Type II (interior).
 10. Finish: Transparent, UV-resistant, protective stain finish as selected by Architect from manufacturer's full range. Finished carpentry shall match approved wood door finish sample "Masonite Architectural, Aspiro Series, Nutmeg (medium brown stain color)."

2.6 MISCELLANEOUS MATERIALS

- A. Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.
1. Where galvanized finish is indicated, provide fasteners and anchorages with hot-dip galvanized coating complying with ASTM A 153/A 153M.
- B. Glue: Aliphatic-resin, polyurethane, or resorcinol wood glue recommended by manufacturer for general carpentry use.
1. Use wood glue that has a VOC content of 30 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- C. Paneling Adhesive: Comply with paneling manufacturer's written recommendations for adhesives.
1. Use adhesive that has a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- D. Multipurpose Construction Adhesive: Formulation complying with ASTM D 3498 that is recommended for indicated use by adhesive manufacturer.
1. Use adhesive that has a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2.7 FABRICATION

- A. Back out or kerf backs of the following members except those with ends exposed in finished work:
1. Interior standing and running trim except shoe and crown molds.
 2. Wood board paneling.
- B. Ease edges of lumber less than 1 inch in nominal thickness to 1/16-inch radius and edges of lumber 1 inch or more in nominal thickness to 1/8-inch radius.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.
- B. Before installing interior finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours unless longer conditioning is recommended by manufacturer.

3.3 INSTALLATION, GENERAL

- A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.
 - 1. Do not use manufactured units with defective surfaces, sizes, or patterns.
- B. Install interior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
 - 1. Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
 - 2. Countersink fasteners, fill surface flush, and sand where face fastening is unavoidable.
 - 3. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining interior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
 - 4. Install stairs with no more than 3/16-inch variation between adjacent treads and risers and with no more than 3/8-inch variation between largest and smallest treads and risers within each flight.
 - 5. Coordinate interior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate interior finish carpentry.

3.4 STANDING AND RUNNING TRIM INSTALLATION

- A. Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches long, except where necessary. Stagger joints in adjacent and related standing and running trim. Cope at returns and miter at corners to produce tight-fitting joints with full-surface contact throughout length of joint. Use scarf joints for end-to-end joints. Plane backs of casings to provide uniform thickness across joints where necessary for alignment.
 - 1. Match color and grain pattern of trim for transparent finish (stain or clear finish) across joints.
 - 2. Install trim after gypsum board joint finishing operations are completed.
 - 3. Drill pilot holes in hardwood before fastening to prevent splitting. Fasten to prevent movement or warping. Countersink fastener heads on exposed carpentry work and fill holes.

3.5 PANELING INSTALLATION

- A. Plywood Paneling: Select and arrange panels on each wall to minimize noticeable variations in grain character and color between adjacent panels. Leave 1/4-inch gap to be covered with trim at top, bottom, and openings or provide reveal with finished edge as indicated by drawing. Install with uniform tight joints between panels.
 - 1. Attach panels to supports with manufacturer's recommended panel adhesive and fasteners. Space fasteners as recommended by panel manufacturer.
 - 2. Conceal fasteners to greatest practical extent.
 - 3. Arrange panels with grooves and joints over supports. Fasten to supports with nails of type and at spacing recommended by panel manufacturer. Use fasteners with prefinished heads matching groove color.
- B. Hardboard Paneling: Install according to manufacturer's written recommendations. Leave 1/4-inch gap to be covered with trim at top, bottom, and openings. Butt adjacent panels with moderate contact. Use fasteners with prefinished heads matching paneling color.
 - 1. Wood Stud or Furring Substrate: Install with 1-inch annular-ring shank hardboard nails.
 - 2. Plaster or Gypsum Board Substrate: Install with 1-5/8-inch annular-ring shank hardboard nails.
 - 3. Nailing: Space nails 4 inches o.c. at panel perimeter and 8 inches o.c. at intermediate supports unless otherwise required by manufacturer.
- C. Board Paneling: Install according to manufacturer's written instructions. Arrange in random-width pattern suggested by manufacturer unless boards or planks are of uniform width.
 - 1. Install in full lengths without end joints.
 - 2. Stagger end joints in random pattern to uniformly distribute joints on each wall.
 - 3. Install with uniform end joints with only end-matched (tongue-and-groove) joints within each field of paneling.
 - 4. Install with uniform end joints. Locate end joints only over furring or blocking.
 - 5. Select and arrange boards on each wall to minimize noticeable variations in grain character and color between adjacent boards. Install with uniform tight joints between boards.
 - 6. Fasten paneling by face nailing, setting nails, and filling over nail heads.
 - 7. Fasten paneling with trim screws, set below face and filled.
 - 8. Fasten paneling by blind nailing through tongues.
 - 9. Fasten paneling with paneling system manufacturer's concealed clips.
 - 10. Fasten paneling to gypsum wallboard with panel adhesive.

3.6 ADJUSTING

- A. Replace interior finish carpentry that is damaged or does not comply with requirements. Interior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

3.7 CLEANING

- A. Clean interior finish carpentry on exposed and semi-exposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

3.8 PROTECTION

- A. Protect installed products from damage from weather and other causes during remainder of the construction period.
- B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
 - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.

2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 06 20 23

SECTION 06 40 23 - INTERIOR ARCHITECTURAL WOODWORK

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. This Section includes the following:
 - 1. Wood veneer casework.
 - 2. Courtroom furnishings.
- B. Related Sections include the following:
 - 1. Division 06 Section "Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.
 - 2. Division 06 Section "Interior Architectural Woodwork" for wood paneling and trim.

1.3 DEFINITIONS

- A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated, including cabinet hardware and accessories handrail brackets and finishing materials and processes.
- B. Product Data: For panel products, high-pressure decorative laminate, adhesive for bonding plastic laminate solid-surfacing material, cabinet hardware and finishing materials and processes.
- C. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 - 1. Show details full size.
 - 2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
 - 3. Show locations and sizes of cutouts and holes for **electrical devices and other items** installed in architectural woodwork.
 - 4. Show veneer leaves with dimensions, grain direction, exposed face, and identification numbers indicating the flitch and sequence within the flitch for each leaf.
- D. Samples for Initial Selection:
 - 1. Shop-applied transparent finishes.
 - 2. Shop-applied opaque finishes.
 - 3. Solid-surfacing materials.
- E. Samples for Verification:

1. Lumber with or for transparent finish, not less than 50 sq. in., for each species and cut, finished on 1 side and 1 edge.
 2. Veneer leaves representative of and selected from flitches to be used for transparent-finished woodwork.
 3. Veneer-faced panel products with or for transparent finish, 8 by 10 inches, for each species and cut. Include at least one face-veneer seam and finish as specified.
 4. Lumber and panel products with shop-applied opaque finish, 50 sq. in. for lumber and 8 by 10 inches for panels, for each finish system and color, with 1/2 of exposed surface finished.
 5. Plastic laminates, 8 by 10 inches, for each type, color, pattern, and surface finish, with 1 sample applied to core material and specified edge material applied to 1 edge.
 6. Solid-surfacing materials, 6 inches square.
 7. Exposed cabinet hardware and accessories, one unit for each type and finish.
- F. Qualification Data: For Installer and fabricator.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- B. Source Limitations: Engage a qualified woodworking firm to assume undivided responsibility for production of interior architectural woodwork with sequence-matched wood veneers and wood doors with face veneers that are sequence matched with woodwork.
- C. Quality Standard: Unless otherwise indicated, comply with WI's "Manual of Millwork" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.
- D. Fire-Test-Response Characteristics: Where fire-retardant materials or products are indicated, provide materials and products with specified fire-test-response characteristics as determined by testing identical products per test method indicated by UL, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify with appropriate markings of applicable testing and inspecting agency in the form of separable paper label or, where required by authorities having jurisdiction, imprint on surfaces of materials that will be concealed from view after installation.
 1. Surface-Burning Characteristics: Not exceeding values indicated below, tested per ASTM E 84 for standard time period (10 minutes).
 - a. Flame Spread: 75.
 - b. Smoke Developed: 450.
- E. Preinstallation Conference: Conduct conference at Project site.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

- B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.
 - 2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.8 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide materials that comply with requirements of AWS's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.
- B. Wood Products: Comply with the following:
 - 1. Hardboard: AHA A135.4.
 - 2. Medium-Density Fiberboard: ANSI A208.2, Grade MD, made with binder containing no urea formaldehyde.
 - 3. Particleboard: ANSI A208.1, Grade M-2.
 - 4. Softwood Plywood: DOC PS 1, Medium Density Overlay.
 - 5. Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1.
- C. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or, if not indicated, as required by woodwork quality standard with Enhanced Scratch & Scuff-Resistant Performance Technology.
 - 1. Manufacturer: Basis of Design: Wilsonart International; Premium Aeon
 - 2. Subject to compliance with requirements, provide high-pressure decorative laminates basis of design or approved equal by one of the following:
 - a. Abet Laminati, Inc.
 - b. Arborite; Division of ITW Canada, Inc.
 - c. Formica Corporation.
 - d. Lamin-Art, Inc.
 - e. Nevamar Company, LLC; Decorative Products Div.
 - f. Panolam Industries International Incorporated.
 - g. Westinghouse Electric Corp.; Specialty Products Div.
 - h. Wilsonart International; Div. of Premark International, Inc.
 - 3. Colors and Patterns: Basis of Design
 - a. PL1: Premium Aeon 7949K-18 Asian Night
 - b. PL2: Premium Aeon 4926K-07 Black Alicante
 - c. PL3: Premium Aeon 4939K-18 Vapor Strandz
 - d. PL4: Premium Aeon 7960K-18 Studio Teak
 - e. PL5: HD / Aeon 1869K-55 Alentina Argento

- D. Solid-Surfacing Material: Homogeneous solid sheets of filled plastic resin complying with ISSFA-2.
1. Manufacturer: Basis of Design: Daltile; One Quartz Surfaces : Calacatta NQ06 Polished
 2. Subject to compliance with requirements, provide Solid Surface material basis of design or approved equal by one of the following:
 - a. ABA Industries.
 - b. Avonite, Inc.
 - c. Corian
 - d. E. I. du Pont de Nemours and Company.
 - e. Formica Corporation.
 - f. LG Chemical, Ltd.
 - g. Meganite Inc.; a division of the Pyrochem Group.
 - h. Nevamar Company, LLC; Decorative Products Div.
 - i. Samsung; Cheil Industries Inc.
 - j. Swan Corporation (The).
 - k. Transolid, Inc.
 - l. Wilsonart International; Div. of Premark International, Inc.
 3. Type: Standard type, unless Special Purpose type is indicated.
 4. Colors and Patterns: As selected by Architect from manufacturer's full range.

2.2 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets.
- B. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 135 degrees of opening, **self-closing**.
- C. Wire Pulls: Back mounted, solid metal, 5 inches long, 2-1/2 inches deep, and 5/16 inch in diameter.
- D. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081.
- E. Drawer Slides: BHMA A156.9, B05091.
1. Heavy Duty (Grade 1HD-100 and Grade 1HD-200): Side mounted; **full-extension** type; zinc-plated steel ball-bearing slides.
 2. File Drawer Slides: **Grade 1HD-100**; for drawers more than 6 inches high or 24 inches wide.
 3. Pencil Drawer Slides: **Grade 2**; for drawers not more than 3 inches high and 24 inches wide.
- F. **Aluminum** Slides for Sliding Glass Doors: BHMA A156.9, B07063.
- G. Door Locks: BHMA A156.11, E07121. (all doors)
- H. Drawer Locks: BHMA A156.11, E07041. (all drawers)
- I. Grommets for Cable Passage through Countertops: 2-inch OD, black, molded-plastic grommets and matching plastic caps with slot for wire passage. (provide 1 per everything 3'-0" of countertop or as indicated on the drawings)
1. Product: Subject to compliance with requirements.
- J. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
1. Satin Stainless Steel: BHMA 630.
- K. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.
- L. Specialty Items:
1. Metal Parts: Countertop support brackets, undercounter support frames, legs and miscellaneous metal parts shall be furniture steel, welded, degreased, cleaned, treated and epoxy powder painted in dove grey, frosty white or light beige to match basic cabinet body color, or in a contrasting slate grey or black color.

2.3 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- B. Furring, Blocking, Shims, and Hanging Strips: Fire-retardant-treated softwood lumber, kiln dried to less than 15 percent moisture content.
- C. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.
- D. Adhesives, General: Do not use adhesives that contain urea formaldehyde.
- E. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - 1. Wood Glues: 30 g/L.
 - 2. Contact Adhesive: 80 g/L.
- F. Adhesive for Bonding Plastic Laminate: Contact cement.
 - 1. Adhesive for Bonding Edges: Hot-melt adhesive **or adhesive specified above for faces.**

2.4 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Unless otherwise indicated, provide Premium-grade interior woodwork complying with referenced quality standard.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- C. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
 - 1. Notify Architect seven days in advance of the dates and times woodwork fabrication will be complete.
 - 2. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.
- D. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
- E. Install glass to comply with applicable requirements in Division 08 Section "Glazing" and in GANA's "Glazing Manual." For glass in wood frames, secure glass with removable stops.

2.5 WOOD CABINETS FOR TRANSPARENT FINISH

- A. Grade: Premium.
- B. AWS Type of Cabinet Construction: Flush overlay.
- C. WI Construction Style: Style A **Frameless.**
- D. WI Construction Type: Type I, multiple self-supporting units rigidly joined together.
- E. WI Door and Drawer Front Style: Full **Flush overlay.**
- F. Reveal Dimension: **1/4 inch max**
- G. Wood Species and Cut for Exposed Surfaces: Premium Select Red Oak, rift sawn.
 - 1. Grain Direction: Horizontally for drawer fronts and Vertically for doors, and fixed panels.

2. Matching of Veneer Leaves: **Book** match.
 3. Vertical Matching of Veneer Leaves: End match.
 4. Veneer Matching within Panel Face: **Balance** match.
 5. Veneer Matching within Room: Provide cabinet veneers in each room or other space from a single flitch with doors, drawer fronts, and other surfaces matched in a sequenced set with continuous match where veneers are interrupted perpendicular to the grain.
 6. Comply with veneer and other matching requirements indicated for blueprint-matched paneling.
- H. Semiexposed Surfaces: Provide surface materials indicated below:
1. Surfaces Other Than Drawer Bodies: Same species and cut indicated for exposed surfaces.
 2. Drawer Sides and Backs: **Plywood**.
 3. Drawer Bottoms: **Plywood**.
- I. Provide dust panels of 1/4-inch plywood or tempered hardboard above compartments and drawers, unless located directly under tops.

2.6 WOOD CABINETS FOR TRANSPARENT FINISH

- A. Grade: Premium.
- B. AWS Type of Cabinet Construction: Flush overlay.
- C. WI Construction Style: Style A **Frameless**.
- D. WI Construction Type: Type I, multiple self-supporting units rigidly joined together.
- E. WI Door and Drawer Front Style: Full **Flush overlay**.
- F. Reveal Dimension: **1/4 inch max**.
- G. Wood Species and Cut for Exposed Surfaces: Premium Select Red Oak, rift sawn.
 1. Grain Direction: Horizontally for drawer fronts and Vertically for doors, and fixed panels.
 2. Matching of Veneer Leaves: **Book** match.
 3. Vertical Matching of Veneer Leaves: End match.
 4. Veneer Matching within Panel Face: **Balance** match.
 5. Veneer Matching within Room: Provide cabinet veneers in each room or other space from a single flitch with doors, drawer fronts, and other surfaces matched in a sequenced set with continuous match where veneers are interrupted perpendicular to the grain.
 6. Comply with veneer and other matching requirements indicated for blueprint-matched paneling.
- H. Semiexposed Surfaces: Provide surface materials indicated below:
 1. Surfaces Other Than Drawer Bodies: Same species and cut indicated for exposed surfaces.
 2. Drawer Sides and Backs: **Plywood**.
 3. Drawer Bottoms: **Plywood**.

2.7 PLASTIC-LAMINATE COUNTERTOPS

- A. Grade: **Premium**.
- B. High-Pressure Decorative Laminate Grade: **HGS**.
- C. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
 1. Colors for countertop grades, GP50 and PF42, shall be selected from the current year of approved manufacturer's full range (Minimum of 120 color selections) available. Selections can be made from any of the listed companies in any combination.
 2. See Section 2.1D of this specification for basis of design.
- D. Grain Direction: Parallel to cabinet fronts.
- E. Edge Treatment: Same as laminate cladding on horizontal surfaces.

1. All edges shall be finished with 3mm PVC to match exterior face laminate in all locations.
- F. Core Material: Medium-density fiberboard made with exterior glue.
- G. Core Material at Sinks: exterior-grade plywood.

2.8 SOLID-SURFACING-MATERIAL COUNTERTOPS

- A. Grade: Premium.
- B. Solid-Surfacing-Material Thickness: **1/2 inch**.
- C. Colors, Patterns, and Finishes: Provide materials and products that result in colors of solid-surfacing material complying with the following requirements:
 1. As selected by Architect from manufacturer's full range.
 2. See Section 2.1 E of this specification.
- D. Fabricate tops in one piece, unless otherwise indicated. Comply with solid-surfacing-material manufacturer's written recommendations for adhesives, sealers, fabrication, and finishing.
 1. Fabricate tops with shop-applied edges of materials and configuration indicated.
 2. Fabricate tops with **shop-applied backsplashes**
- E. Install integral sink bowls in countertops in shop.
- F. Drill holes in countertops for plumbing fittings.

2.9 SHOP FINISHING

- A. Grade: Provide finishes of same grades as items to be finished.
- B. General: Finish architectural woodwork at fabrication shop as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation.
- C. General: Shop finish transparent-finished interior architectural woodwork at fabrication shop as specified in this Section.
- D. General: Shop finish all wood work unless otherwise noted. Finish such items at fabrication shop as specified in this Section.
- E. Shop Priming: Shop apply the prime coat including backpriming, if any, for items specified to be field finished.
- F. Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.
- G. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork. Apply two coats to back of paneling and to end-grain surfaces. Concealed surfaces of plastic-laminate-clad woodwork do not require backpriming when surfaced with plastic laminate.
- H. Transparent Finish:
 1. Grade: **Premium** – Wood work shall match approved wood door finish sample “Masonite Architectural, Aspiro Series, Nutmeg (medium brown stain color).”
- I. Opaque Finish:
 1. Grade: **Premium**.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.

- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

- A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.
- B. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.
- C. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.
- D. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- E. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
- F. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.
 - 1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 - 2. Maintain veneer sequence matching of cabinets with transparent finish.
 - 3. Fasten wall cabinets through back, near top and bottom, at ends and not more than 16 inches o.c.
- G. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.
 - 1. Align adjacent solid-surfacing-material countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
 - 2. Install countertops with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 - 3. Secure backsplashes to walls with adhesive.
 - 4. Caulk space between backsplash and wall with sealant specified in Division 07 Section "Joint Sealants."
- H. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 06 40 23



LIFT-U[®]



Accessor I & II Courtroom Wheelchair Lifts

- ▶ Lift function is virtually invisible
- ▶ Requires minimal site preparation
- ▶ Efficient use of courtroom space
- ▶ All electric, no hydraulic bleed down
- ▶ New Applications or Remodels
- ▶ Used extensively in GSA projects

Accessor I Model VMW

Four screw jack design sets on the floor and requires “no pit”.

Screw jacks are encased in the millwork walls.



Accessor II Model VMX

Lever-screw design utilizes a recess (pit) in the floor for installation. Minimizes impact on millwork walls.

Universal Access For Courtrooms



“The Accessor courtroom lift is an excellent addition and example of what we are attempting to achieve with the Courtroom 21 Project – that is demonstrating how technology can best be used to improve all components of the legal system.”



*Fredric Lederer
Chancellor Professor of Law
William & Mary Law School and Director of
The Center For Legal and Court Technology and The Courtroom 21 Project*



Website: www.lift-u.com



Accessor I and II Courtroom Wheelchair Lifts

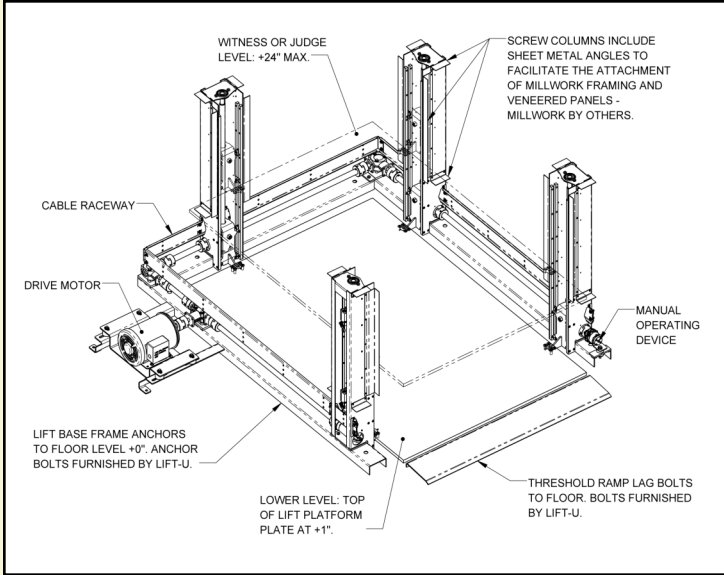


PATENT INFORMATION REFER TO:
www.lift-u.com/patents.pdf

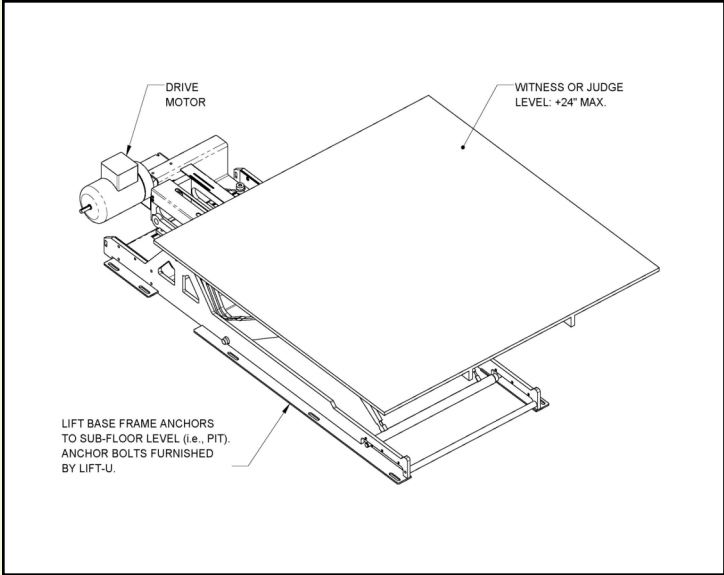
“The solution to complying with ADA/ABA Accessibility Guidelines 2010 courtroom accessibility requirements”

All Electric Drive - Quiet Operation

Accessor I (VMW)



Accessor II (VMX)



Overall Dimensions

Platform parks at the intermediate level until needed.
Platform size is determined by the application.

Lift

Vertical travel is up to 24 inches.
Rated capacity is 750 lbs or 1050 lbs - depending on platform size.
All-electric motor drive - no hydraulic bleed down.
No pit required for Accessor I.
Pit required for Accessor II (6 Inches).

Construction

Steel components are used for reliable operation.
Corrosion resistant finish on all surfaces.

Optional Accessories Available

Retractable Roll-up Barrier provides roll off protection.
Retractable Step provides dual access to upper landing.
Operable Step that eliminates use of a removable step at the lower landing.
Automatic Door Operator.
UPS Battery Back-Up.

Safety

Redundant safeties assure reliable operation.
Microprocessor monitors all safety points and stops if an unsafe condition is detected.

Power and Controls

Independent operation
Main power 115 VAC, 15A, 3-wire, single-phase.
24 VDC controls used.
Control panels at each landing and carriage. Electric strike latches at each door.

Warranty

All parts are covered for one year from the date of completion.
Extended warranty is available.

Code Compliance

Lift complies with ASME A18.1-2008 and later editions; However, due to various State and Local codes, a variance may be required from the authority having jurisdiction (AHJ).



Free Product Design Application Guidelines Available at www.lift-u.com
Call: (209) 838-2400 or Email: liftusales@lift-u.com





LIFT APPLICATION GUIDELINES

**COURTROOM WHEELCHAIR LIFTS
ACCESSOR I – MODEL VMW-09
ACCESSOR II – MODEL VMX-07**



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GENERAL INFORMATION

PURPOSE

LIFT-U® has prepared this document for the purpose of providing building owners and owner representatives such as architects, contractors, and installers with information specific to design planning, special provisions, installation considerations, and regulatory compliance responsibility relevant to the LIFT-U® Accessor I Model VMW and Accessor II Model VMX Courtroom Wheelchair Lifts, hereinafter referred to as VMW and VMX respectively.

The information presented in this document is fairly generic for VMW and VMX lift applications and not intended to address every detail or special conditions that may be encountered on a project.

PRODUCT OVERVIEW

By way of introduction, the VMW and VMX lift models are not conventional Vertical Platform Lifts comprised of a car with platform mounted sidewalls, but rather the VMW and VMX are comprised of a platform that raises and lowers within the confines of stationary millwork walls and the closed entrance/exit doors hingedly attached thereto. Subsequently, the lift layout is customized for each application.

SUITABLE LIFT APPLICATIONS

The VMW and VMX Courtroom Wheelchair Lifts are specifically designed for use in courtrooms to facilitate mobility-impaired judges, witnesses, clerks, and jurors.



APPLICATION GUIDELINES

LIFT MODEL SELECTION

Accessor I Model VMW

1. The four (4) screw jack column design permits the lift to be installed directly on the lower landing floor without the need for a pit.
2. The lift screw columns, base frame, and drive train are encased in millwork walls surrounding the lift platform, thus requiring the coordination of other trades.
3. The drive motor and electronics are located under the upper landing.
4. Refer to exemplar Lift Configuration drawing 910-0091 which is included in this document.

Accessor II Model VMX

1. The lever-screw design requires the lift to be installed in a pit or sub-floor at least 6 inches below the lower landing floor; LIFT-U recommends 7 inches.
2. The lift drive mechanism, motor, and electronics are oriented under the upper landing, thus minimizing the influence on millwork walls surrounding the lift platform.
3. Refer to exemplar Lift Configuration drawing 910-0092 which is included in this document.

For graphic illustration of these design differences and the variables to consider when planning for a particular lift application, as well as LIFT-U's recommended interface design principles for the lift and optional equipment, refer to exemplar Lift Configuration drawings 910-0091 and 910-0092 along with the following drawings included near the back portion of this document:

1. 910-0026, VMW Lift / Millwork Interface
2. 910-0042, Roll-up Barrier / Millwork Interface
3. 910-0054, Step Module / Millwork Interface
4. 910-0055, Door Set-up Alternatives
5. 910-0056, Strike Latch / Millwork Interface
6. 910-0085, Operable Step / Millwork Interface
7. 910-0088, Roll-Up Barrier Overview
8. 910-0089, Retractable Step Overview
9. 910-0090, Operable Step Overview
10. 910-0093, Electromagnetic Door Holder / Millwork Interface
11. 910-0101, Door Operator Overview
12. 910-0102, Door Operator / Millwork Interface
13. 910-0103, Over 24" to 42" Upper Landing Roll-Up Barrier / Millwork Interface
14. 910-0104, Door Operator / Millwork Interface
15. 910-0105, Door Operator / Millwork Interface
16. 910-0106, Door Operator / Millwork Interface

To further facilitate the architectural design process, design files such as 2D CAD drawings and 3D images, contact LIFT-U® at 209-838-2400 or e-mail at markramos@hoganmfg.com or donbirdsall@hoganmfg.com.



PLATFORM SIZE AND DOOR OPENING LIMITATIONS

The advantage of using the VMW or VMX is that the platform size and layout can be customized for each application, as well as orientation and placement of the entrance/exit doors.

Be advised, there are certain limitations to be aware of with respect to minimum and maximum dimensions. The minimum platform size and minimum door opening are contingent upon door orientation, i.e., whether the lift provides straight through access or involves a 90 degree turn for the wheelchair-bound passenger. For illustration of available orientations and preferred minimum dimensions refer to template layout drawings 910-0064 thru 910-0071 for the VMW and 910-0072 thru 910-0078 for the VMX near the back portion of this document.

Further, the maximum platform size per code is no greater than 25 sq. ft. However, certain applications may be cause for exception and must be evaluated on a case-by case basis. Exceeding 25 sq. ft. may require a variance from the authority having jurisdiction.

The best method to prevent exceeding the 25 sq. ft. maximum platform size, particularly for courtroom lift applications where the witness stand or clerk bench footprint may be larger than 25 sq. ft., is to include the LIFT-U® Roll-up Barrier in the witness/clerk landing. Since space in the interior of the witness stand or clerk bench is typically too restrictive for a hinged self-closing door, the LIFT-U® Roll-up Barrier is a practical alternative. The Roll-up Barrier is also practical for non-courtroom lift applications when door swing is an issue. The Roll-up Barrier is illustrated in context on drawing 910-0088, Roll-up Barrier Overview. Additional details are shown on drawing 910-0042, titled Roll-up Barrier/Millwork Interface. Both drawings are included near the back portion of this document.

ACCESSOR SPECIFICATIONS

1. Platform dimensions vary for each application.
2. Lift capacity (maximum operating load):
 - 750 lbs for platforms less than or equal to 18 ft².
 - 1050 lbs for platforms greater than 18 ft².
3. Speed is 10 ft./min. maximum.
4. Maximum vertical travel is limited to 24 inches.
5. Manual lowering device is included.
6. Factory finish for all steel framework is black powder-coat.
7. Power source requirements are 115 VAC, 15 amp, 3 wire, single-phase service.

COMPONENTS SUPPLIED BY LIFT-U®

The lift package as delivered includes the following:

1. Lift Assembly.
2. Threshold Ramp (if applicable).
3. Electrical Control Panel with Lockable Disconnect.
4. Operator Control Stations (call buttons).
5. Electric Strike Latches.
6. Spring-loaded Latch Bolts.
7. Anchor Bolts.
8. Roll-up Barrier Module (if applicable).
9. Retractable Step Module (if applicable).



10. Hinged Riser – VMW (if applicable).
11. Fixed Riser – VMX (if applicable).
12. Battery Back-up / UPS (if applicable).
13. Operable Step (if applicable).
14. Electromagnetic Door Holder (if applicable)
15. Door Operator (if applicable)



REGULATORY REQUIREMENTS

Vertical Platform Lift design, construction, installation, operation, inspection, testing, maintenance, and repair is specified in Standards developed and published by The American Society of Mechanical Engineers (ASME), entitled ASME A18.1 Safety Standard For Platform Lifts And Stairway Chairlifts. The ASME Standard is intended to serve as the basis for state, municipal, and other jurisdictional authorities in drafting regulations governing Vertical Platform Lifts. With respect to A18.1 effectivity in each jurisdiction, the edition date in effect established by the local jurisdiction may vary; therefore, the local regulations from the authority having jurisdiction (AHJ) must be reviewed prior to each lift installation.

For ASME A18.1 references cited in this document, the latest 2014 edition is used.

Regarding ASME A18.1, Section 2 categories, refer to Section 2.1.4 for courtroom lift applications. Due to architecturally desired features, certain VMW and VMX applications may not comply “to the letter” with all the requirements specified in the A18.1 Standard. In those cases, a variance must be requested for certain specification deviations from the authority having jurisdiction. Typically a variance application for the VMW and VMX will address items such as platform size, stationary millwork walls, millwork wall height and door height, and intermediate landing guard (if applicable). If a variance is necessary LIFT-U® will, on behalf of the building owner, facilitate expediting the variance application.

The basis for a variance request is expressly permitted by A18.1 para. 1.2, which states:

“The purpose of this Standard is to provide for the safety of life and limb, and to promote the public welfare.

The provisions of this Standard are not intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety to those prescribed by this Standard provided that there is technical documentation to demonstrate the equivalency of the system, method, or device.

The specific requirements of this Standard shall be permitted to be modified by the authority having jurisdiction based upon technical documentation or physical performance verification to allow alternative arrangements that will assure safety equivalent to that which would be provided by conformance to the corresponding requirements of this Standard.”

For A18.1 regulations applicable to the other trades involved with either the VMW or VMX lift installation, refer to the section entitled, Regulatory Compliance by Others, on page 9 of this document.



RESPONSIBILITY OF OTHERS

SCOPE OF WORK BY OTHERS

The design, materials, construction, and installation of the following items are the responsibility of others.

1. Lift support structure/foundation.
2. Site preparations, including main electrical power connection to lift power input.
3. Prior to installation, placement of lift must be defined. Chalk lines may be used to outline exact lift location.
4. Building elements and millwork that encase the lift mechanism adjacent to and surrounding the lift platform, including but not limited to structural framing and veneered panel finishes.
5. Doors, including self-closing spring hinges.
6. Installation of lift control panels (supplied by LIFT-U®).
7. Installation of door strike latches (supplied by LIFT-U®).
8. Illumination of lift area.
9. Platform floor covering material.
10. Removable step (if applicable).

INTERFACE REQUIREMENTS

Space and structural provisions shall be provided in building elements and millwork to accommodate the lift assembly, motor, and electronics. As non-limiting examples, the following features shall be included:

1. Adequate clear space is required under the upper landing for the lift drive mechanism, motor, and electronics.
2. A service hatch is required in the upper landing floor approximate to the motor and electronics. The size of the service hatch shall be sufficient for access to the main power disconnect and to facilitate maintenance.
3. Cutout reliefs in the millwork are required for lift frame clearance and operational lift elements.
4. Interior millwork panels adjacent to the lift platform shall be smooth.
5. With respect to the VMW, the interior millwork panels are to be made removable to facilitate lift maintenance.
6. Running clearance between platform edges and adjacent millwork surfaces shall be no less than 0.375 inch nor more than 0.75 inch.

Refer to applicable Lift Configuration drawing for layout, orientation, and controlling dimensions for each project.



REGULATORY COMPLIANCE BY OTHERS

The ASME A18.1 specifies requirements for the design, construction, installation, operation, inspection, testing, maintenance, and repair for Vertical Platform Lifts.

With respect to the VMW and VMX installation, while LIFT-U® is required to certify that the lift complies with the A18.1 Standard and any variance decisions granted by the AHJ, there are certain requirements associated with elements necessary for the installation of a complete lift system that are not provided by LIFT-U®, and therefore require the cooperation of other trades contracted by the building owner. Subsequently, these other trades are responsible for compliance with the A18.1 requirements related to their respective work. These elements are itemized in the Scope of Work by Others noted on page 8 of this document.

LIFT-U® hereby advises the building owner, or owner's designated representative, of the owner's responsibility to communicate the applicable A18.1 requirements to the appropriate trades. To facilitate this effort, LIFT-U® has summarized below the A18.1 requirements that other trades involved with the lift installation must comply with - refer to the A18.1 Standard for complete text.

Applicable to Courtroom Lift Installations

2.1.4.1 Upper Landing Entrance

- A door measuring at least 36 inches high shall guard the entrance.
- Door shall be unperforated.
- Door shall be self-closing.
- Door shall be capable of withstanding 125 lbf applied on any 4 inch by 4 inch area without permanent deformation.
- Clearance between the door and platform edge shall not be less than 0.375 inch nor more than 0.75 inch.

2.1.4.4 Vertical Fascia

- A vertical fascia shall be provided from the upper landing sill and any intermediate landing sill to the lower landing and shall guard the full width of the platform.
- If openings are necessary in the fascia for operation, they shall reject a ball 0.5 inch in diameter.
- Fascia shall be capable of withstanding 125 lbf applied on any 4 inch by 4 inch area without permanent deformation.
- Clearance between the fascia and platform edge shall not be less than 0.375 inch nor more than 0.75 inch.

2.1.4.5 Lower Landing Entrance

- A door measuring at least 36 inches high shall guard the entrance.
- Door shall be unperforated.
- Door shall be self-closing.
- Door shall be capable of withstanding 125 lbf applied on any 4 inch by 4 inch area without permanent deformation.



- Clearance between the door and platform edge shall not be less than 0.375 inch nor more than 0.75 inch.

2.1.4.6 Stationary Runway Guards [millwork sidewalls]

- Sides of the platform not used for entrance or exit shall be guarded by stationary millwork walls that extend to a height of at least 36 inches above the lower landing.
- Millwork walls shall be unperforated.
- Openings necessary for lift operation shall reject a ball 0.5 inch in diameter.
- Clearance between stationary millwork walls and the platform edge shall not be less than 0.375 inch nor more than 0.75 inch.

2.1.4.7 Doors / Guards

- Doors shall be provided with a combination mechanical lock and electric contact. LIFT-U® furnishes the electric strike latches and associated wiring to interface with the lift control system, which are incorporated by other trades.

Applicable to Both Courtroom and Non-Courtroom Lift Installations

2.1.1.5 Protrusions

- No hardware shall project beyond the vertical line of travel of the platform. For witness stands that may include a desk or counter top positioned within the vertical line of travel of the platform, LIFT-U® recommends desk and counter tops either be mounted to the lift platform and thus move with the lift, or be hinge mounted to the millwork or removable to prevent a potential hazard to the passenger.

2.1.1.6 Platform Running Clearance

- The running clearance between the entrance and exit sides of the platform floor and the interior of the runway enclosure [millwork walls] shall not be less than 0.375 inch nor more than 0.75 inch.

2.1.5 Pipes in Runway Vicinity

- No piping is permitted in the runway [lift footprint].

2.1.8 Structural Support

- The structure on which the equipment is installed shall be capable of safely supporting the loads imposed. LIFT-U® provides the building owner, or owner's representative, with the appropriate load data.

2.1.9 Headroom Clearance

- Headroom clearance throughout the range of travel shall be not less than 79 inches as measured vertically from the platform floor. Refer to the Lift Configuration drawing for lift operational envelope dimensions.



2.2.4.2 Brackets, Fastenings, and Supports

- The guide-rail brackets, their fastenings and supports, such as building beams and walls, shall be capable of resisting the horizontal forces imposed by rated load with a total deflection to the point of support not in excess of 0.125 inch. *[Related to millwork walls that encase the VMW screw columns].*

2.2.7 Design and Strength of Brackets and Supports

- The building construction forming the supports for the guide rails, and the guide-rail brackets, shall be designed to safely withstand the application of the platform when stopping the platform and its rated load; and withstand the forces specified in para. 2.2.4.2 within the deflection limits specified.
Where necessary, the building construction shall be reinforced to provide adequate support for the guide rails. *[Related to millwork walls that encase the VMW screw columns].*

2.3.6 Guiding Member Enclosures

- The guiding members shall be guarded to prevent accidental contact. Any openings necessary in guards for operation, they shall reject a ball 0.75 inch in diameter. *[Related to millwork walls that encase the VMW screw columns].*

2.5.8 Guarding

- All suspension means shall be guarded against accidental contact. Suspension means, which operate within a guide or track and travel at the same speed and in the same direction as the platform shall be considered suitably guarded. *[Related to millwork walls that encase the VMW screw columns or VMX mechanism].*

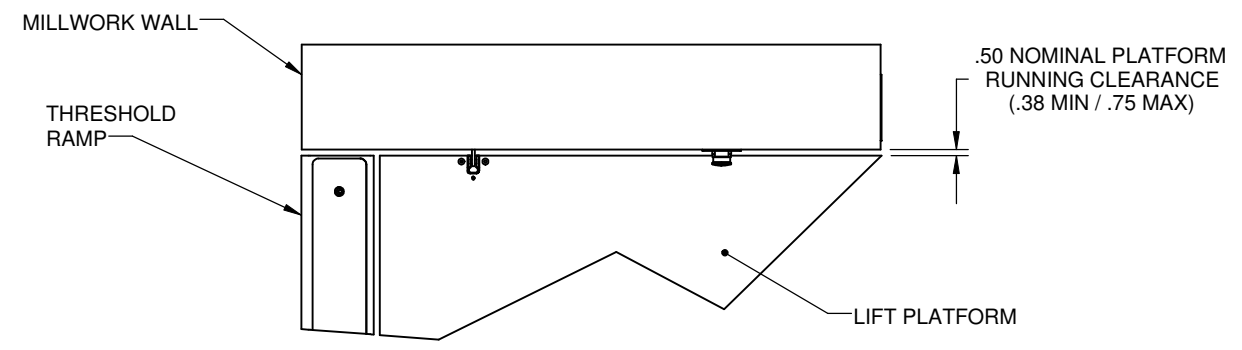
2.6.6 Illumination

- 2.6.6.1** At the threshold of the floor, with the landing door open, the minimum illumination shall be not less than 5 ftc (50 lx).
- 2.6.6.2** During operation, the minimum illumination on the floor and controls shall be not less than 5 ftc (50 lx).
- 2.6.6.3** An auxiliary illumination source to provide general illumination of not less than 0.2 ftc (2.2 lx) on the floor and controls shall be provided.
The auxiliary system shall be automatically activated when normal illumination power fails and shall be capable of maintaining the above illumination intensity for a period of not less than 4 hr and shall use no fewer than two lamps of approximately equal wattage.

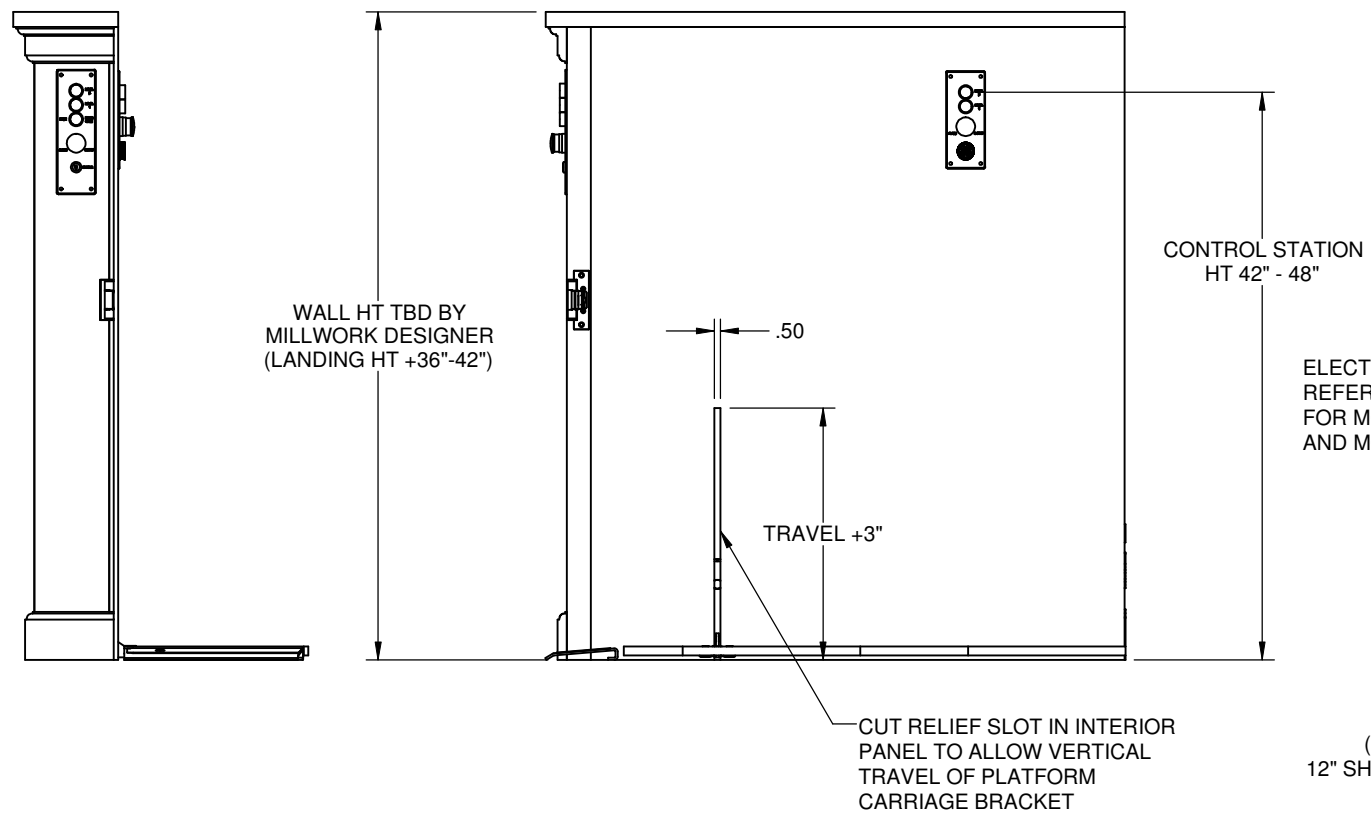
2.10.1 Operator Control Stations

- Controls shall be located between 48 inches maximum and 15 inches minimum above the platform floor or facility floor or ground level.

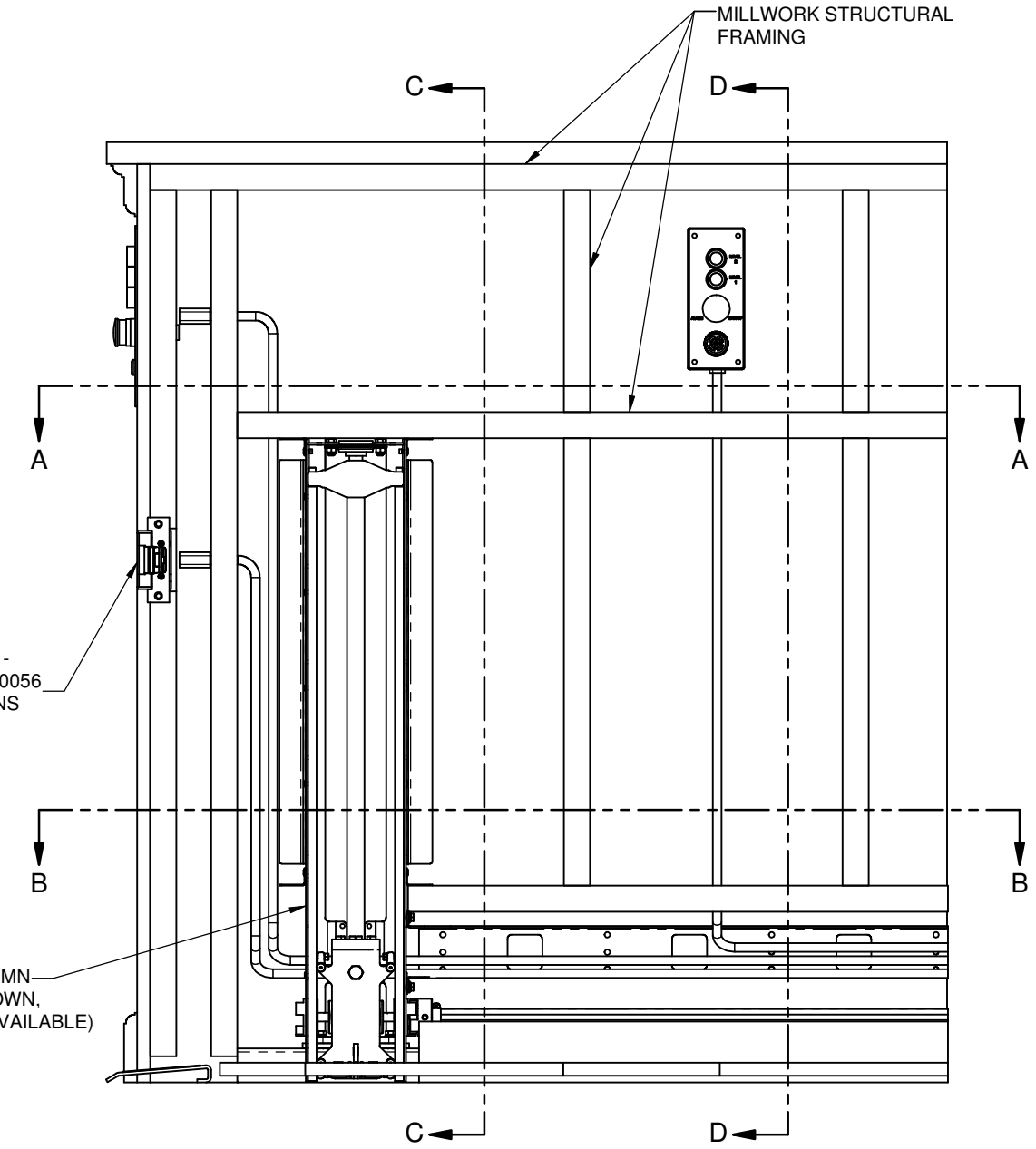
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LTR	ECO	APPD	DATE	DESCRIPTION	DFTR	DATE	CHKR	DATE
A				RELEASED	CAL	6/21/2006		
B				REVISED STRIKE LATCH NOTE ON SHT 1	CAL	9/7/2007		
C				UPDATED MODEL PER CURRENT DESIGN	BRB	9/21/2011		



WALL SEGMENT PLAN VIEW



WALL SEGMENT ELEVATION VIEW



ENLARGED VIEW OF WALL SEGMENT WITH INTERIOR PANEL REMOVED (SEE SHEETS 2-4 FOR SECTIONS AND DETAILS)

NOTES:

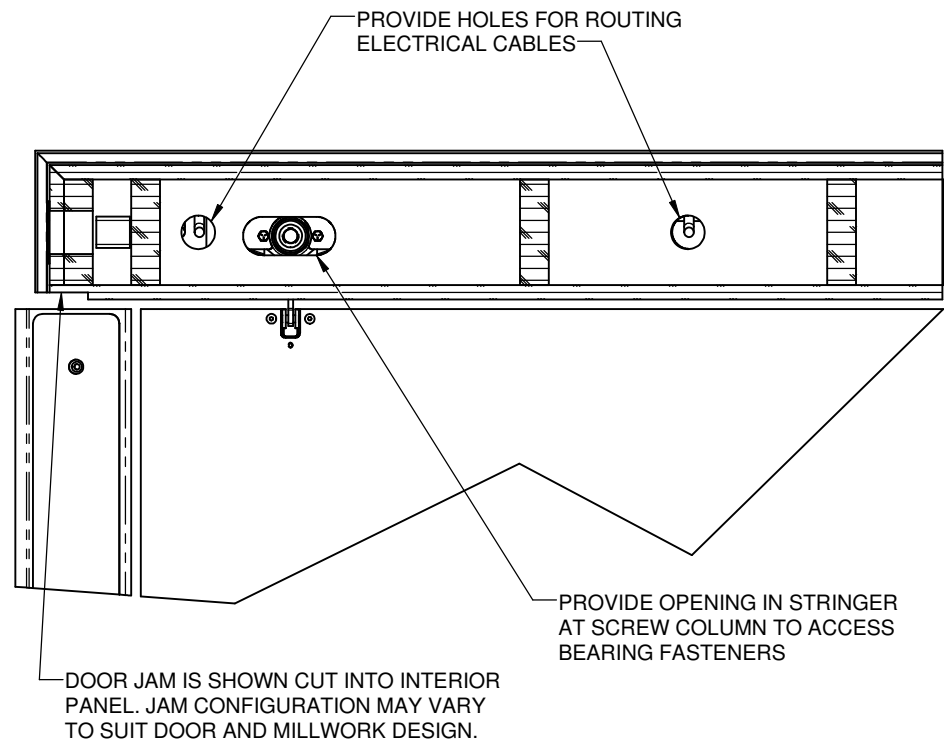
THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED LIFT / MILLWORK INTERFACE. FOR EACH PROJECT APPLICATION REFER TO ITS CORRESPONDING LIFT CONFIGURATION DRAWING FOR GENERAL ARRANGEMENT LAYOUT AND LIFT ENVELOPE DIMENSIONS.

ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT ARE FURNISHED AND INSTALLED BY OTHERS.

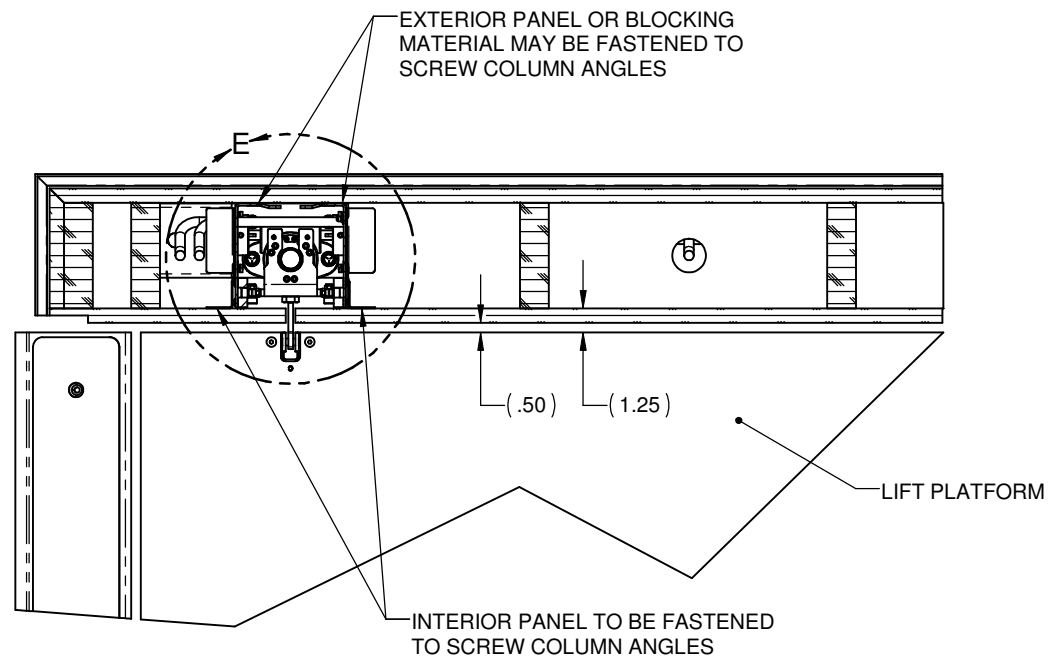
THE VMW LIFT MECHANISM (i.e., SCREW COLUMNS, BASE FRAME, AND DRIVE TRAIN) IS ENCASED IN MILLWORK WALLS SURROUNDING A LIFT PLATFORM THAT TRAVELS UP AND DOWN. SINCE THE MILLWORK IS FURNISHED AND INSTALLED BY OTHERS THE INTERFACE OF THE MILLWORK TO THE LIFT IS CRITICAL TO A SUCCESSFUL INSTALLATION, WHEREIN THE MILLWORK WALL SYSTEM IS NOT ONLY STRUCTURALLY SOUND AND AESTHETICALLY APPEALING, BUT JUST AS IMPORTANT SPECIFIC PROVISIONS AND CLEARANCES TO ACCOMMODATE CERTAIN LIFT ELEMENTS ARE ALSO INCLUDED IN THE MILLWORK TO ENSURE PROPER LIFT OPERATION AND SERVICABILITY.

ONLY A SMALL SEGMENT OF MILLWORK WALL AND ONE SCREW COLUMN IS SHOWN ON THIS DRAWING. THE SAME DESIGN PRINCIPLES CAN BE APPLIED TO THE OTHER WALLS BORDERING THE LIFT.

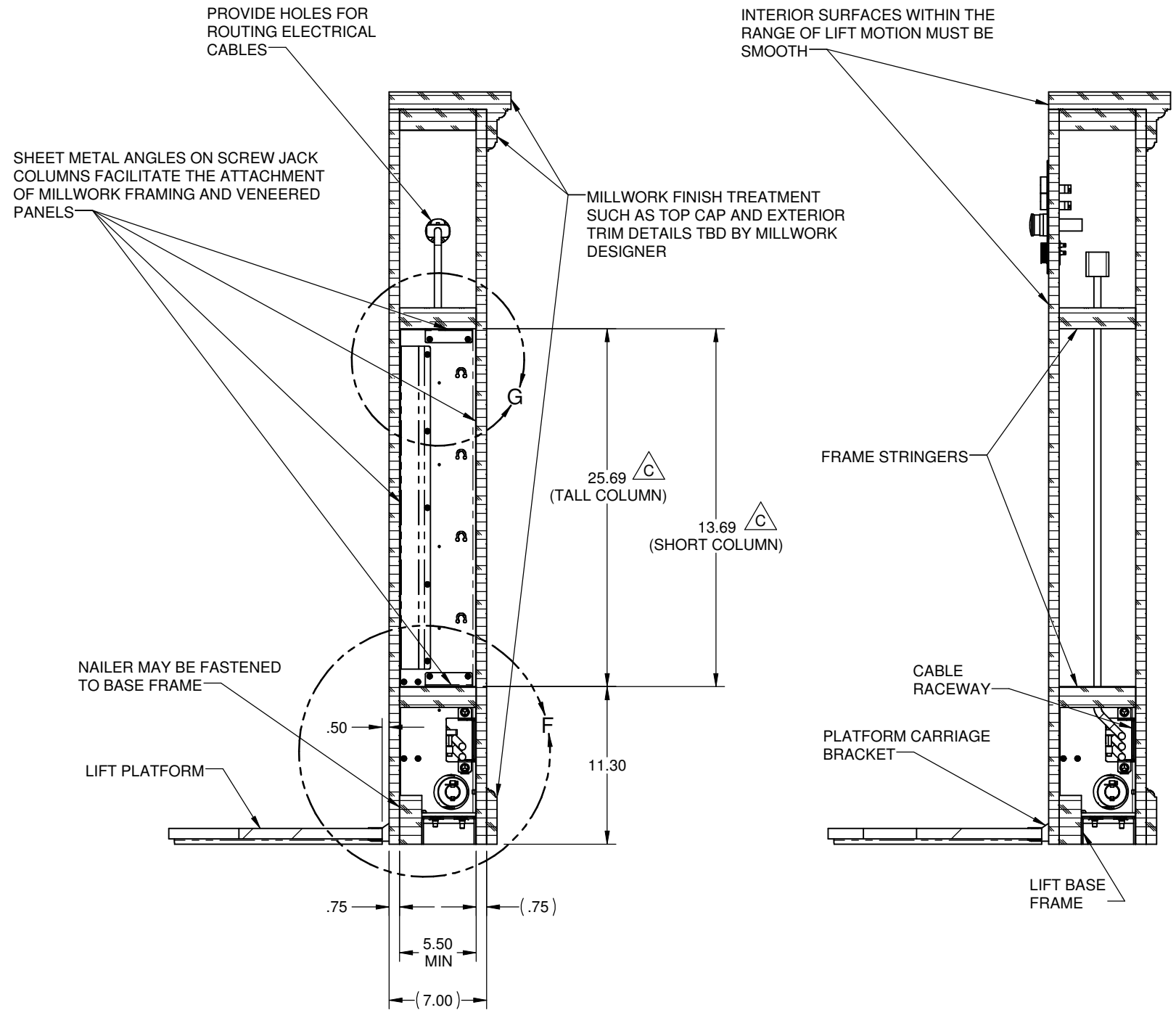
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TITLE VMW LIFT / MILLWORK INTERFACE		
DOCUMENT NO. 910-0026	SHEET NO. 1 OF 4	REVISION C



SECTION A-A




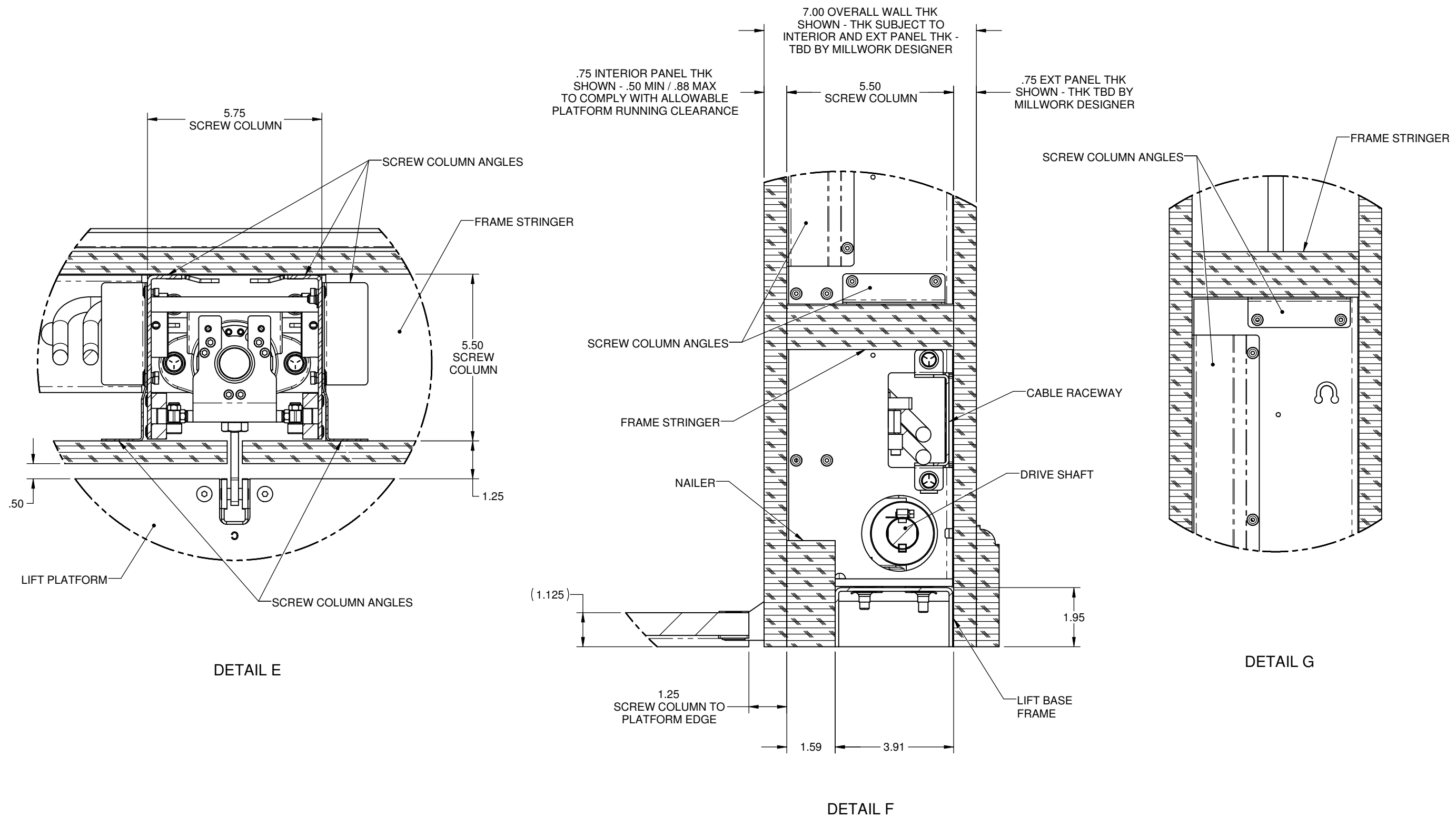
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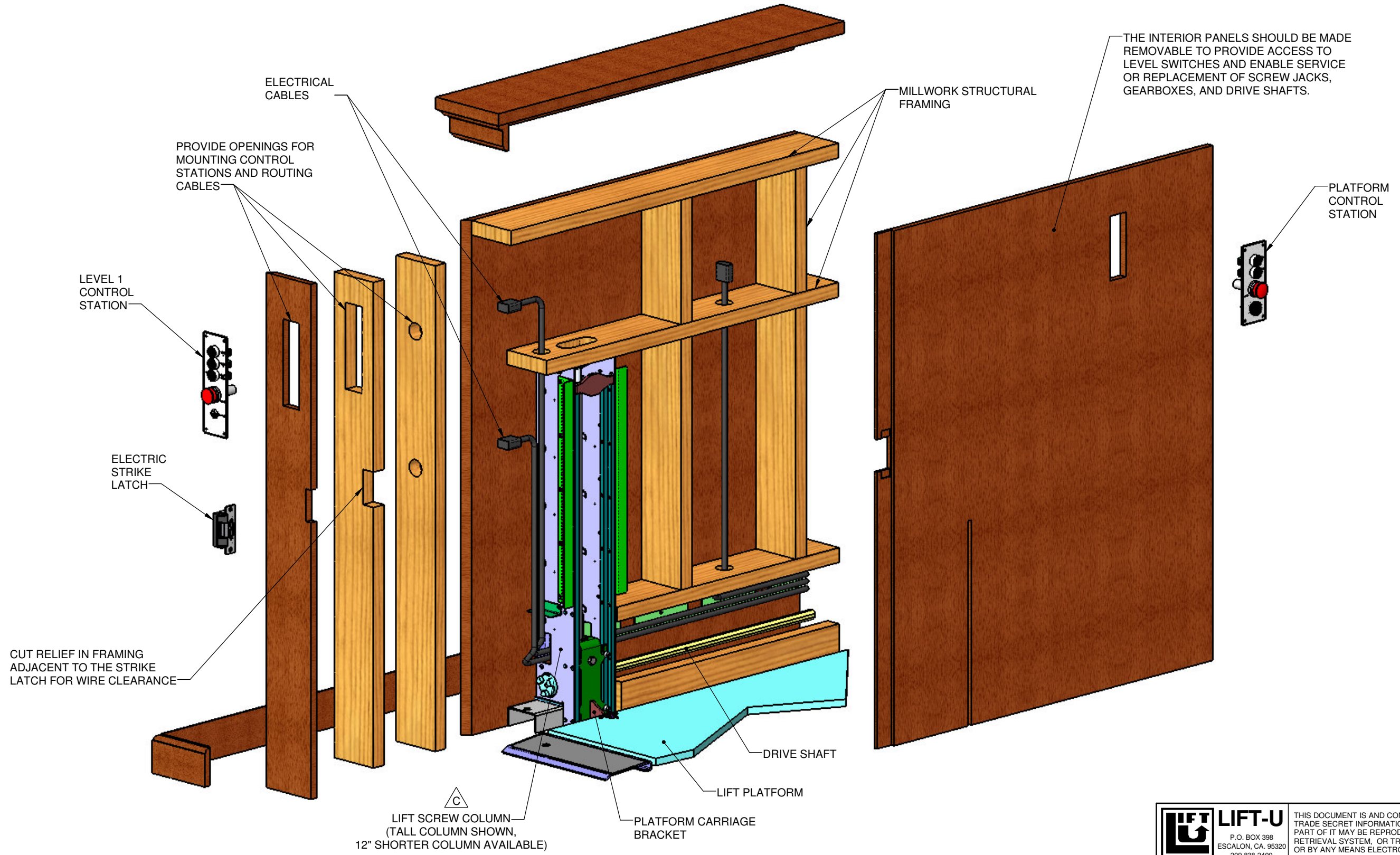
SECTION C-C

SECTION D-D


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TITLE VMW LIFT / MILLWORK INTERFACE		
DOCUMENT NO. 910-0026	SHEET NO. 2 OF 4	REVISION C



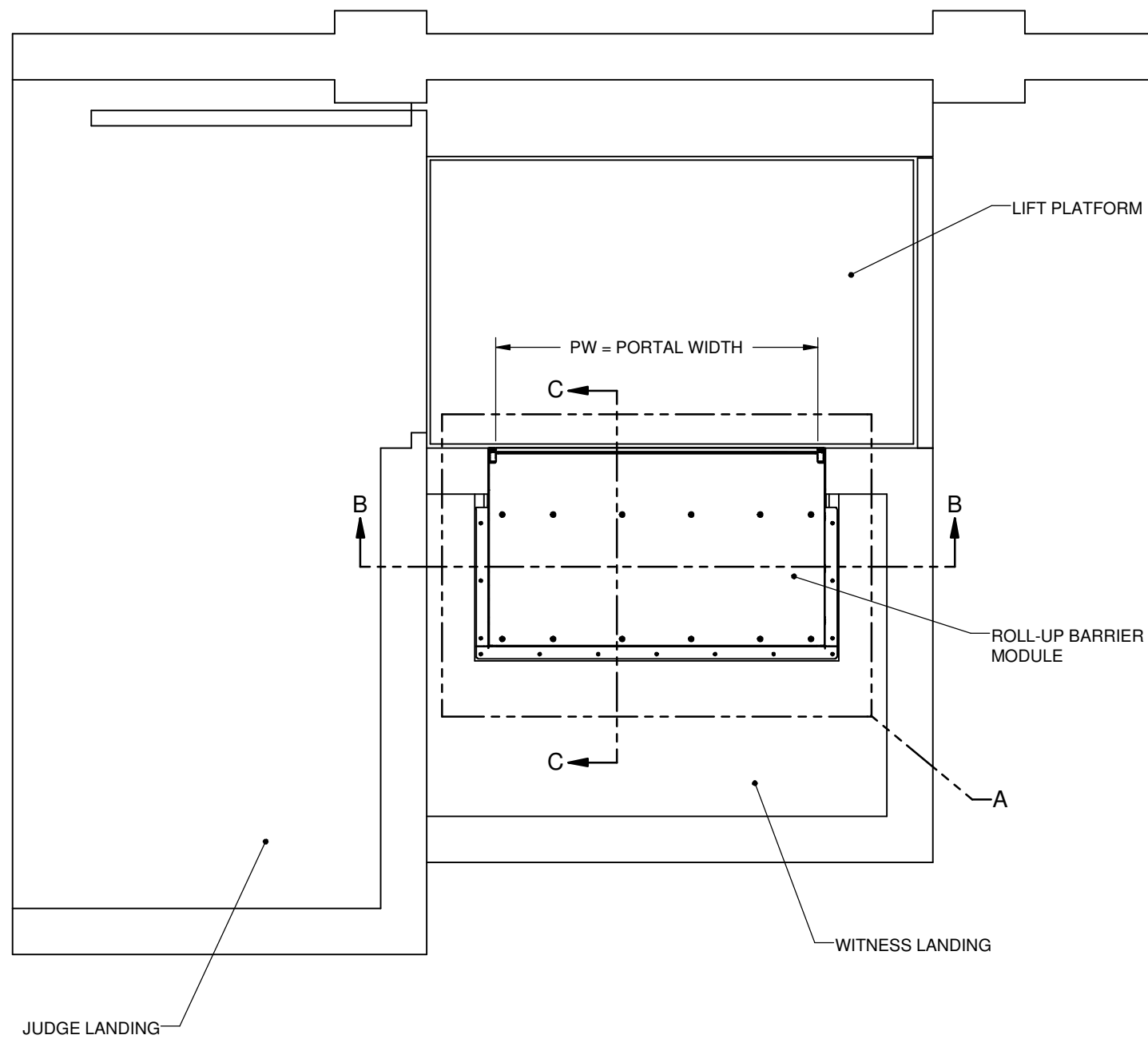
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TITLE VMW LIFT / MILLWORK INTERFACE		
DOCUMENT NO. 910-0026	SHEET NO. 3 OF 4	REVISION C



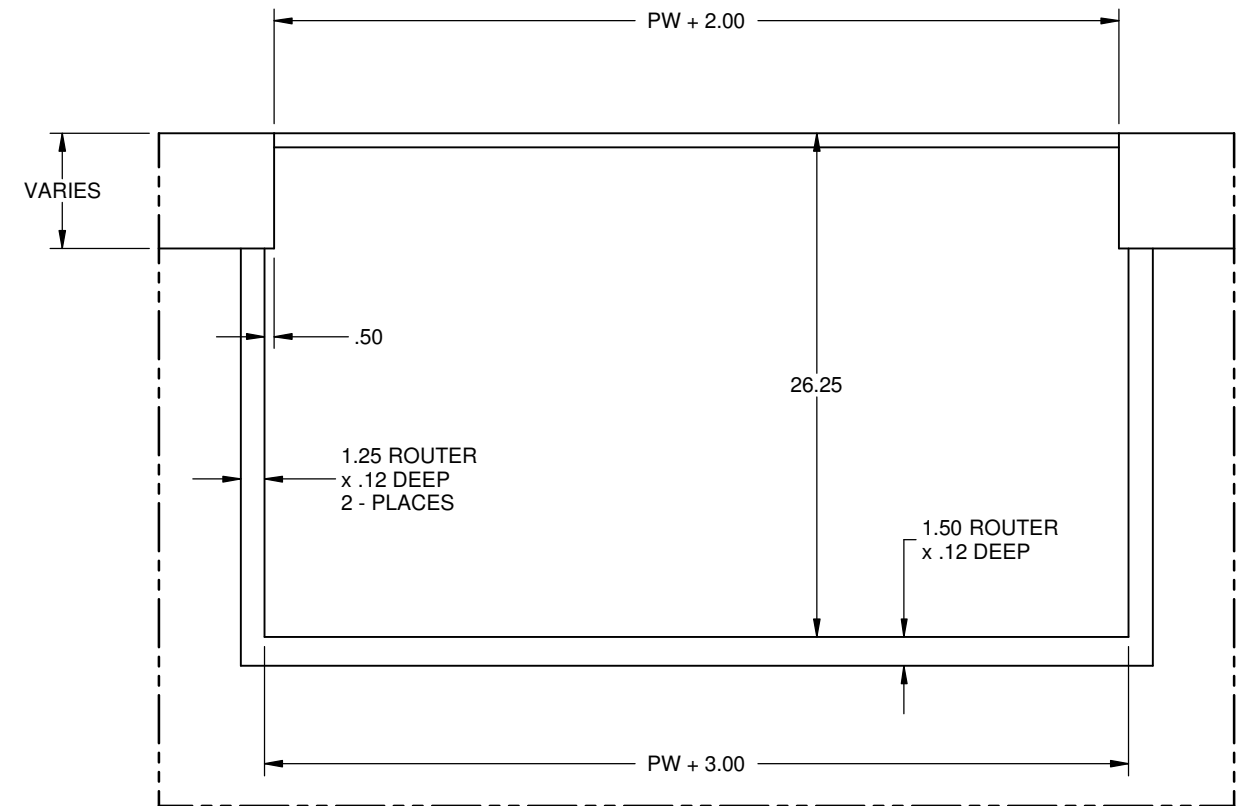
PERSPECTIVE VIEW OF WALL SEGMENT

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TITLE VMW LIFT / MILLWORK INTERFACE		
DOCUMENT NO. 910-0026	SHEET NO. 4 OF 4	REVISION C

REVISIONS									
LTR	ECO	APPD	DATE	DESCRIPTION	DFTR	DATE	CHKR	DATE	
A				RELEASED	CAL	7/7/2006			
B				UPDATED PER CURRENT DESIGN	WAC	10/14/2011			



PLAN VIEW



DETAIL A
FLOOR OPENING AND SUGGESTED PREP TO
ACCOMMODATE ROLL-UP BARRIER MODULE

NOTES:

THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED ROLL-UP BARRIER / MILLWORK INTERFACE.

THE ROLL-UP BARRIER PORTAL WIDTH, VERTICAL GUIDES, AND EXTENDED BARRIER HEIGHT WILL VARY FOR EACH APPLICATION. THEREFORE, FOR EACH PROJECT APPLICATION REFER TO ITS CORRESPONDING LIFT CONFIGURATION DRAWING FOR GENERAL ARRANGEMENT LAYOUT, LIFT ENVELOPE DIMENSIONS, AND ROLL-UP BARRIER MODULE DIMENSIONS.

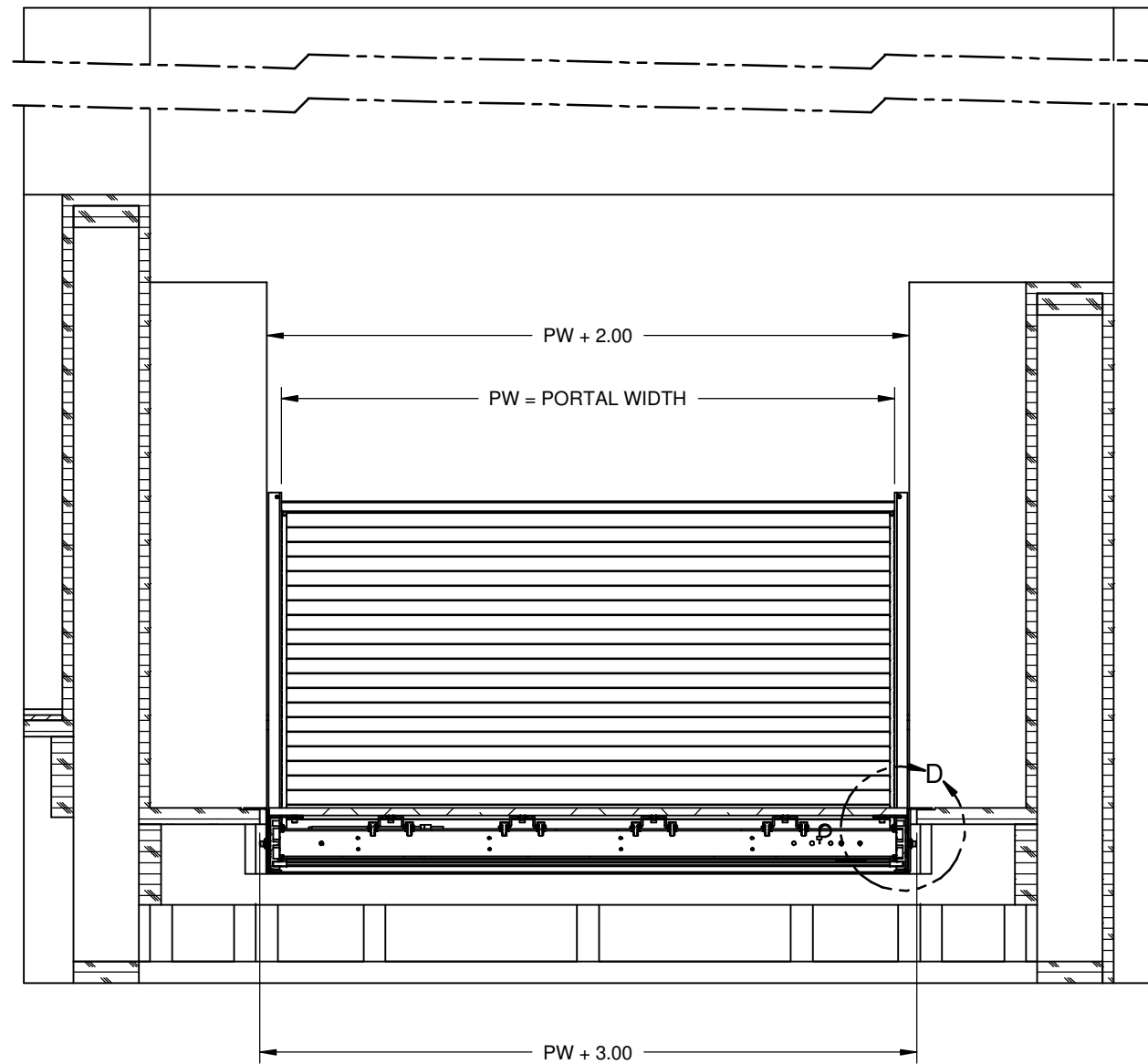
ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT ARE FURNISHED AND INSTALLED BY OTHERS.



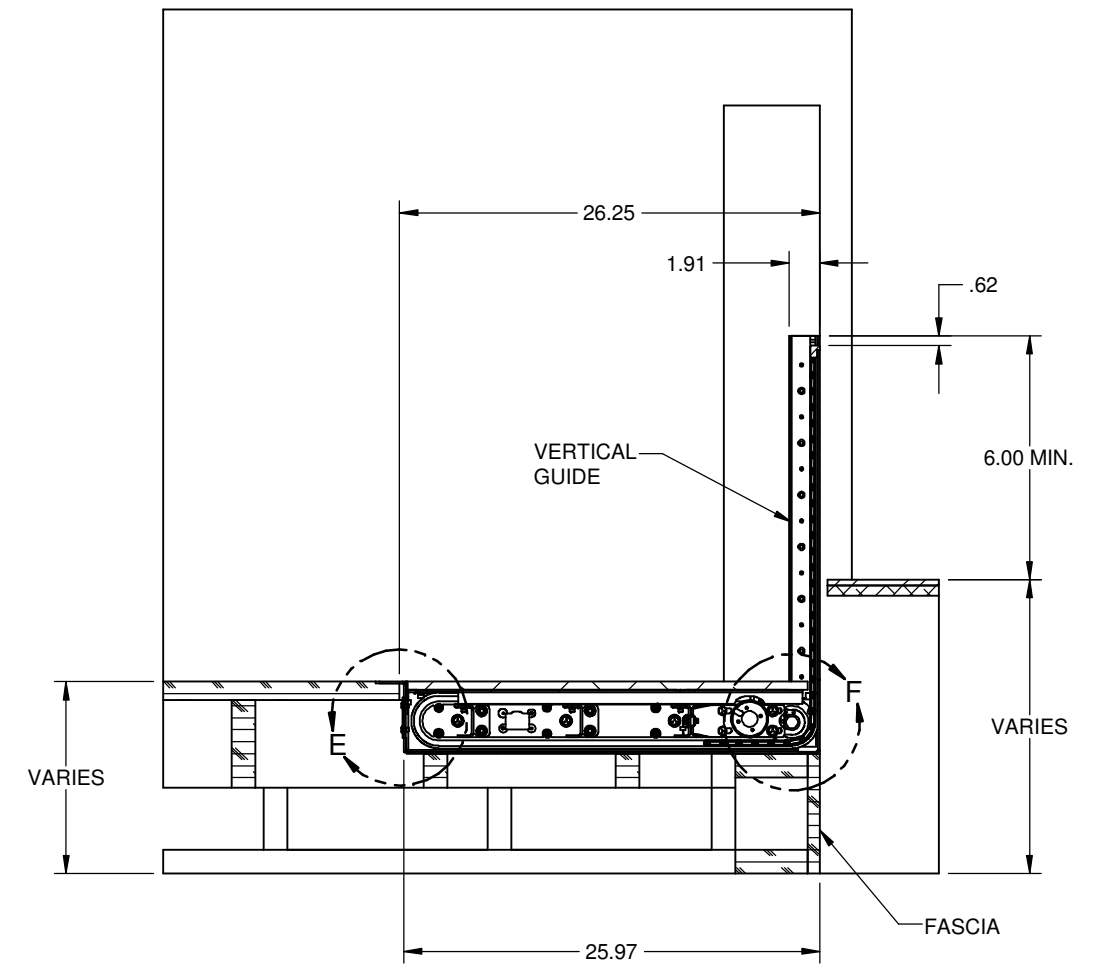
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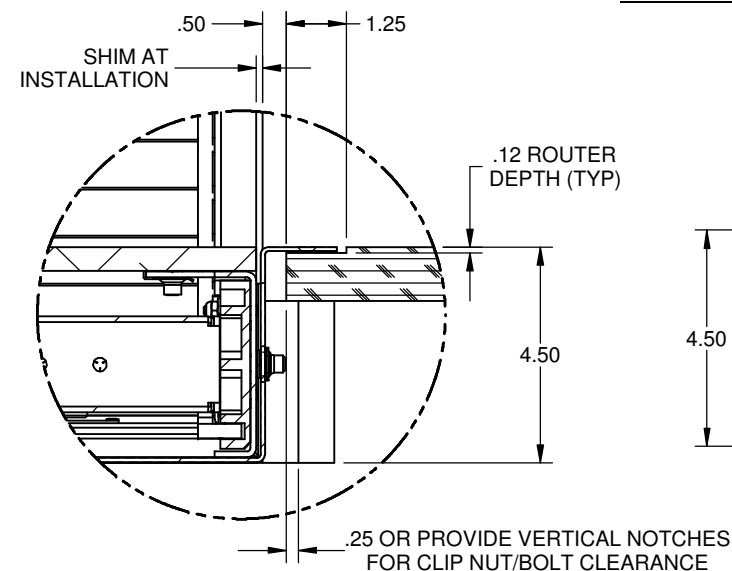
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ROLL-UP BARRIER / MILLWORK INTERFACE			
DOCUMENT NO.	910-0042	SHEET NO.	1 OF 3
		REVISION	B



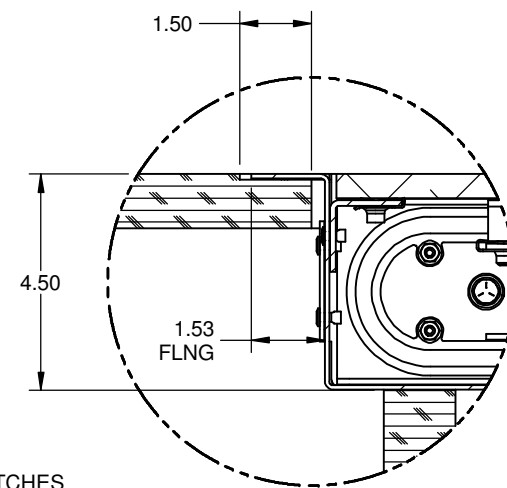
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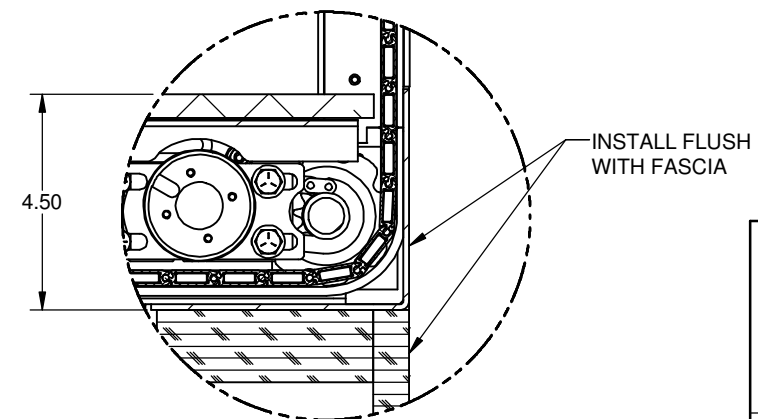
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DETAIL D



DETAIL E



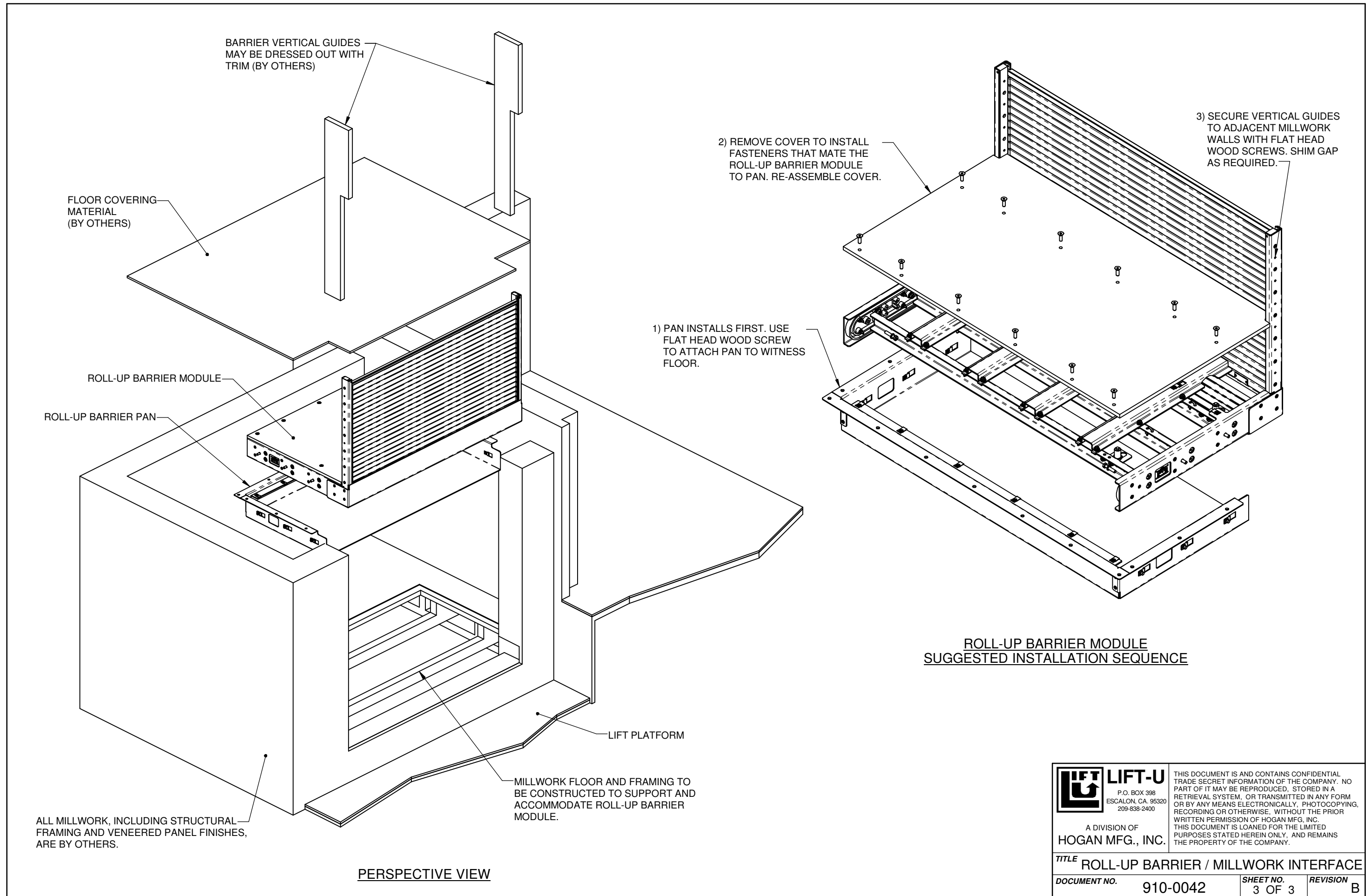
DETAIL F



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TITLE ROLL-UP BARRIER / MILLWORK INTERFACE		
DOCUMENT NO. 910-0042	SHEET NO. 2 OF 3	REVISION B



PERSPECTIVE VIEW

ROLL-UP BARRIER MODULE
SUGGESTED INSTALLATION SEQUENCE

ALL MILLWORK, INCLUDING STRUCTURAL FRAMING AND VENEERED PANEL FINISHES, ARE BY OTHERS.

MILLWORK FLOOR AND FRAMING TO BE CONSTRUCTED TO SUPPORT AND ACCOMMODATE ROLL-UP BARRIER MODULE.

1) PAN INSTALLS FIRST. USE FLAT HEAD WOOD SCREW TO ATTACH PAN TO WITNESS FLOOR.

2) REMOVE COVER TO INSTALL FASTENERS THAT MATE THE ROLL-UP BARRIER MODULE TO PAN. RE-ASSEMBLE COVER.

3) SECURE VERTICAL GUIDES TO ADJACENT MILLWORK WALLS WITH FLAT HEAD WOOD SCREWS. SHIM GAP AS REQUIRED.

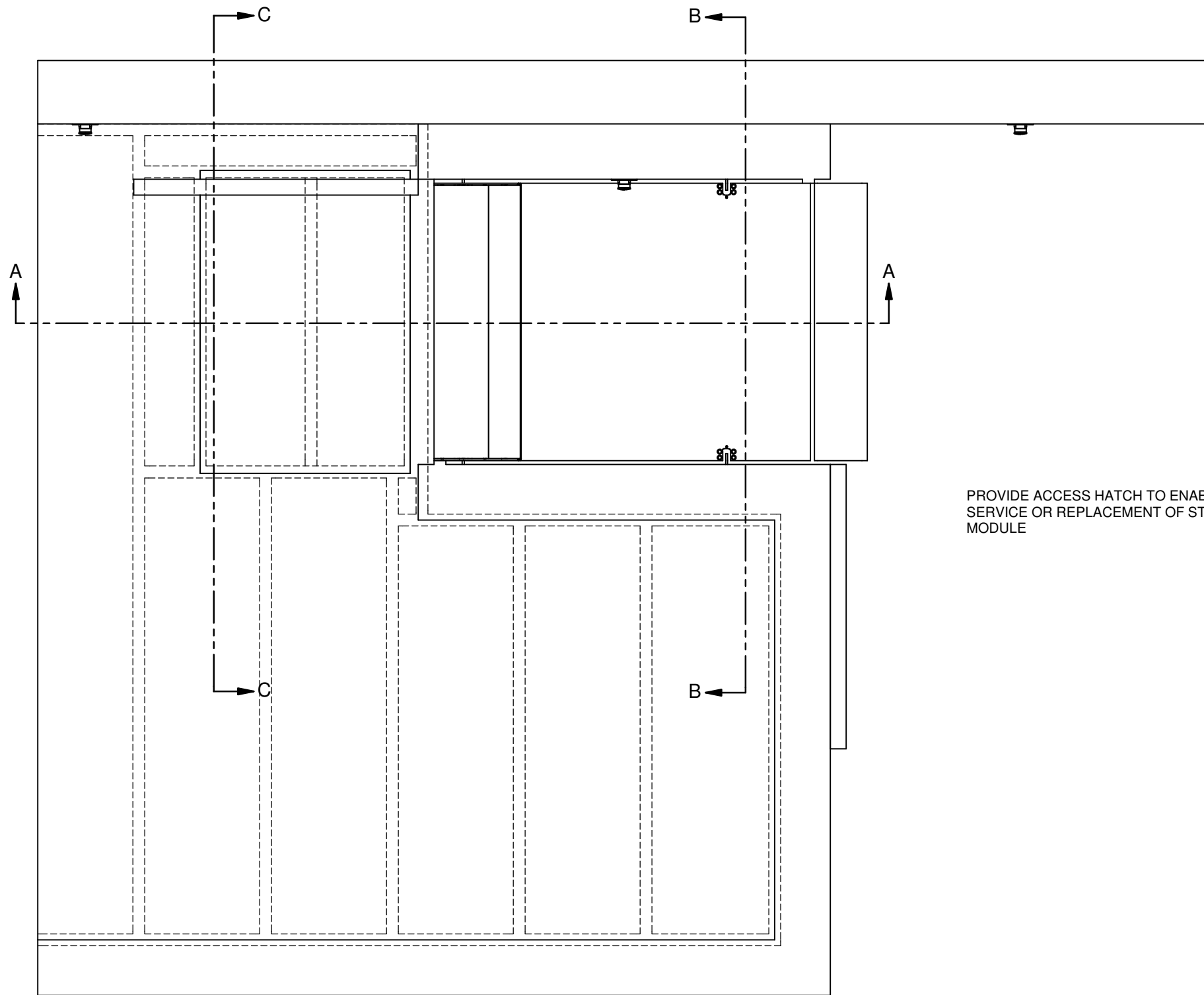


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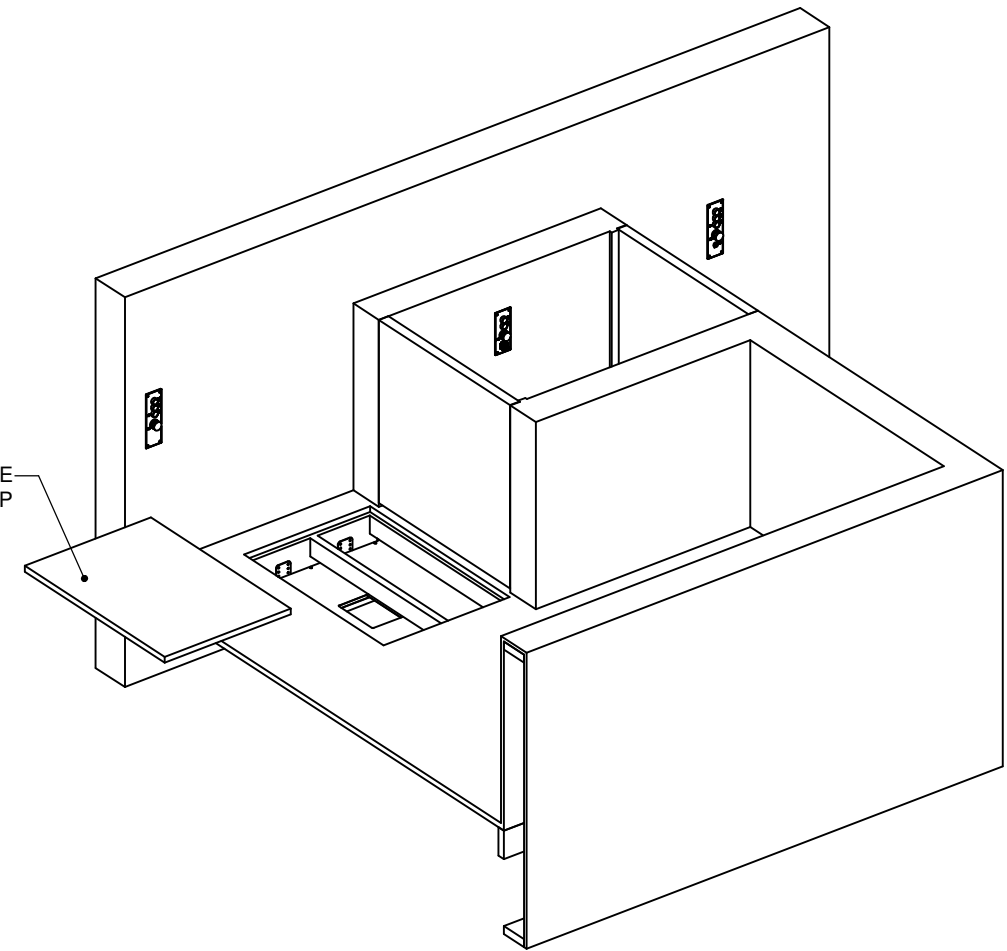
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TITLE			ROLL-UP BARRIER / MILLWORK INTERFACE
DOCUMENT NO.	910-0042	SHEET NO.	3 OF 3
		REVISION	B

REVISIONS									
LTR	ECO	APPD	DATE	DESCRIPTION	DFTR	DATE	CHKR	DATE	
A				RELEASED	CAL	8/28/2007			
B				UPDATED PER CURRENT STEP DESIGN	BSA	9/20/2011			



PLAN VIEW



PERSPECTIVE VIEW

NOTES:

THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED RETRACTABLE STEP MODULE / MILLWORK INTERFACE.

THE RETRACTABLE STEP MODULE HEIGHT AND WIDTH WILL VARY FOR EACH APPLICATION. THEREFORE, FOR EACH PROJECT REFER TO ITS CORRESPONDING LIFT CONFIGURATION DRAWING FOR GENERAL ARRANGEMENT LAYOUT, LIFT ENVELOPE DIMENSIONS, AND STEP MODULE DIMENSIONS.

ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT, AND FLOOR JOIST FRAMING USED TO FASTEN AND SUPPORT THE STEP MODULE ARE FURNISHED AND INSTALLED BY OTHERS.

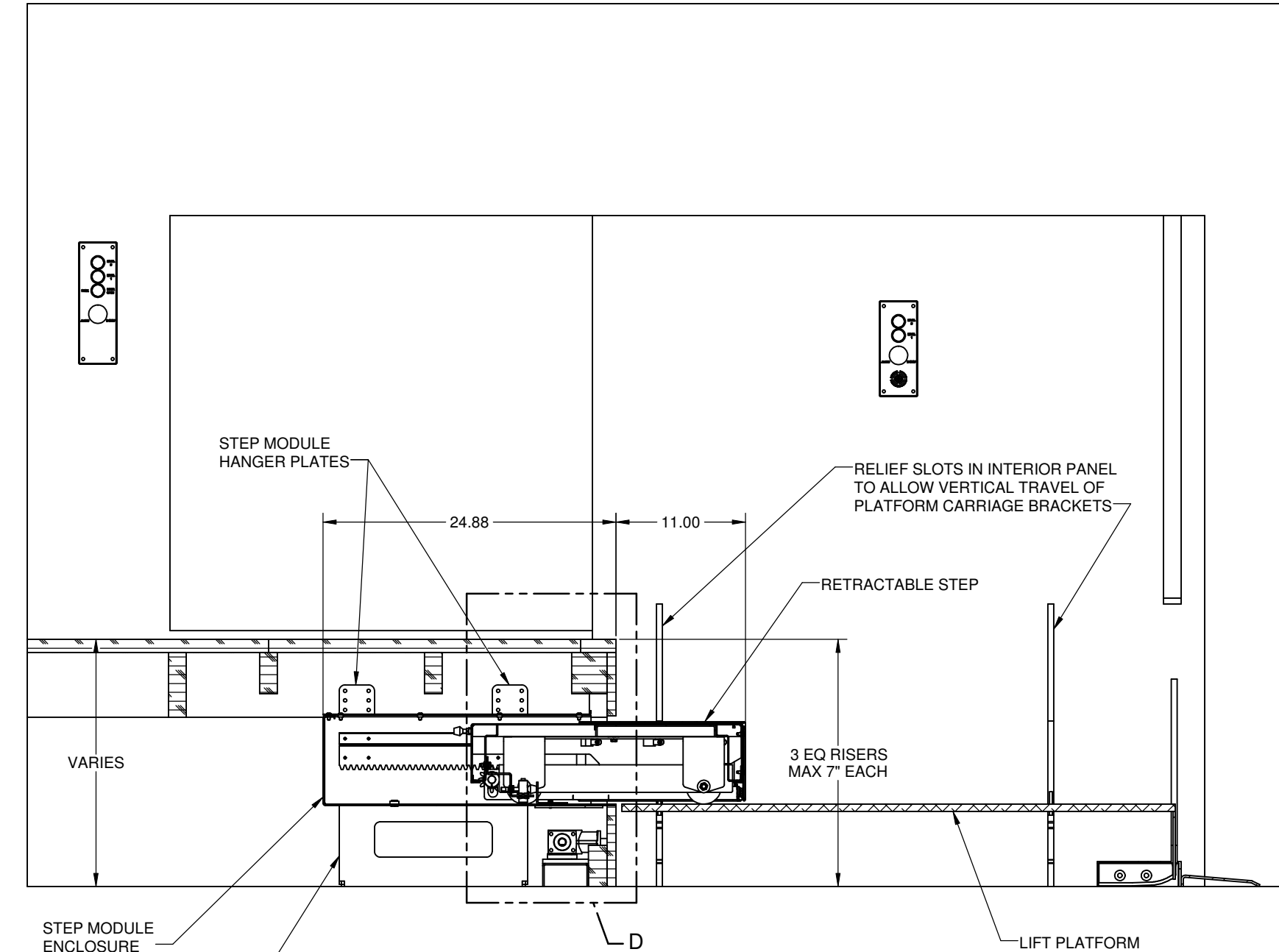


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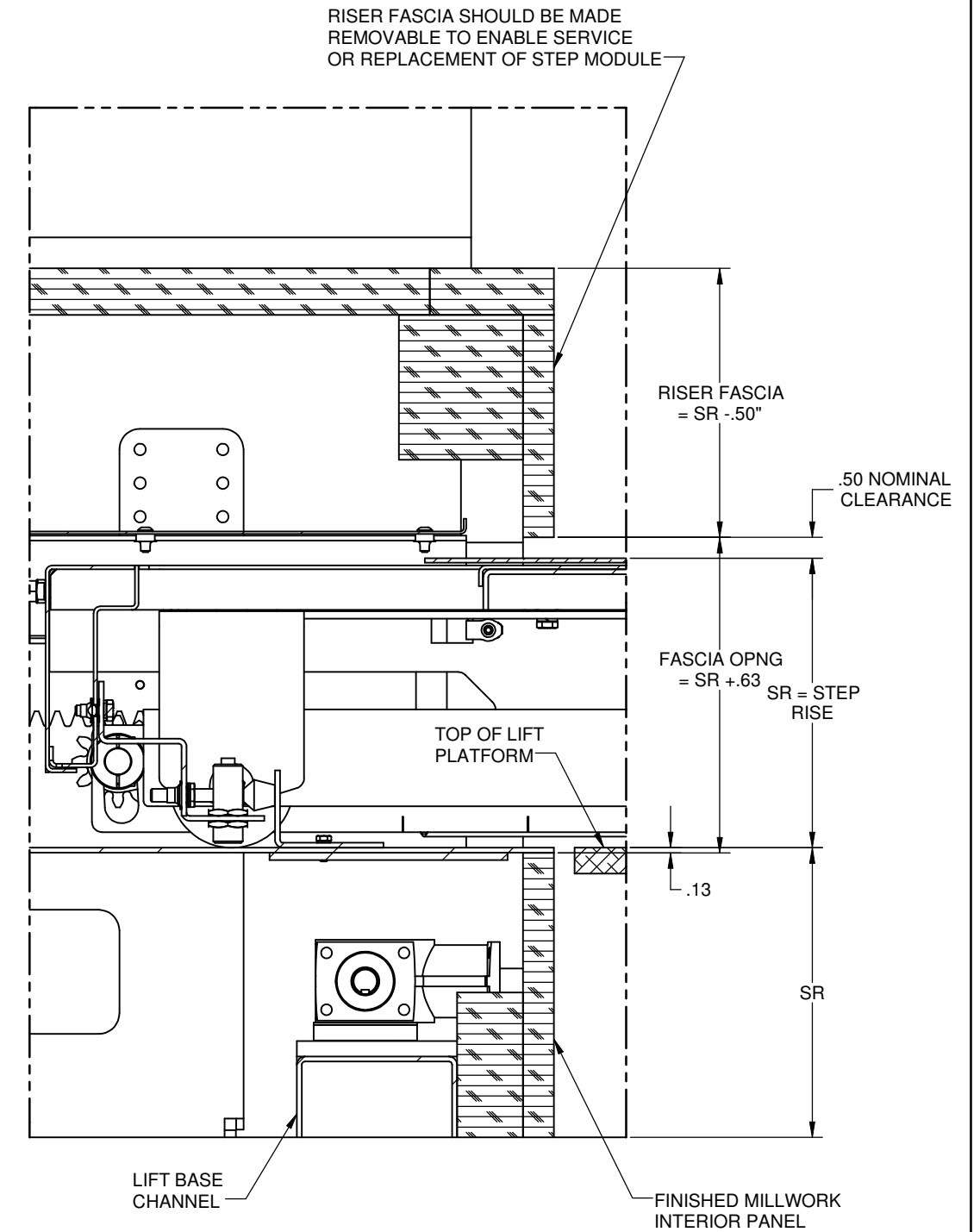
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TITLE STEP MODULE / MILLWORK INTERFACE			
DOCUMENT NO.	910-0054	SHEET NO.	1 OF 4
		REVISION	B



SECTION A-A



DETAIL D

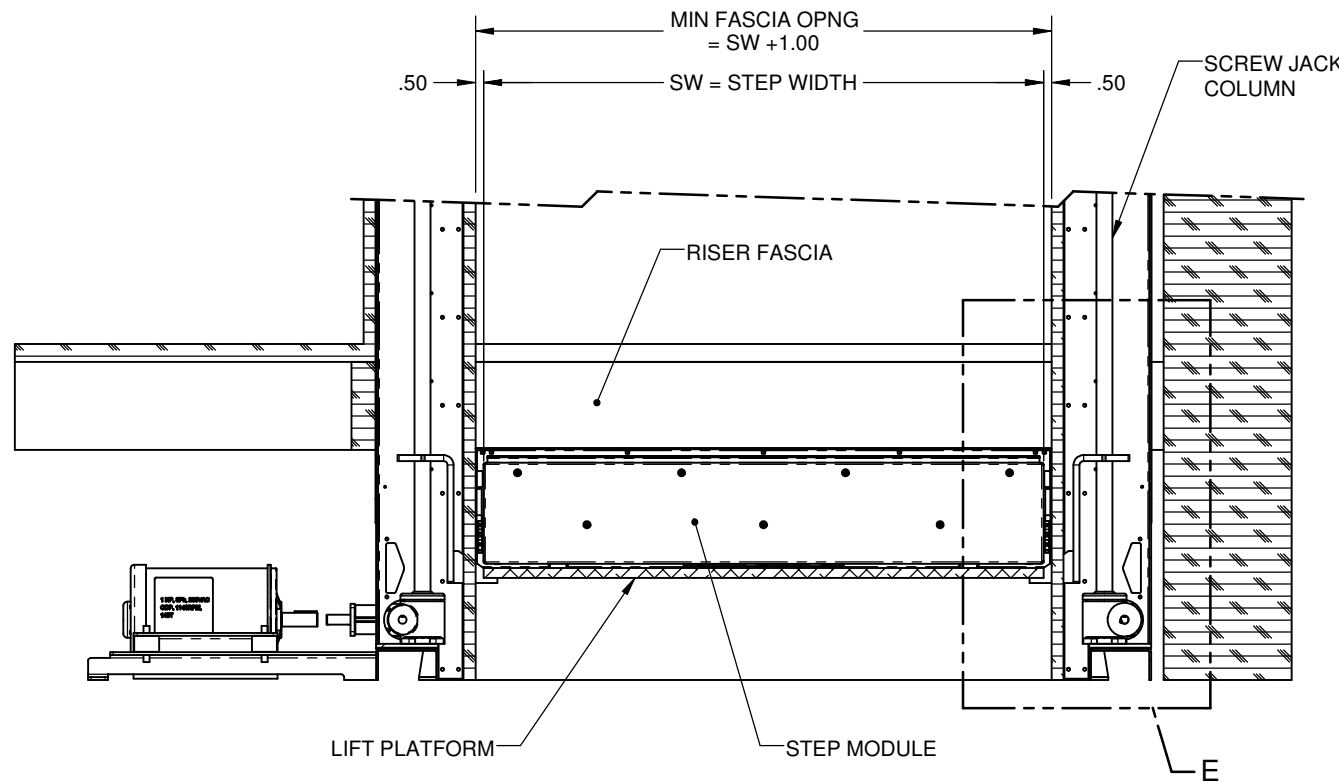
STEP MODULE ENCLOSURE
STEP MODULE SUPPORT BRACKET (IF APPLICABLE)

LIFT PLATFORM

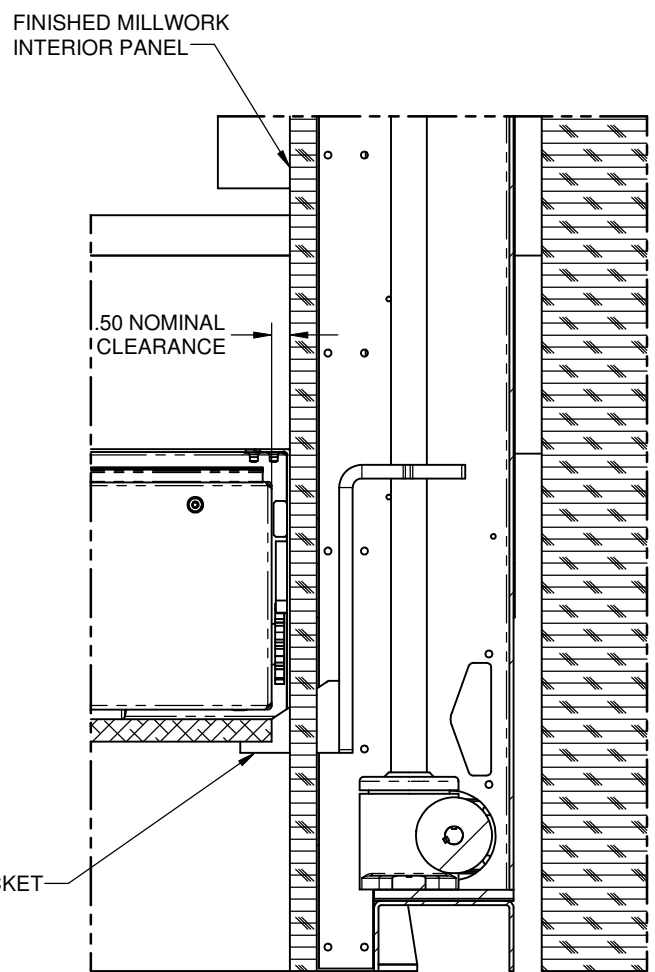
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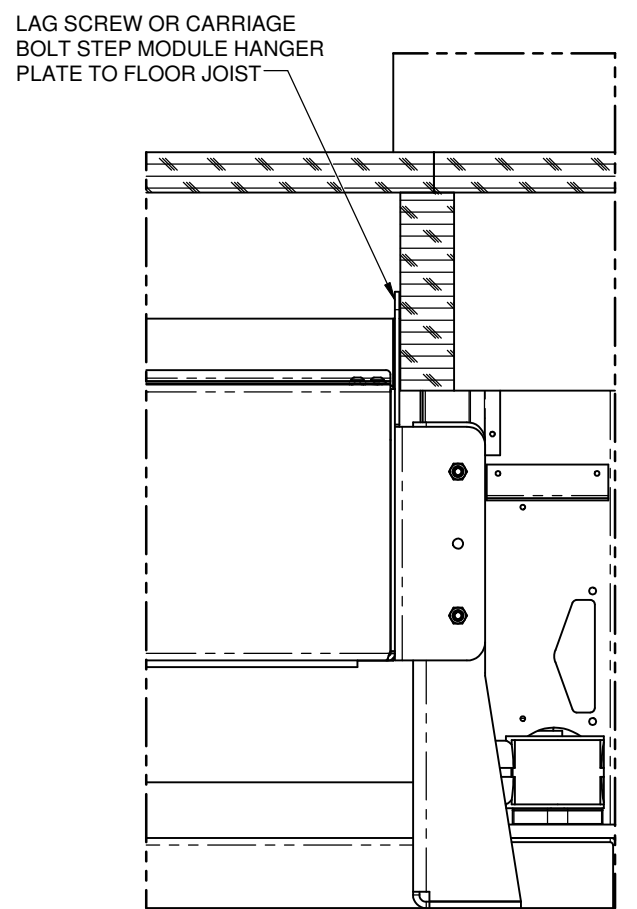
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DOCUMENT NO. 910-0054	SHEET NO. 2 OF 4	REVISION B



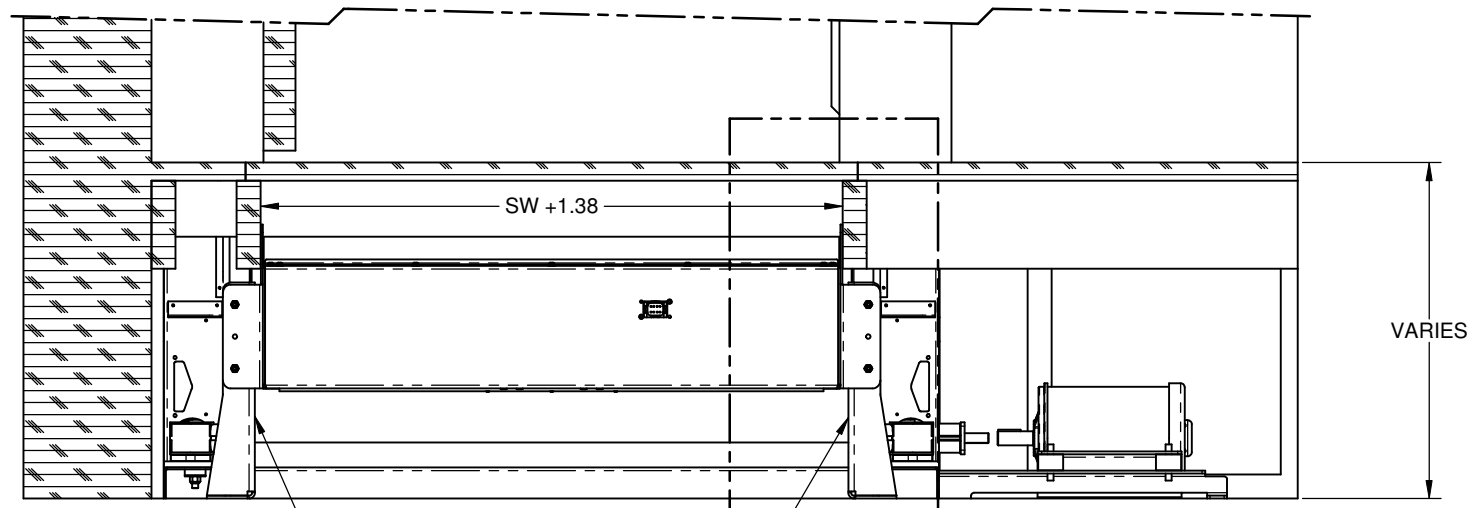
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DETAIL E




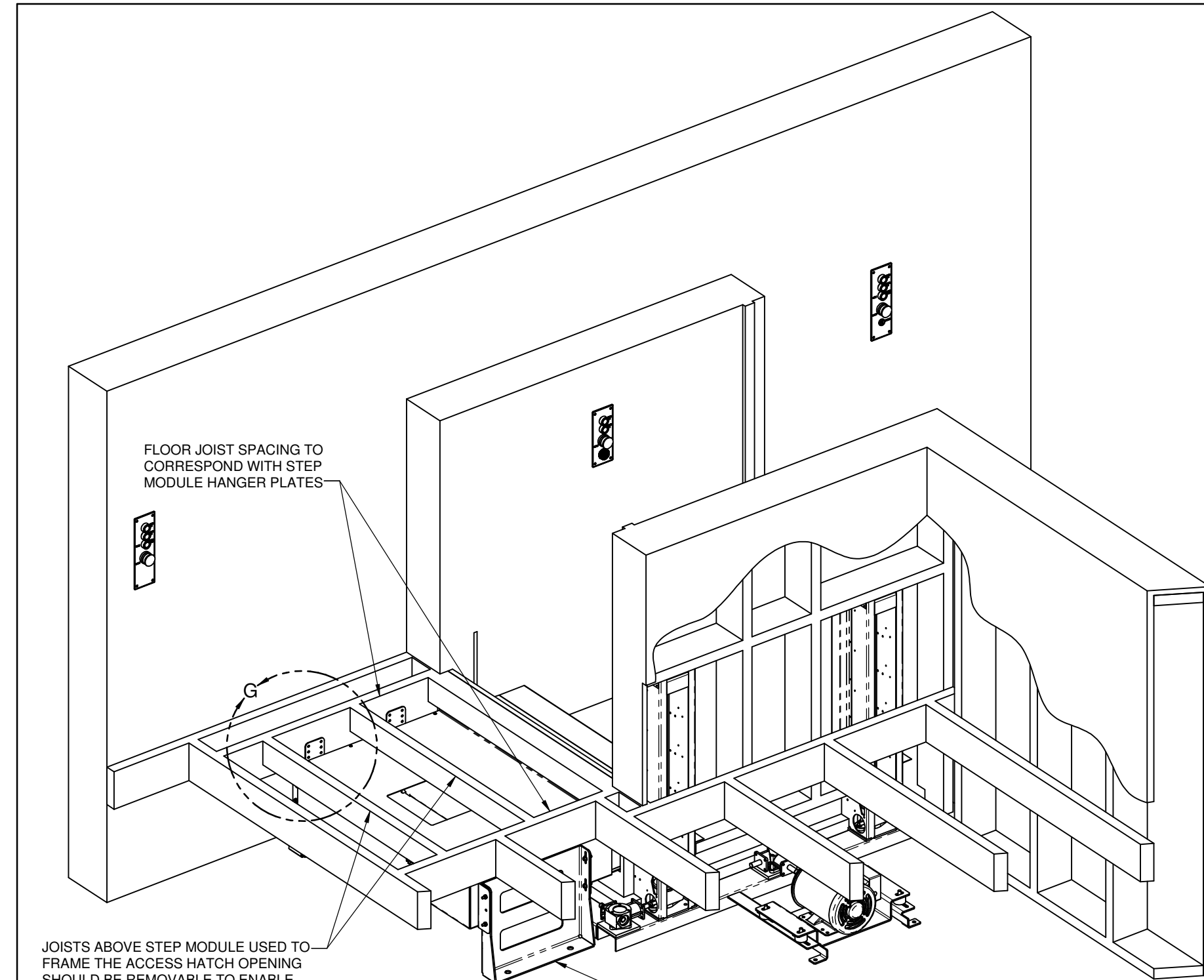
DETAIL F



SECTION C-C

STEP MODULE SUPPORT BRACKETS (IF APPLICABLE) MAY BE REMOVED AFTER THE HANGER PLATES ARE FASTENED TO FLOOR JOISTS

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TITLE STEP MODULE / MILLWORK INTERFACE	
DOCUMENT NO. 910-0054	SHEET NO. 3 OF 4
	REVISION B



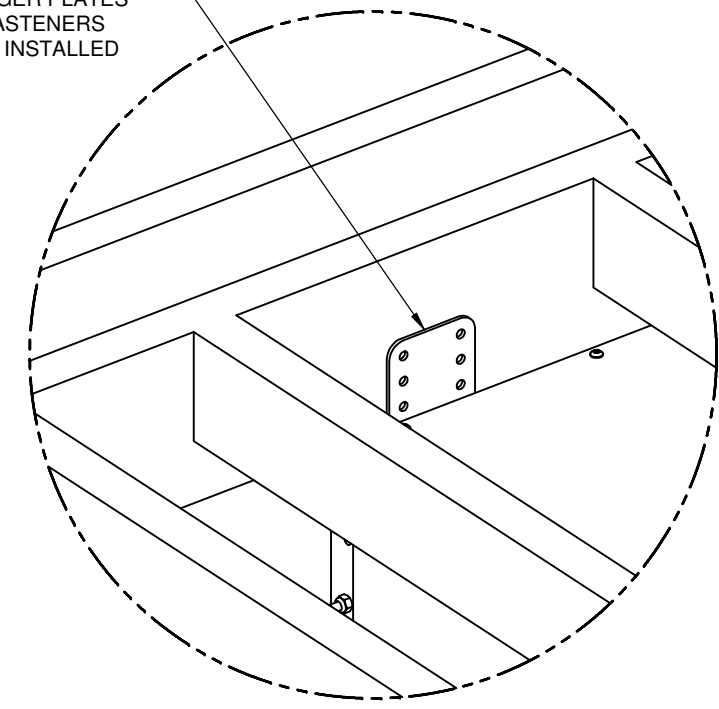
FLOOR JOIST SPACING TO CORRESPOND WITH STEP MODULE HANGER PLATES

JOISTS ABOVE STEP MODULE USED TO FRAME THE ACCESS HATCH OPENING SHOULD BE REMOVABLE TO ENABLE SERVICE AND REPLACEMENT OF STEP MODULE


THE STEP MODULE IS SUSPENDED BELOW THE UPPER LANDING FLOOR BY FASTENING THE HANGER PLATES (INCLUDED WITH THE STEP MODULE) TO FLOOR JOISTS. ALTERNATIVELY, SUPPORT BRACKETS (INCLUDED WITH MOST APPLICATIONS), WHICH ARE INTENDED TO FACILITATE INSTALLATION OF THE STEP MODULE BEFORE THE MILLWORK IS COMPLETE, MAY BE MADE PERMANENT BY ANCHORING TO THE FLOOR, BUT MUST ALSO BE SECURED Laterally FOR STABILITY; i.e., BRACE TO ADJACENT STRUCTURE OR UTILIZE HANGER CONNECTION TO FLOOR JOISTS. LIFT-U FURNISHES THE ANCHOR BOLTS TO EXERCISE THIS OPTION.

PARTIAL PERSPECTIVE VIEW
w/ MILLWORK CUT AWAY AND SUB-FLOOR HIDDEN TO ILLUSTRATE FRAMING CONCEPT

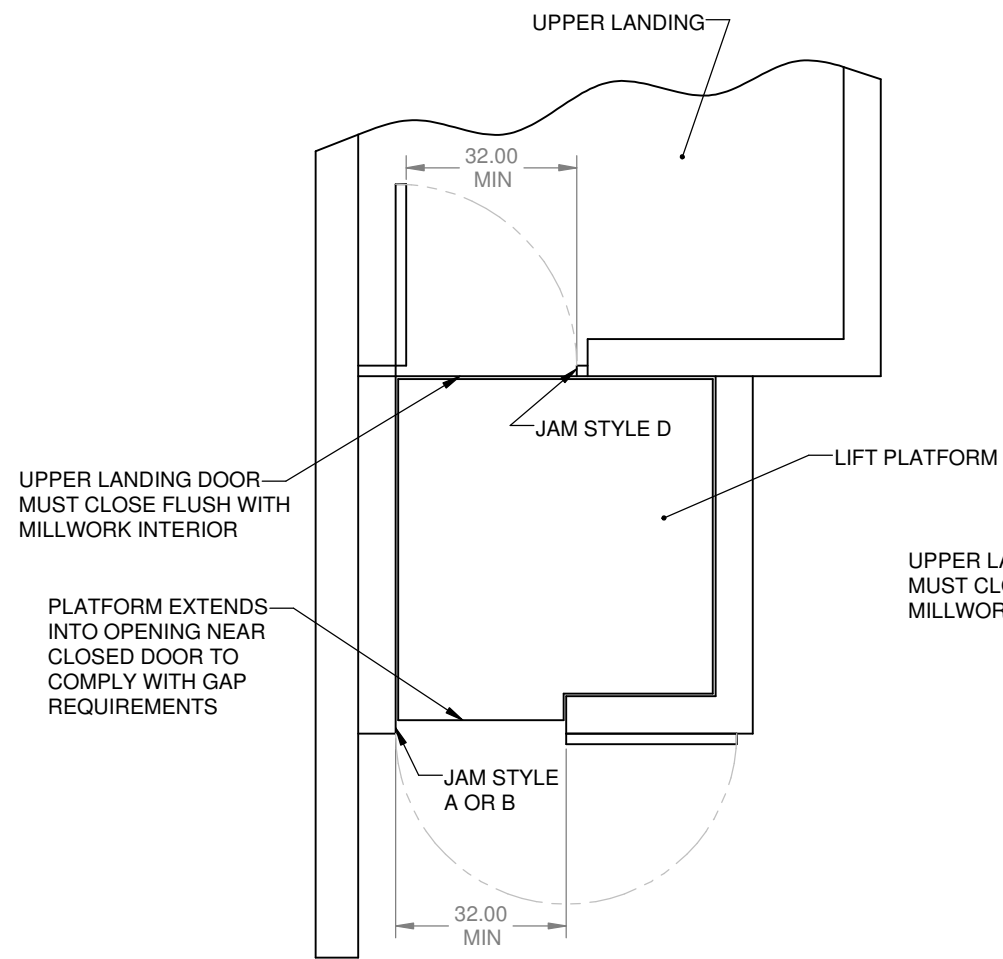
PREFERRED ATTACHMENT:
LAG SCREW OR CARRIAGE BOLT
STEP MODULE HANGER PLATES
TO FLOOR JOIST. FASTENERS
ARE SUPPLIED AND INSTALLED
BY OTHERS.



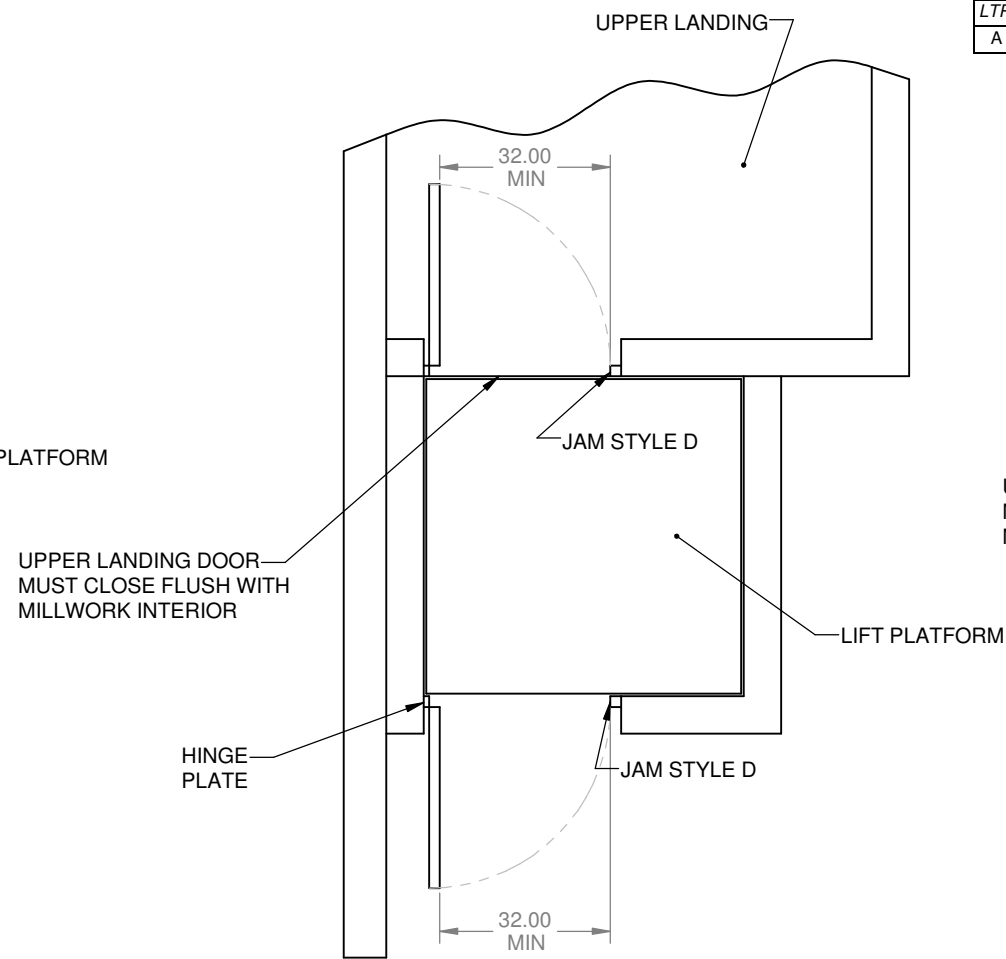
DETAIL G

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TITLE STEP MODULE / MILLWORK INTERFACE	
DOCUMENT NO. 910-0054	SHEET NO. 4 OF 4
REVISION B	

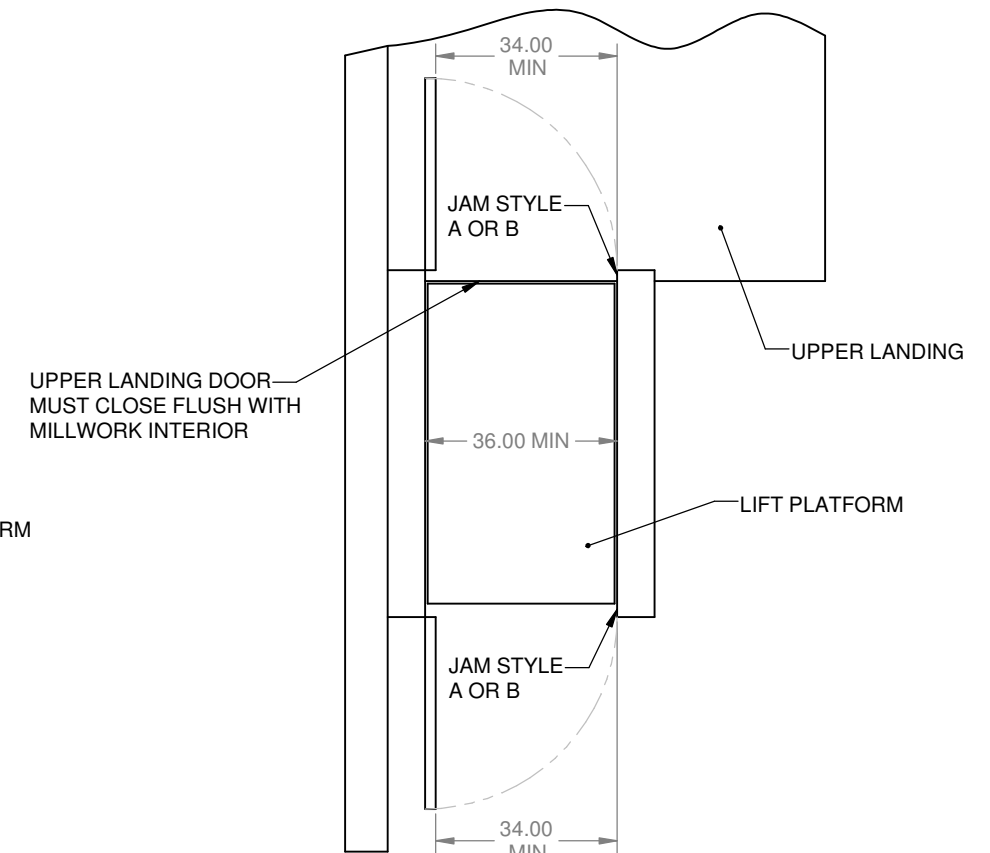
REVISIONS								
LTR	ECO	APPD	DATE	DESCRIPTION	DFTR	DATE	CHKR	DATE
A				RELEASED	CAL	9/5/2007		



LOWER LANDING DOOR CLOSSES FLUSH WITH MILLWORK EXTERIOR - HINGES 180°



LOWER LANDING DOOR CLOSSES FLUSH WITH MILLWORK INTERIOR - HINGES 90°



LOWER LANDING DOOR CLOSSES FLUSH WITH MILLWORK EXTERIOR - HINGES 90°

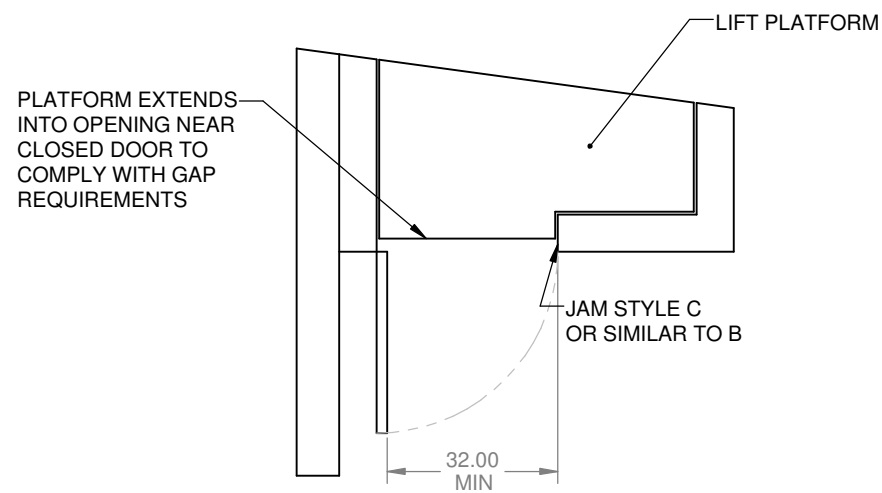
NOTES:

THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED DOOR / MILLWORK INTERFACE ALTERNATIVES. FOR EACH PROJECT APPLICATION REFER TO ITS CORRESPONDING LIFT CONFIGURATION DRAWING FOR GENERAL ARRANGEMENT AND LIFT ENVELOPE DIMENSIONS.

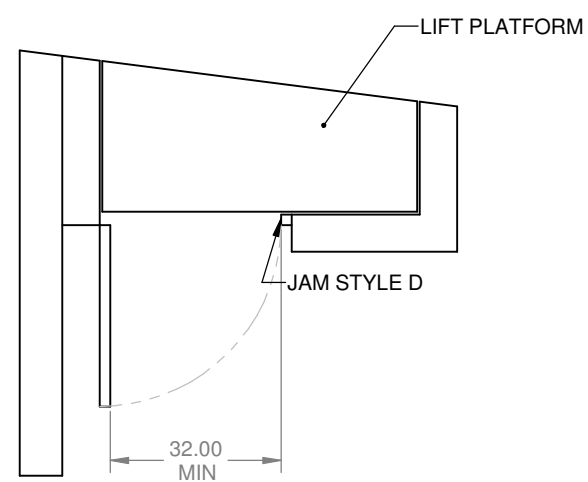
REFER TO DRAWING 910-0056 FOR THE RECOMMENDED JAM STYLES NOTED ON THIS DRAWING, AND FOR STRIKE LATCH / MILLWORK INTERFACE.

THE LIFT PLATFORM REQUIRES 3/8" MINIMUM TO 3/4" MAXIMUM RUNNING CLEARANCE WITH ALL ADJACENT SURFACES; i.e., CLOSED DOORS AND MILLWORK FINISHED SURFACES.

ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT, AS WELL AS DOORS / GATES AND JAMS ARE FURNISHED AND INSTALLED BY OTHERS.



LOWER LANDING DOOR CLOSSES FLUSH WITH MILLWORK EXTERIOR - HINGES 90°



LOWER LANDING DOOR CLOSSES FLUSH WITH MILLWORK INTERIOR - HINGES 90°

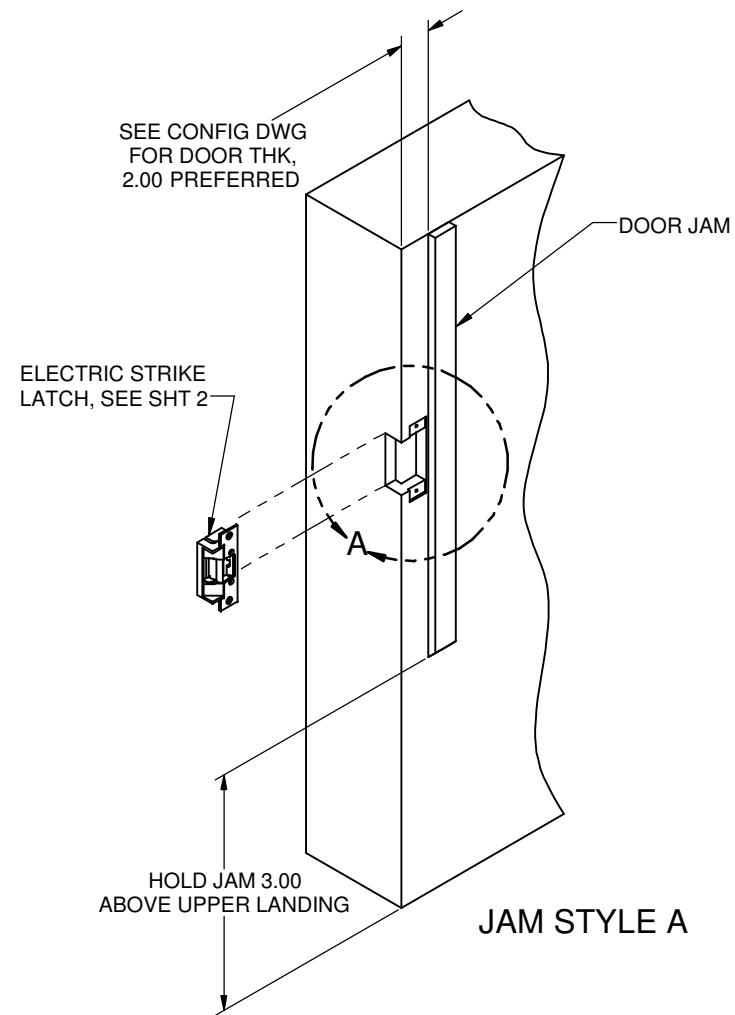


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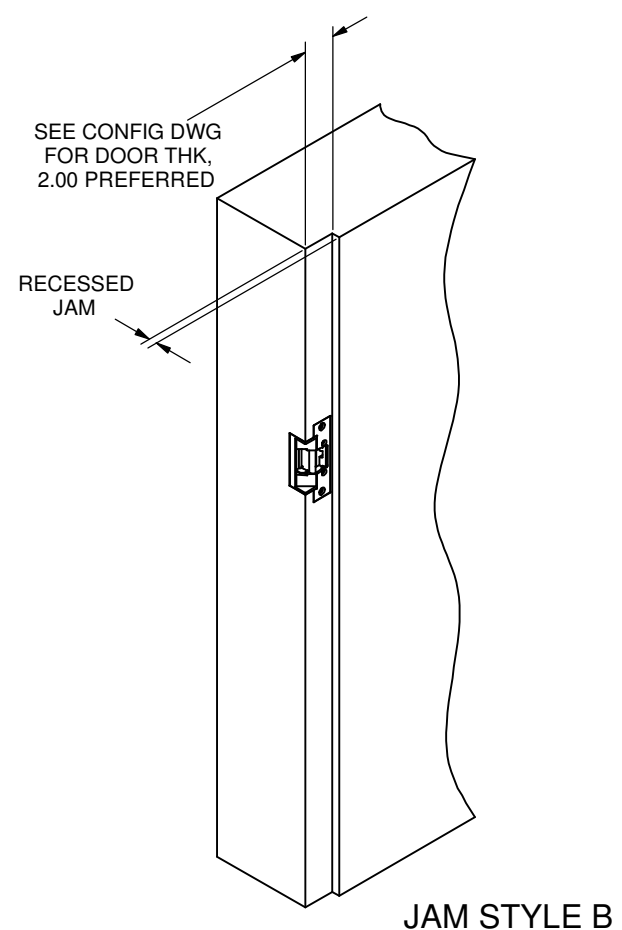
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TITLE	DOOR SET-UP ALTERNATIVES		
DOCUMENT NO.	910-0055	SHEET NO.	1 OF 1
		REVISION	A

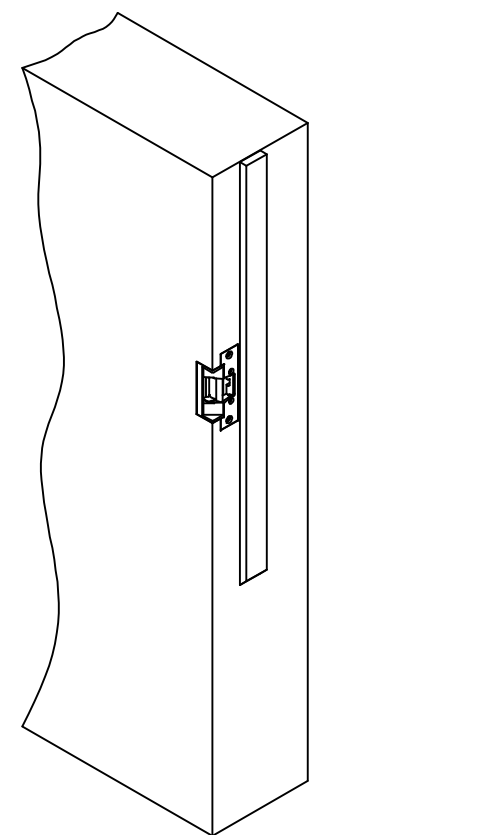
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LTR	ECO	APPD	DATE	DESCRIPTION	DFTR	DATE	CHKR	DATE
A				RELEASED	CAL	9/6/2007		
B				ADDED STRIKE LATCH DIMENSIONS ON SHEET 2	BSA	11/15/2011		
C				REVISED TO ADJUSTABLE SPRING LATCH	WAC	3/4/2013		



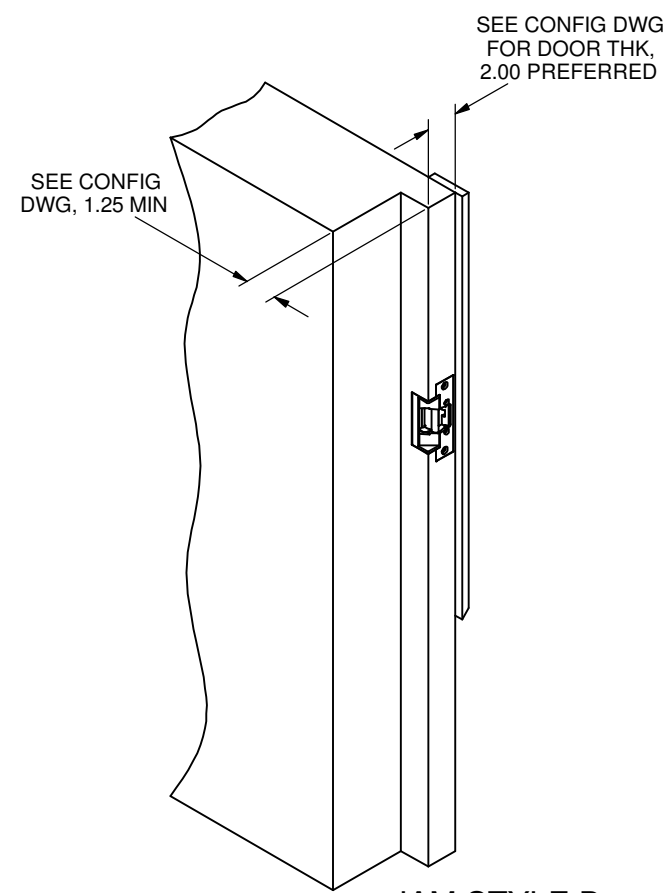
JAM STYLE A



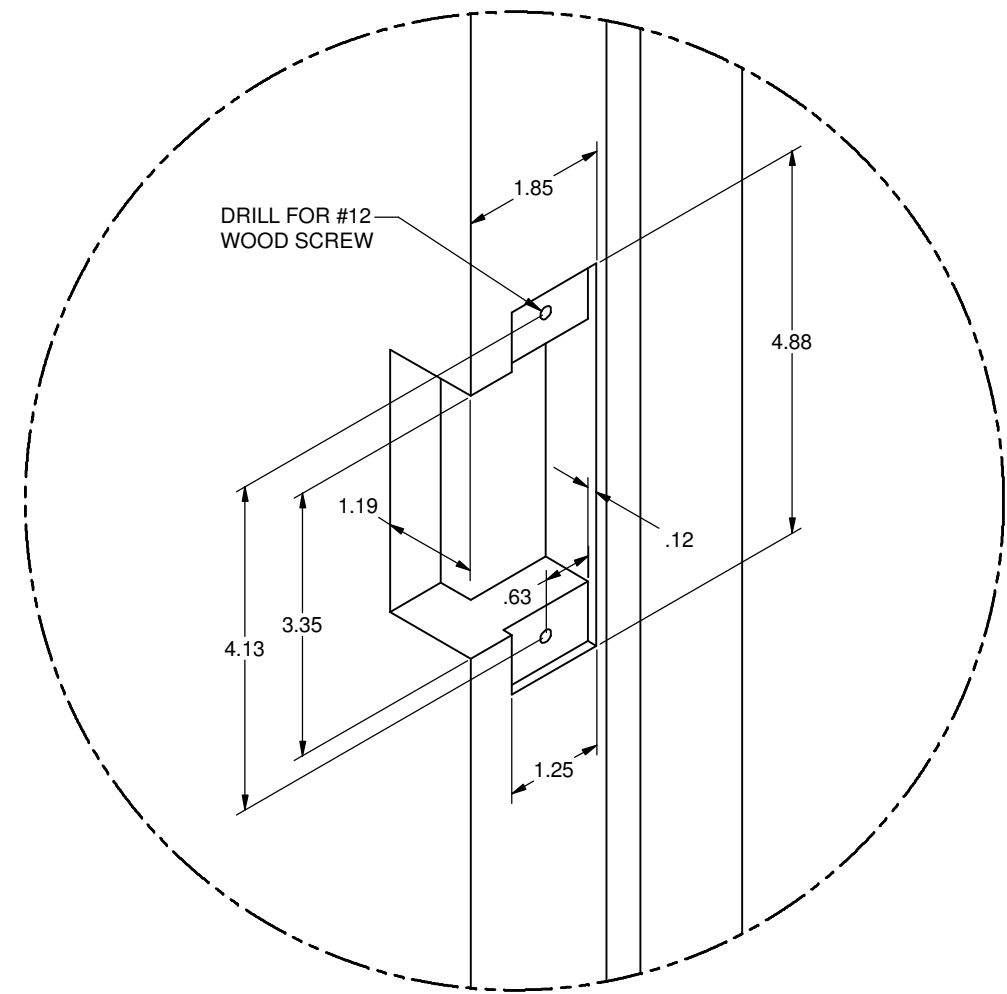
JAM STYLE B



JAM STYLE C



JAM STYLE D



DETAIL A

NOTES:

THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED JAM STYLES AND STRIKE LATCH / MILLWORK INTERFACE.

CLEARANCE AND/OR OPENINGS INSIDE THE MILLWORK WALLS MUST BE PROVIDED FOR ROUTING OF ELECTRIC STRIKE LATCH WIRING.

REFER TO DRAWING 910-0026 FOR ADDITIONAL RECOMMENDED MILLWORK WALL INTERFACE DESIGN PRINCIPLES.

ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT, AS WELL AS DOORS / GATES AND JAMS ARE FURNISHED AND INSTALLED BY OTHERS.



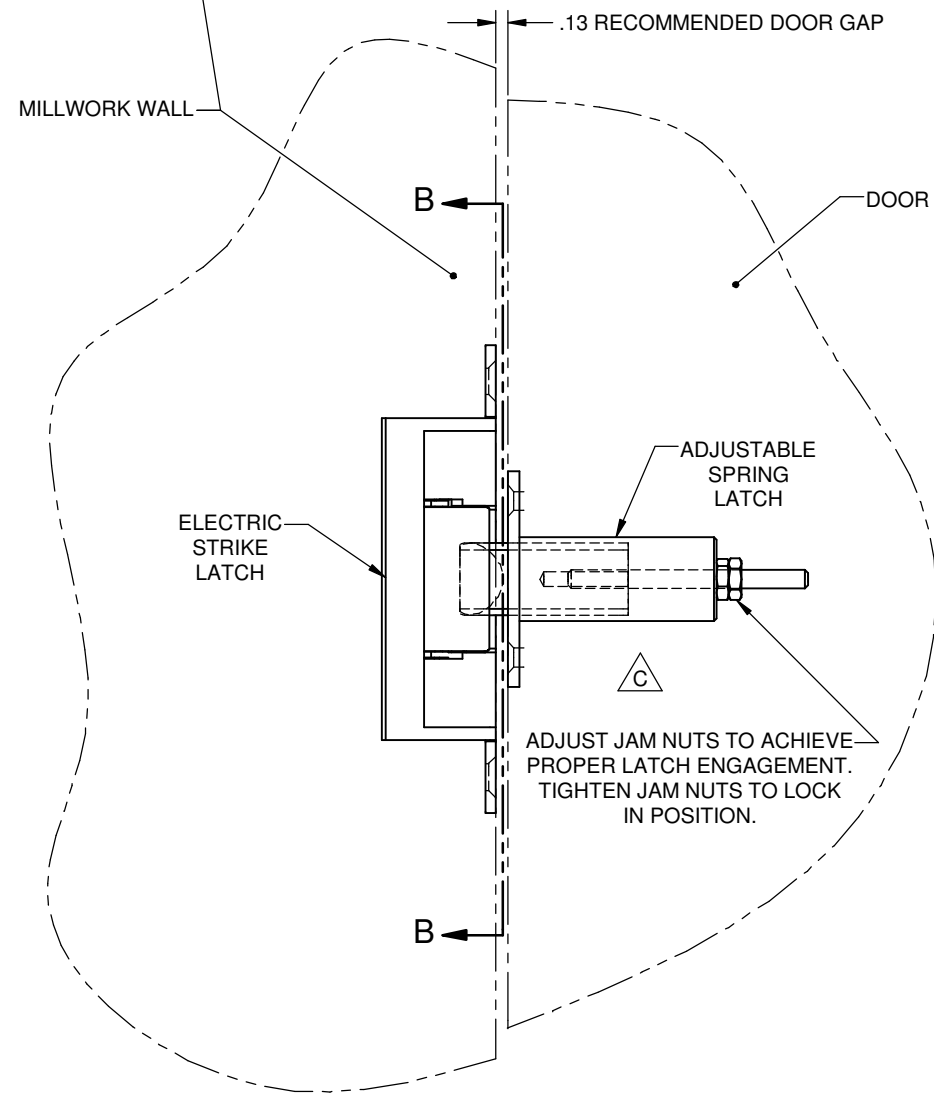
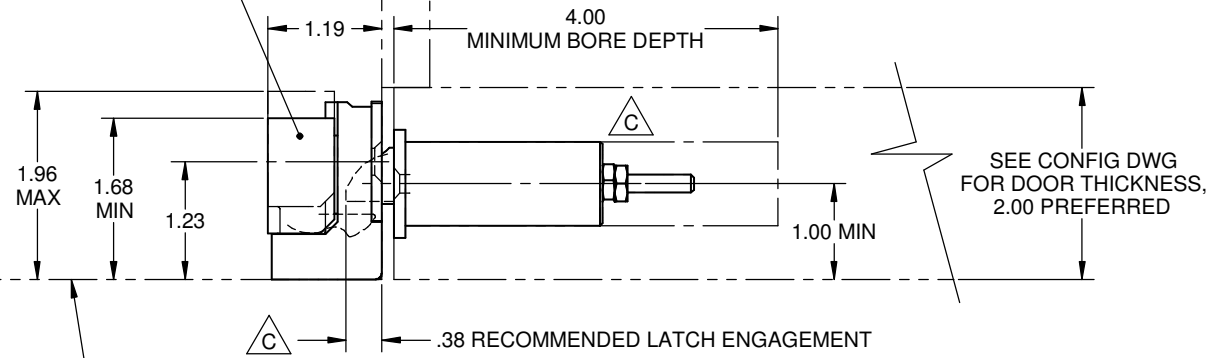
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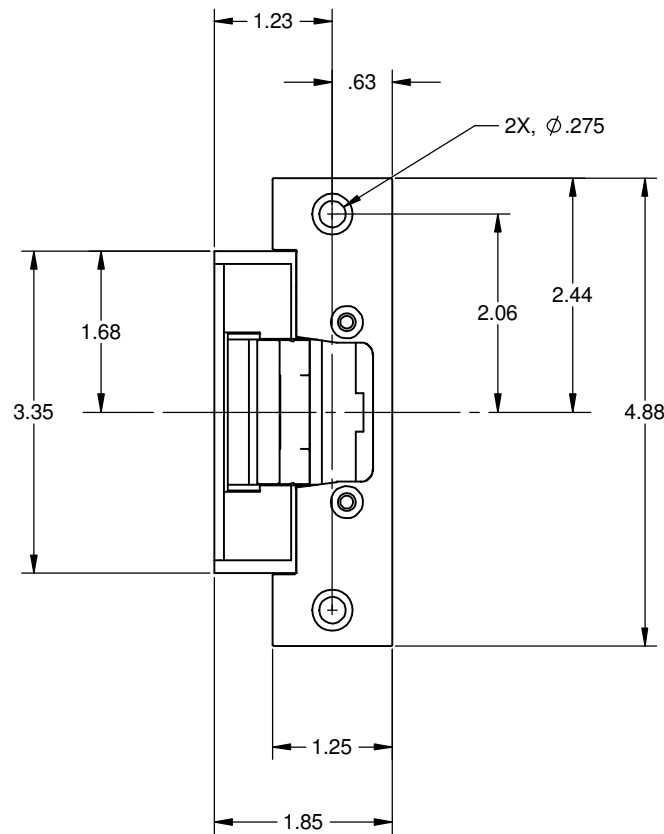
TITLE STRIKE LATCH / MILLWORK INTERFACE

DOCUMENT NO. 910-0056 SHEET NO. 1 OF 2 REVISION C

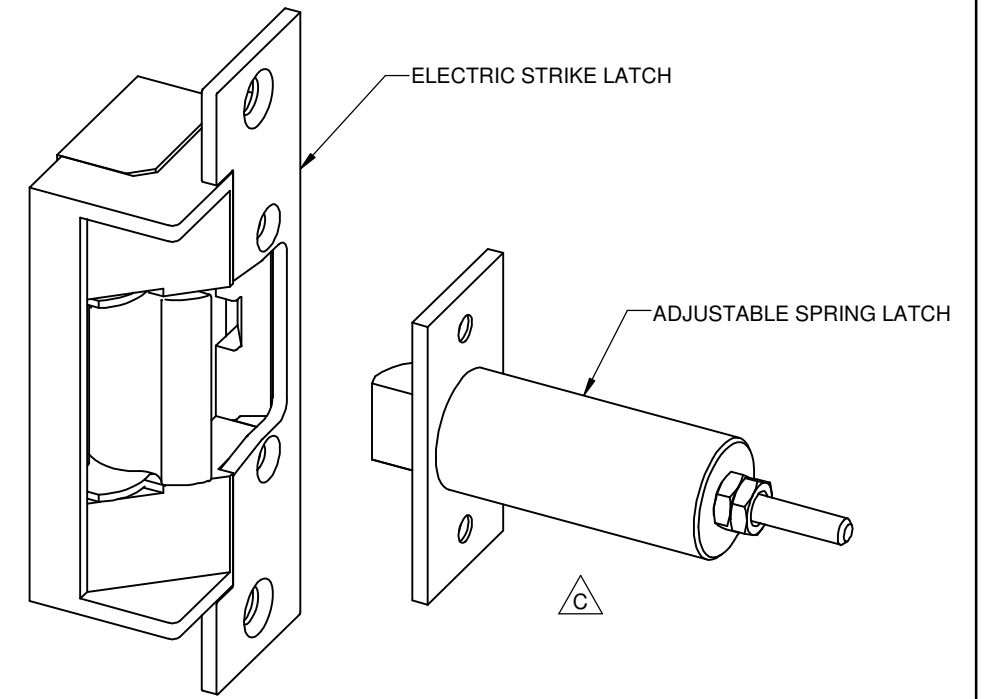
STRIKE INSERT MAY BE ADJUSTED FOR PROPER ALIGNMENT WITH SPRING LATCH



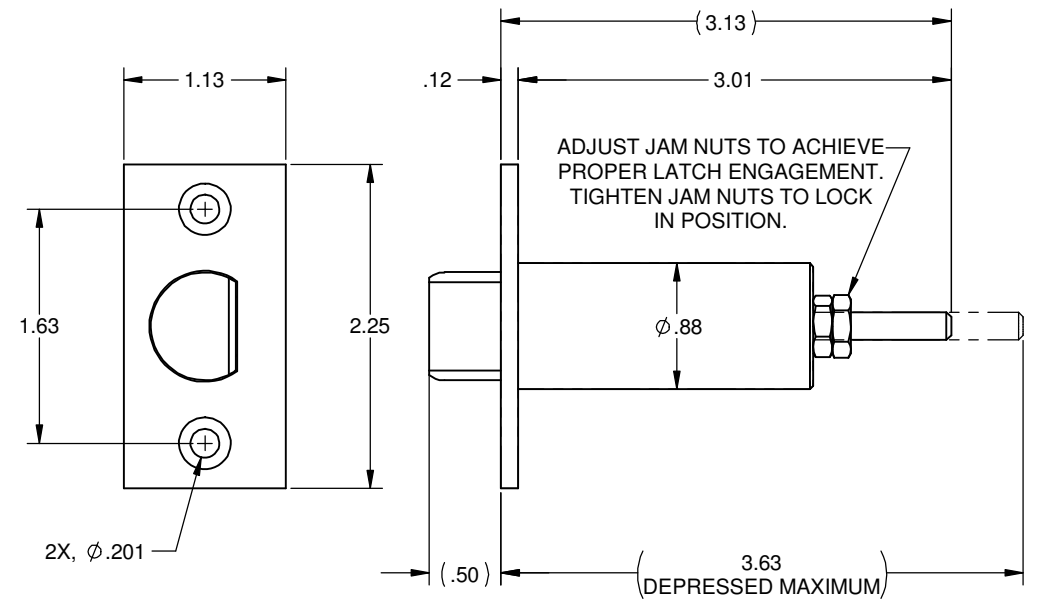
ELEVATION VIEW OF LOCKSET INTERFACE



SECTION B-B



PERSPECTIVE VIEW OF LOCKSET



ADJUSTABLE SPRING LATCH DIMENSIONS



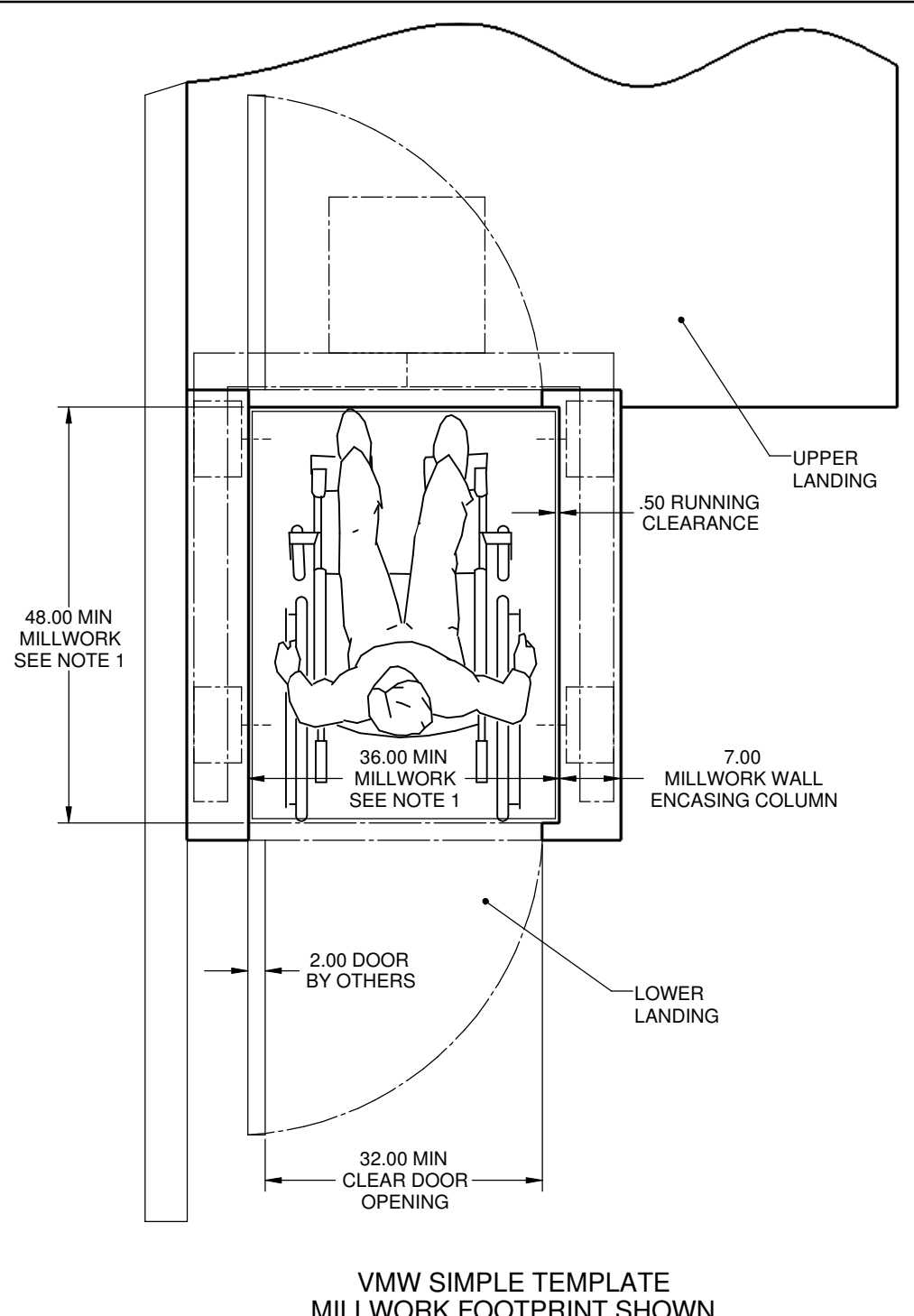
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TITLE STRIKE LATCH / MILLWORK INTERFACE

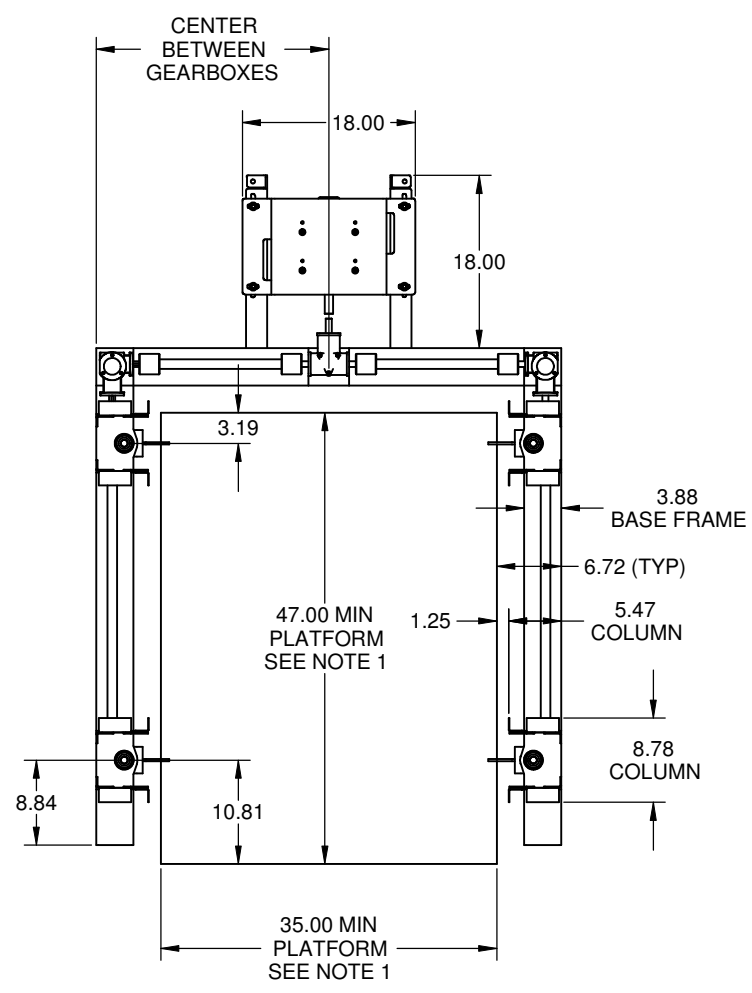
DOCUMENT NO. 910-0056 SHEET NO. 2 OF 2 REVISION C

REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	CAL	3/4/09		
B		UPDATED PER CURRENT DESIGNS	WAC	10-18-11		

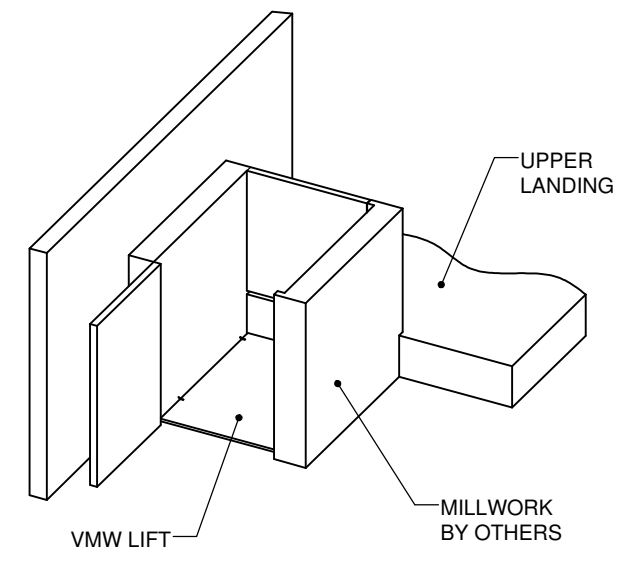


VMW SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN

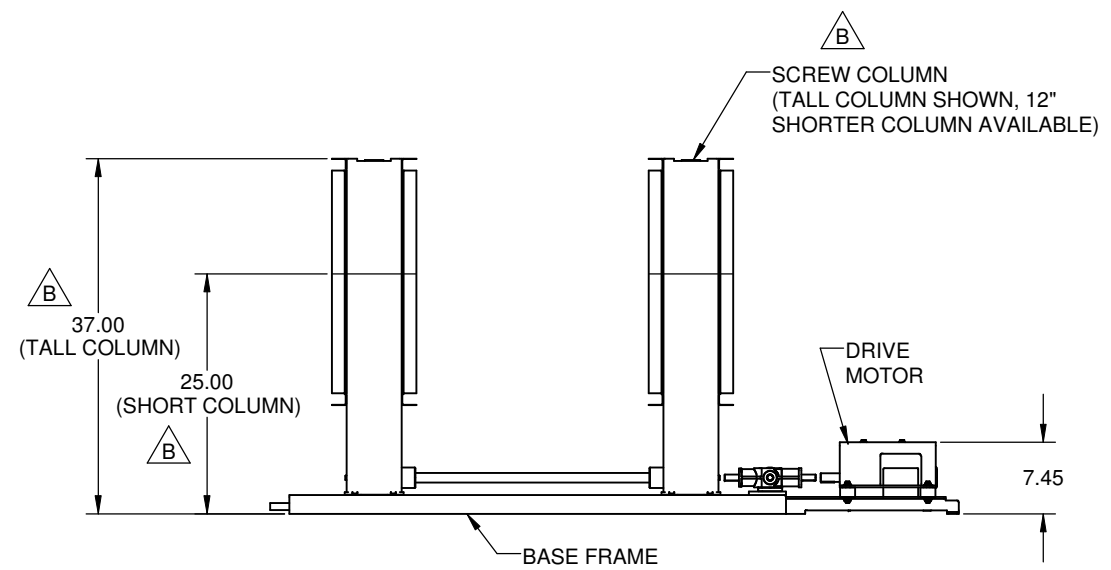
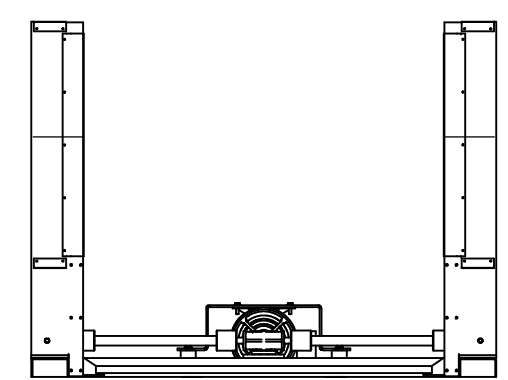
- NOTES:
1. MINIMUM PLATFORM DIMENSIONS ARE SHOWN. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 74" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMW.
 2. MAXIMUM VERTICAL TRAVEL IS 24".
 3. FOR LIFT APPLICATIONS THAT DO NOT CORRESPOND WITH LIFT-U'S STANDARD TEMPLATES, CONTACT LIFT-U FOR EVALUATION.
 4. FOR ADDITIONAL INFORMATION, INCLUDING MILLWORK INTERFACE DETAILS, REFER TO VMW LIFT APPLICATION GUIDELINES.



VMW DETAILED LIFT TEMPLATE



PERSPECTIVE VIEW

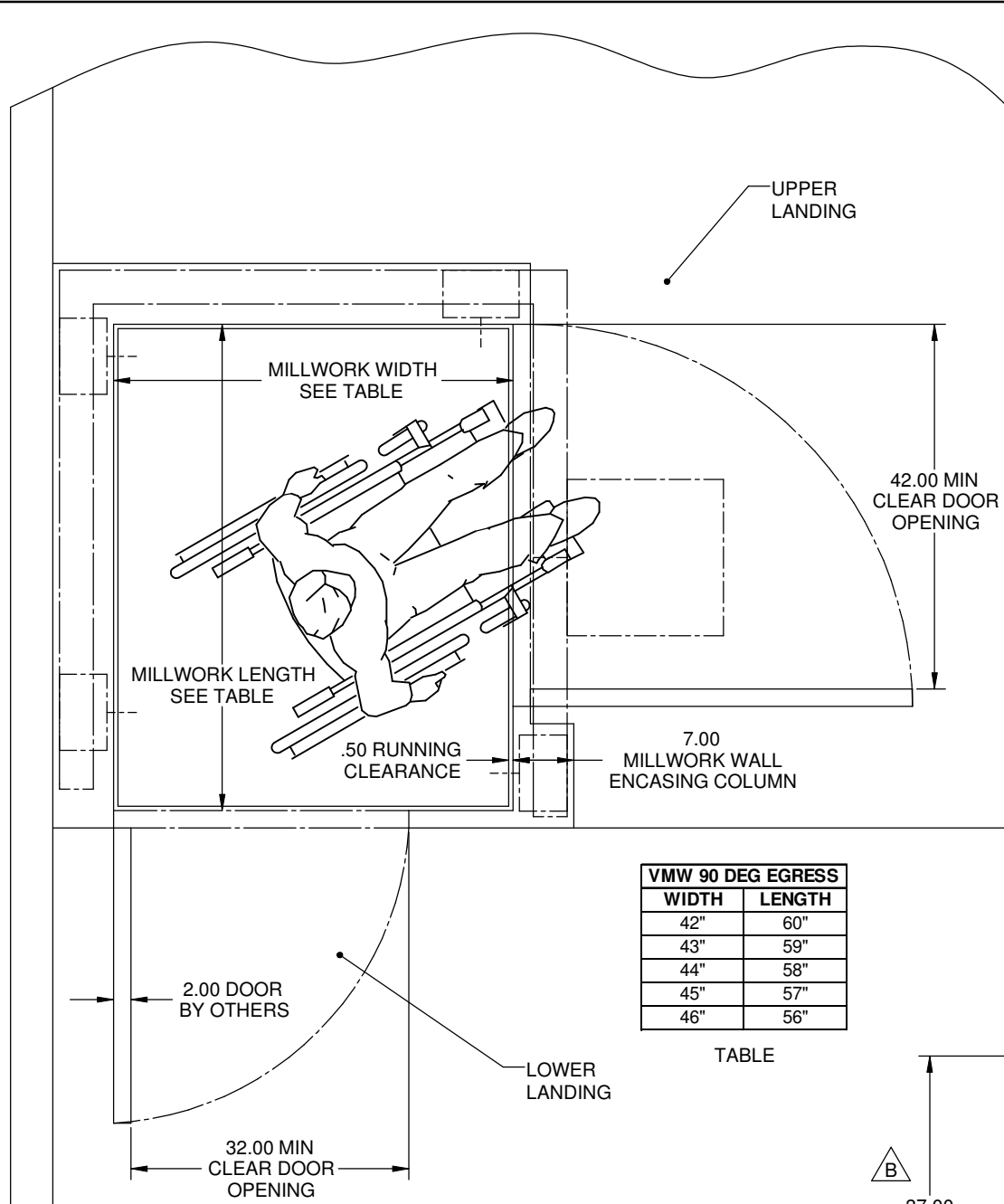


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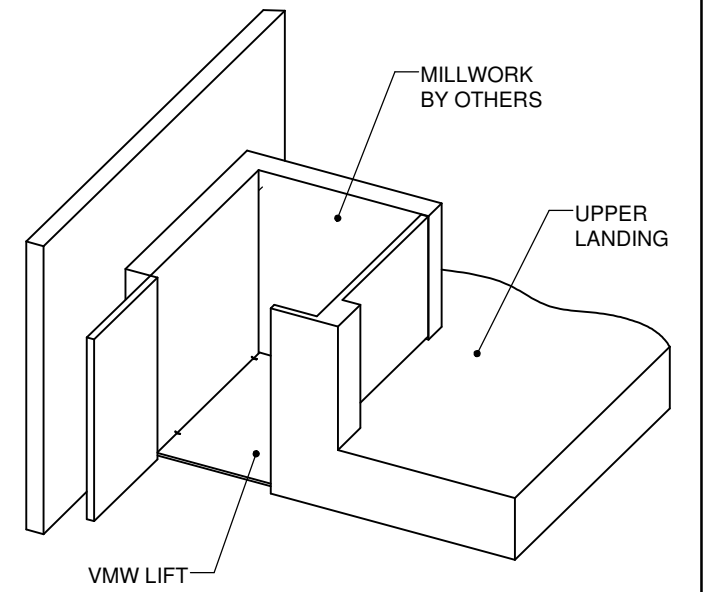
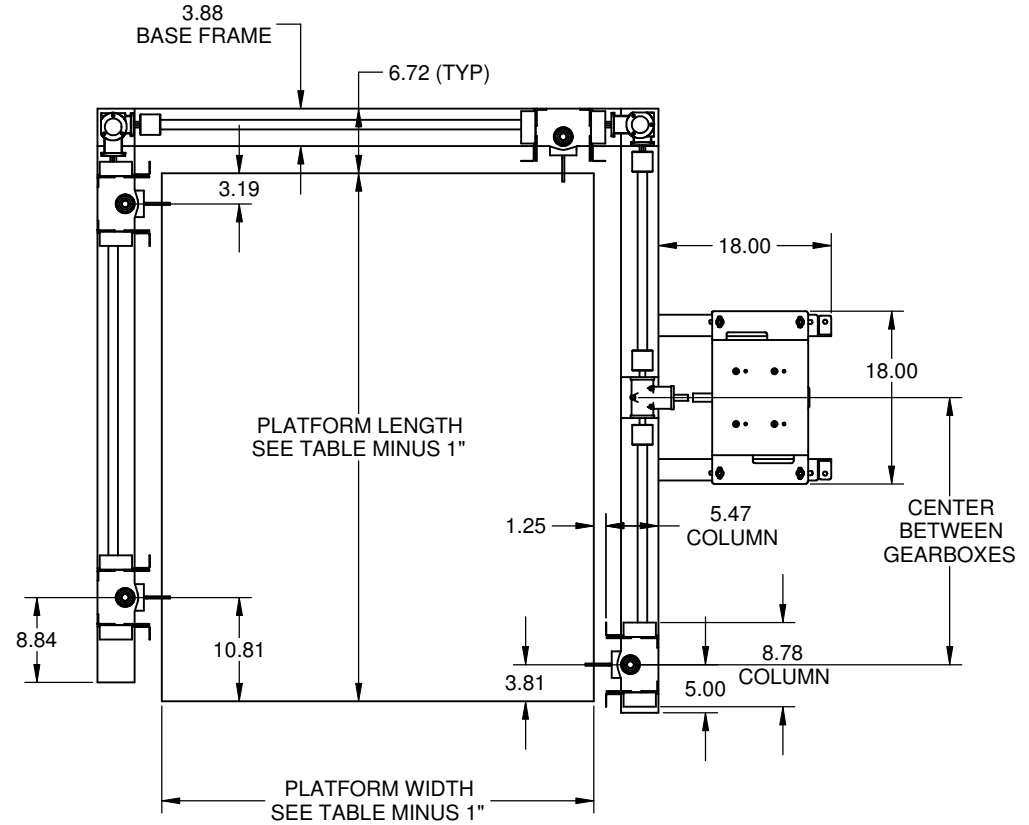
TITLE	VMW TEMPLATE, LAYOUT A		
DOCUMENT NO.	910-0064	SHEET NO.	1 OF 1
		REVISION	B

REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	CAL	3/4/09		
B		UPDATED PER CURRENT DESIGNS	WAC	10-18-11		



VMW 90 DEG EGRESS	
WIDTH	LENGTH
42"	60"
43"	59"
44"	58"
45"	57"
46"	56"

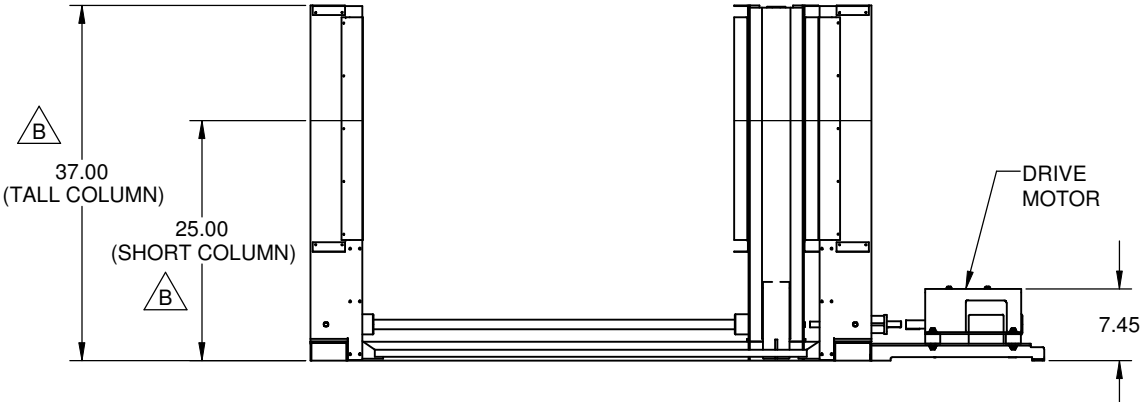
TABLE



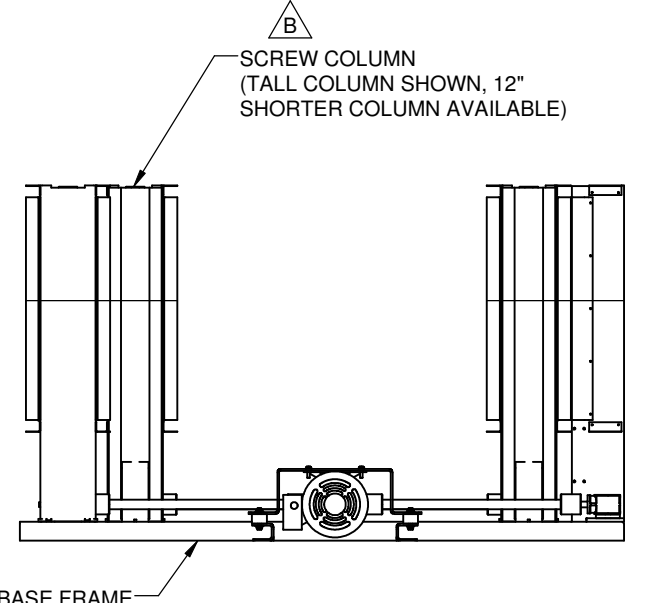
PERSPECTIVE VIEW

VMW SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN

- NOTES:
- SPECIFIC TO THIS CONFIGURATION, THE MINIMUM PLATFORM WIDTH CORRESPONDS TO THE MINIMUM PLATFORM LENGTH - REFER TO TABLE. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 74" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMW.
 - MAXIMUM VERTICAL TRAVEL IS 24".
 - FOR LIFT APPLICATIONS THAT DO NOT CORRESPOND WITH LIFT-U'S STANDARD TEMPLATES, CONTACT LIFT-U FOR EVALUATION.
 - FOR ADDITIONAL INFORMATION, INCLUDING MILLWORK INTERFACE DETAILS, REFER TO VMW LIFT APPLICATION GUIDELINES.



VMW DETAILED LIFT TEMPLATE

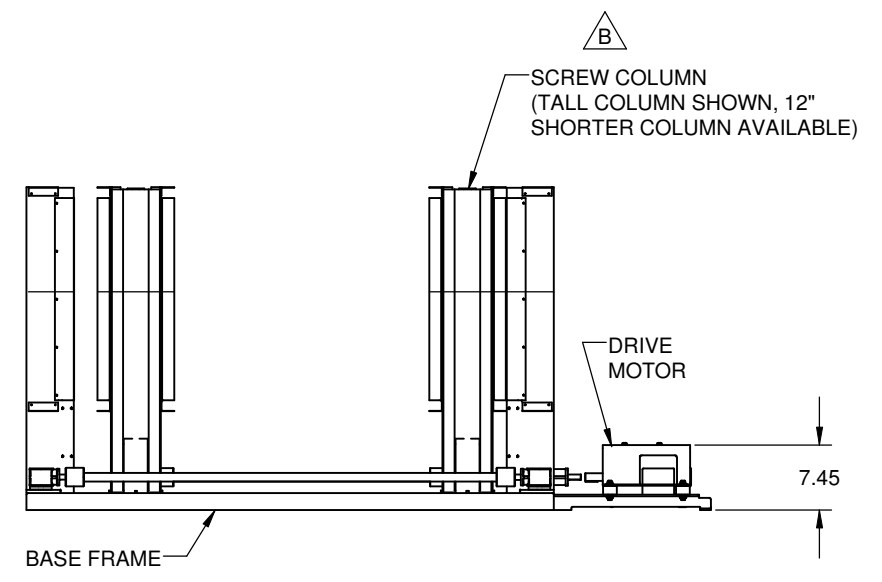
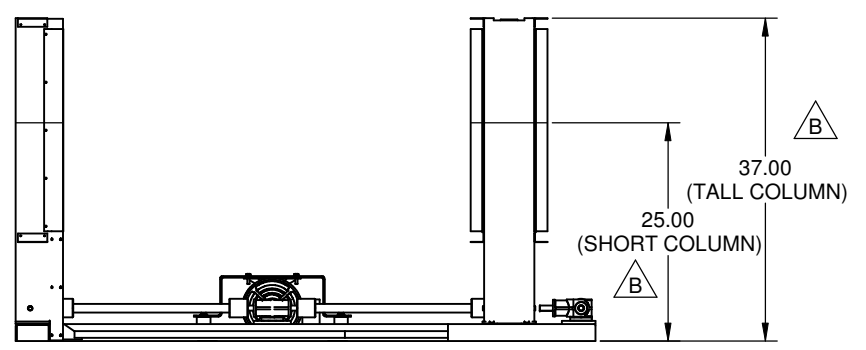
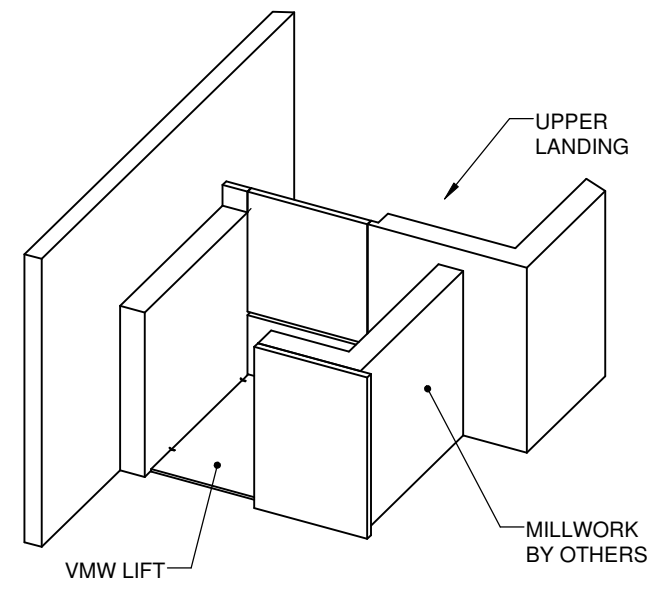
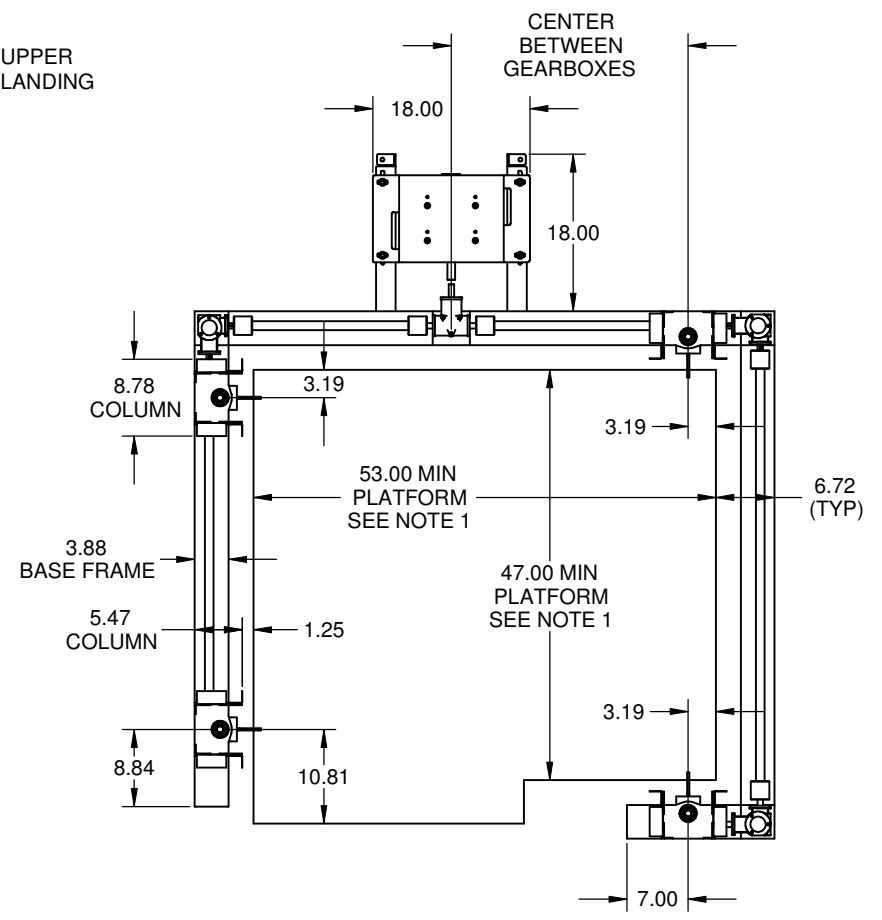
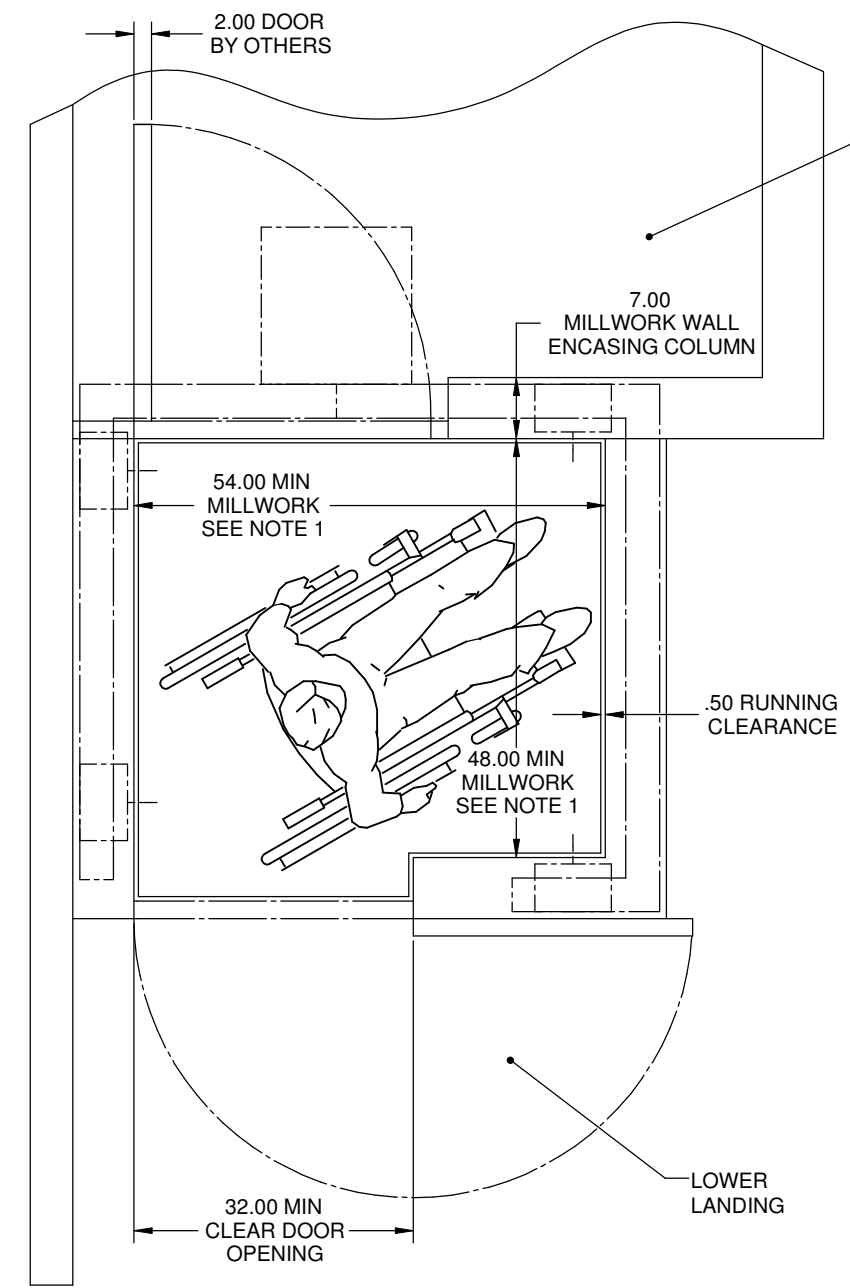


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TITLE	VMW TEMPLATE, LAYOUT B		
DOCUMENT NO.	910-0065	SHEET NO.	1 OF 1
		REVISION	B


REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	CAL	3/4/09		
B		UPDATED PER CURRENT DESIGNS	WAC	10-18-11		



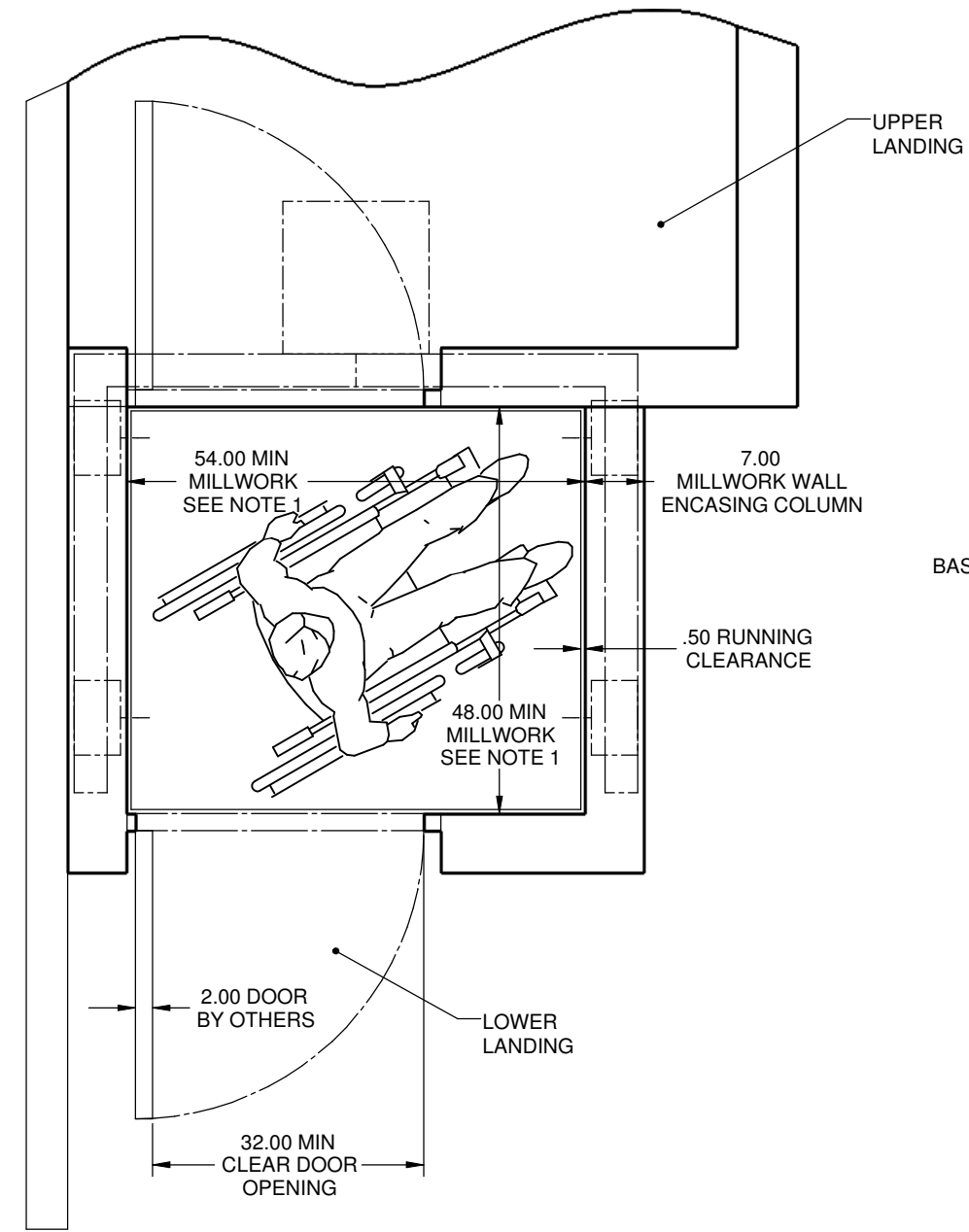
VMW SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN

VMW DETAILED LIFT TEMPLATE

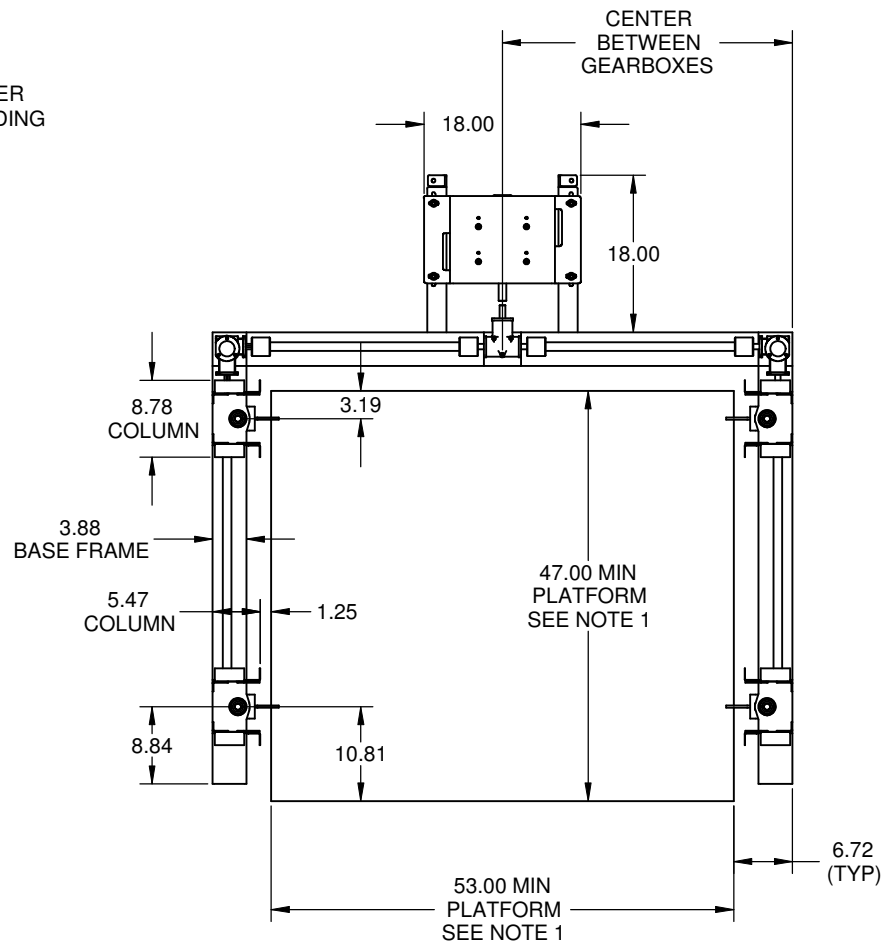
- NOTES:
1. MINIMUM PLATFORM DIMENSIONS ARE SHOWN. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 74" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMW.
 2. MAXIMUM VERTICAL TRAVEL IS 24".
 3. FOR LIFT APPLICATIONS THAT DO NOT CORRESPOND WITH LIFT-U'S STANDARD TEMPLATES, CONTACT LIFT-U FOR EVALUATION.
 4. FOR ADDITIONAL INFORMATION, INCLUDING MILLWORK INTERFACE DETAILS, REFER TO VMW LIFT APPLICATION GUIDELINES.

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TITLE VMW TEMPLATE, LAYOUT C		
DOCUMENT NO. 910-0066	SHEET NO. 1 OF 1	REVISION B

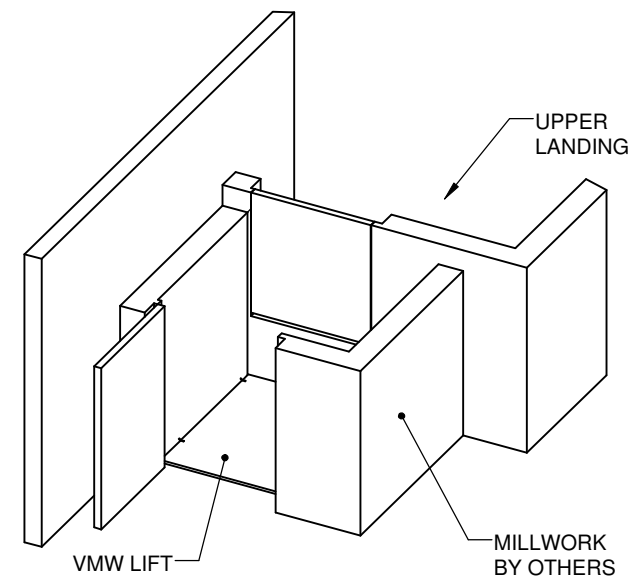
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REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	CAL	3/4/09		
B		UPDATED PER CURRENT DESIGNS	WAC	10-18-11		



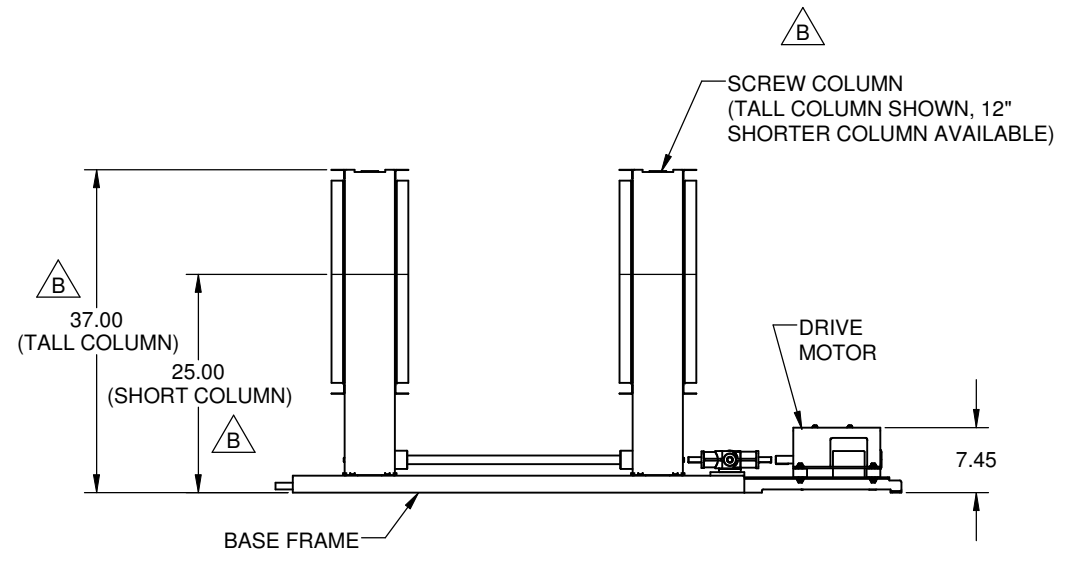
VMW SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN




VMW DETAILED LIFT TEMPLATE



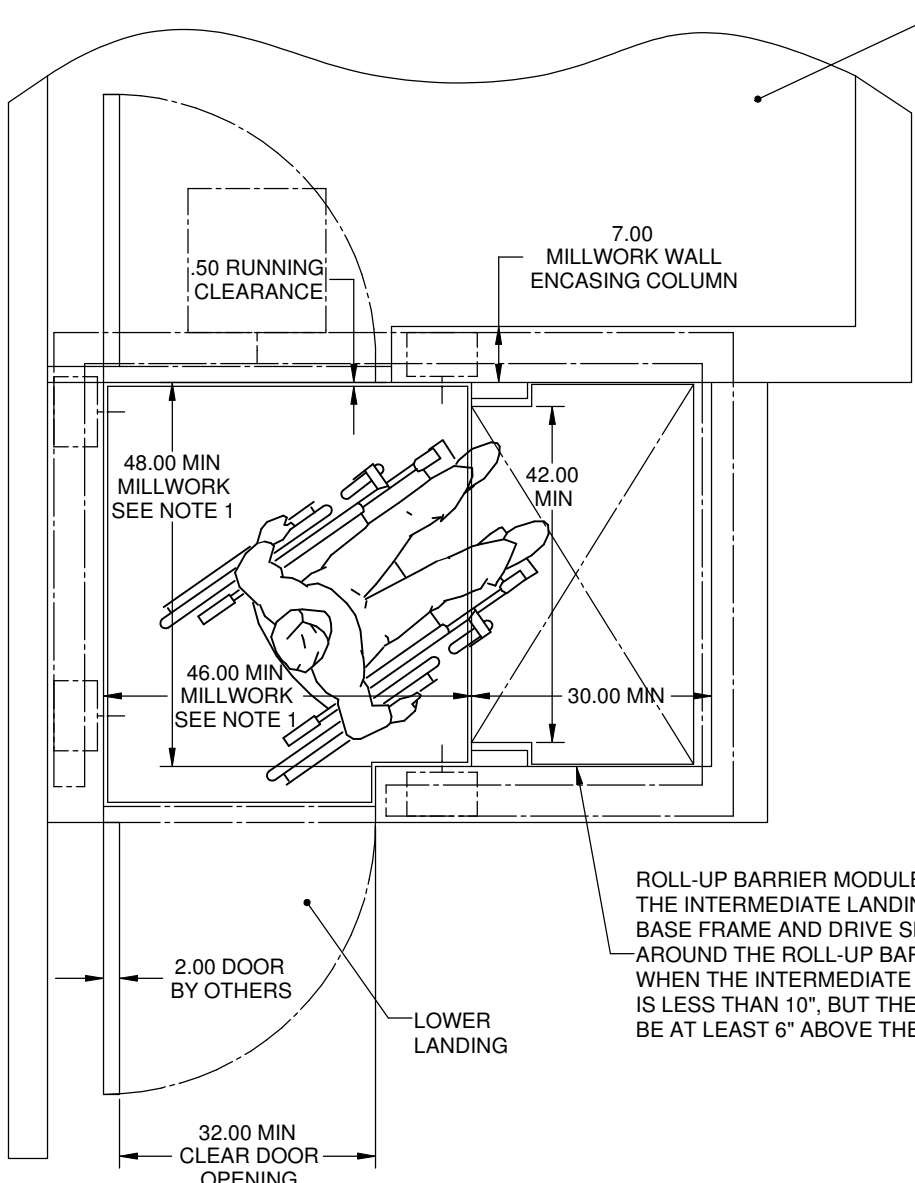
PERSPECTIVE VIEW



- NOTES:
1. MINIMUM PLATFORM DIMENSIONS ARE SHOWN. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 74" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMW.
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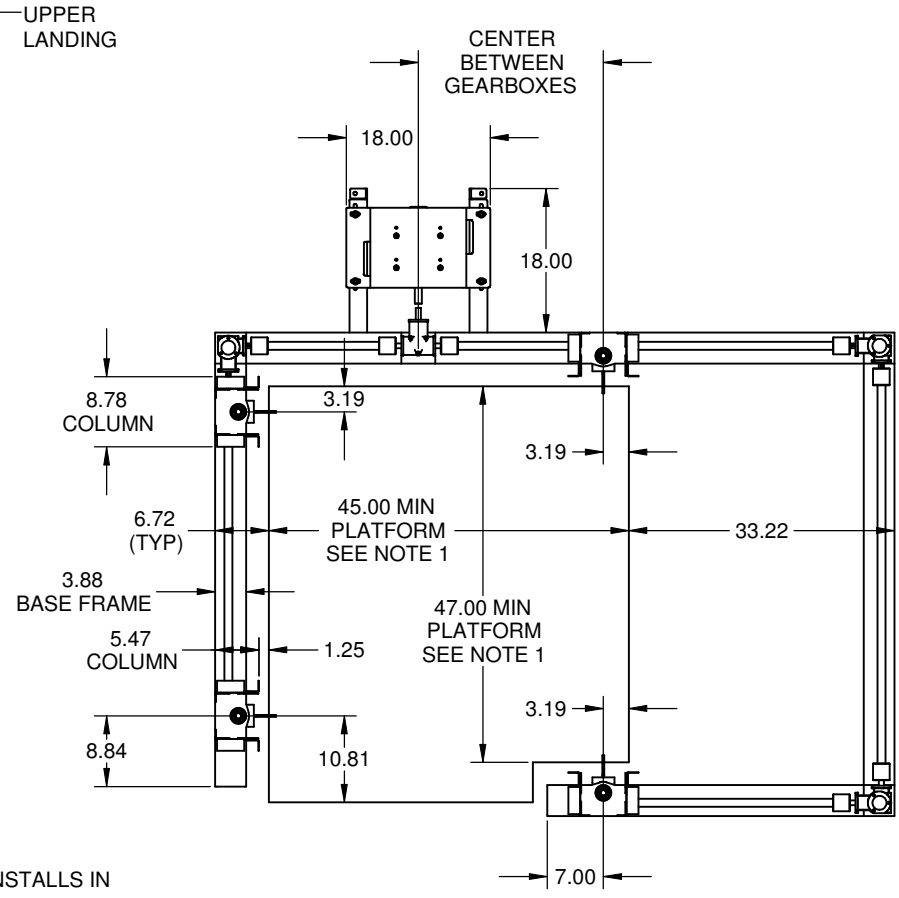
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	TITLE VMW TEMPLATE, LAYOUT D	
DOCUMENT NO. 910-0067	SHEET NO. 1 OF 1	REVISION B

REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
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B		UPDATED PER CURRENT DESIGNS	WAC	10-18-11		

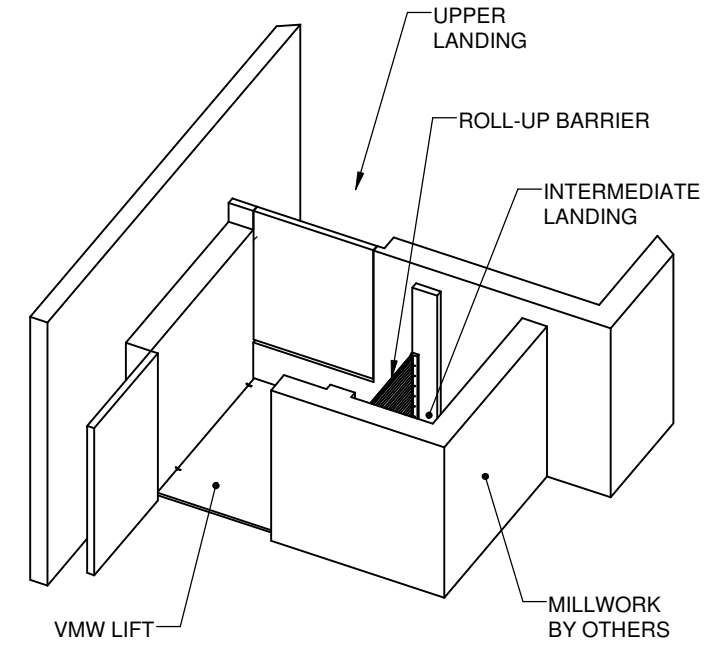


VMW SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN

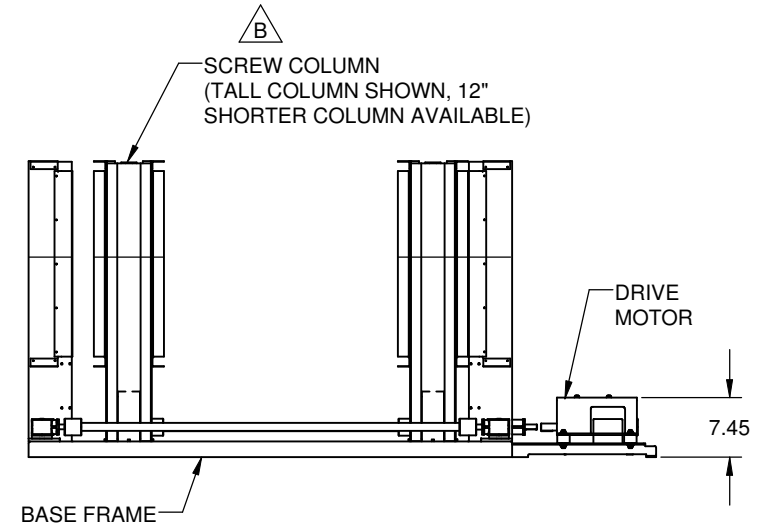
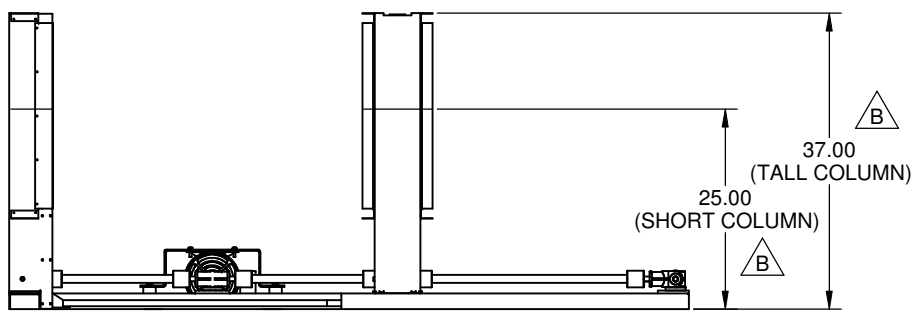
- NOTES:
1. MINIMUM PLATFORM DIMENSIONS CORRESPOND WITH MINIMUM DOOR OPENINGS AND SCREW COLUMN ORIENTATION. SUBSEQUENTLY, INCREASING THE DOOR OPENINGS ALSO INCREASES THE MINIMUM PLATFORM DIMENSIONS. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 74" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMW.
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 4. FOR ADDITIONAL INFORMATION, INCLUDING MILLWORK INTERFACE DETAILS, REFER TO VMW LIFT APPLICATION GUIDELINES.




VMW DETAILED LIFT TEMPLATE



PERSPECTIVE VIEW





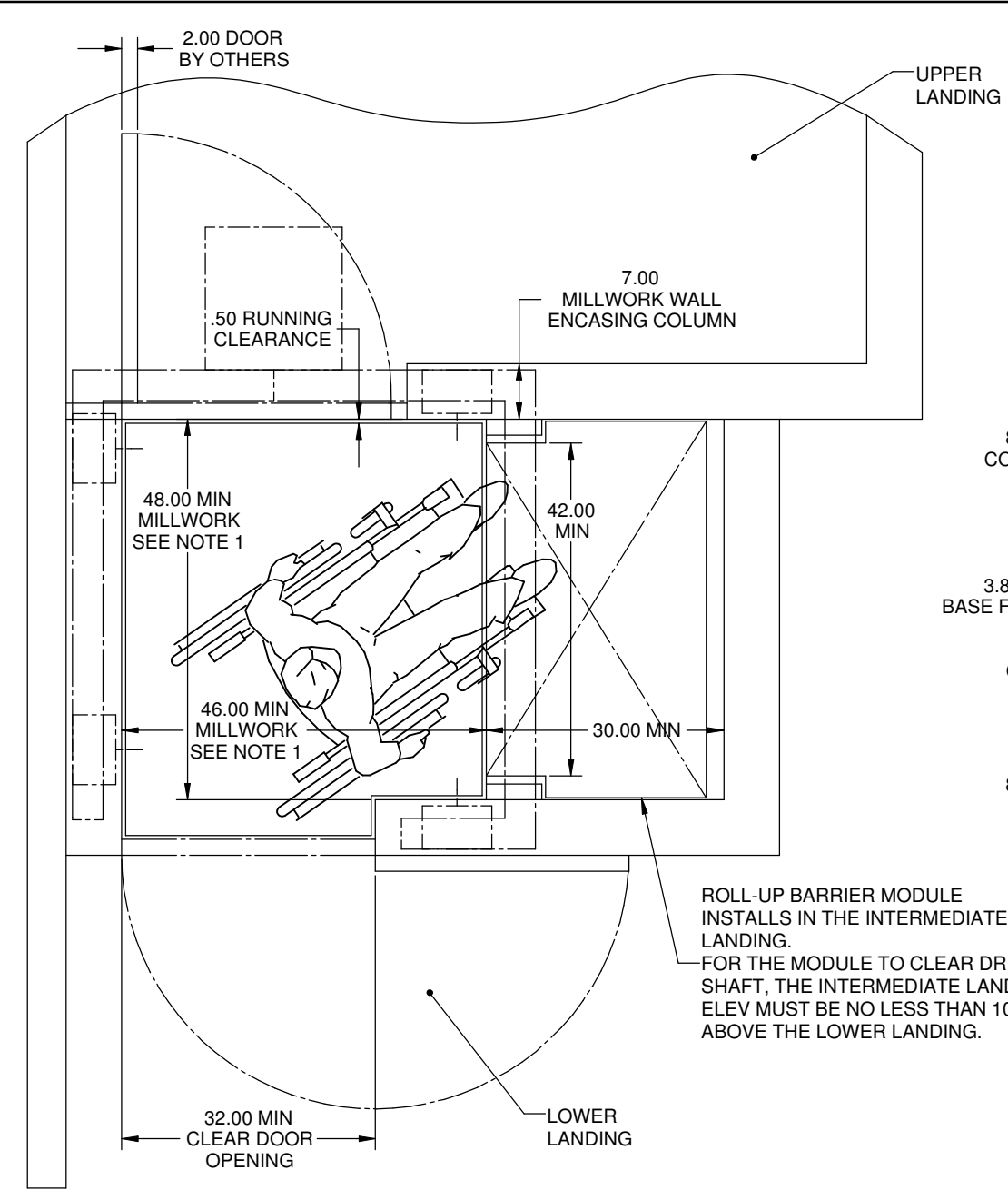
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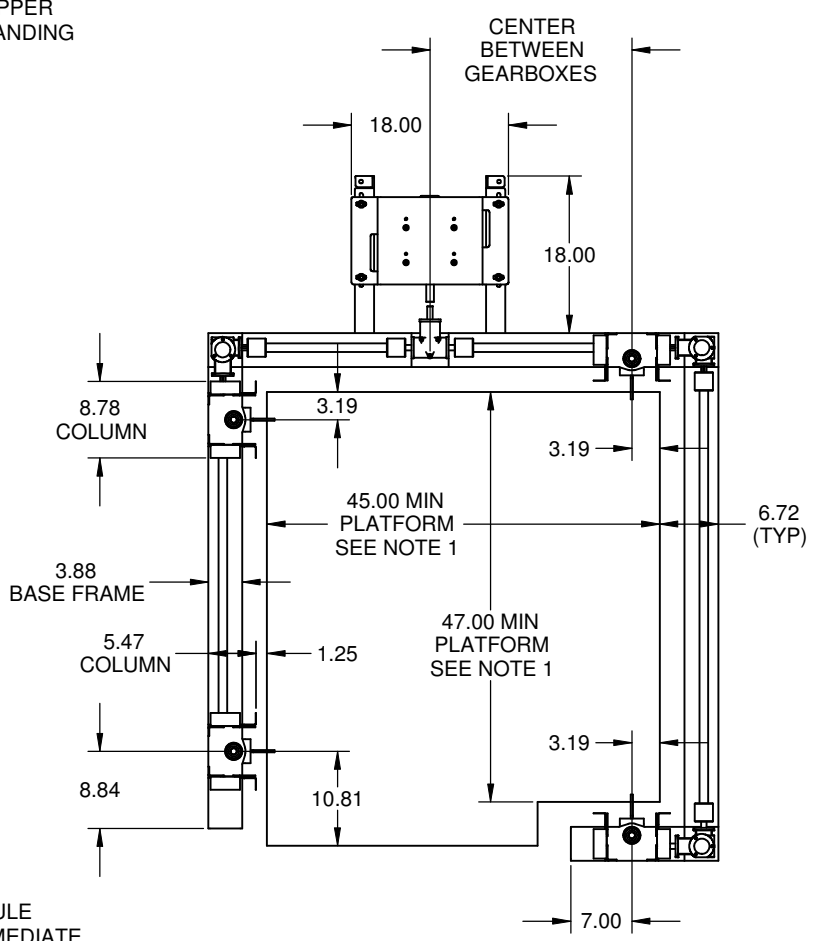
TITLE	VMW TEMPLATE, LAYOUT E		
DOCUMENT NO.	910-0068	SHEET NO.	1 OF 1
		REVISION	B

REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	CAL	3/4/09		
B		UPDATED PER CURRENT DESIGNS	WAC	10-18-11		

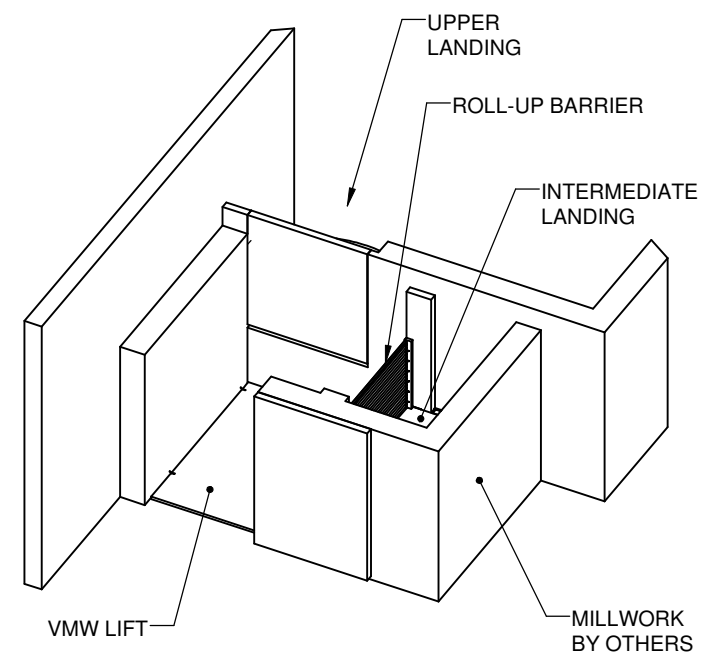


VMW SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN

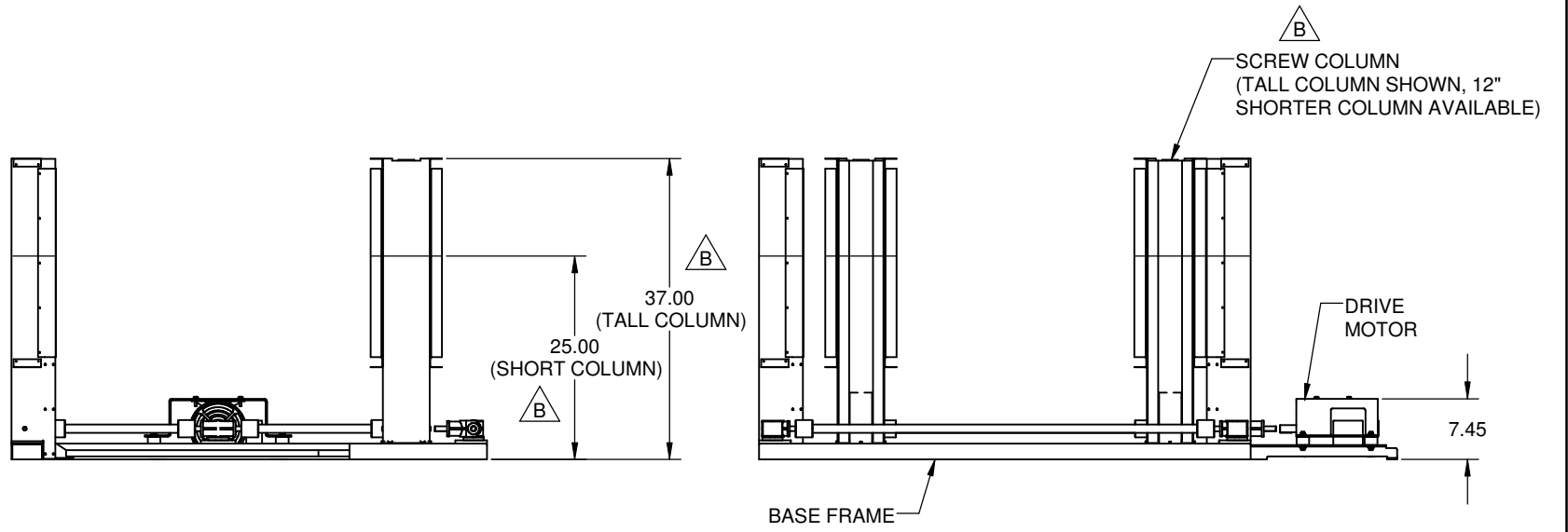
- NOTES:
1. MINIMUM PLATFORM DIMENSIONS CORRESPOND WITH MINIMUM DOOR OPENINGS AND SCREW COLUMN ORIENTATION. SUBSEQUENTLY, INCREASING THE DOOR OPENINGS ALSO INCREASES THE MINIMUM PLATFORM DIMENSIONS. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 74" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMW.
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 4. FOR ADDITIONAL INFORMATION, INCLUDING MILLWORK INTERFACE DETAILS, REFER TO VMW LIFT APPLICATION GUIDELINES.




VMW DETAILED LIFT TEMPLATE

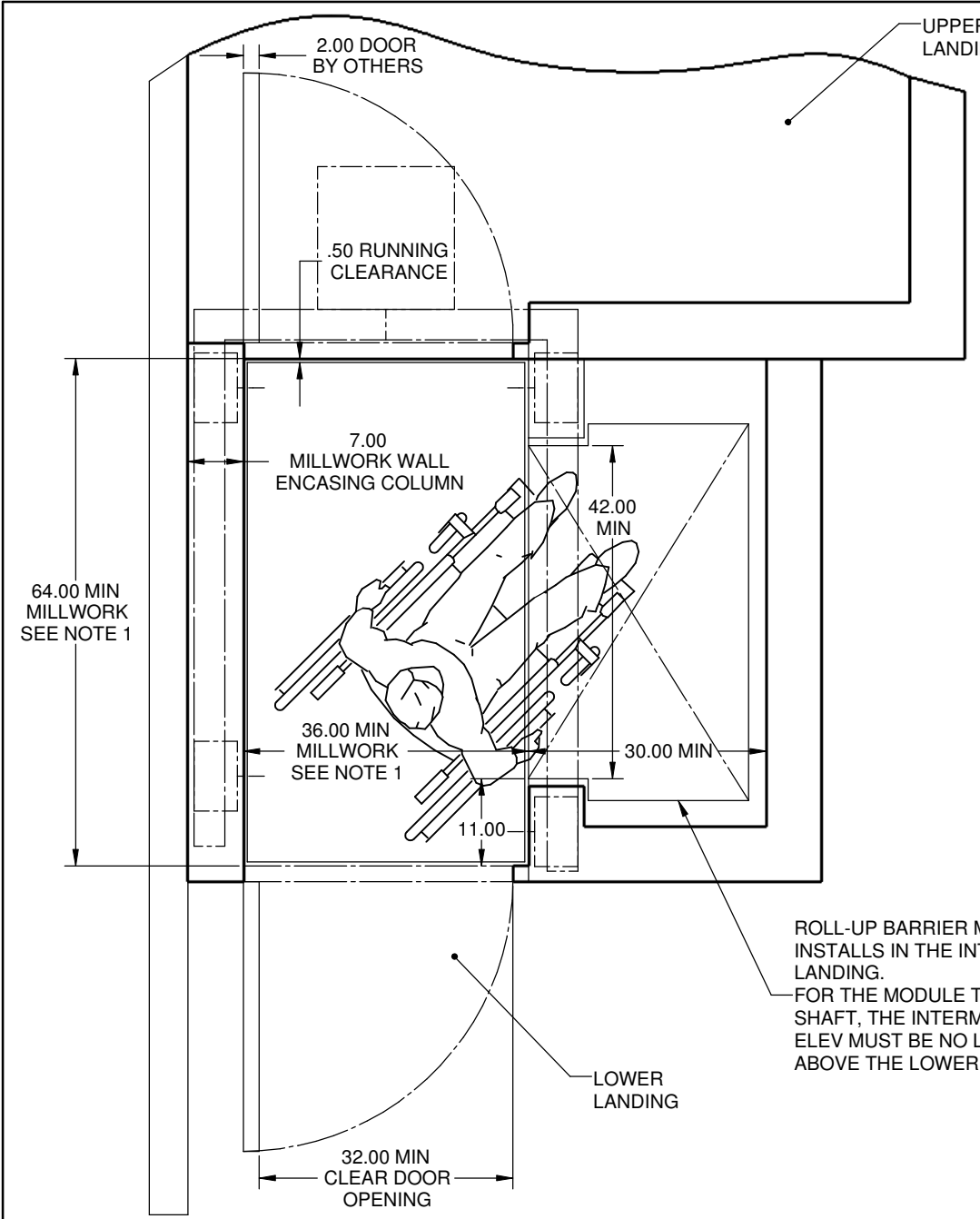


PERSPECTIVE VIEW



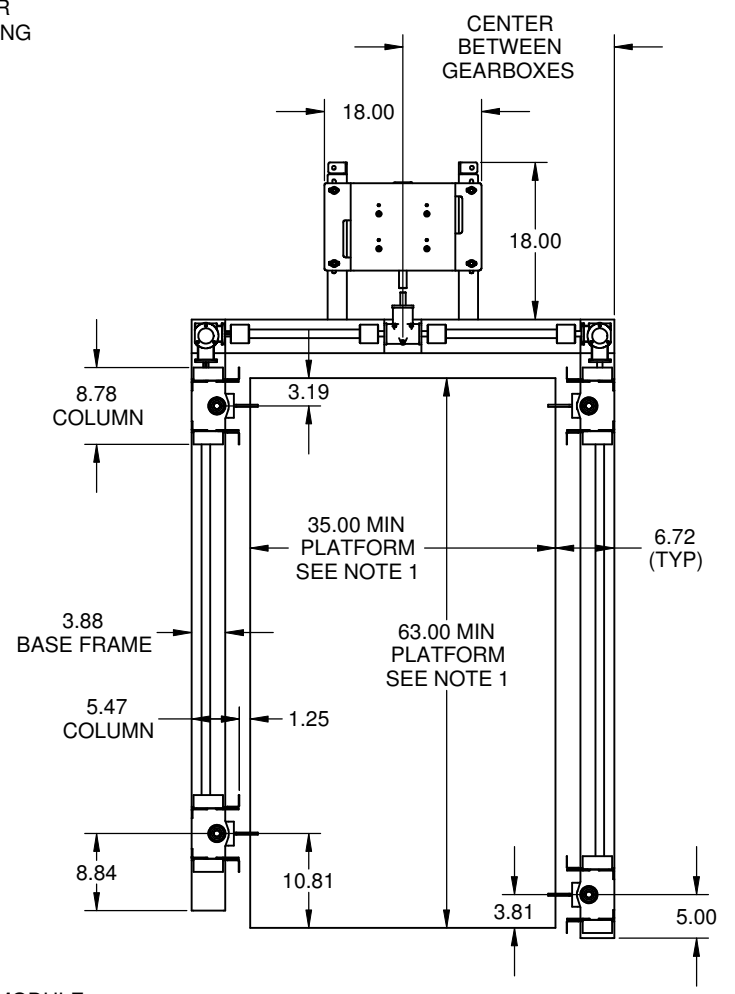
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	TITLE VMW TEMPLATE, LAYOUT F	
DOCUMENT NO. 910-0069	SHEET NO. 1 OF 1	REVISION B

REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	CAL	3/4/09		
B		UPDATED PER CURRENT DESIGNS	WAC	10-18-11		

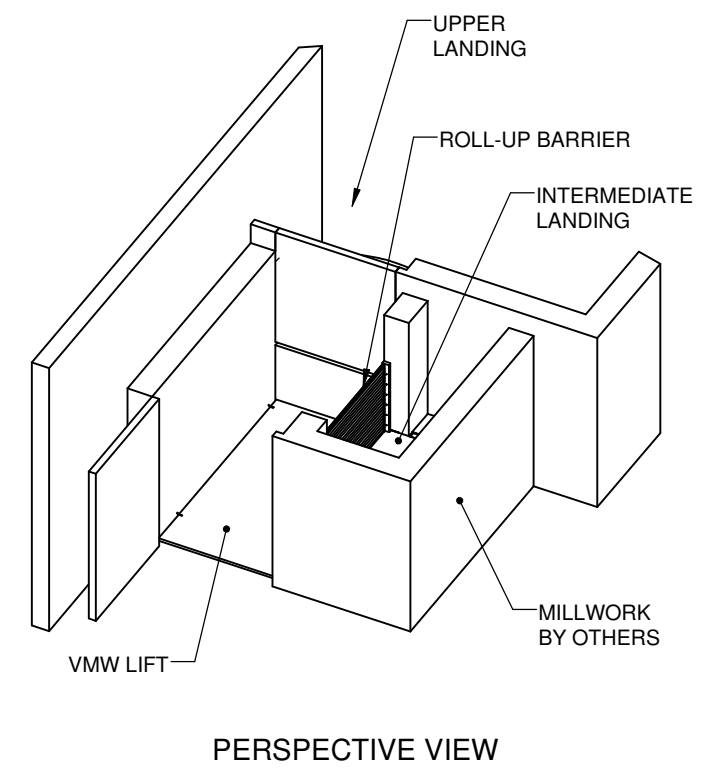


VMW SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN

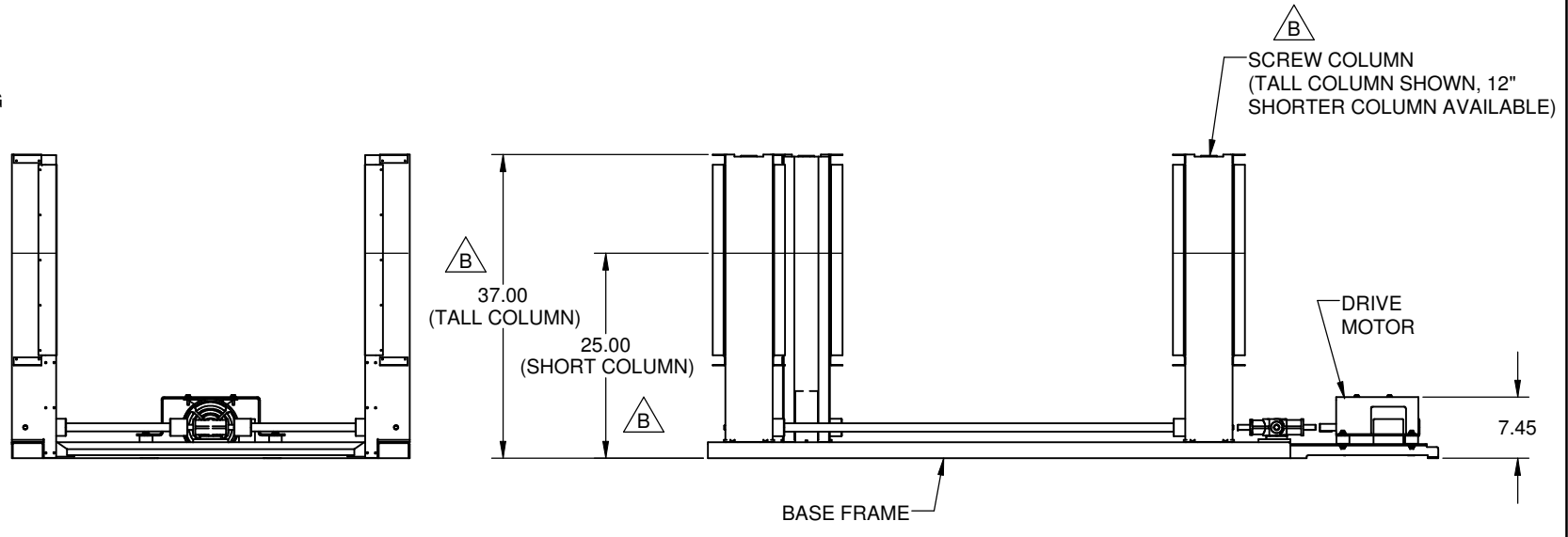
- NOTES:
1. MINIMUM PLATFORM DIMENSIONS CORRESPOND WITH MINIMUM DOOR OPENINGS AND SCREW COLUMN ORIENTATION. SUBSEQUENTLY, INCREASING THE DOOR OPENINGS ALSO INCREASES THE MINIMUM PLATFORM DIMENSIONS. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 74" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMW.
 2. MAXIMUM VERTICAL TRAVEL IS 24".
 3. FOR LIFT APPLICATIONS THAT DO NOT CORRESPOND WITH LIFT-U'S STANDARD TEMPLATES, CONTACT LIFT-U FOR EVALUATION.
 4. FOR ADDITIONAL INFORMATION, INCLUDING MILLWORK INTERFACE DETAILS, REFER TO VMW LIFT APPLICATION GUIDELINES.



VMW DETAILED LIFT TEMPLATE

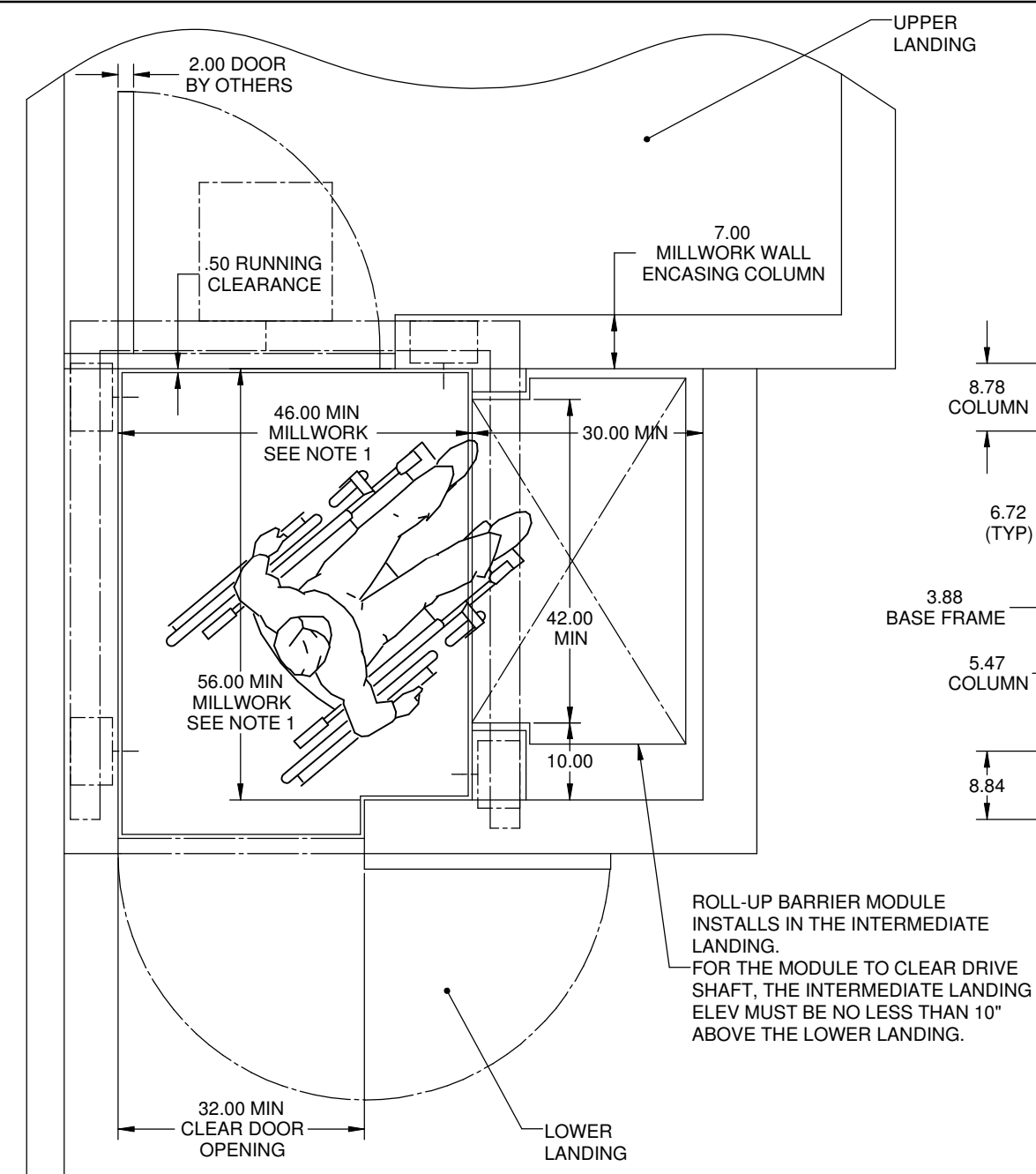


ROLL-UP BARRIER MODULE INSTALLS IN THE INTERMEDIATE LANDING. FOR THE MODULE TO CLEAR DRIVE SHAFT, THE INTERMEDIATE LANDING ELEV MUST BE NO LESS THAN 10" ABOVE THE LOWER LANDING.



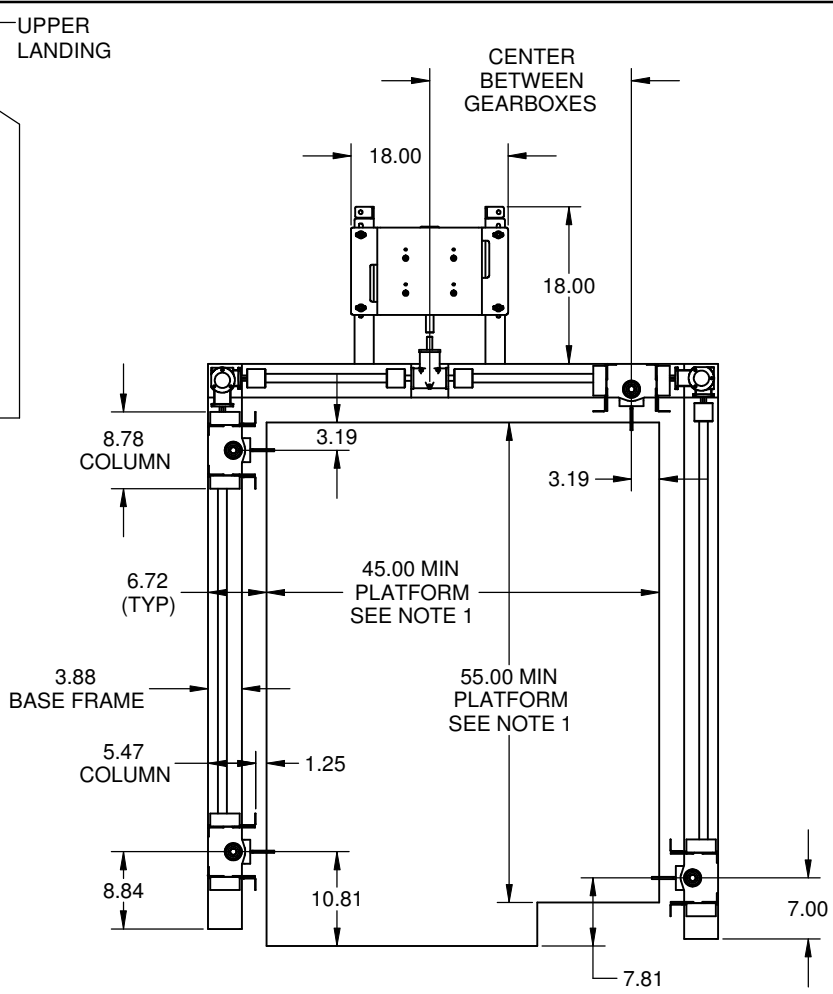
<p>LIFT-U P.O. BOX 398 ESCALON, CA. 95320 209-838-2400</p> <p>A DIVISION OF HOGAN MFG., INC.</p>	<p>THIS DOCUMENT IS AND CONTAINS CONFIDENTIAL TRADE SECRET INFORMATION OF THE COMPANY. NO PART OF IT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS ELECTRONICALLY, PHOTOCOPIING, RECORDING OR OTHERWISE, WITHOUT THE PRIOR WRITTEN PERMISSION OF HOGAN MFG, INC. THIS DOCUMENT IS LOANED FOR THE LIMITED PURPOSES STATED HEREIN ONLY, AND REMAINS THE PROPERTY OF THE COMPANY.</p>	
	<p>TITLE VMW TEMPLATE, LAYOUT G</p>	
DOCUMENT NO. 910-0070	SHEET NO. 1 OF 1	REVISION B

REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	CAL	3/4/09		
B		UPDATED PER CURRENT DESIGNS	WAC	10-18-11		

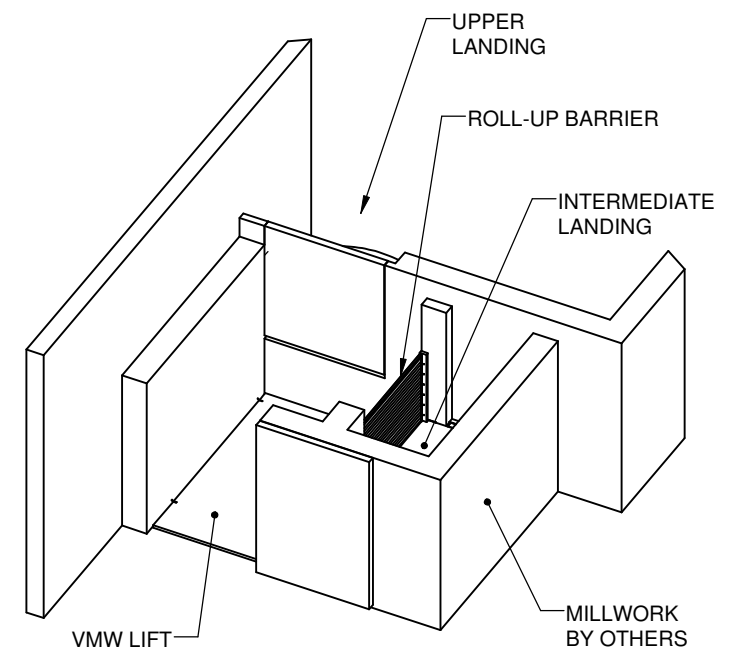


VMW SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN

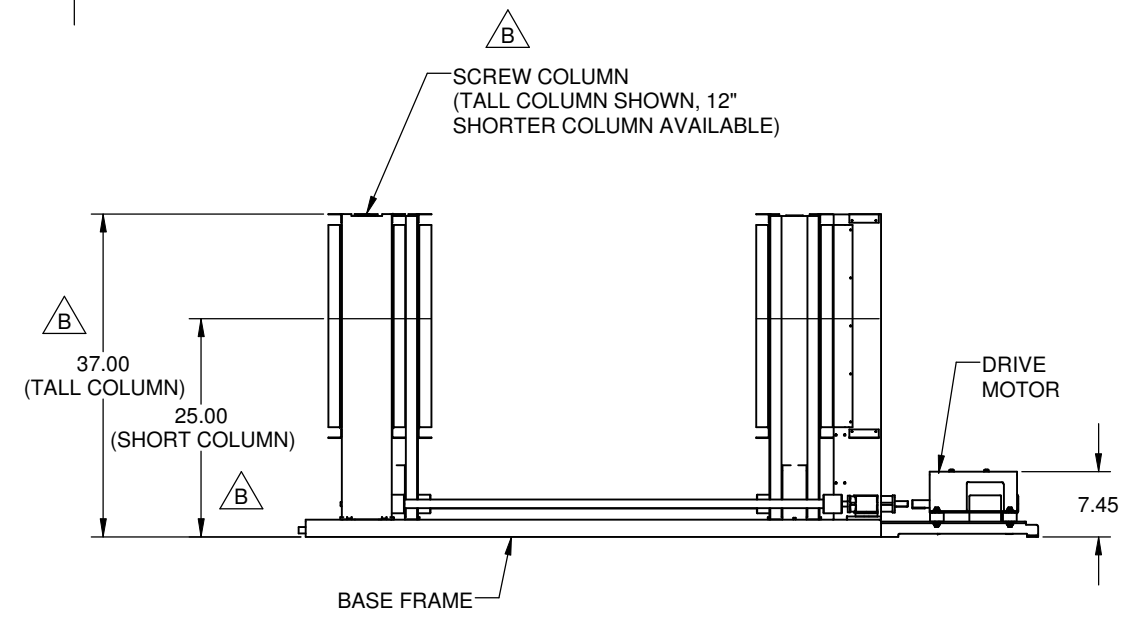
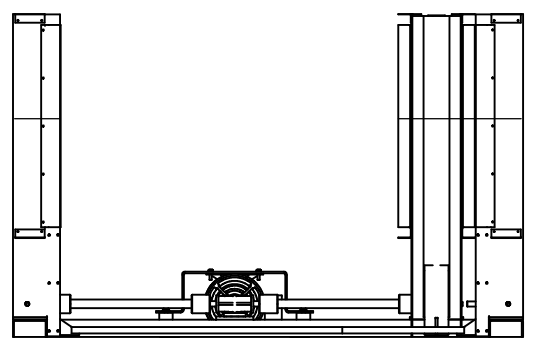
- NOTES:
1. MINIMUM PLATFORM DIMENSIONS CORRESPOND WITH MINIMUM DOOR OPENINGS AND SCREW COLUMN ORIENTATION. SUBSEQUENTLY, INCREASING THE DOOR OPENINGS ALSO INCREASES THE MINIMUM PLATFORM DIMENSIONS. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 74" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMW.
 2. MAXIMUM VERTICAL TRAVEL IS 24".
 3. FOR LIFT APPLICATIONS THAT DO NOT CORRESPOND WITH LIFT-U'S STANDARD TEMPLATES, CONTACT LIFT-U FOR EVALUATION.
 4. FOR ADDITIONAL INFORMATION, INCLUDING MILLWORK INTERFACE DETAILS, REFER TO VMW LIFT APPLICATION GUIDELINES.



VMW DETAILED LIFT TEMPLATE



PERSPECTIVE VIEW

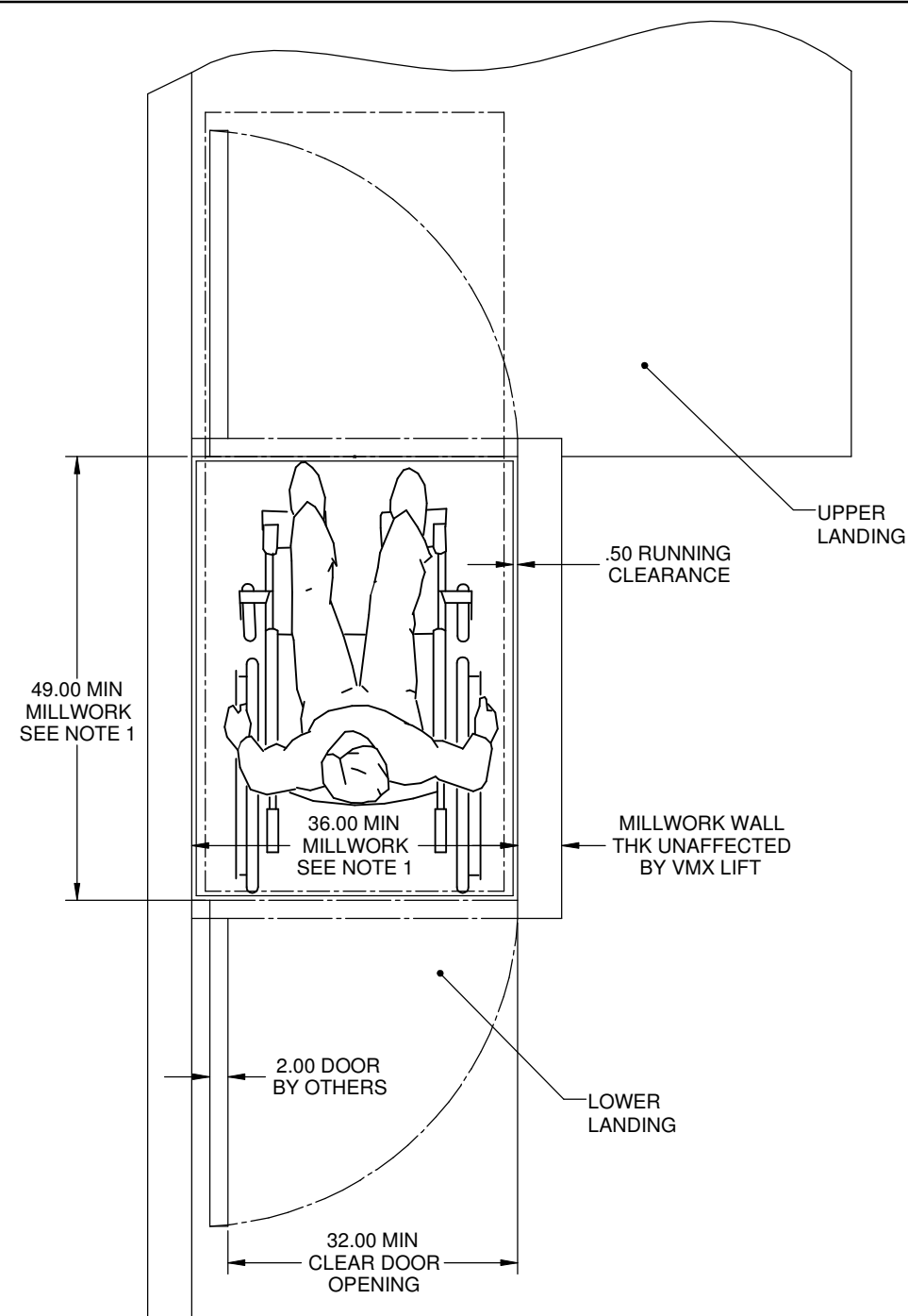


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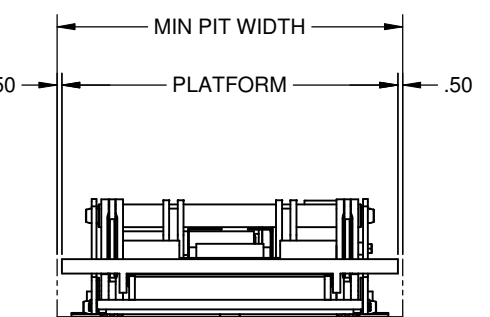
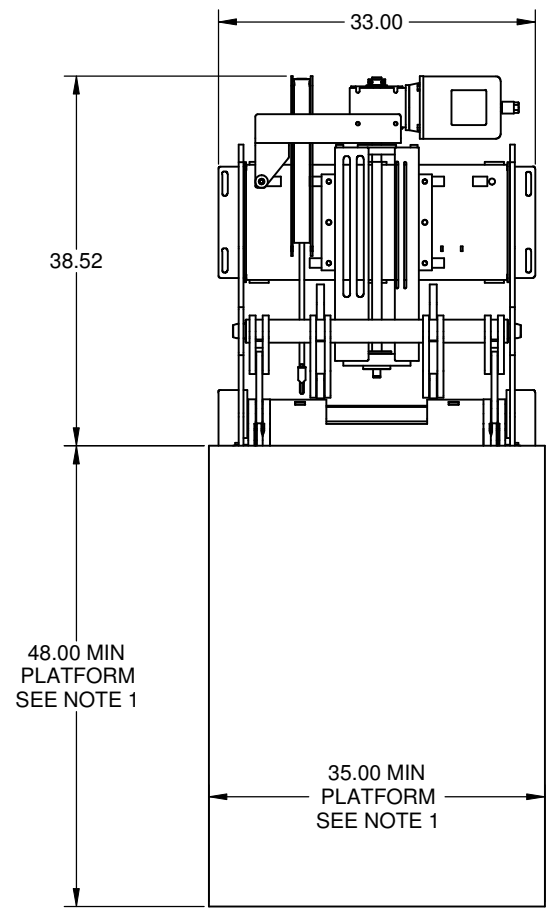
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TITLE	VMW TEMPLATE, LAYOUT H		
DOCUMENT NO.	910-0071	SHEET NO.	1 OF 1
		REVISION	B

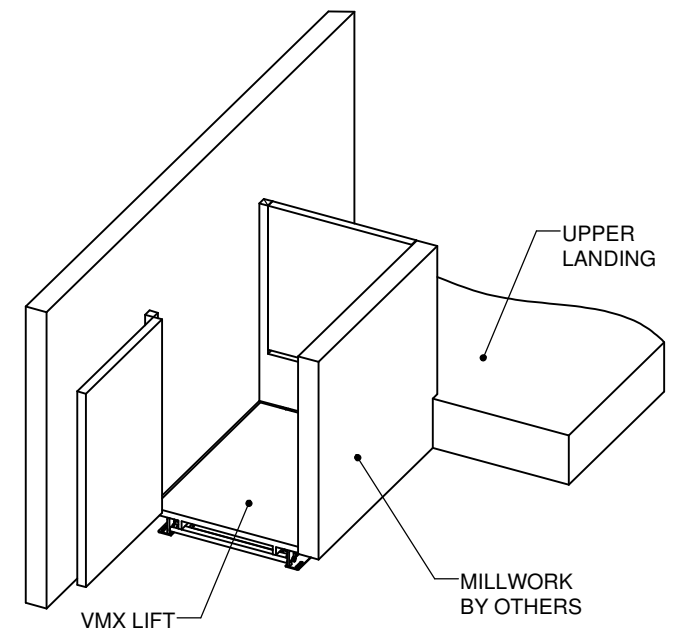
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REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	CAL	3/4/09		



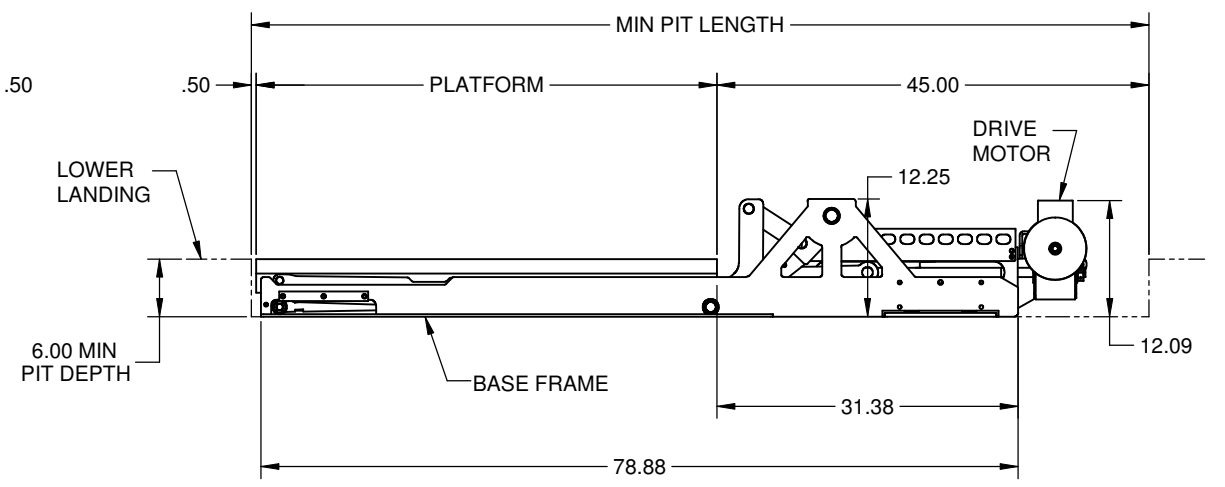
VMX SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN




VMX DETAILED LIFT TEMPLATE



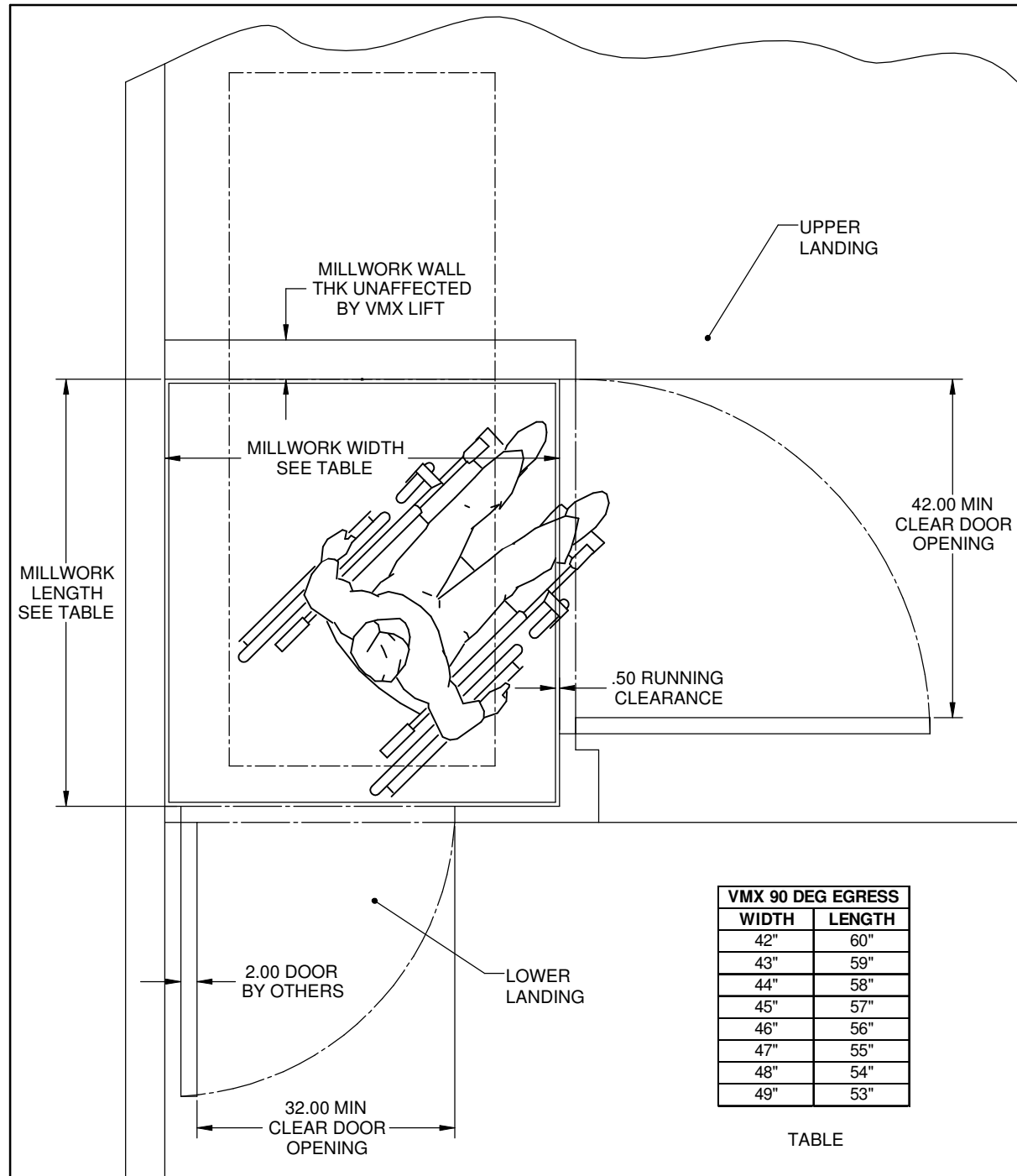
PERSPECTIVE VIEW



- NOTES:
1. MINIMUM PLATFORM DIMENSIONS ARE SHOWN. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 72" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMX.
 2. MAXIMUM VERTICAL TRAVEL IS 24".
 3. FOR LIFT APPLICATIONS THAT DO NOT CORRESPOND WITH LIFT-U'S STANDARD TEMPLATES, CONTACT LIFT-U FOR EVALUATION.
 4. FOR ADDITIONAL INFORMATION, INCLUDING MILLWORK INTERFACE DETAILS, REFER TO VMX LIFT APPLICATION GUIDELINES.

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	A DIVISION OF HOGAN MFG., INC.	
TITLE VMX TEMPLATE, LAYOUT A		
DOCUMENT NO. 910-0072	SHEET NO. 1 OF 1	REVISION A

REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	CAL	3/4/09		



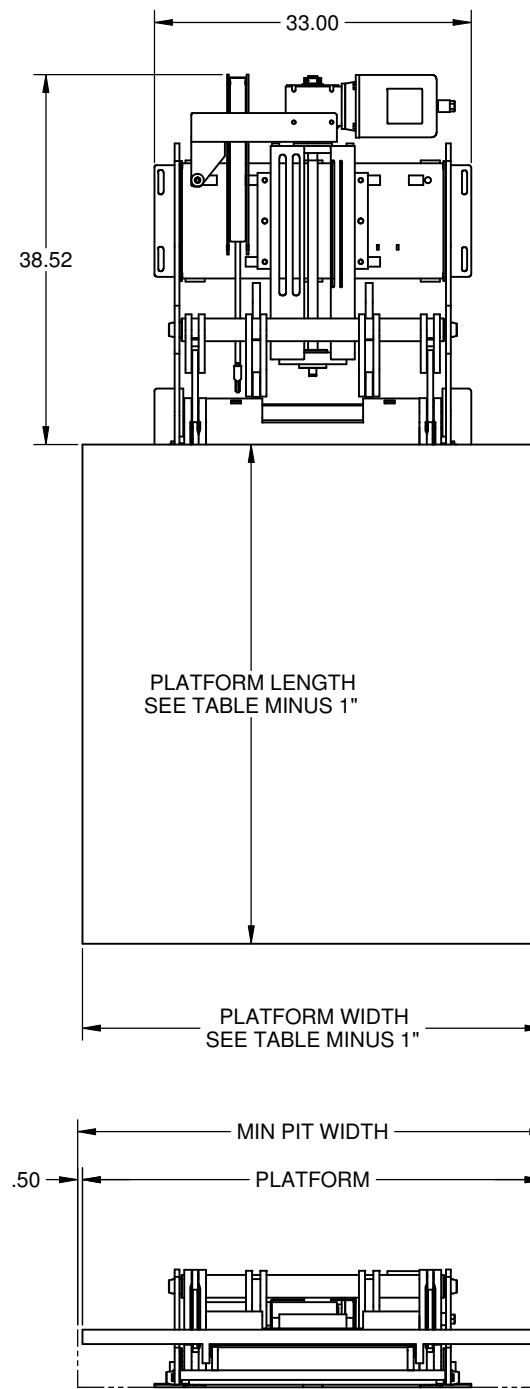
VMX 90 DEG EGRESS	
WIDTH	LENGTH
42"	60"
43"	59"
44"	58"
45"	57"
46"	56"
47"	55"
48"	54"
49"	53"

TABLE

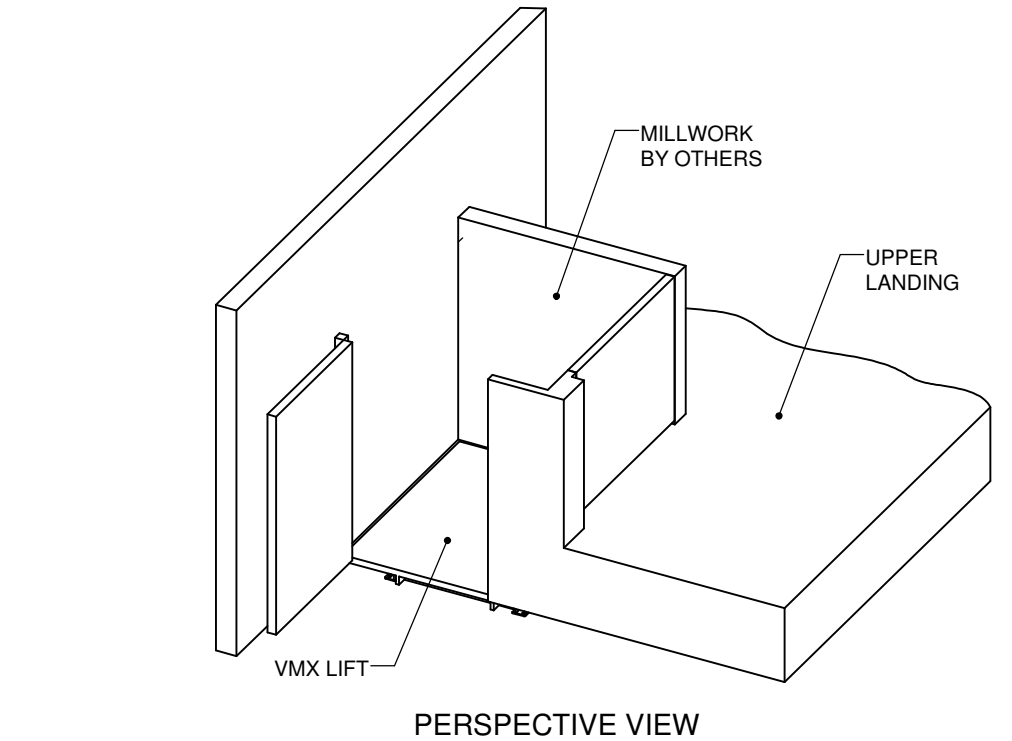
VMX SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN

NOTES:

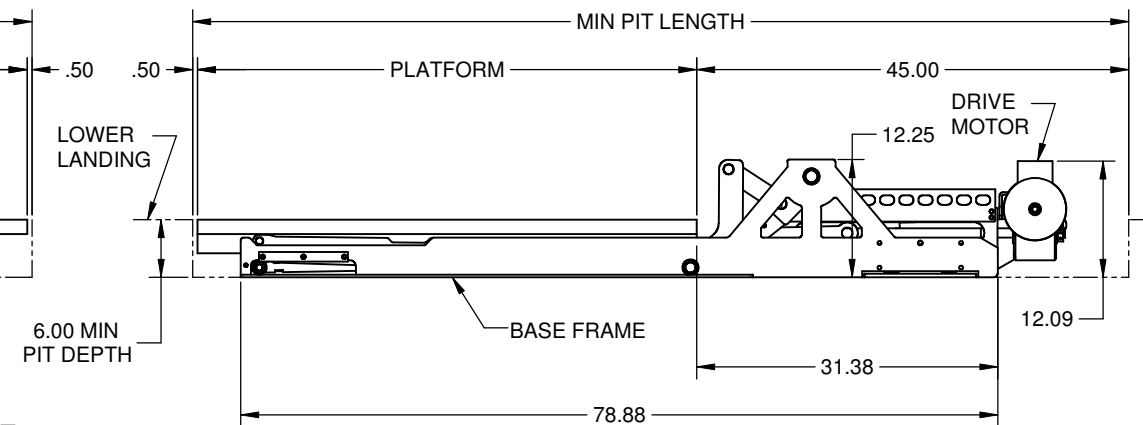
- SPECIFIC TO THIS CONFIGURATION, THE MINIMUM PLATFORM WIDTH CORRESPONDS TO THE MINIMUM PLATFORM LENGTH - REFER TO TABLE. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 72" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMX.
- MAXIMUM VERTICAL TRAVEL IS 24".
- FOR LIFT APPLICATIONS THAT DO NOT CORRESPOND WITH LIFT-U'S STANDARD TEMPLATES, CONTACT LIFT-U FOR EVALUATION.
- FOR ADDITIONAL INFORMATION, INCLUDING MILLWORK INTERFACE DETAILS, REFER TO VMX LIFT APPLICATION GUIDELINES.



VMX DETAILED LIFT TEMPLATE



PERSPECTIVE VIEW

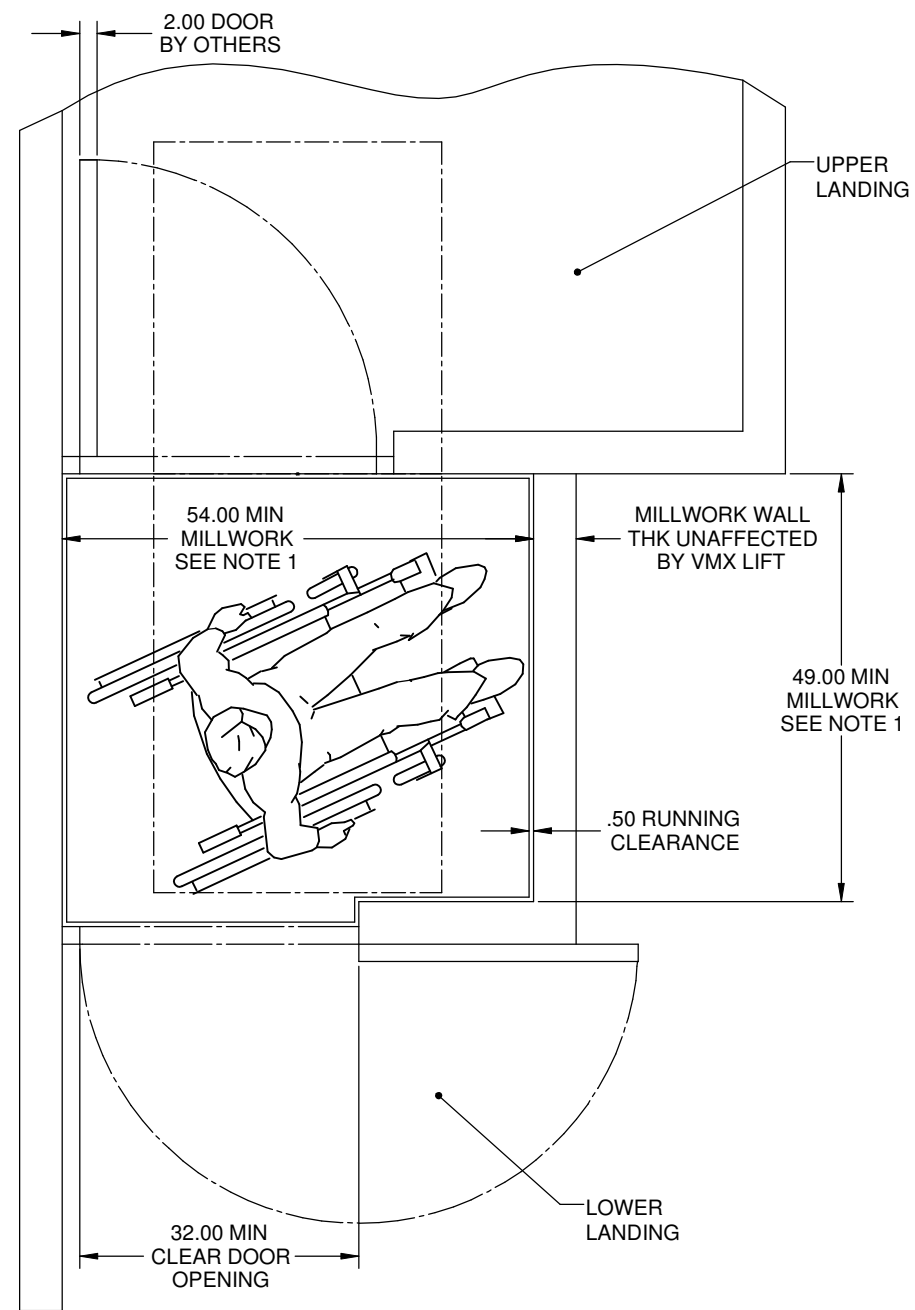


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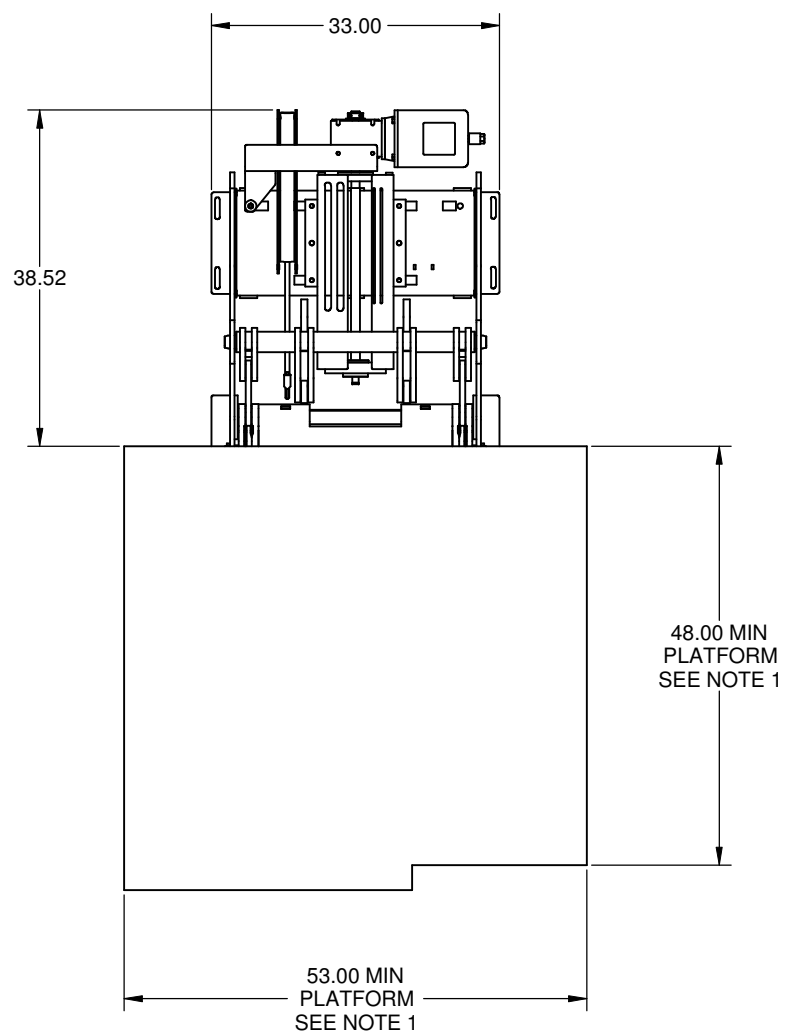
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TITLE	VMX TEMPLATE, LAYOUT B		
DOCUMENT NO.	910-0073	SHEET NO.	1 OF 1
		REVISION	A

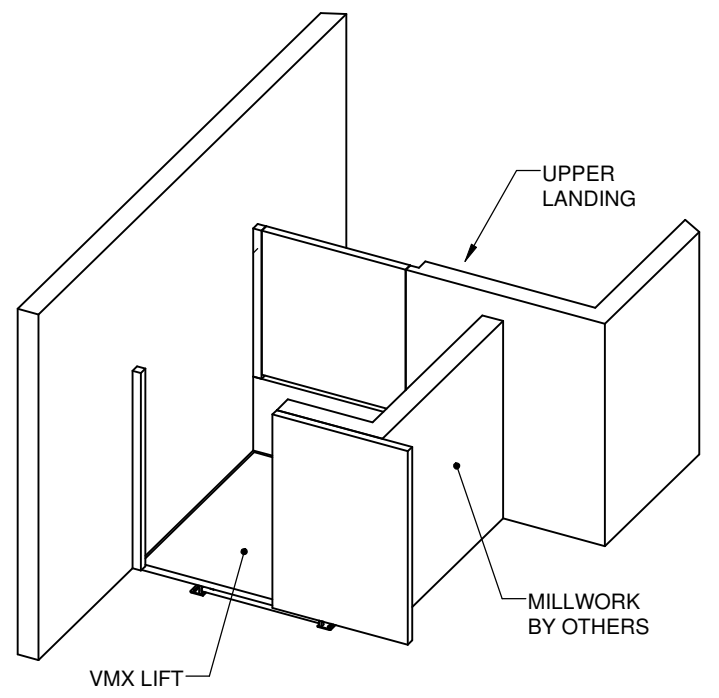
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REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	CAL	3/4/09		



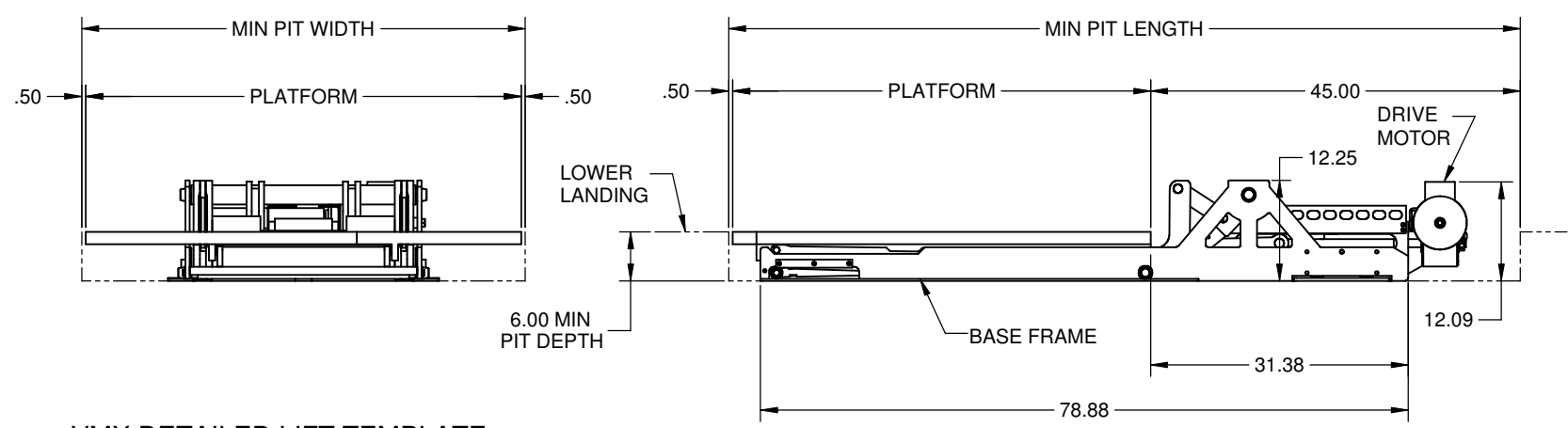
VMX SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN



VMX DETAILED LIFT TEMPLATE



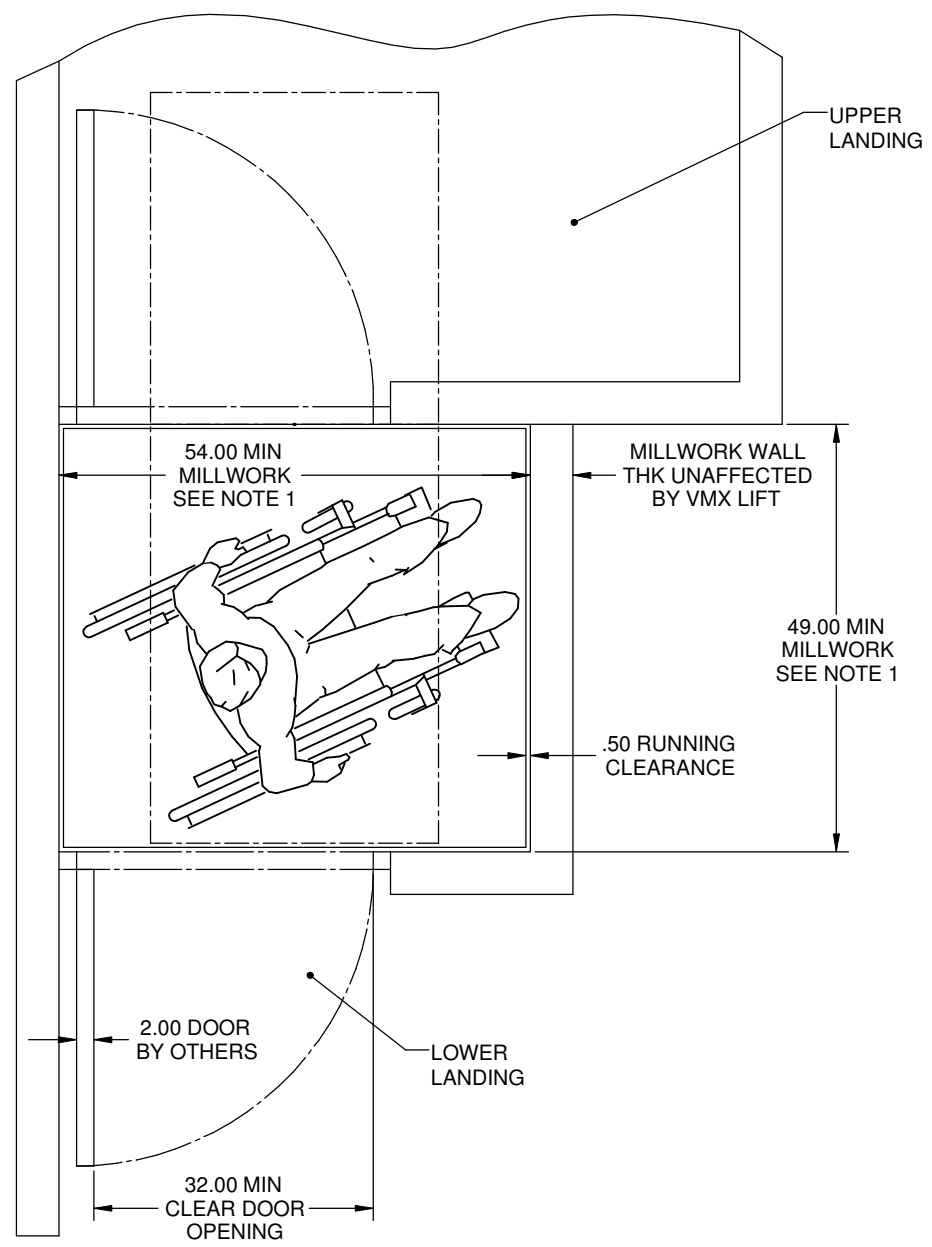
PERSPECTIVE VIEW



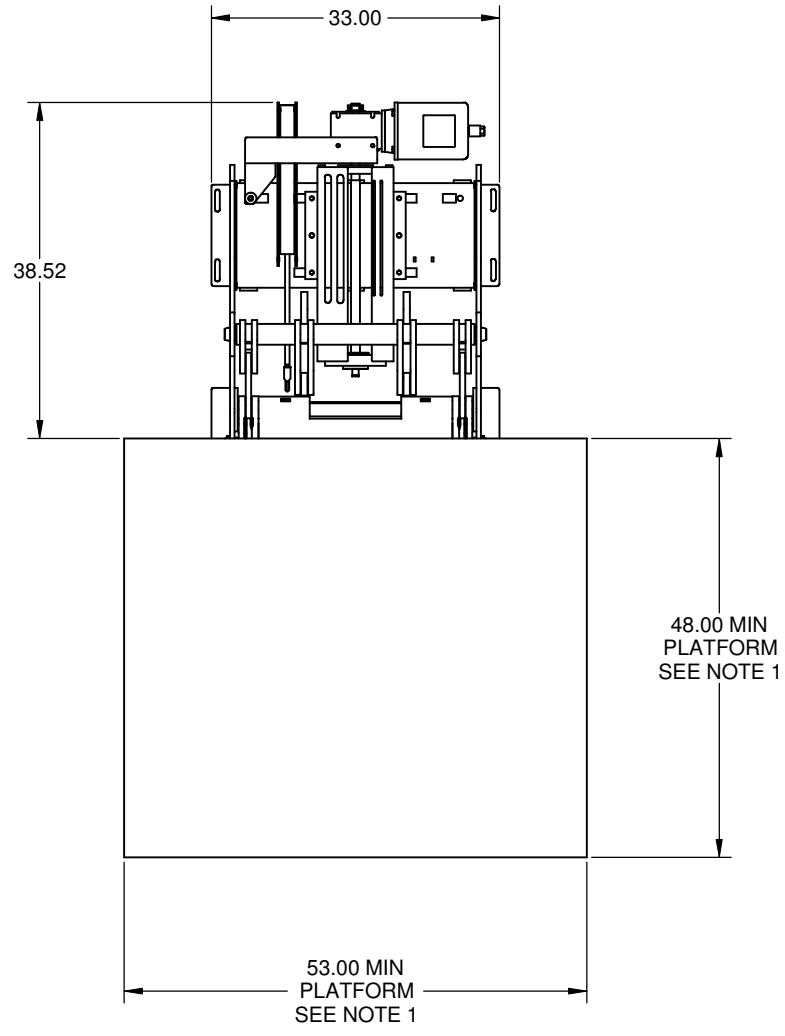
- NOTES:
1. MINIMUM PLATFORM DIMENSIONS ARE SHOWN. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 72" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMX.
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 4. FOR ADDITIONAL INFORMATION, INCLUDING MILLWORK INTERFACE DETAILS, REFER TO VMX LIFT APPLICATION GUIDELINES.

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	<p>TITLE VMX TEMPLATE, LAYOUT C</p>	
DOCUMENT NO.	910-0074	SHEET NO. 1 OF 1
		REVISION A

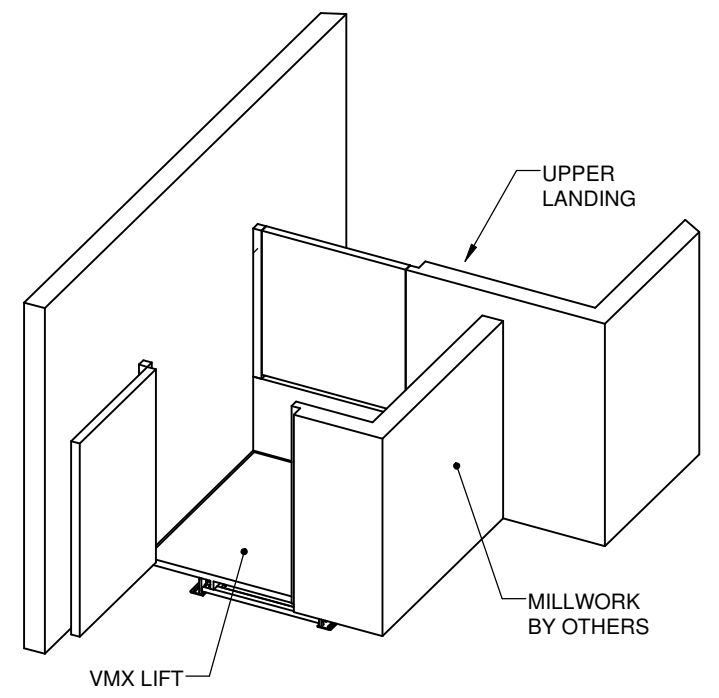
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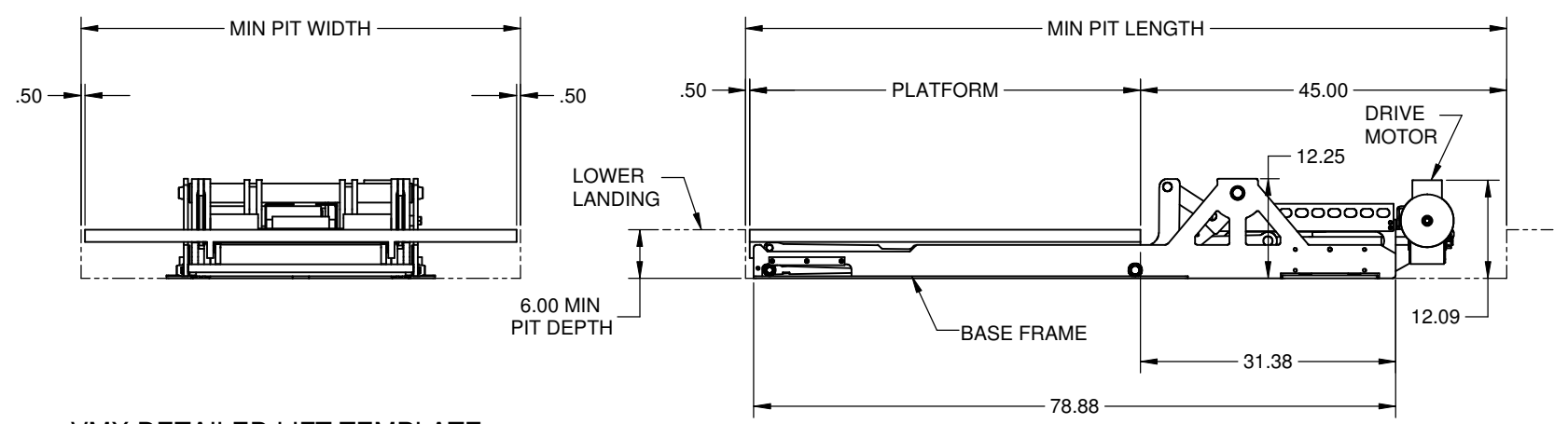
VMX SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN




VMX DETAILED LIFT TEMPLATE



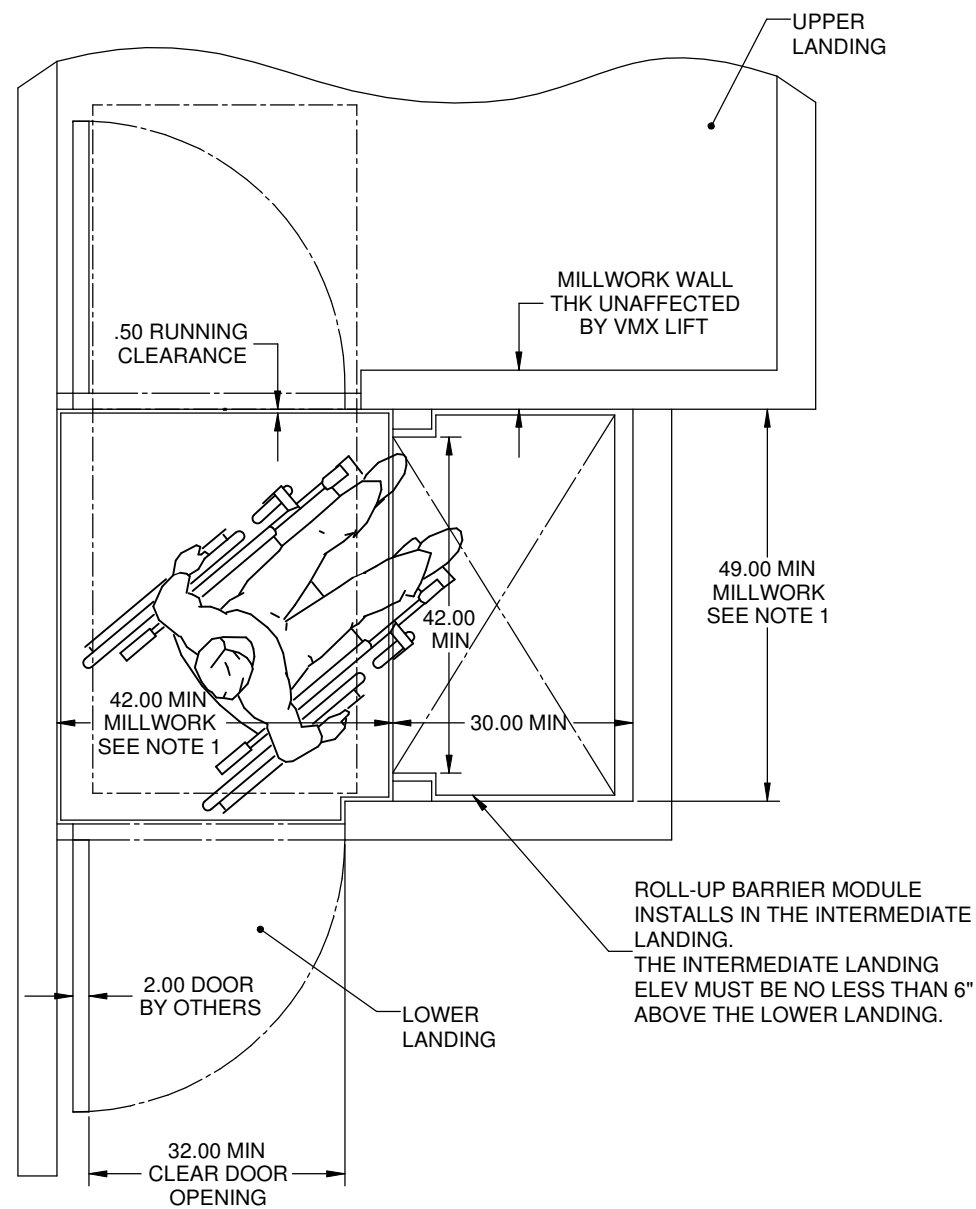
PERSPECTIVE VIEW



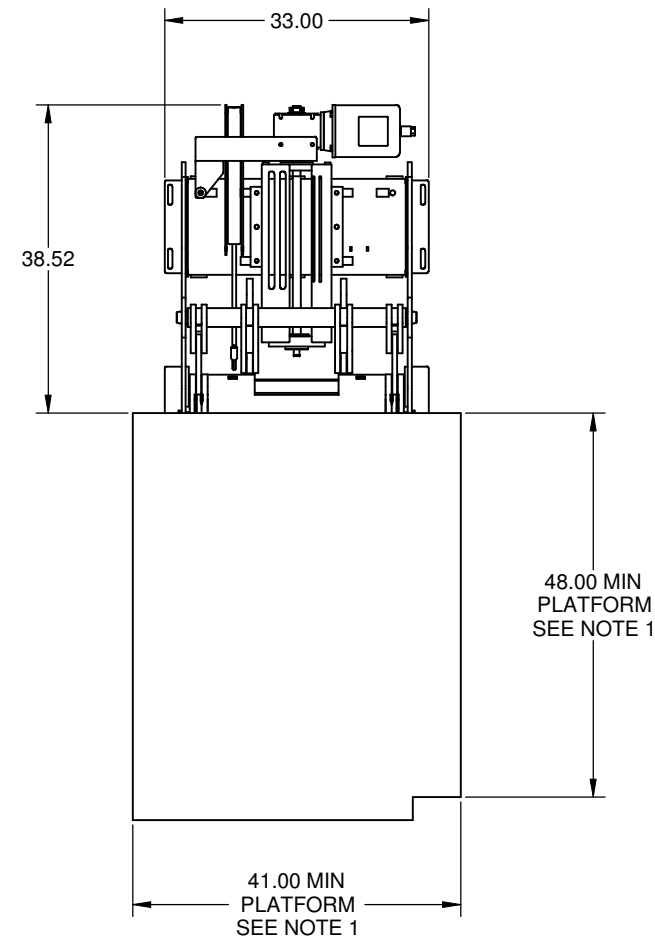
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TITLE VMX TEMPLATE, LAYOUT D		DOCUMENT NO. 910-0075	SHEET NO. 1 OF 1
		REVISION A	

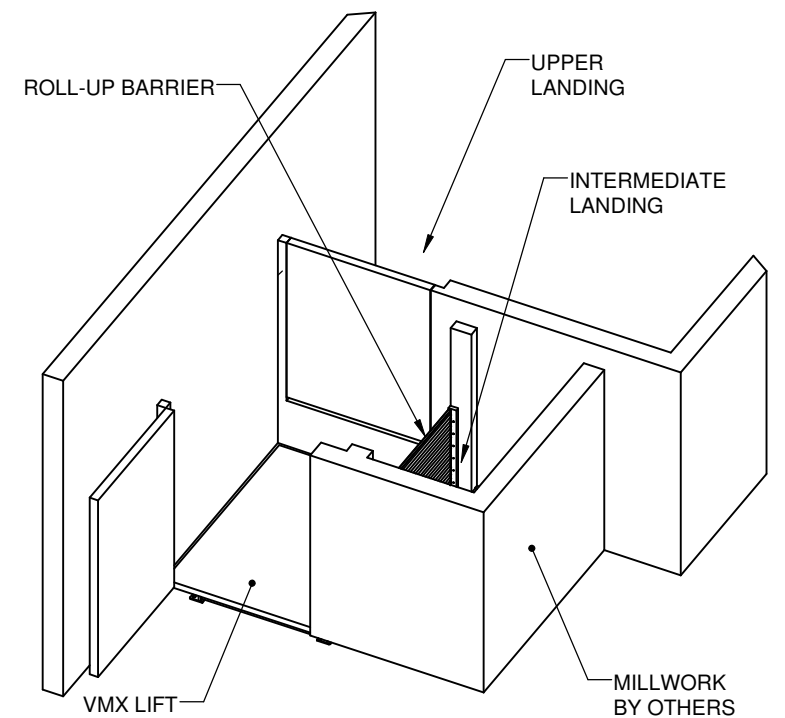
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A		RELEASED	CAL	3/4/09		



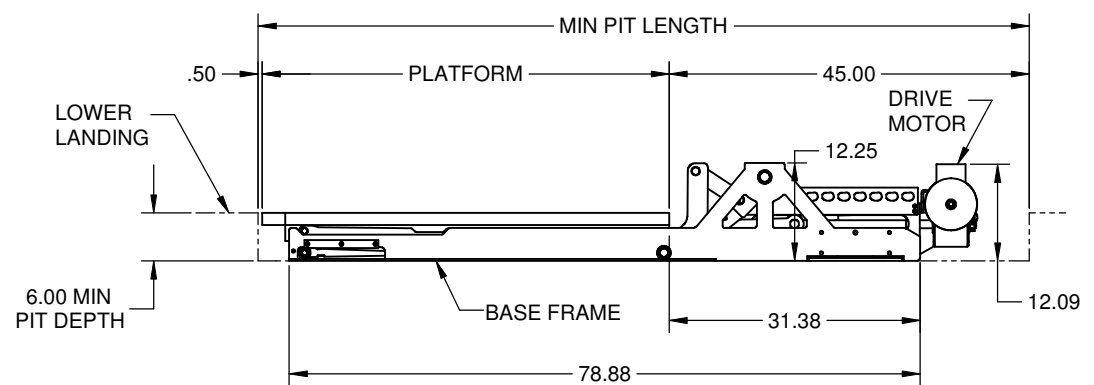
VMX SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN



VMX DETAILED LIFT TEMPLATE



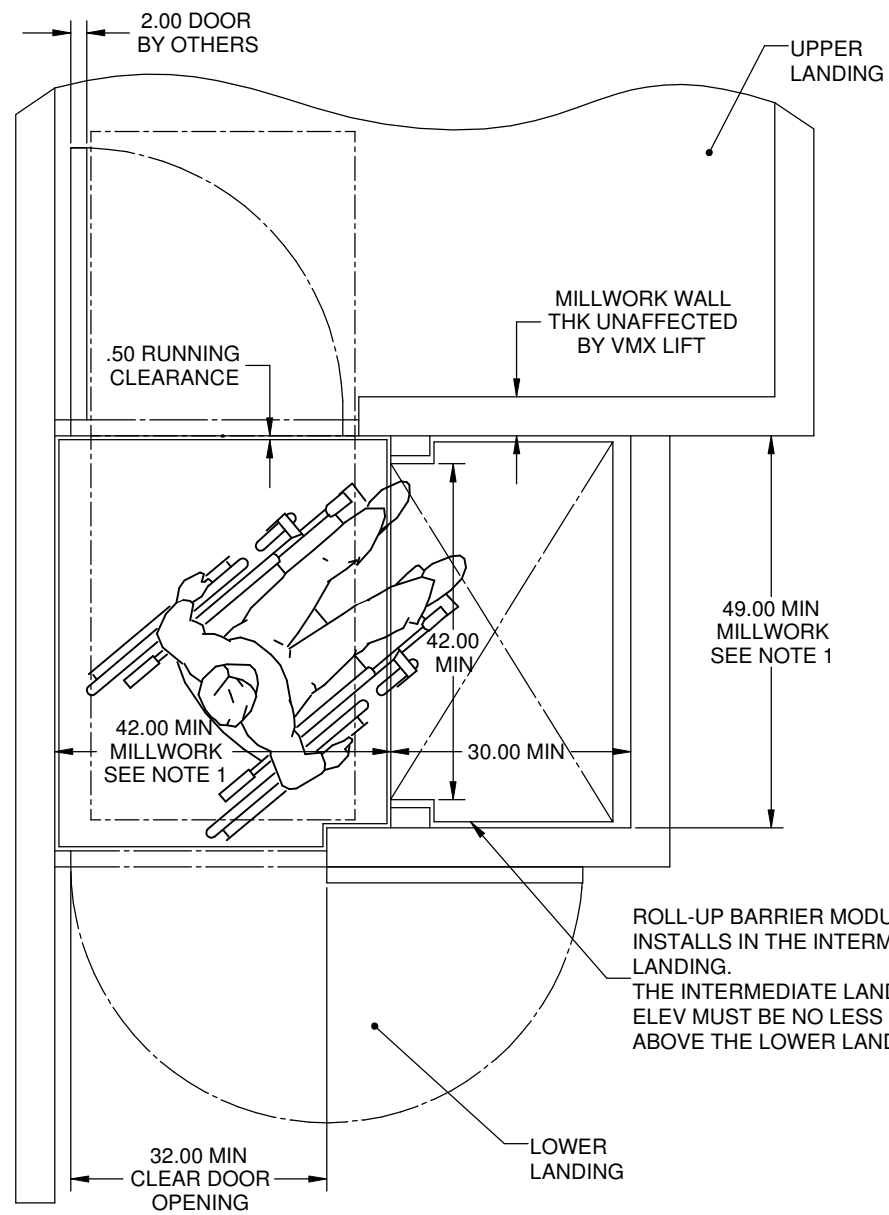
PERSPECTIVE VIEW



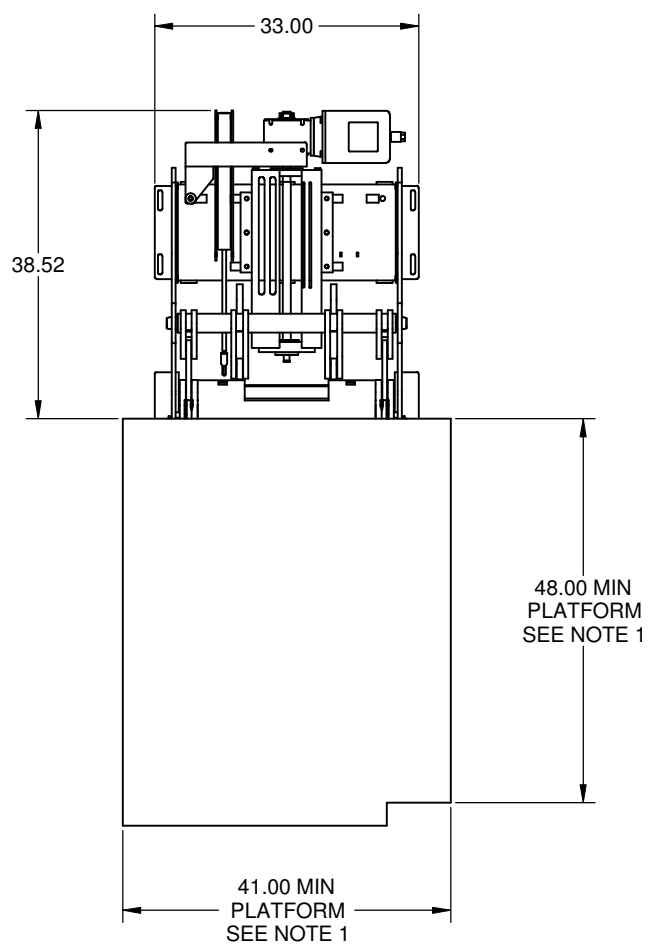
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	<p>A DIVISION OF HOGAN MFG., INC.</p>	
<p>TITLE VMX TEMPLATE, LAYOUT E</p>		
DOCUMENT NO.	910-0076	SHEET NO. 1 OF 1
		REVISION A

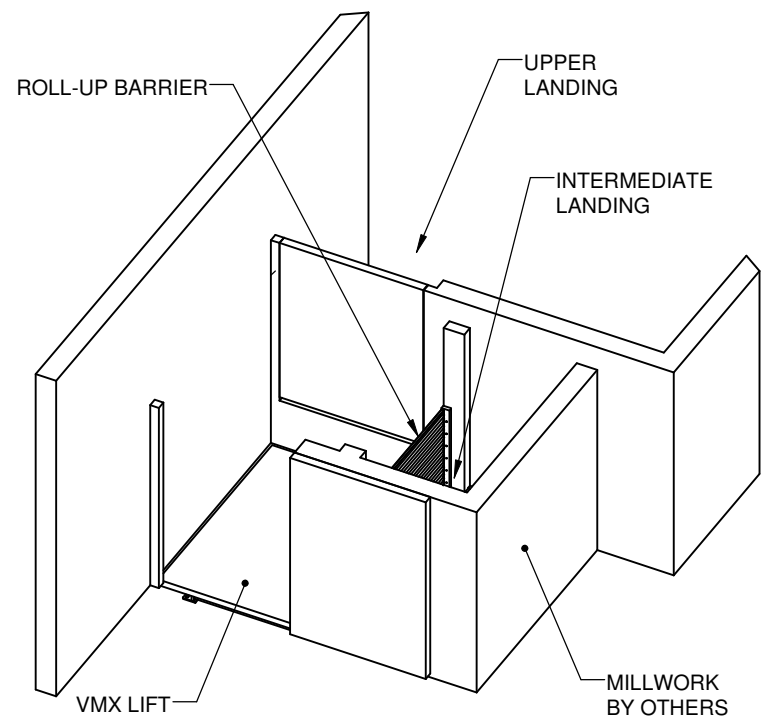
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A		RELEASED	CAL	3/4/09		



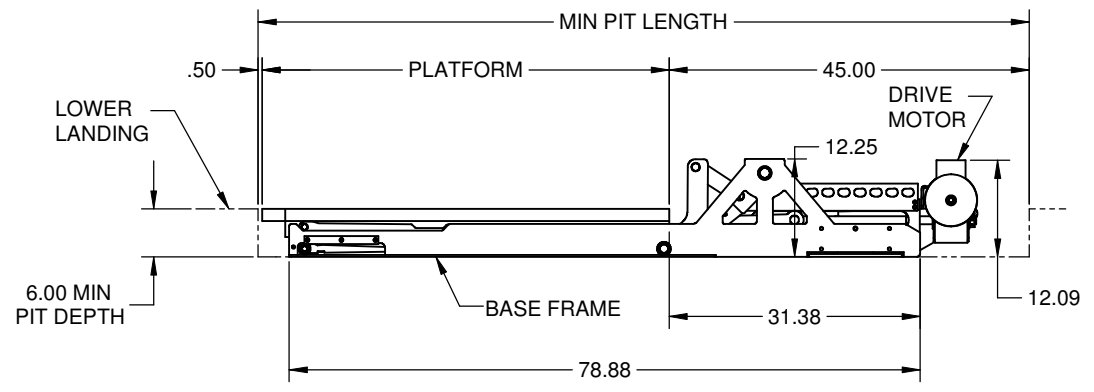
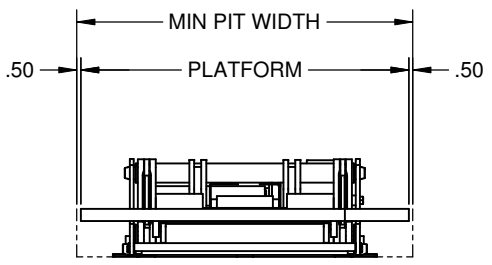
VMX SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN



VMX DETAILED LIFT TEMPLATE



PERSPECTIVE VIEW



- NOTES:
1. MINIMUM PLATFORM DIMENSIONS ARE SHOWN. PLATFORMS MEASURING AT LEAST 18 SQ. FT. ARE PREFERRED; BUT SHOULD NOT EXCEED 25 SQ. FT. BE ADVISED, 72" IN THE LONG DIRECTION IS LIFT-U'S ABSOLUTE "DO NOT EXCEED" DIMENSION FOR THE VMX.
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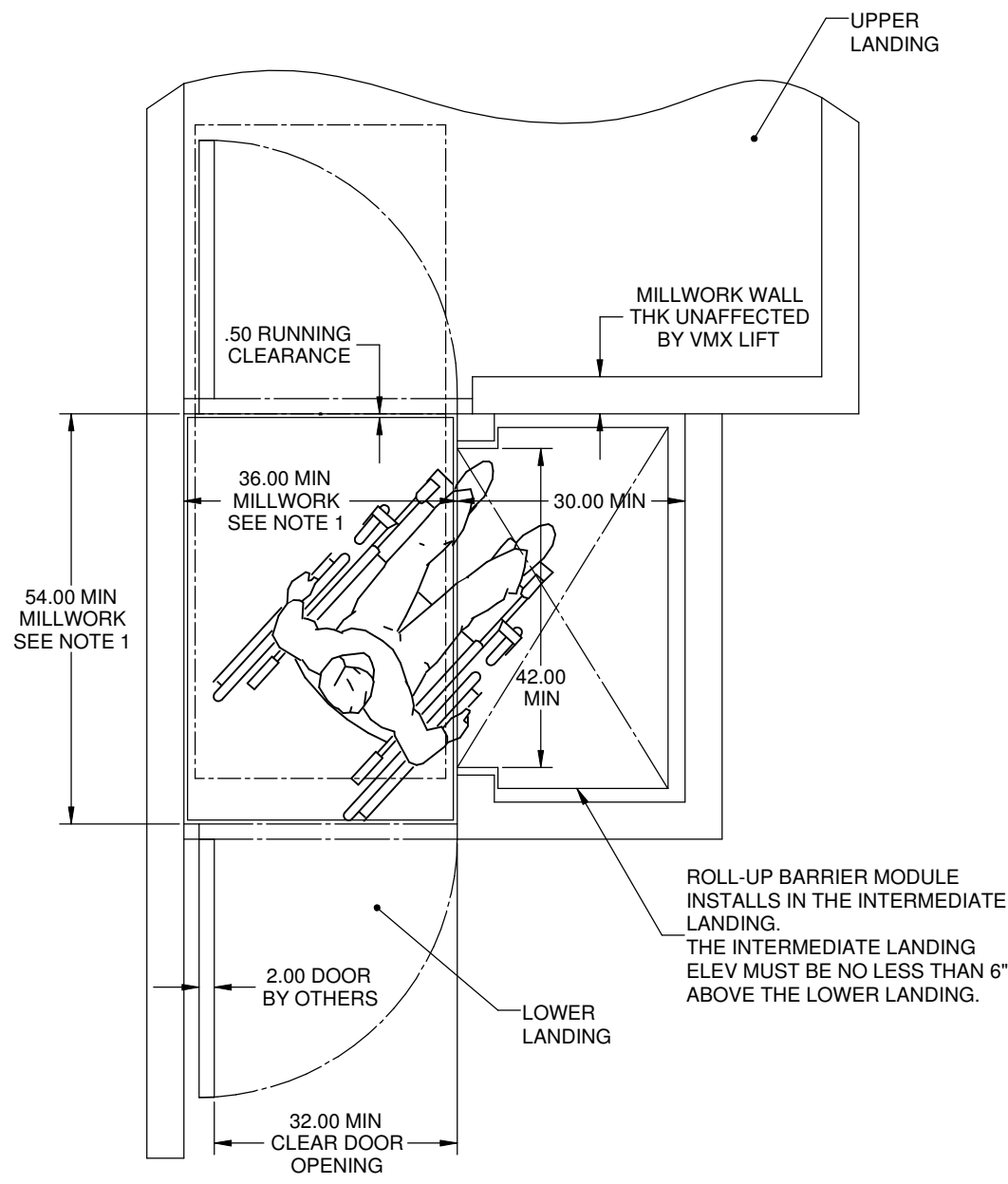
LIFT-U
P.O. BOX 398
ESCALON, CA. 95320
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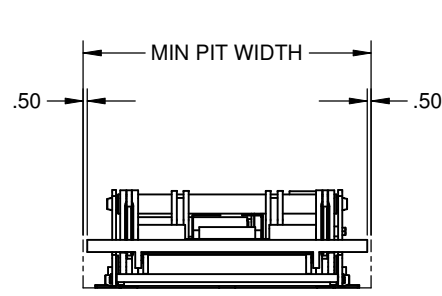
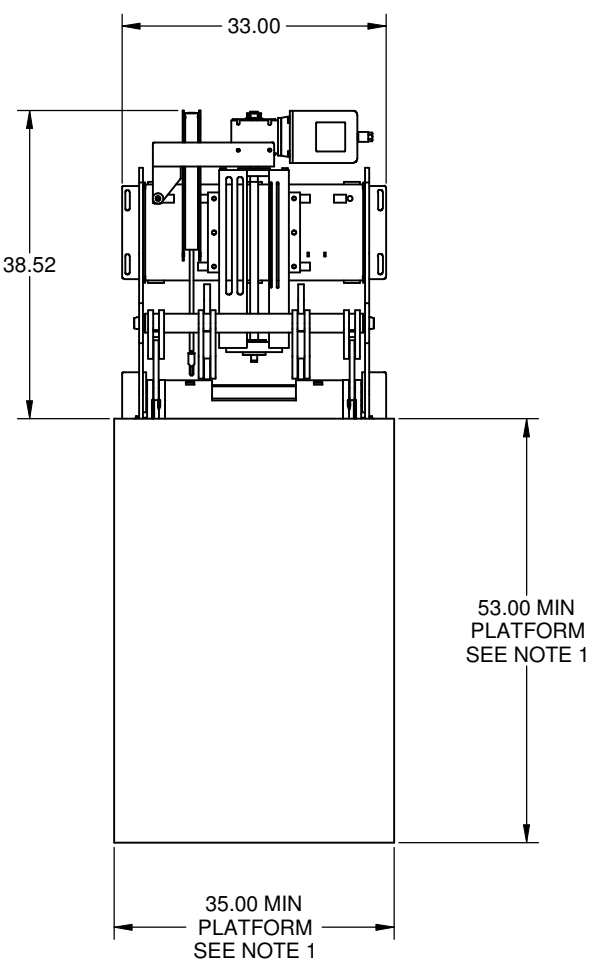
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TITLE		VMX TEMPLATE, LAYOUT F	
DOCUMENT NO.	910-0077	SHEET NO.	1 OF 1
		REVISION	A

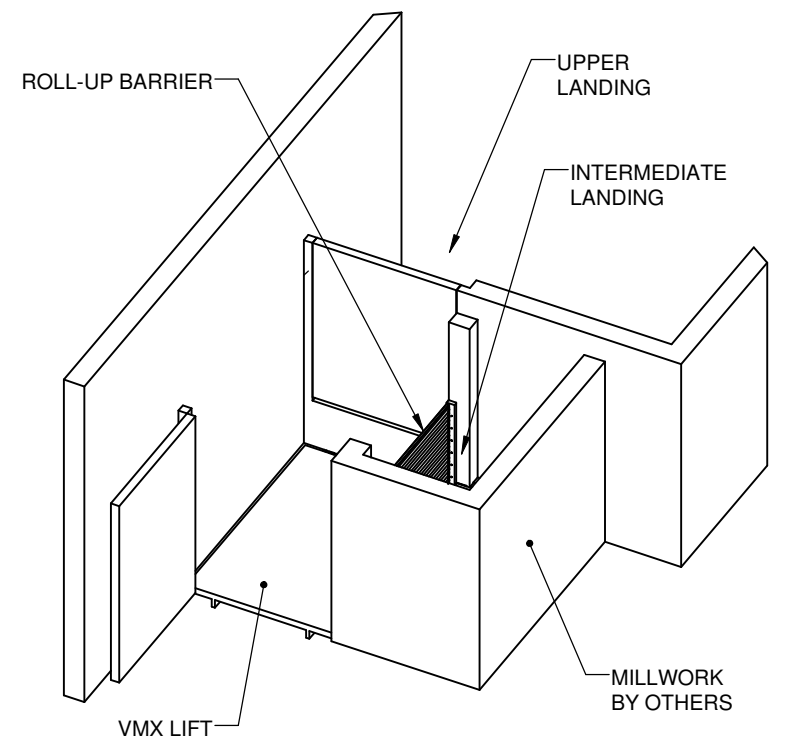
REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	CAL	3/4/09		



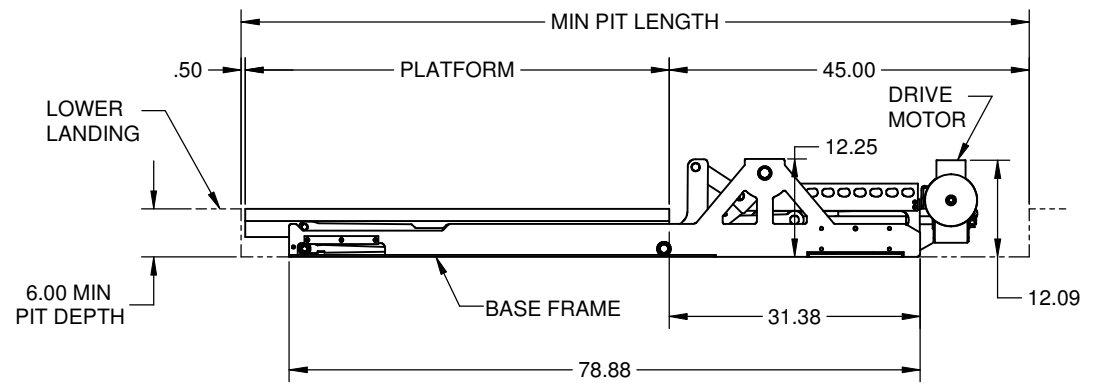
VMX SIMPLE TEMPLATE
MILLWORK FOOTPRINT SHOWN



VMX DETAILED LIFT TEMPLATE



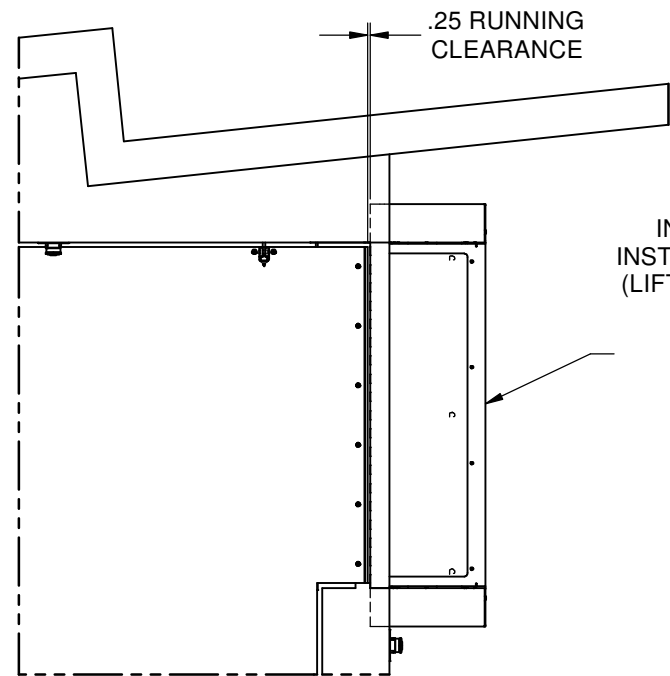
PERSPECTIVE VIEW



- NOTES:
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	<p>TITLE VMX TEMPLATE, LAYOUT G</p>	
DOCUMENT NO.	910-0078	SHEET NO. 1 OF 1
		REVISION A

REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED				
B		ADDED DROP-IN ANCHOR NOTES	BSA	7-20-12		
C		DELETED FIXED-DEPTH DRILL BIT (101-0058)	BSA	9-24-12		



INSTALL OPERABLE STEP PRIOR TO MILLWORK.
 INSTALL WITH DROP-IN ANCHORS, BOLTS & WASHERS
 (LIFT-U P/N'S 417-0117, 411-2658, 426-2106 & 427-2106).
 (SUPPLIED BY LIFT-U)

DRILL 1/2" DIAMETER HOLE 1 5/8" DEEP.
 INSERT DROP-IN ANCHOR AND USE ANCHOR
 SETTING TOOL (LIFT-U P/N 101-0057)
 TO SET DROP-IN ANCHORS
 PER MANUFACTURER INSTRUCTIONS.



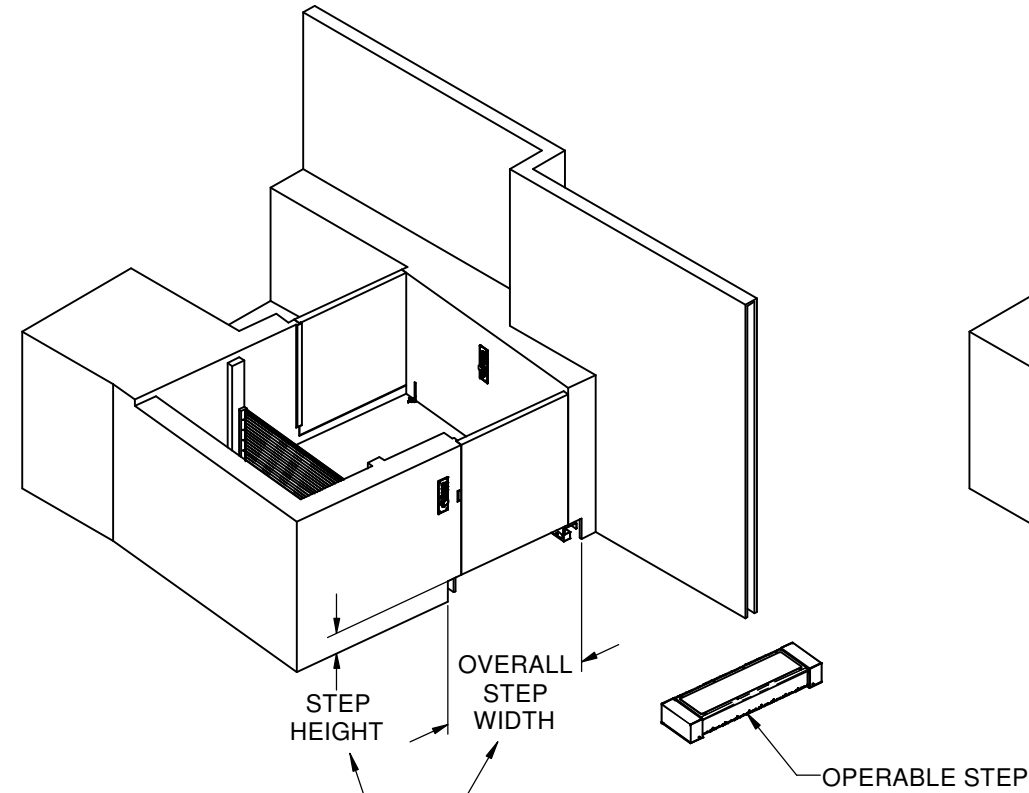
NOTES:

THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED OPERABLE STEP / MILLWORK INTERFACE.

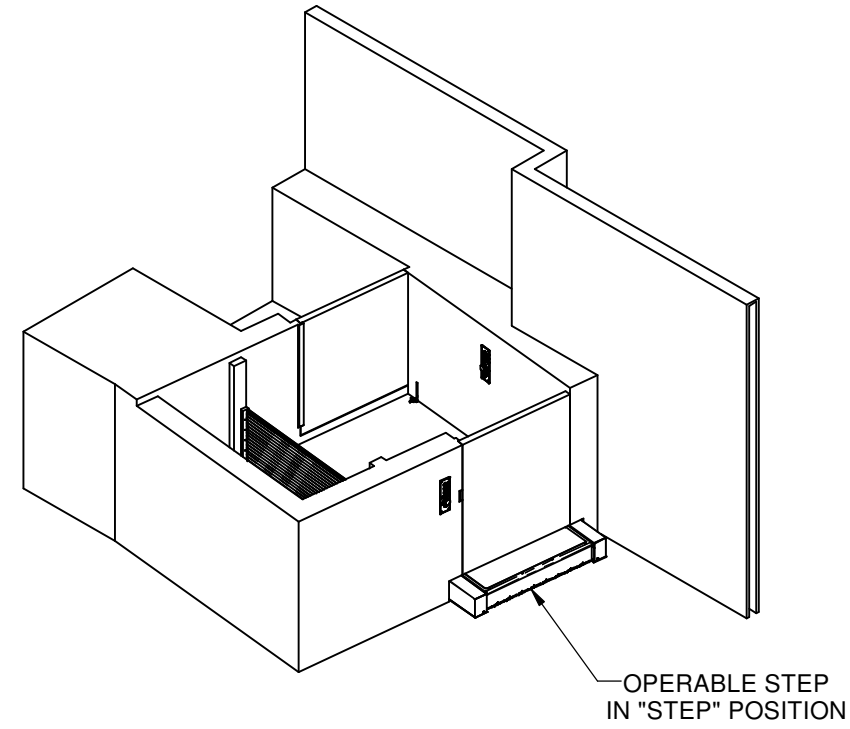
THE OPERABLE STEP HEIGHT AND WIDTH WILL VARY FOR EACH APPLICATION. THEREFORE, FOR EACH PROJECT APPLICATION REFER TO ITS CORRESPONDING LIFT CONFIGURATION DRAWING FOR GENERAL ARRANGEMENT LAYOUT, LIFT ENVELOPE DIMENSIONS, AND OPERABLE STEP MODULE DIMENSIONS.

ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT ARE FURNISHED AND INSTALLED BY OTHERS.

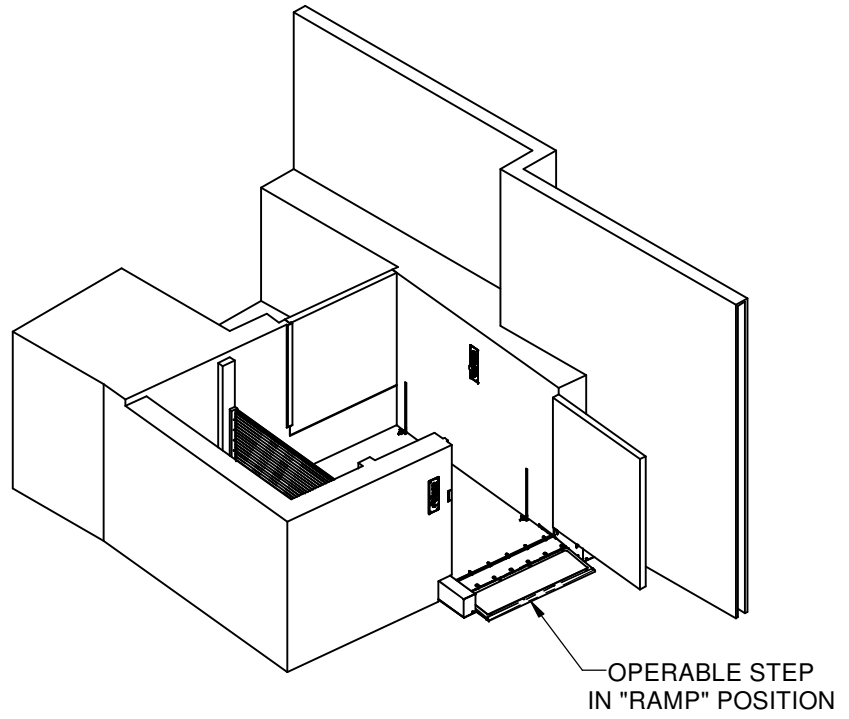
PLAN VIEW WITH OPERABLE STEP IN "STEP" POSITION



CUT MILLWORK FOR
 1/4" TO 1/2" CLEARANCE
 ALL-AROUND



OPERABLE STEP
 IN "STEP" POSITION

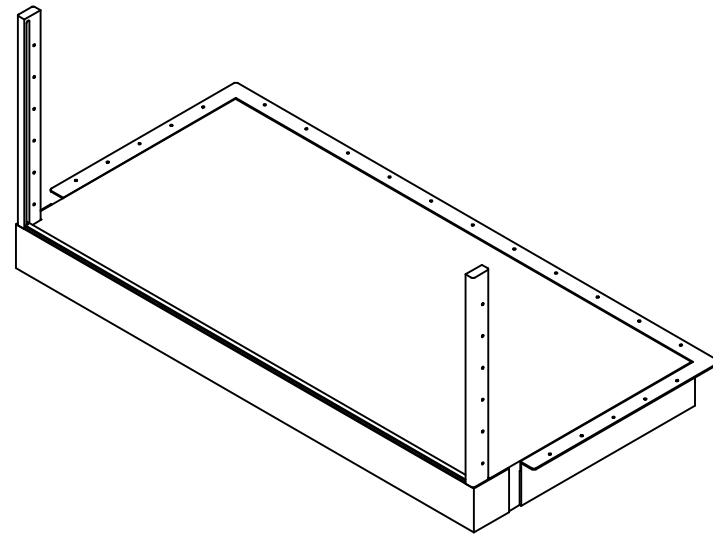


OPERABLE STEP
 IN "RAMP" POSITION

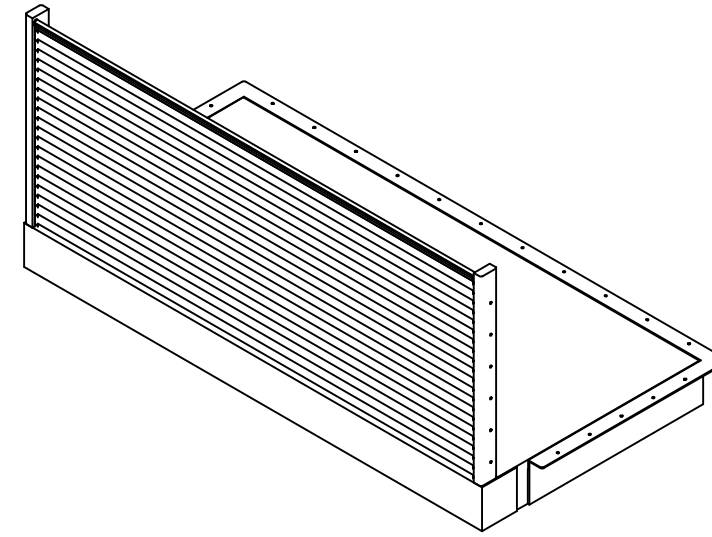


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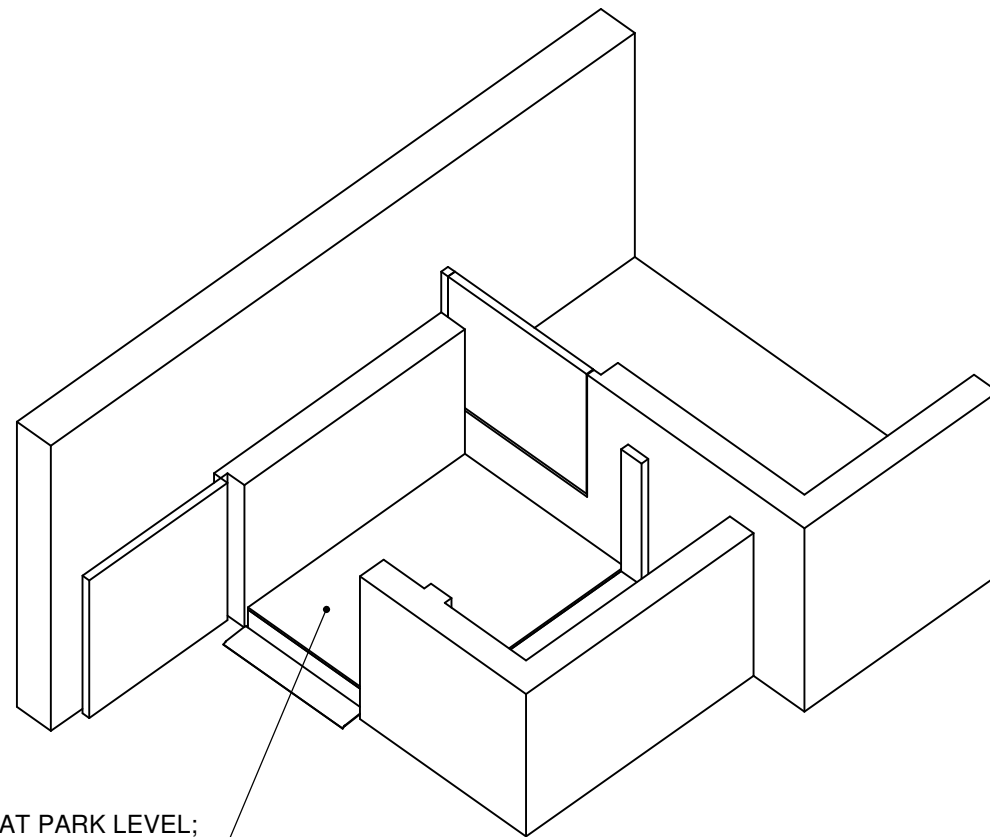
TITLE	OPERABLE STEP / MILLWORK INTERFACE		
DOCUMENT NO.	910-0085	SHEET NO.	1 OF 1
		REVISION	C



ROLL-UP BARRIER (STOWED)

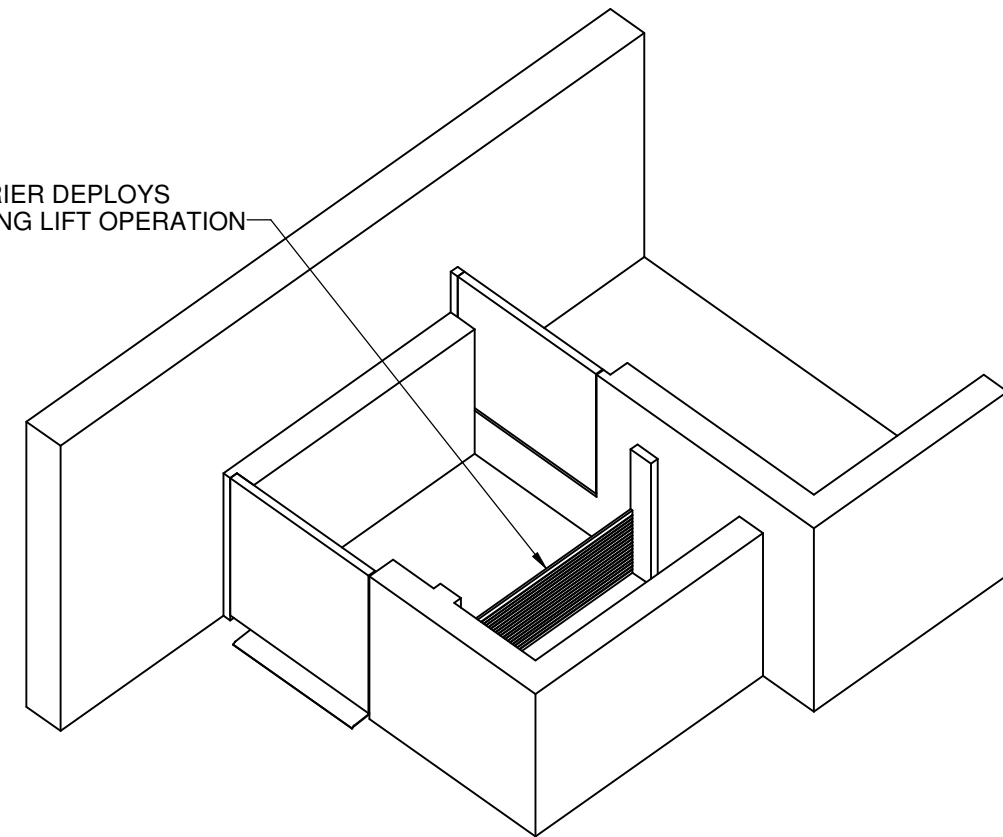


ROLL-UP BARRIER (DEPLOYED)



LIFT AT PARK LEVEL;
BARRIER IS STOWED

BARRIER DEPLOYS
DURING LIFT OPERATION



ACCESSOR LIFT WITH ROLL-UP BARRIER



LIFT-U

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209-838-2400

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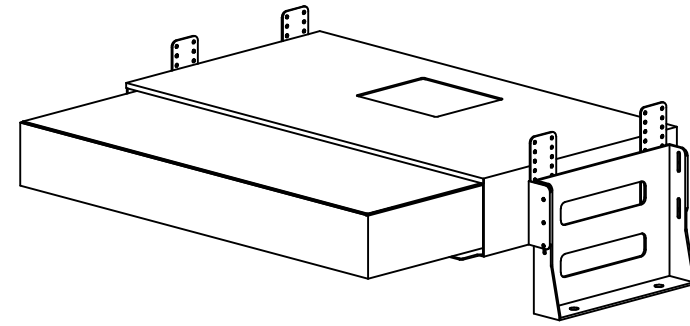
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TITLE **ROLL-UP BARRIER OVERVIEW**

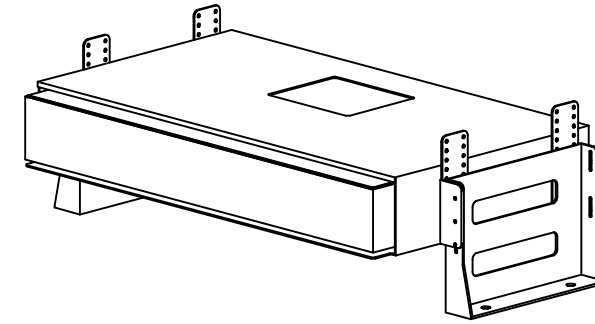
DOCUMENT NO. **910-0088**

SHEET NO.
1 OF 1

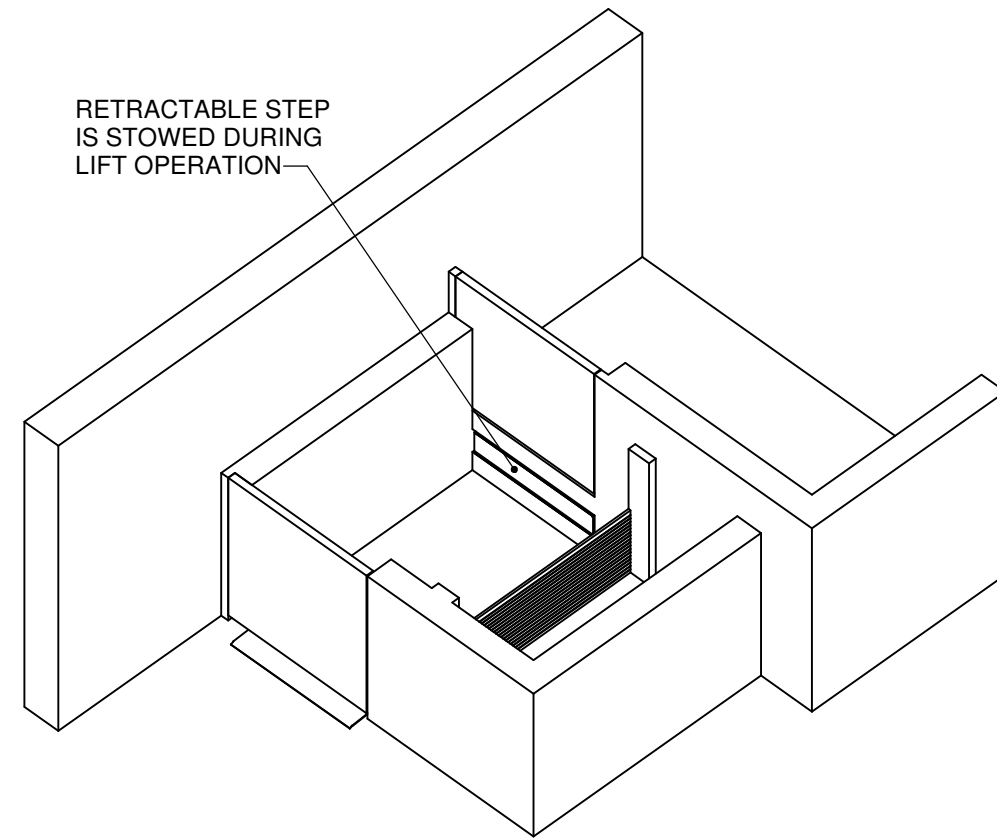
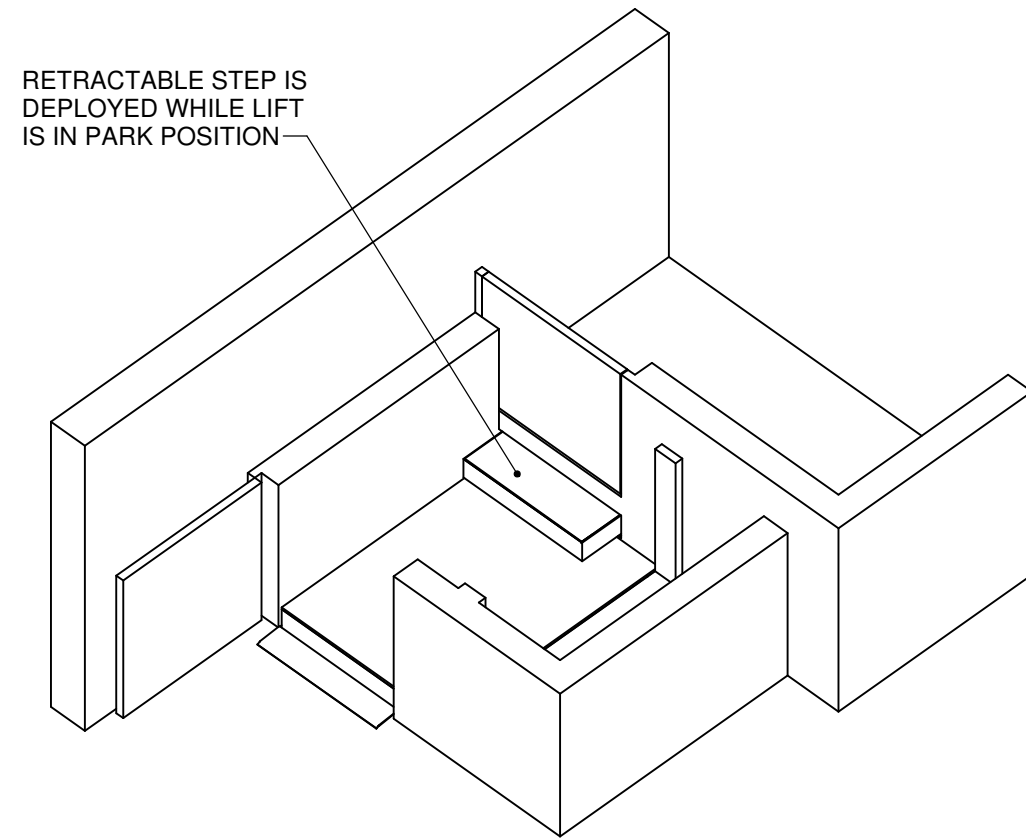
REVISION
A



RETRACTABLE STEP (DEPLOYED)



RETRACTABLE STEP (STOWED)



ACCESSOR LIFT WITH RETRACTABLE STEP



LIFT-U[®]

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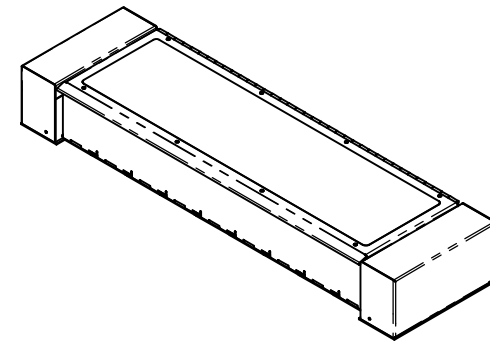
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TITLE RETRACTABLE STEP OVERVIEW

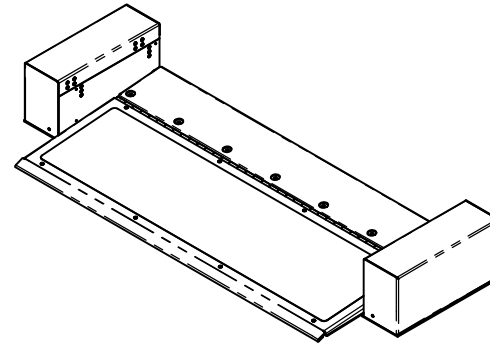
DOCUMENT NO. 910-0089

SHEET NO. 1 OF 1

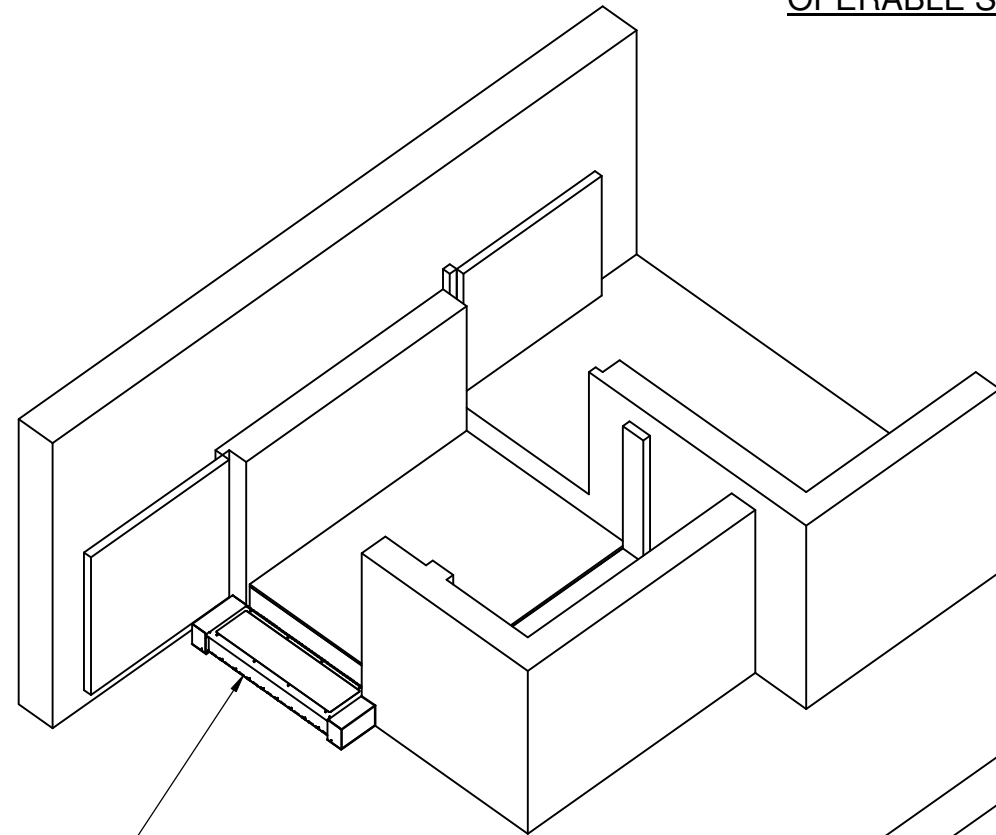
REVISION A



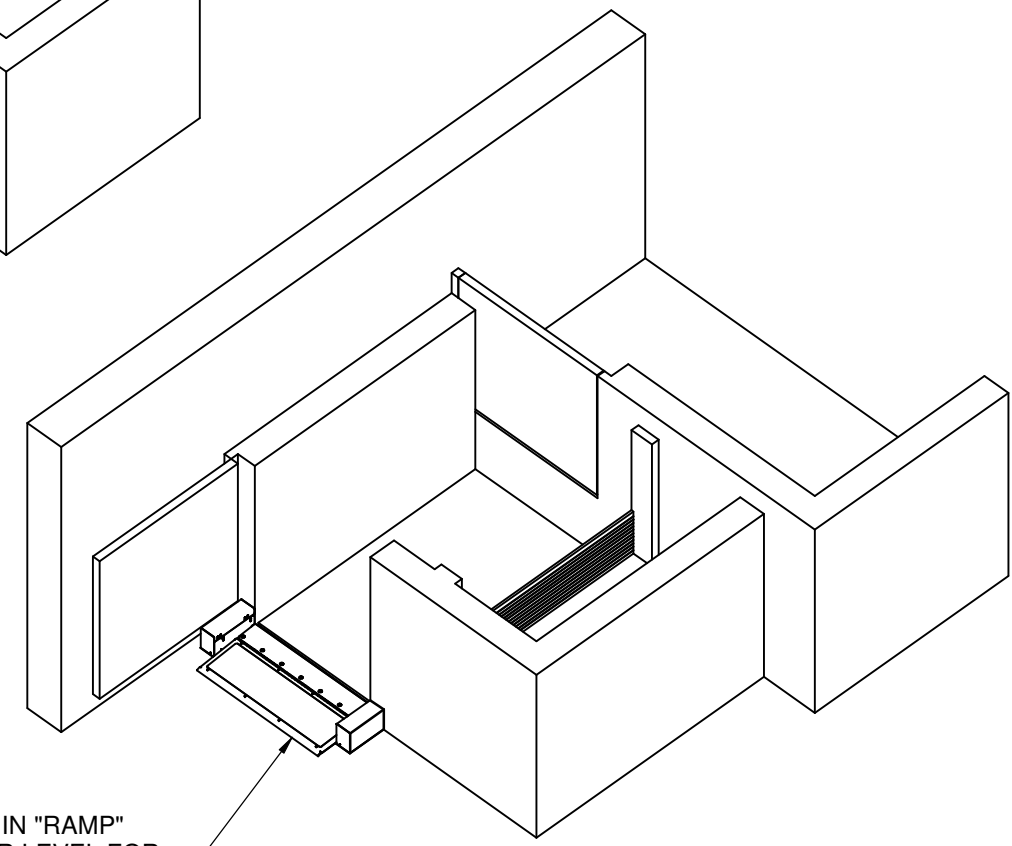
OPERABLE STEP (STEP POSITION)



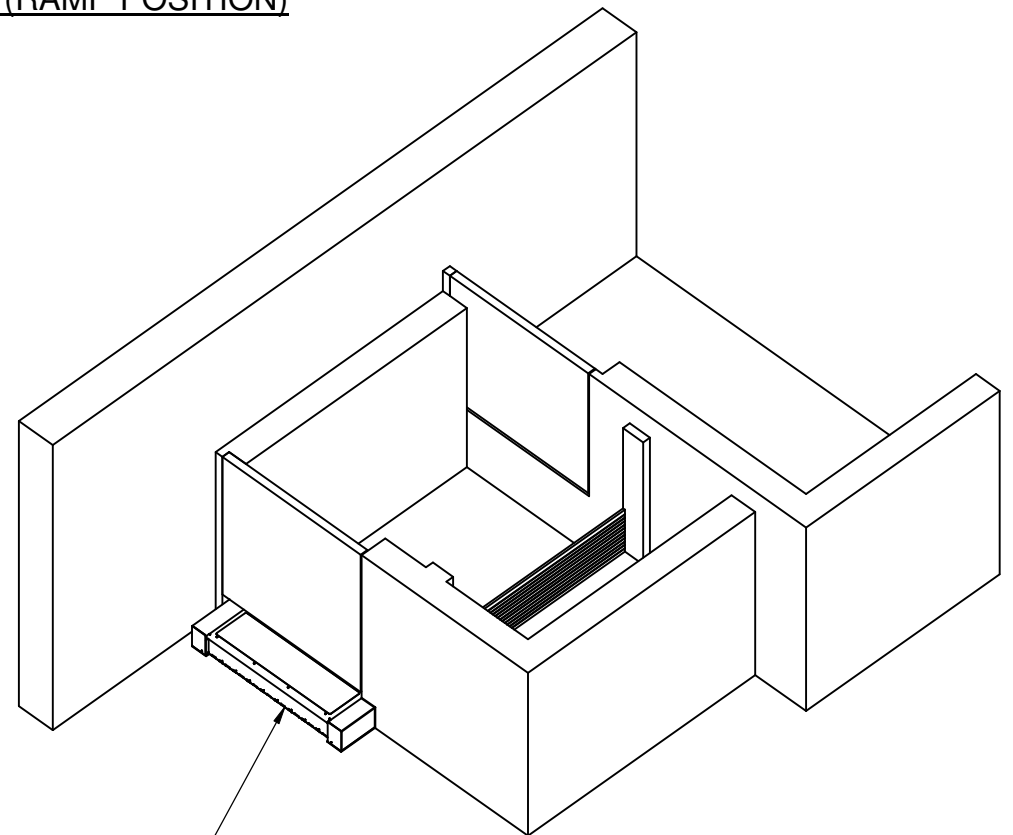
OPERABLE STEP (RAMP POSITION)



OPERABLE STEP IS IN "STEP" POSITION WHILE LIFT IS PARKED




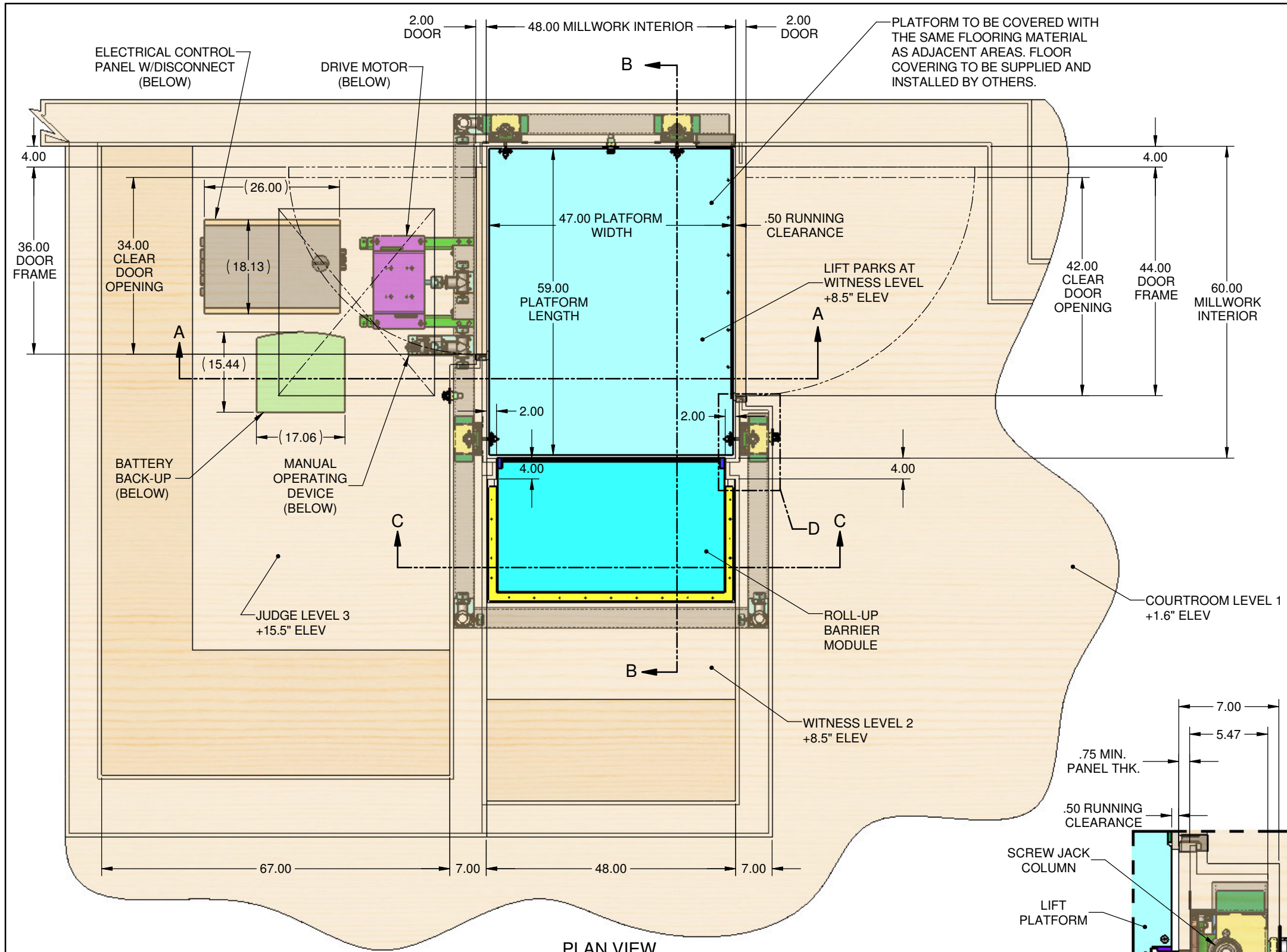
OPERABLE STEP IS IN "RAMP" POSITION AT LOWER LEVEL FOR PASSENGER INGRESS/EGRESS



OPERABLE STEP IS IN "STEP" POSITION DURING LIFT OPERATION

ACCESSOR LIFT WITH OPERABLE STEP

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TITLE OPERABLE STEP OVERVIEW		
DOCUMENT NO. 910-0090	SHEET NO. 1 OF 1	REVISION A



THIS DRAWING ILLUSTRATES A LIFT PLATFORM AND OPERATING MECHANISM WITHIN THE PARAMETERS OF MILLWORK WALLS. THE LIFT PLATFORM REQUIRES 3/8" MINIMUM TO 3/4" MAXIMUM RUNNING CLEARANCE WITH ADJACENT MILLWORK FINISHED SURFACES. THE MILLWORK SHOWN IS FOR ILLUSTRATIVE REFERENCE ONLY. DIMENSIONAL EXTENTS OF THE MILLWORK IS THE RESPONSIBILITY OF OTHERS.

MILLWORK WALLS ARE SHOWN IN SHADED / TRANSPARENT MODE ON SHEET 1 OF 5 TO VIEW ENCASED LIFT ASSEMBLY.

POWER NOTE:
BUILDING POWER TO BE SUPPLIED AND ROUTED TO ELECTRICAL CONTROL PANEL BY OTHERS. FURNISH 115 VAC, 3 WIRE, 15 AMP, SINGLE PHASE SOURCE POWER.

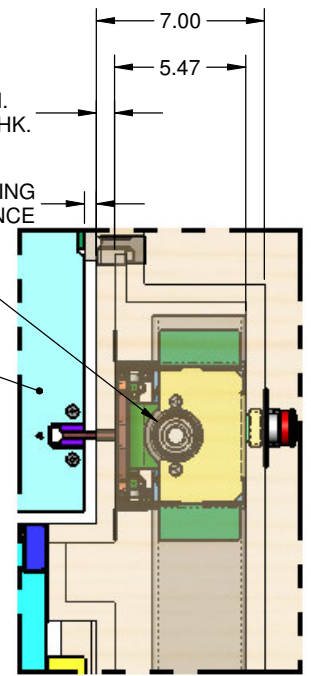
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 3. PRIOR TO INSTALLATION, THE CUSTOMER MAY BE REQUIRED TO OBTAIN A VAIRANCE FROM THE PRESIDING AUTHORITY FOR NON-COMPLIANT FEATURES.
 4. DRAWING MUST BE SIGNED BY CUSTOMER AND RETURNED TO LIFT-U PRIOR TO PRODUCTION RELEASE. CUSTOMER APPROVAL SIGNIFIES THAT ALL DIMENSIONS ARE CORRECT TO THEIR SPECIFICATIONS.
 5. SEE SHEET 5 OF 5 FOR LIFT SPECIFICATIONS.

NOTES:


THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED VMW LIFT / MILLWORK INTERFACE.

THE DIMENSIONS AND DETAILS WILL VARY FOR EACH APPLICATION. THEREFORE, FOR EACH PROJECT APPLICATION REFER TO ITS CORRESPONDING LIFT CONFIGURATION DRAWING FOR GENERAL ARRANGEMENT LAYOUT AND LIFT ENVELOPE DIMENSIONS.

ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT ARE FURNISHED AND INSTALLED BY OTHERS.



REFERENCE ONLY

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	A DIVISION OF HOGAN MFG., INC.	
TITLE LIFT CONFIGURATION, 7"-14" RISE		
DOCUMENT NO. 910-0091	SHEET NO. 1 OF 5	REVISION A

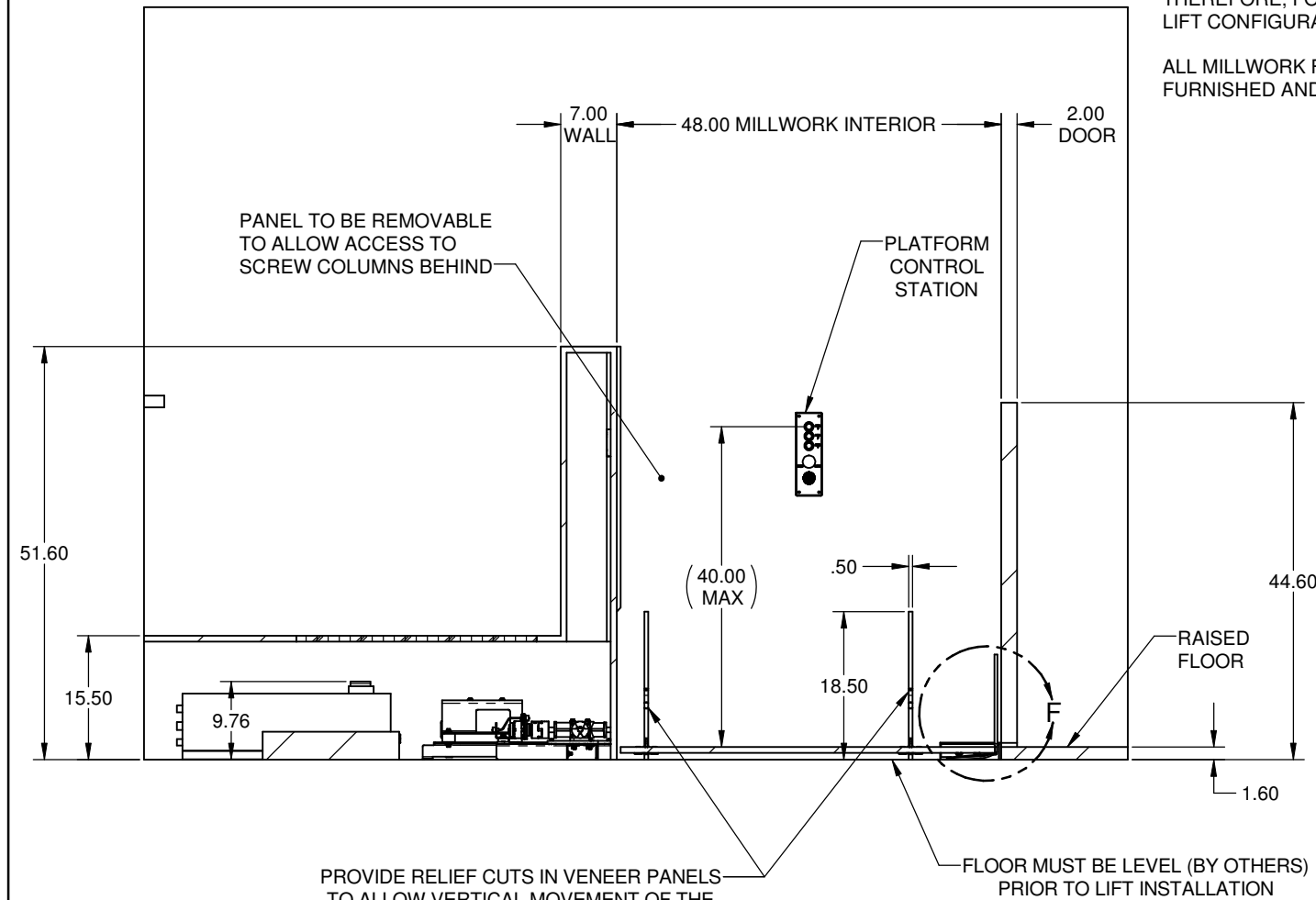
NOTES:

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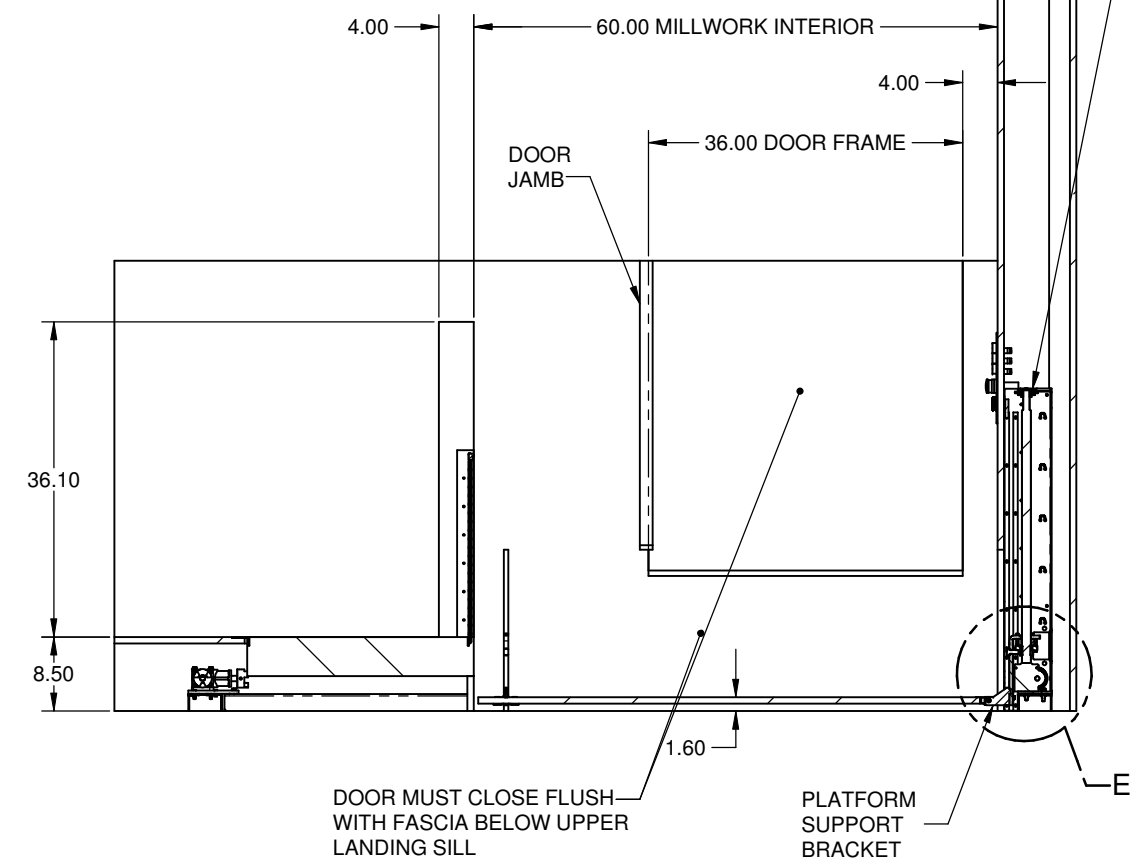
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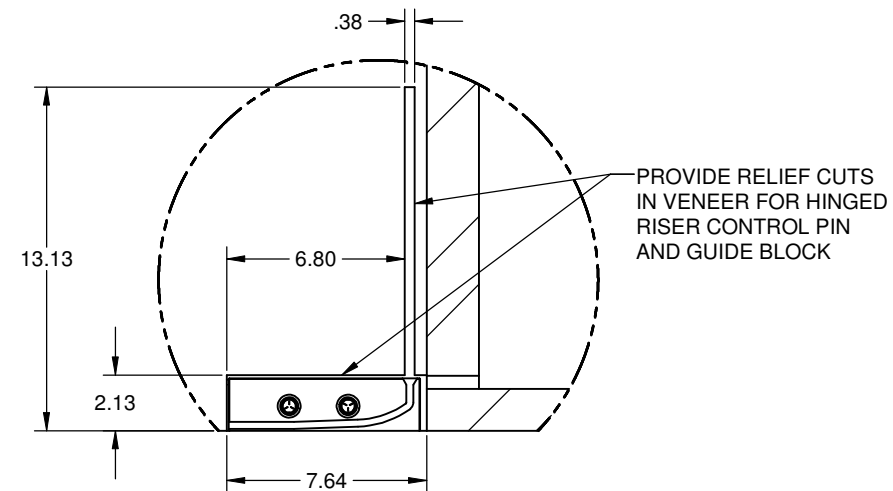
LIFT SCREW JACK COLUMNS TO BE ENCASED IN MILLWORK. MILLWORK IS SUPPLIED AND INSTALLED BY OTHERS. SIDES FACING THE PLATFORM TO BE COMPLETED AFTER THE LIFT IS INSTALLED.



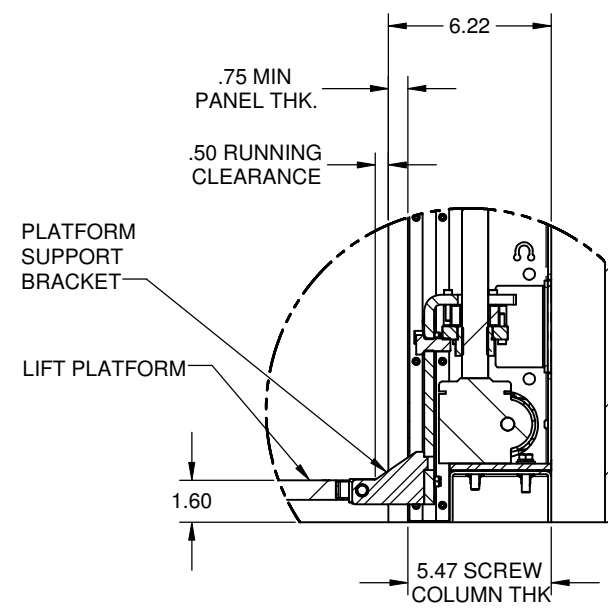
SECTION A-A



SECTION B-B




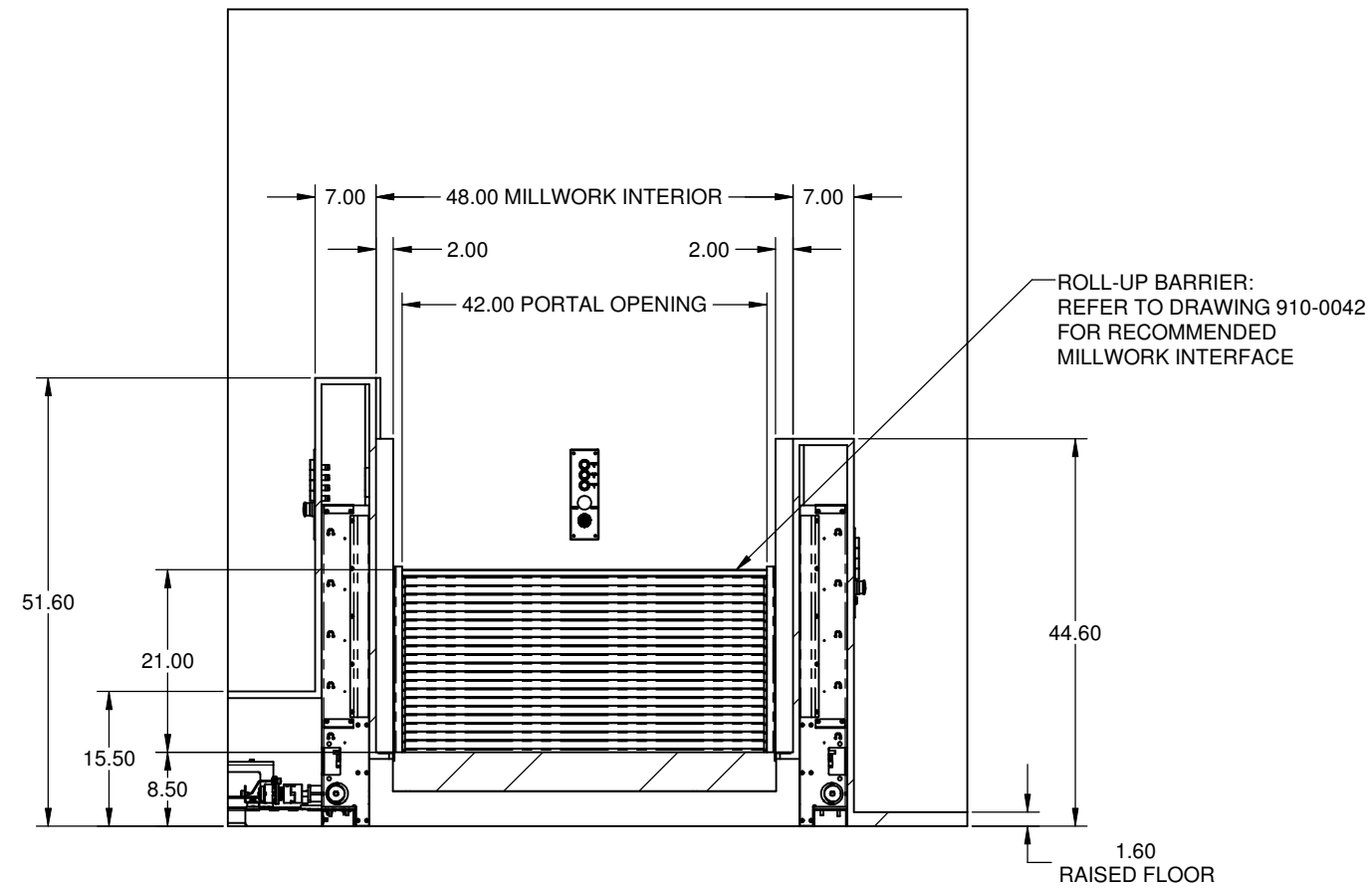
DETAIL F



DETAIL E

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TITLE LIFT CONFIGURATION, 7"-14" RISE		
DOCUMENT NO. 910-0091	SHEET NO. 2 OF 5	REVISION A



SECTION C-C


REFERENCE ONLY

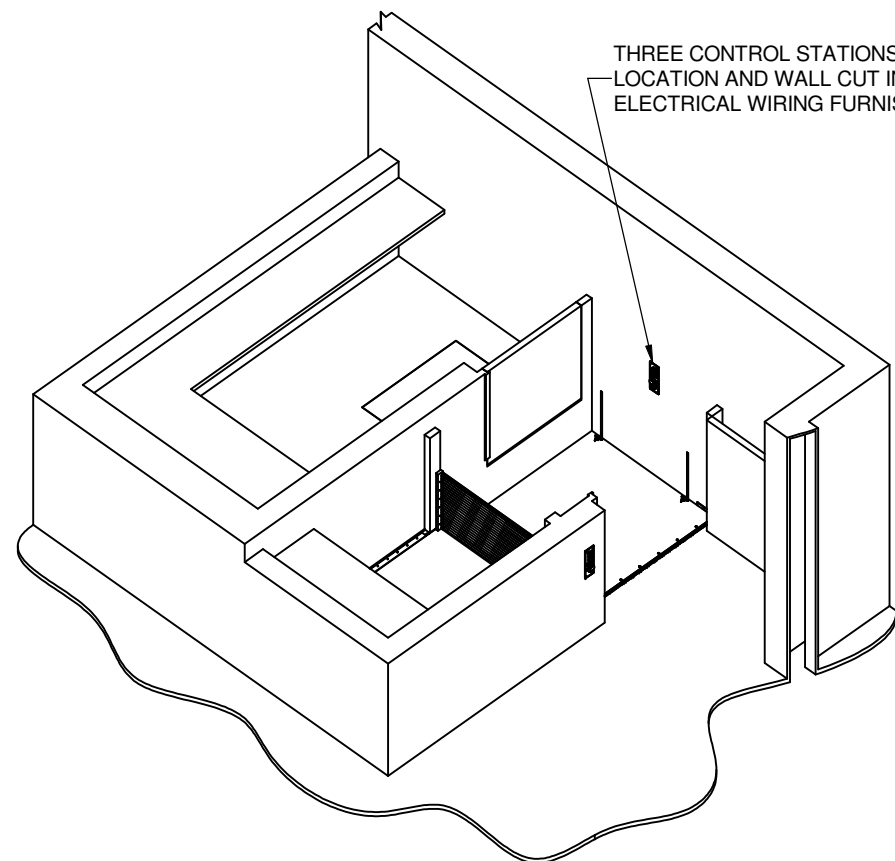
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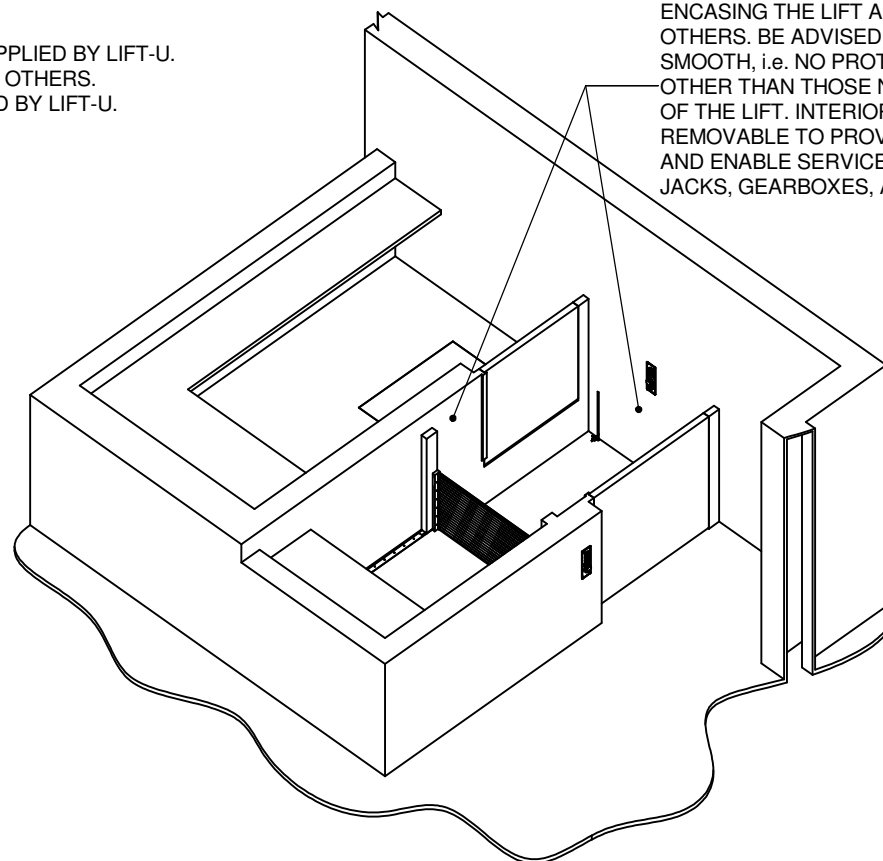
ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT ARE FURNISHED AND INSTALLED BY OTHERS.

 LIFT-U <small>P.O. BOX 398 ESCALON, CA. 95320 209-838-2400</small>	<small>THIS DOCUMENT IS AND CONTAINS CONFIDENTIAL TRADE SECRET INFORMATION OF THE COMPANY. NO PART OF IT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS ELECTRONICALLY, PHOTOCOPYING, RECORDING OR OTHERWISE, WITHOUT THE PRIOR WRITTEN PERMISSION OF HOGAN MFG, INC. THIS DOCUMENT IS LOANED FOR THE LIMITED PURPOSES STATED HEREIN ONLY, AND REMAINS THE PROPERTY OF THE COMPANY.</small>	
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TITLE LIFT CONFIGURATION, 7"-14" RISE		
DOCUMENT NO. 910-0091	SHEET NO. 3 OF 5	REVISION A



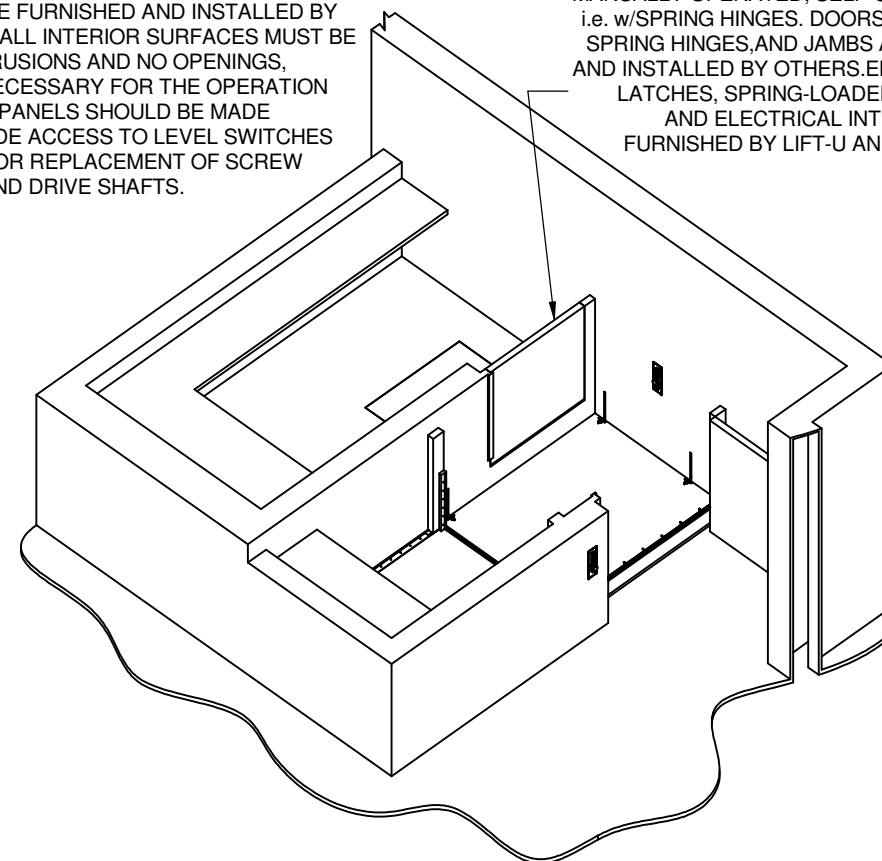
PLATFORM SHOWN AT LOWER LEVEL (1)
READY FOR PASSENGER INGRESS OR EGRESS

THREE CONTROL STATIONS SUPPLIED BY LIFT-U.
LOCATION AND WALL CUT IN BY OTHERS.
ELECTRICAL WIRING FURNISHED BY LIFT-U.



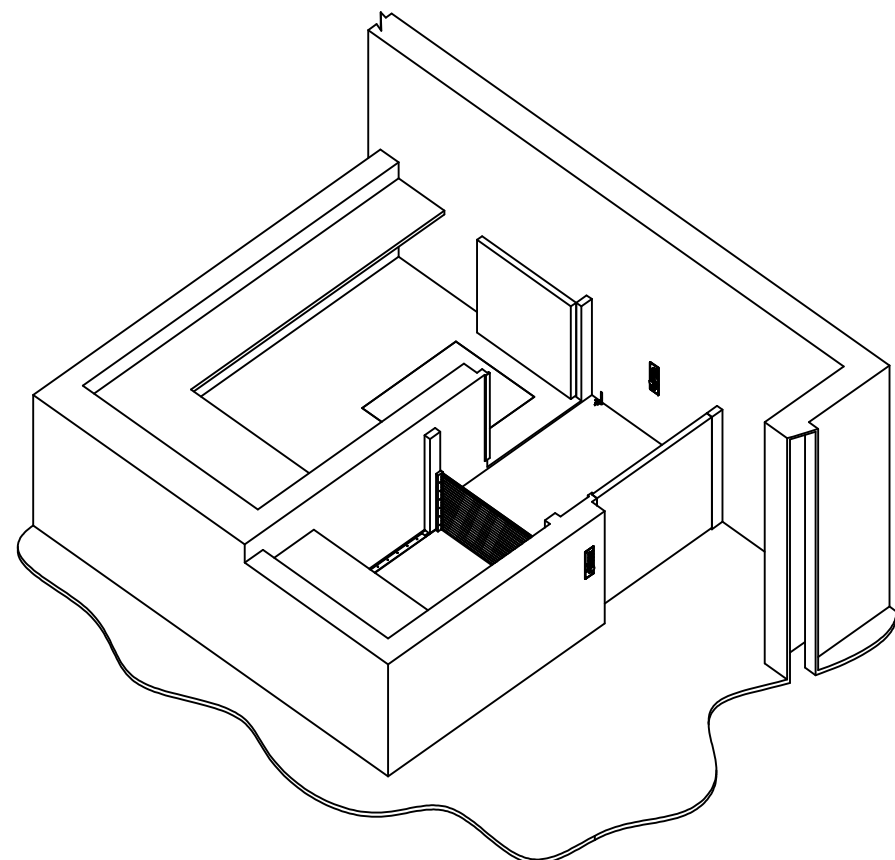
DOORS ARE CLOSED AND LOCKED WHEN
PLATFORM RAISES AND LOWERS

ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES
ENCASING THE LIFT ARE FURNISHED AND INSTALLED BY
OTHERS. BE ADVISED - ALL INTERIOR SURFACES MUST BE
SMOOTH, i.e. NO PROTRUSIONS AND NO OPENINGS,
OTHER THAN THOSE NECESSARY FOR THE OPERATION
OF THE LIFT. INTERIOR PANELS SHOULD BE MADE
REMOVABLE TO PROVIDE ACCESS TO LEVEL SWITCHES
AND ENABLE SERVICE OR REPLACEMENT OF SCREW
JACKS, GEARBOXES, AND DRIVE SHAFTS.



PLATFORM SHOWN PARKED AT WITNESS
LEVEL (2) FOR USE BY ABLE-BODIED PERSONS

MANUALLY OPERATED, SELF-CLOSING DOORS
i.e. w/SPRING HINGES. DOORS, SELF-CLOSING
SPRING HINGES, AND JAMBS ARE FURNISHED
AND INSTALLED BY OTHERS. ELECTRIC STRIKE
LATCHES, SPRING-LOADED LATCH BOLTS,
AND ELECTRICAL INTERLOCK WIRING
FURNISHED BY LIFT-U AND INSTALLED BY
OTHERS.



PLATFORM SHOWN AT UPPER LEVEL (3)
READY FOR PASSENGER INGRESS OR EGRESS

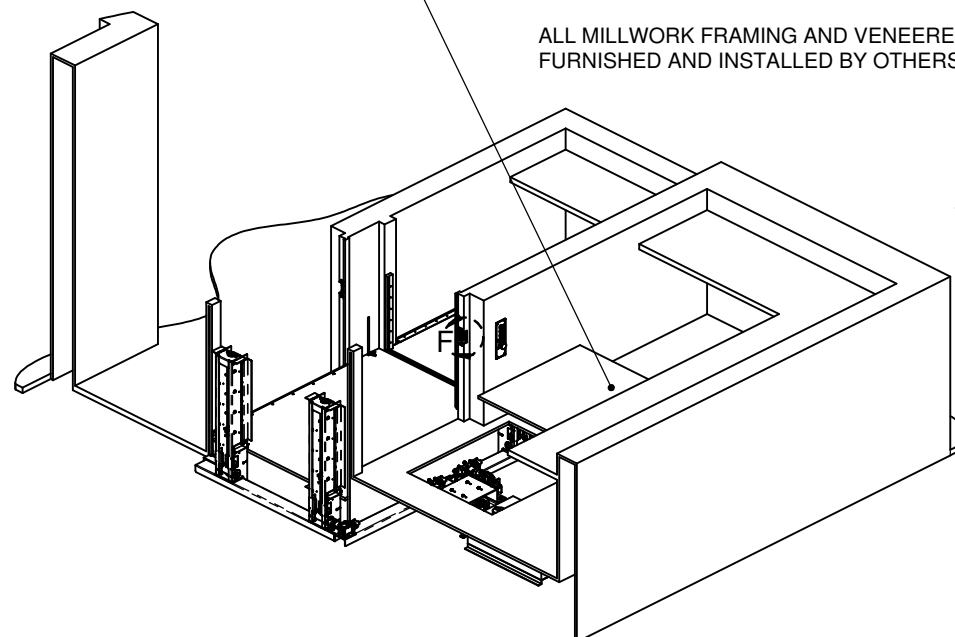
PROVIDE AN ACCESS HATCH TO ENABLE
SERVICE ON MOTOR AND ELECTRONICS
LOCATED BELOW UPPER LANDING.
HATCH SHOULD BE NO LESS THAN 30" x 36".
A REMOVABLE JOIST WITHIN THE FRAMED
HATCH OPENING SHOULD BE POSITIONED
TO REINFORCE THE HATCH COVER.

NOTES:

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VMW LIFT / MILLWORK INTERFACE.

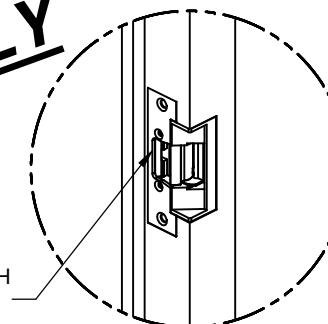
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REVERSE ISOMETRIC VIEW
BACK WALL AND DOORS NOT SHOWN FOR CLARITY

REFERENCE ONLY



ELECTRIC STRIKE LATCH
CUT INTO DOOR JAMB

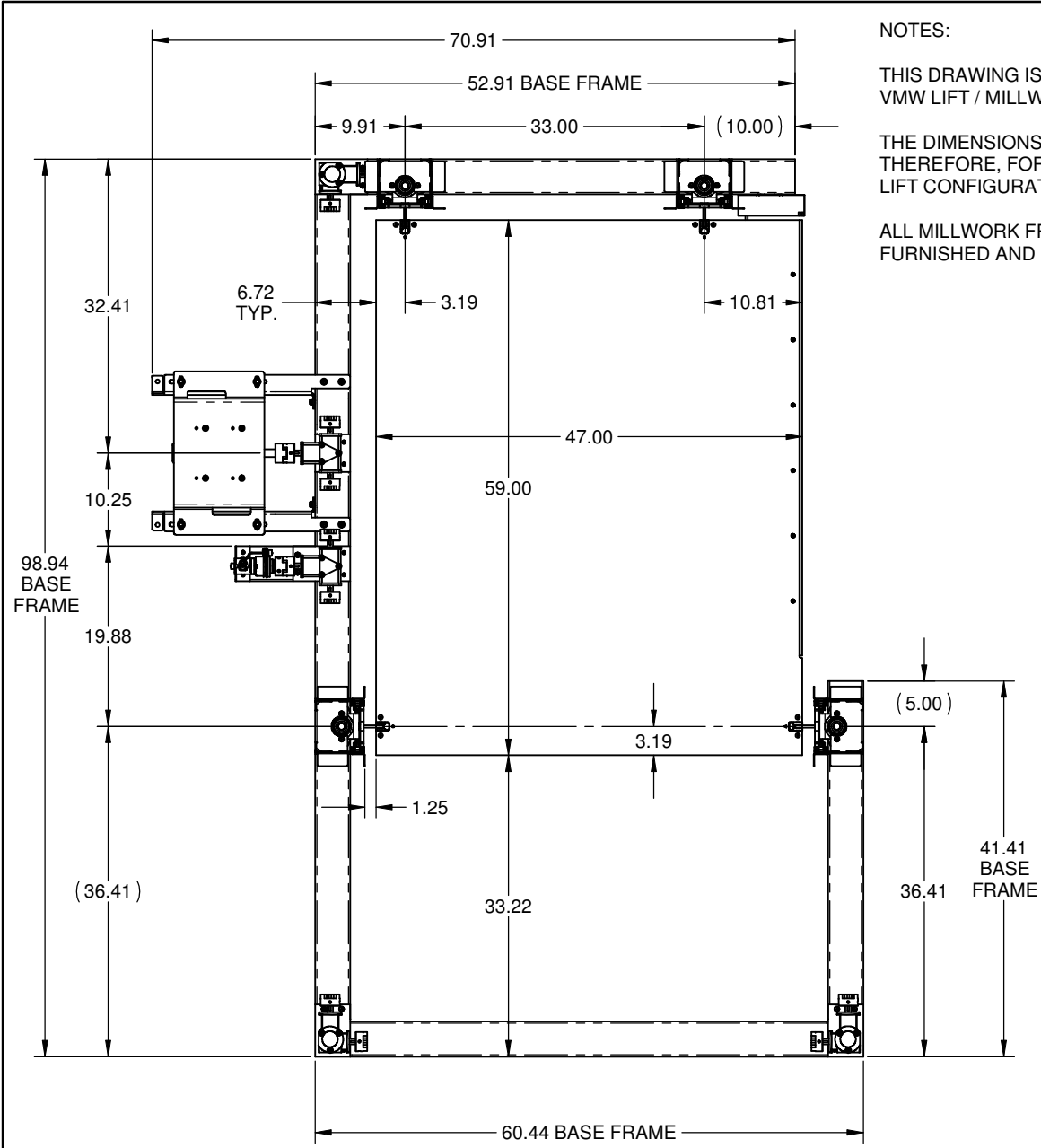
DETAIL F
TYPICAL 2 PLACES



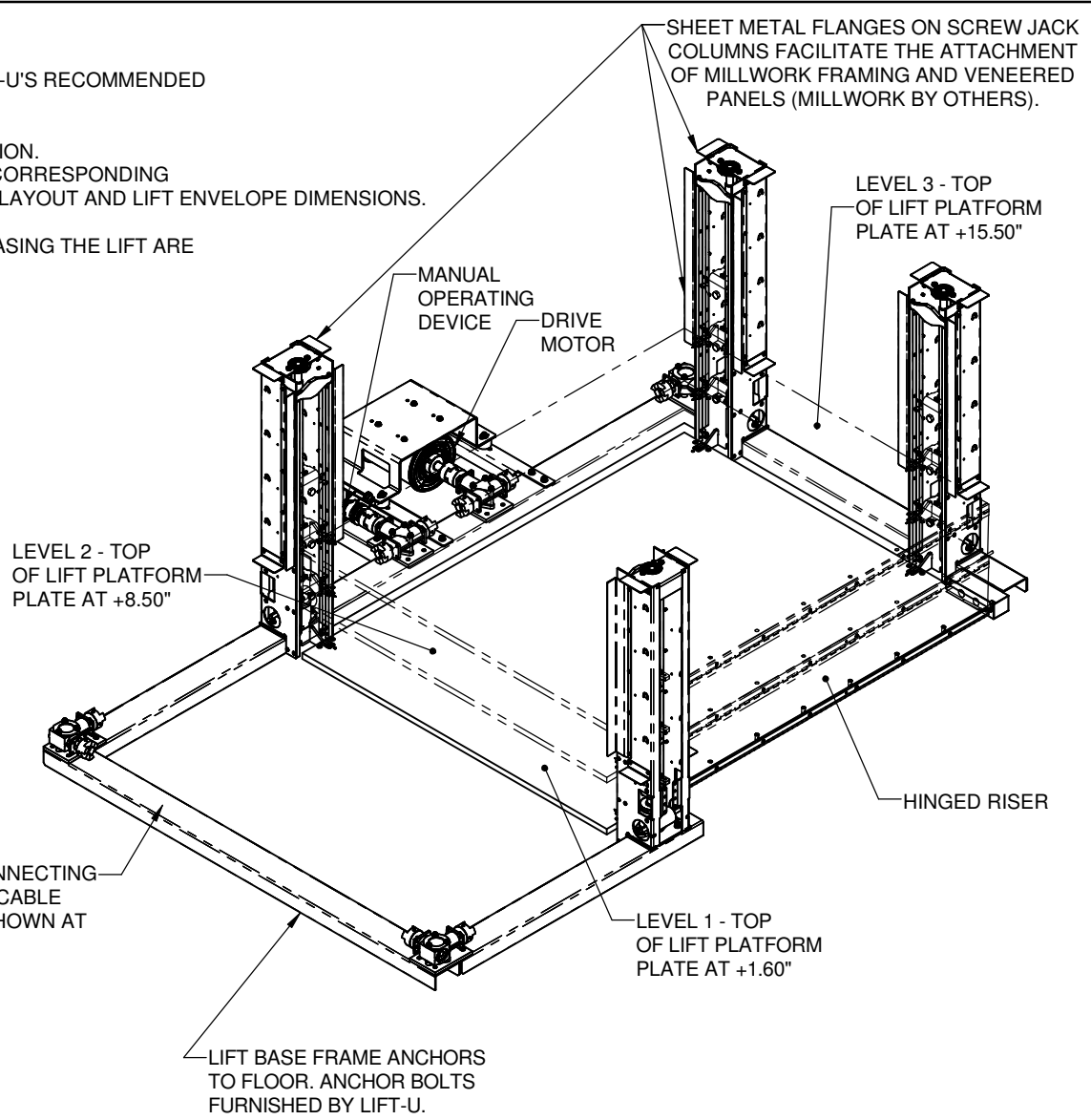
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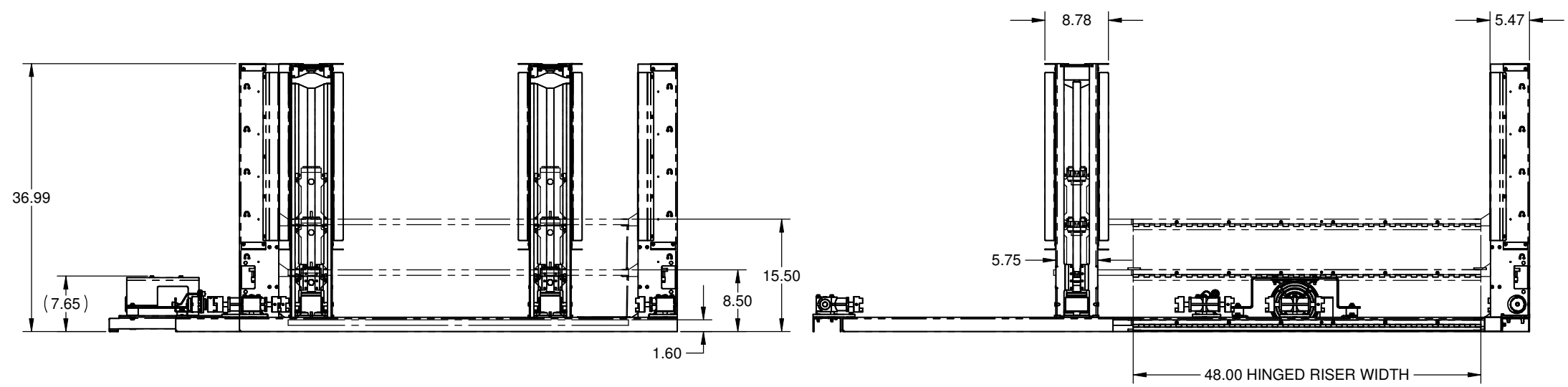
TITLE	LIFT CONFIGURATION, 7"-14" RISE		
DOCUMENT NO.	910-0091	SHEET NO.	4 OF 5
		REVISION	A



NOTES:
 THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED VMW LIFT / MILLWORK INTERFACE.
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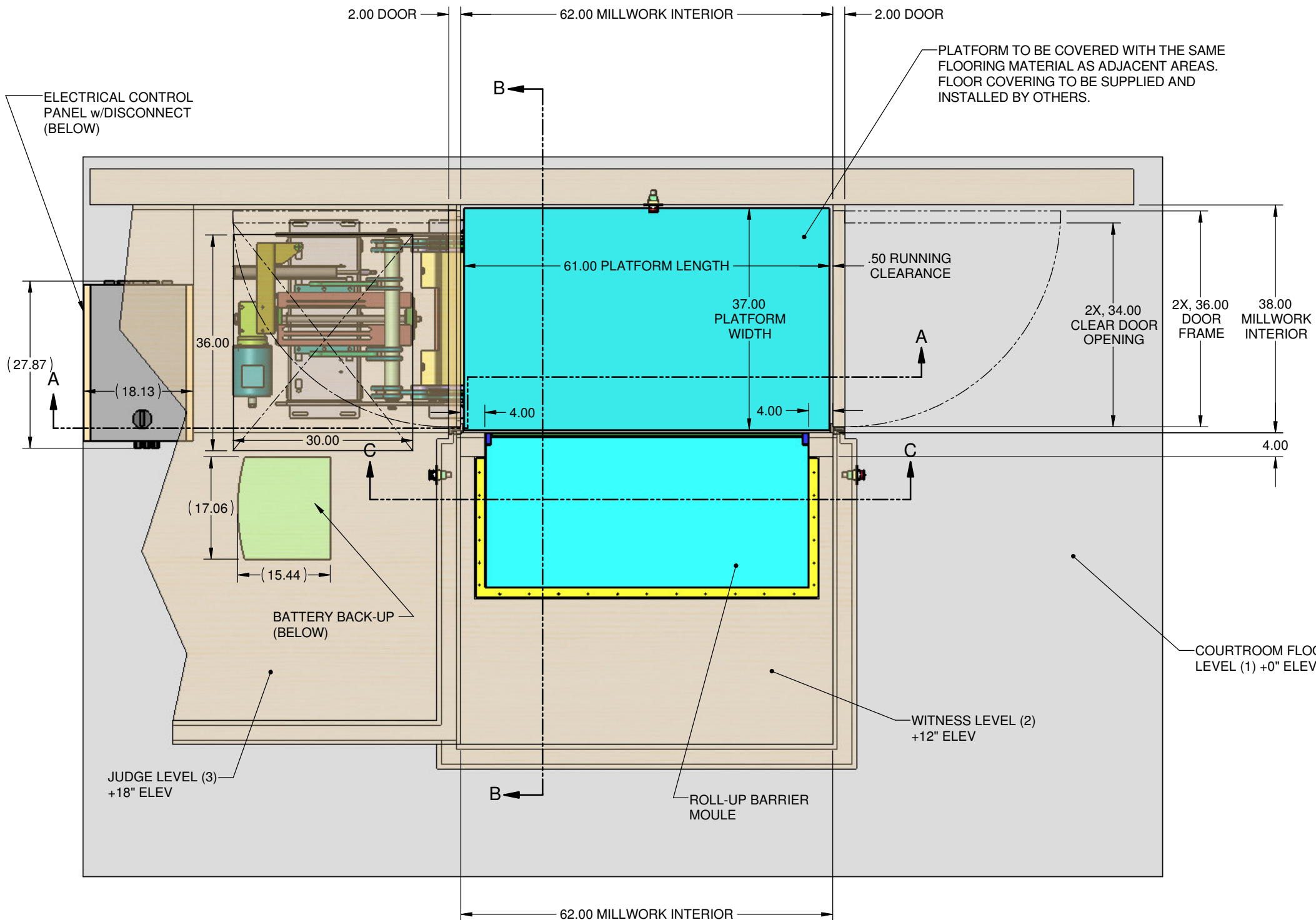
ISOMETRIC VIEW



LIFT ENVELOPE DIMENSIONS

REFERENCE ONLY

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	A DIVISION OF HOGAN MFG., INC.	
TITLE LIFT CONFIGURATION, 7"-14" RISE		
DOCUMENT NO. 910-0091	SHEET NO. 5 OF 5	REVISION A



THIS DRAWING ILLUSTRATES A LIFT PLATFORM AND OPERATING MECHANISM WITHIN THE PARAMETERS OF MILLWORK WALLS. THE LIFT PLATFORM REQUIRES 3/8\"/>

MILLWORK WALLS ARE SHOWN IN SHADED / TRANSPARENT MODE ON SHEET 1 OF 5 TO VIEW ENCASED LIFT ASSEMBLY.

POWER NOTE:
BUILDING POWER TO BE SUPPLIED AND ROUTED TO ELECTRICAL CONTROL PANEL BY OTHERS. FURNISH 115 VAC, 3 WIRE, 15 AMP, SINGLE PHASE SOURCE POWER.

- ADVISORY NOTES:**
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 5. SEE SHEET 5 OF 5 FOR LIFT SPECIFICATIONS.


REFERENCE ONLY

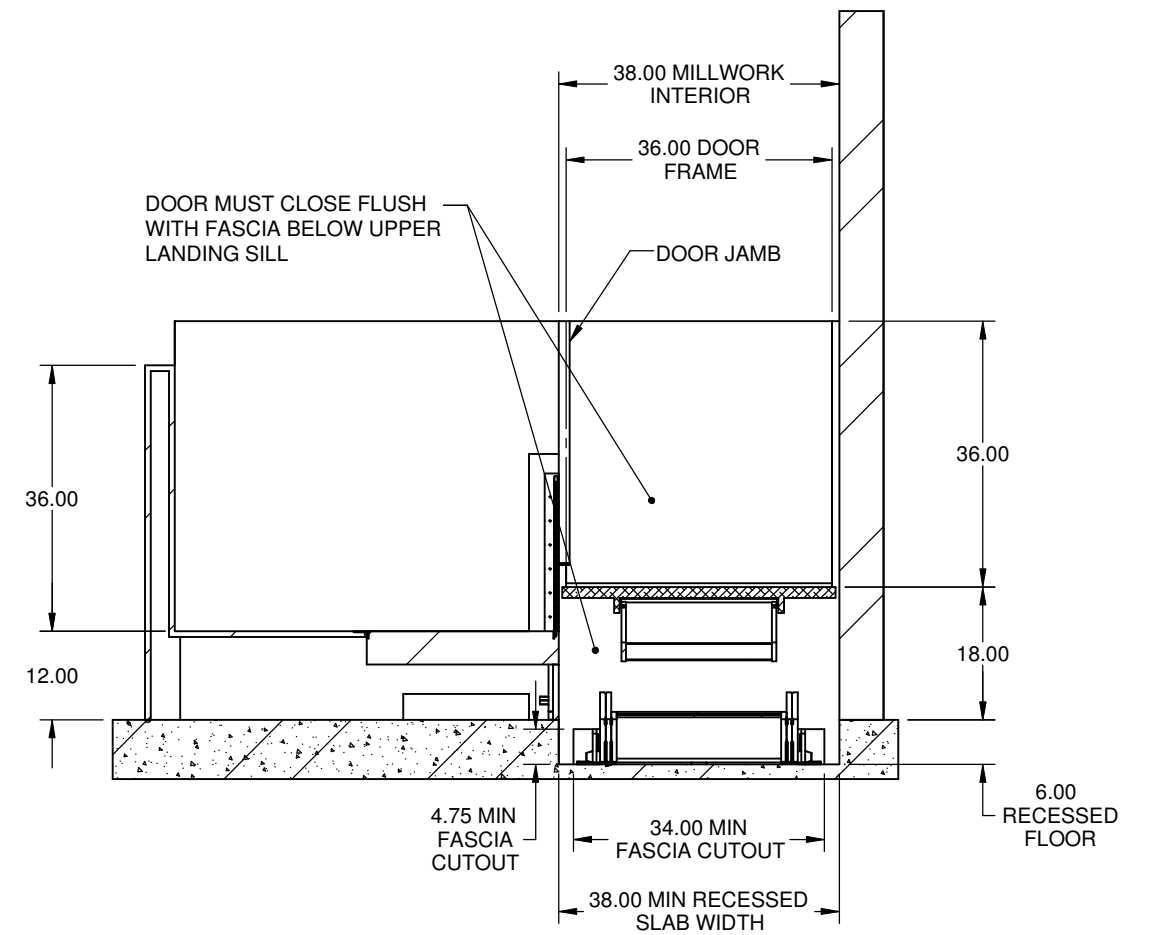
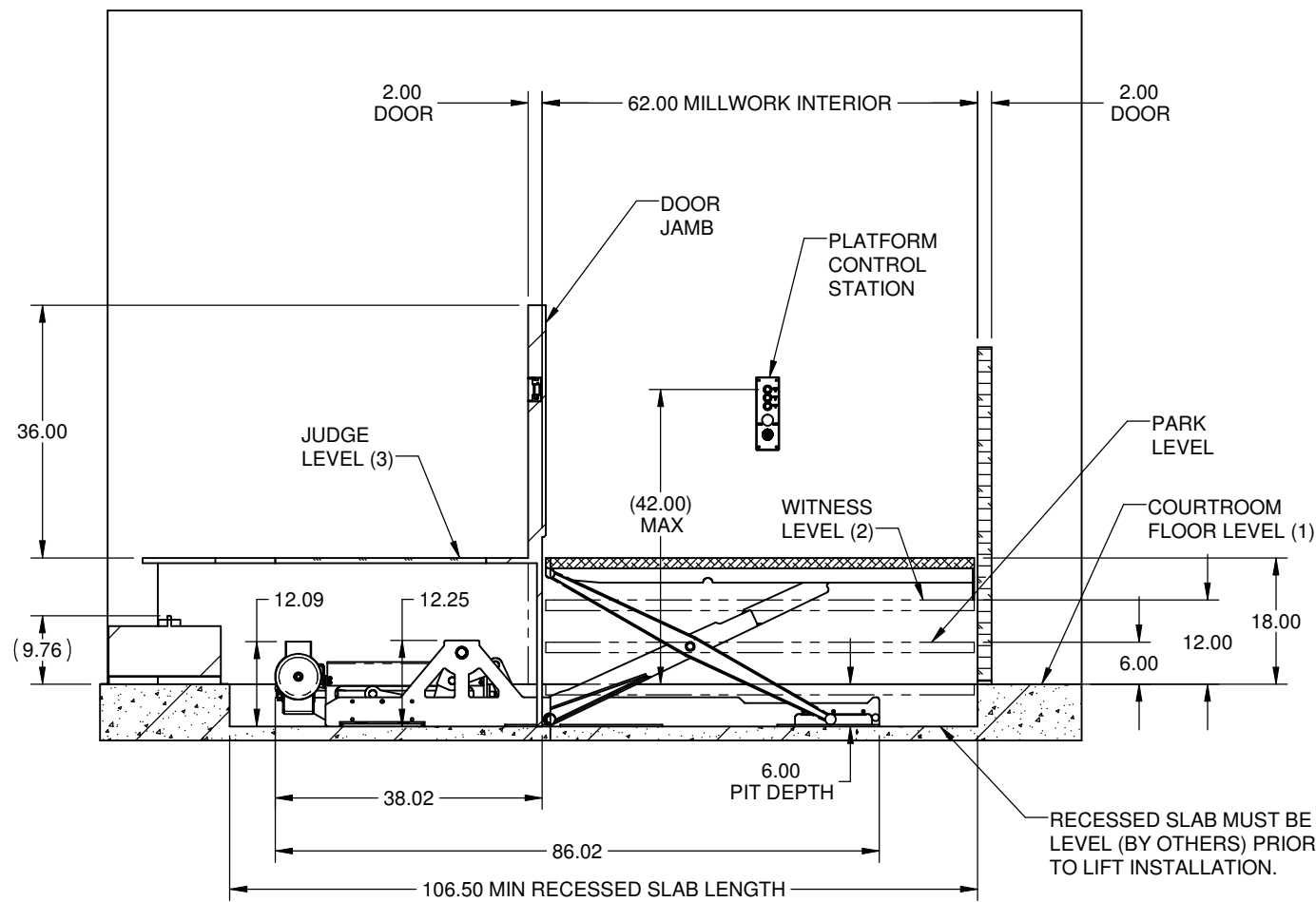
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ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASEING THE LIFT ARE FURNISHED AND INSTALLED BY OTHERS.

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TITLE LIFT CONFIGURATION, 6" - 18" RISE		
DOCUMENT NO. 910-0092	SHEET NO. 1 OF 5	REVISION A




REFERENCE ONLY

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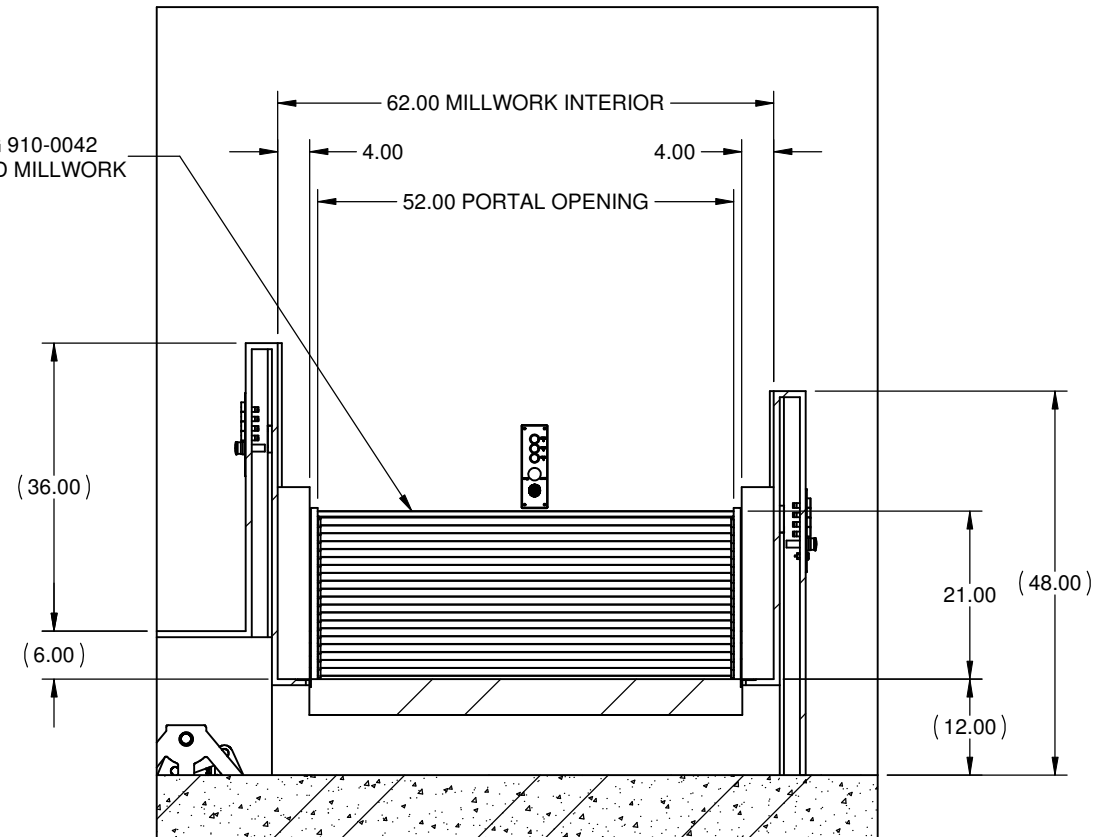
THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED VMW LIFT / MILLWORK INTERFACE.

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TITLE LIFT CONFIGURATION, 6" - 18" RISE		
DOCUMENT NO. 910-0092	SHEET NO. 2 OF 5	REVISION A

ROLL-UP BARRIER:
REFER TO DRAWING 910-0042
FOR RECOMMENDED MILLWORK
INTERFACE.



SECTION C-C

REFERENCE ONLY

NOTES:

THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED VMW LIFT / MILLWORK INTERFACE.

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ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT ARE FURNISHED AND INSTALLED BY OTHERS.



LIFT-U

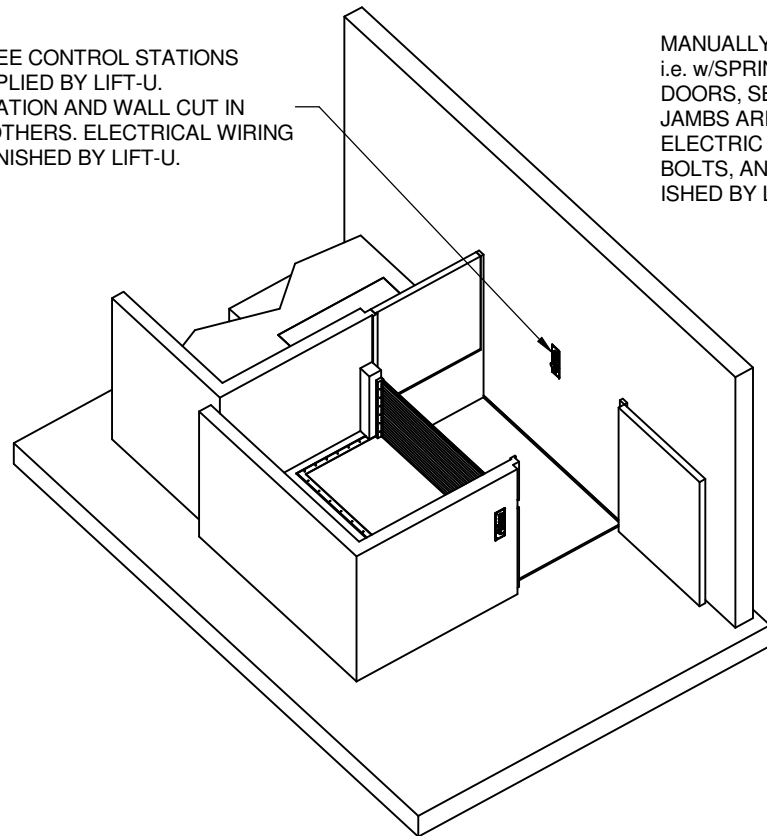
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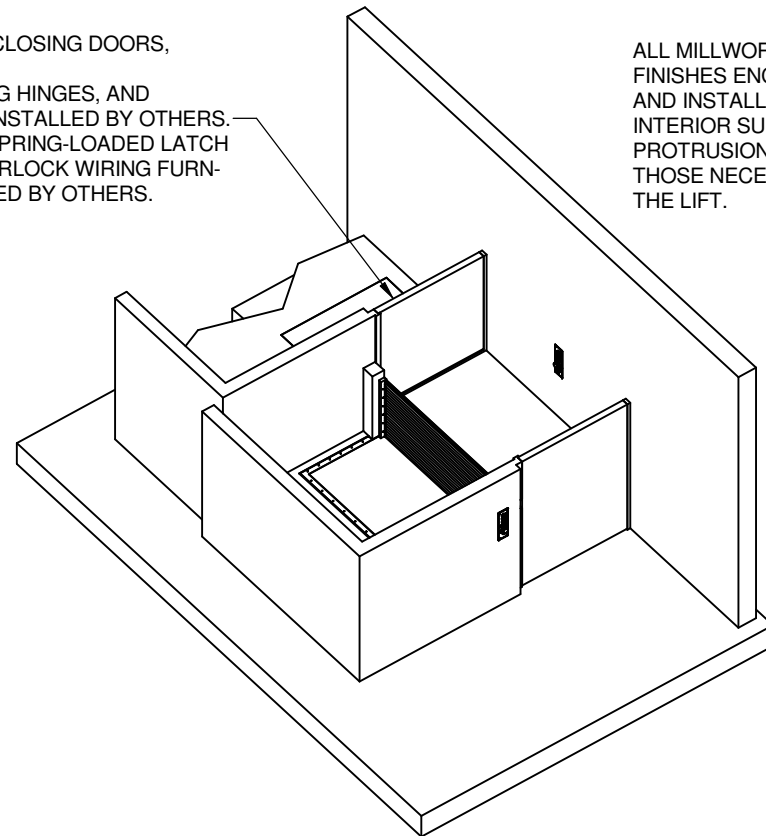
TITLE		
LIFT CONFIGURATION, 6" - 18" RISE		
DOCUMENT NO.	910-0092	SHEET NO.
		3 OF 5
		REVISION
		A

THREE CONTROL STATIONS SUPPLIED BY LIFT-U. LOCATION AND WALL CUT IN BY OTHERS. ELECTRICAL WIRING FURNISHED BY LIFT-U.



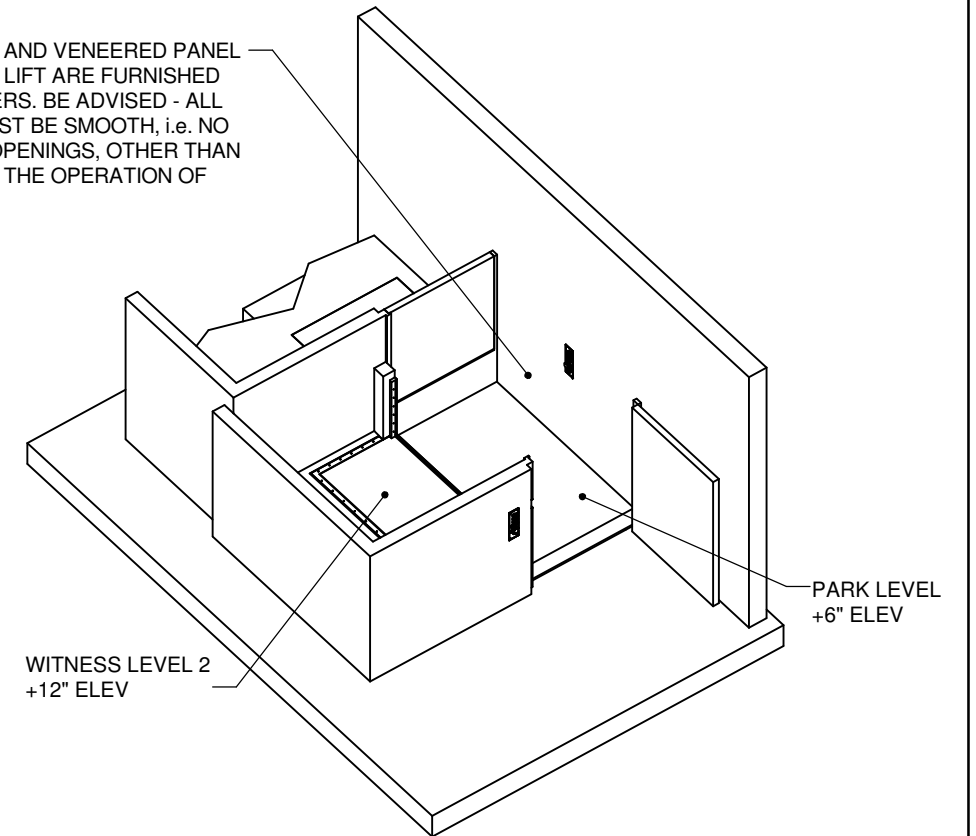
PLATFORM SHOWN AT LOWER LEVEL (1) READY FOR PASSENGER INGRESS OR EGRESS

MANUALLY OPERATED, SELF-CLOSING DOORS, i.e. w/SPRING HINGES. DOORS, SELF-CLOSING SPRING HINGES, AND JAMBS ARE FURNISHED AND INSTALLED BY OTHERS. ELECTRIC STRIKE LATCHES, SPRING-LOADED LATCH BOLTS, AND ELECTRICAL INTERLOCK WIRING FURNISHED BY LIFT-U AND INSTALLED BY OTHERS.



DOORS ARE CLOSED AND LOCKED WHEN PLATFORM RAISES AND LOWERS

ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT ARE FURNISHED AND INSTALLED BY OTHERS. BE ADVISED - ALL INTERIOR SURFACES MUST BE SMOOTH, i.e. NO PROTRUSIONS AND NO OPENINGS, OTHER THAN THOSE NECESSARY FOR THE OPERATION OF THE LIFT.



PLATFORM SHOWN AT PARK LEVEL FOR USE BY ABLE-BODIED PERSONS ROLL-UP BARRIER IS STOWED

WITNESS LEVEL 2 +12" ELEV

PARK LEVEL +6" ELEV

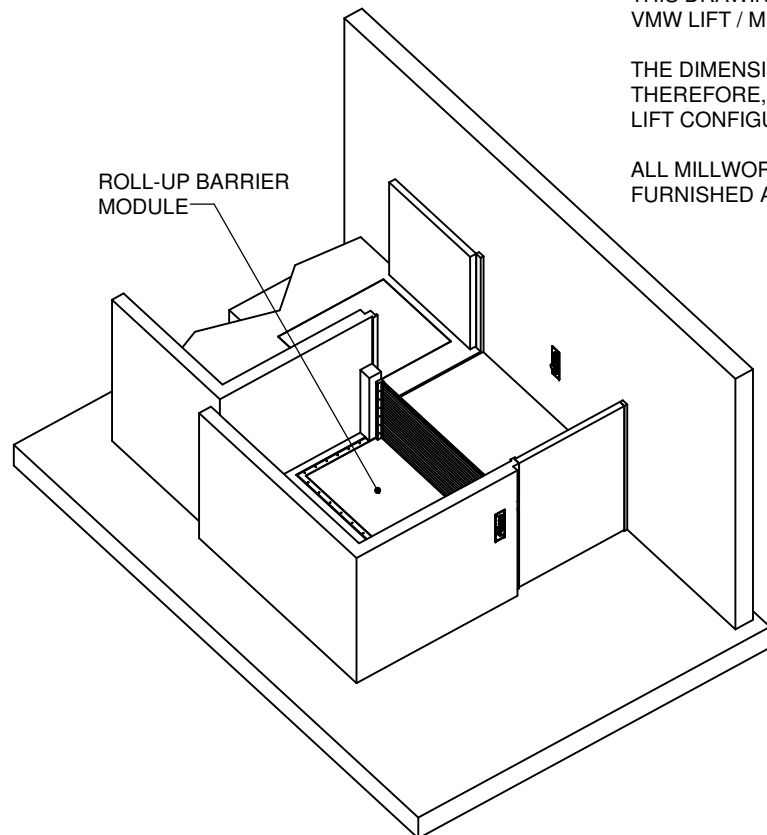
NOTES:

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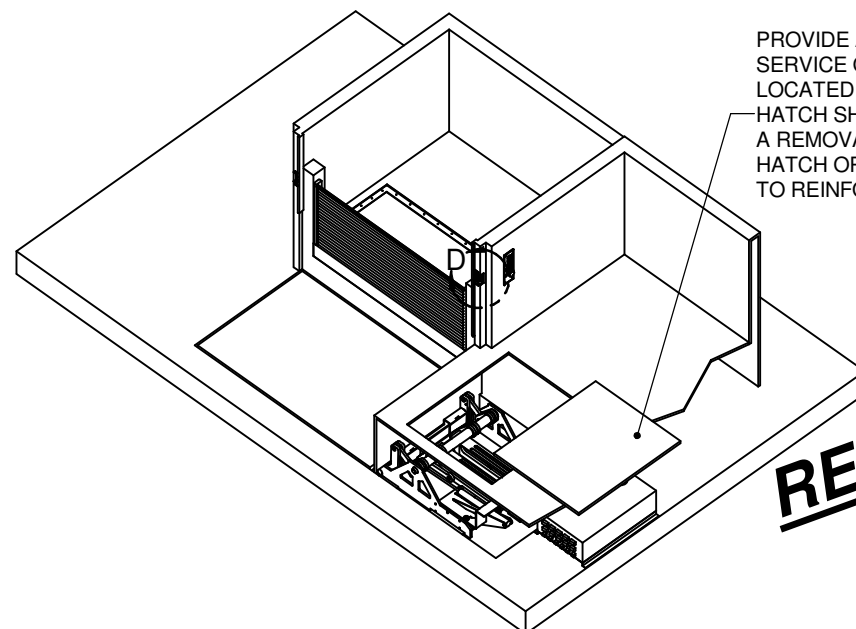
ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT ARE FURNISHED AND INSTALLED BY OTHERS.

ROLL-UP BARRIER MODULE

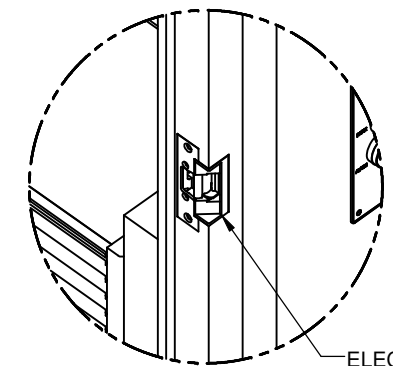


PLATFORM SHOWN AT JUDGE LEVEL (3) READY FOR PASSENGER INGRESS OR EGRESS

PROVIDE AN ACCESS HATCH TO ENABLE SERVICE ON MOTOR AND ELECTRONICS LOCATED BELOW UPPER LANDING. HATCH SHOULD BE NO LESS THAN 30" x 36". A REMOVABLE JOIST WITHIN THE FRAMED HATCH OPENING SHOULD BE POSITIONED TO REINFORCE THE HATCH COVER.



REVERSE ISOMETRIC VIEW BACK WALL AND DOORS NOT SHOWN FOR CLARITY



ELECTRIC STRIKE LATCH CUT INTO DOOR JAMB

DETAIL D 2 PLACES

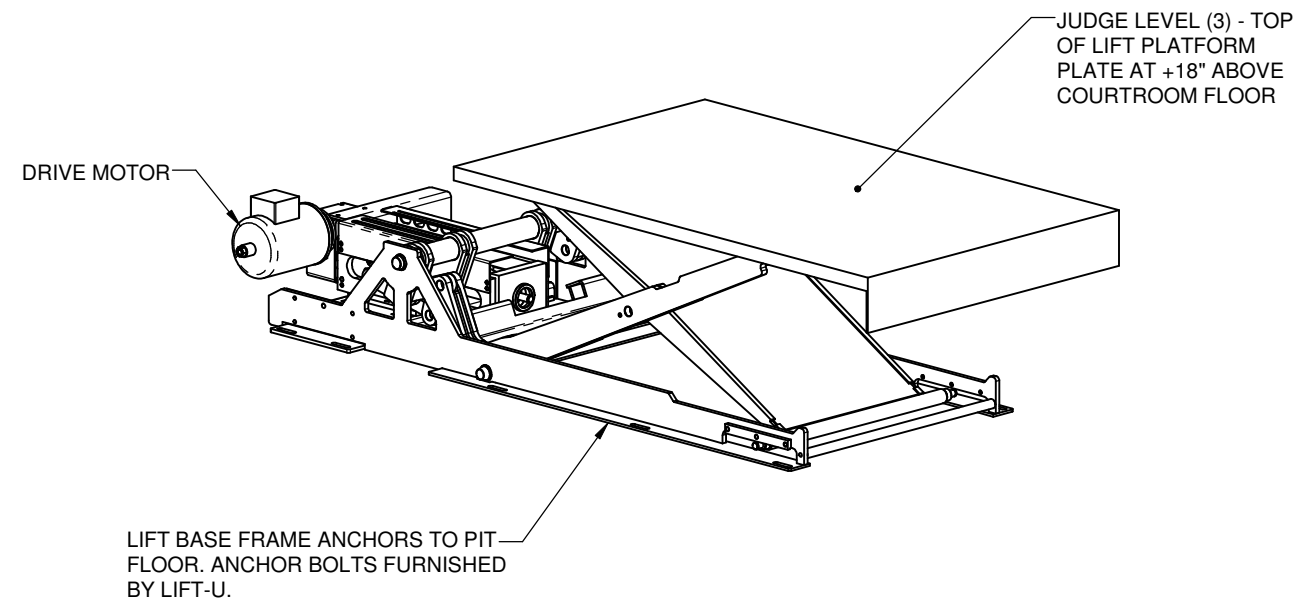
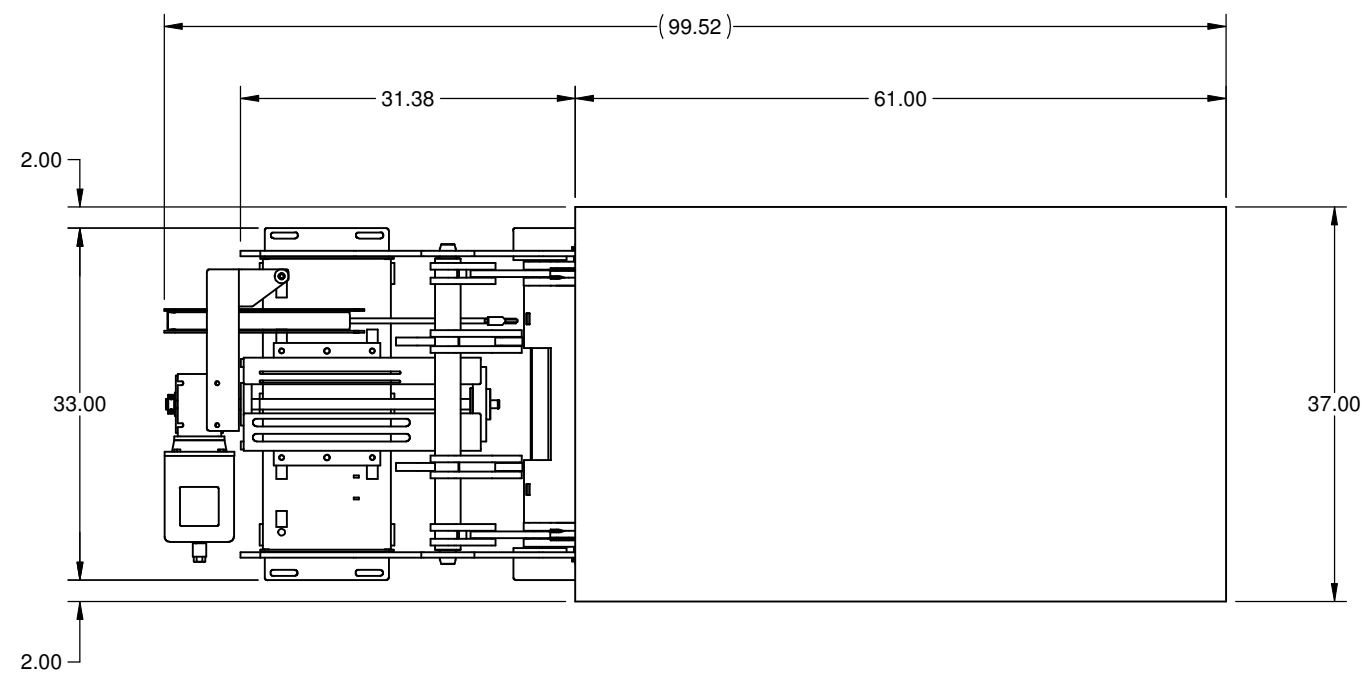
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TITLE	LIFT CONFIGURATION, 6" - 18" RISE		
DOCUMENT NO.	910-0092	SHEET NO.	4 OF 5
		REVISION	A



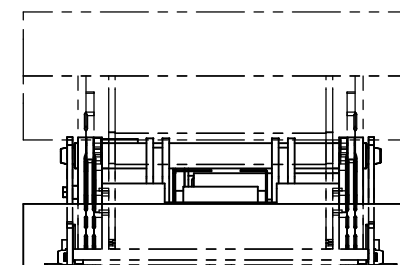
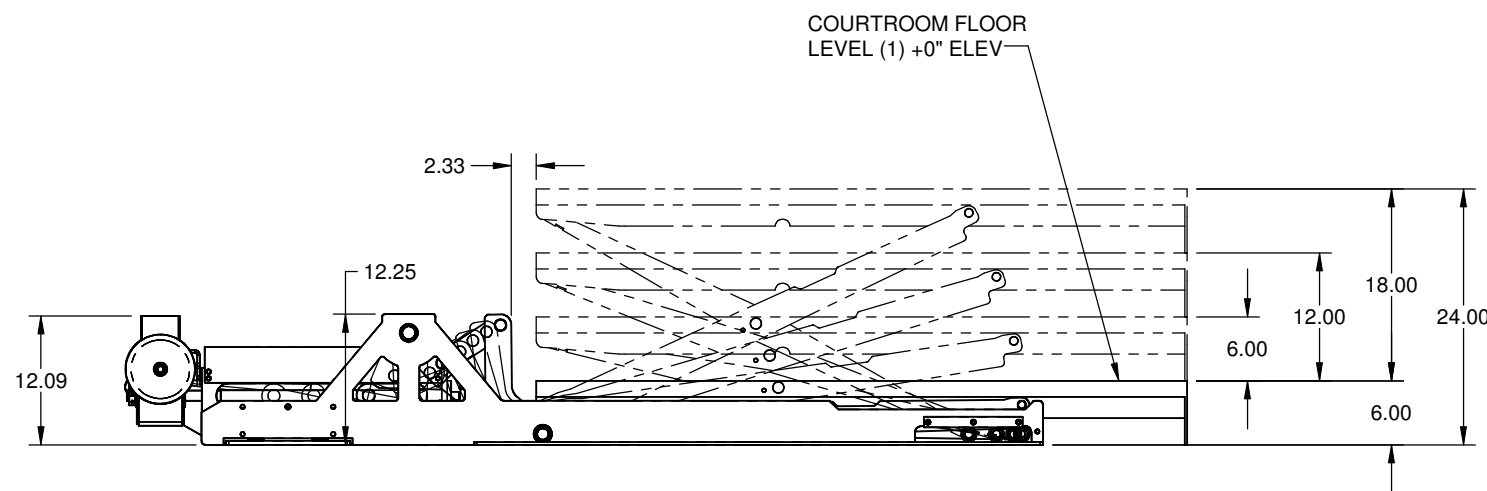
PERSPECTIVE VIEW

NOTES:

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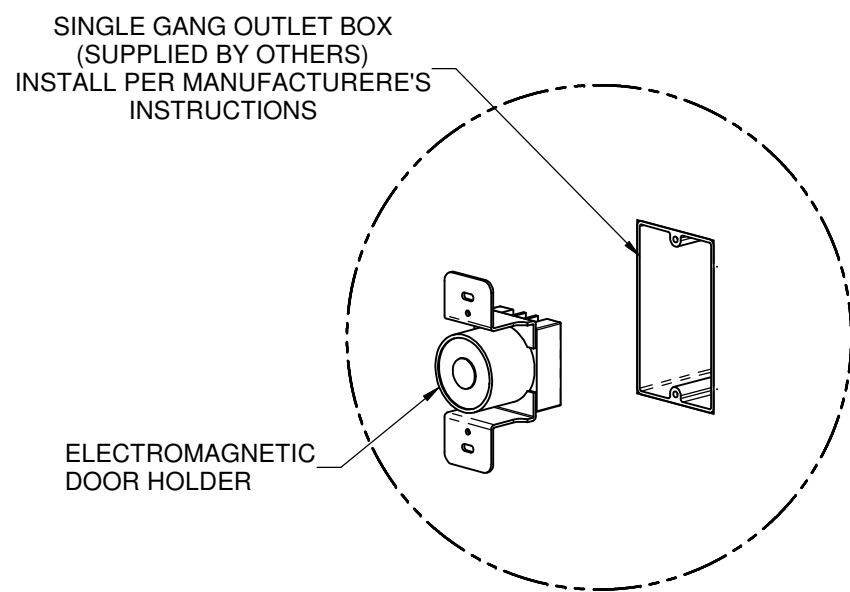
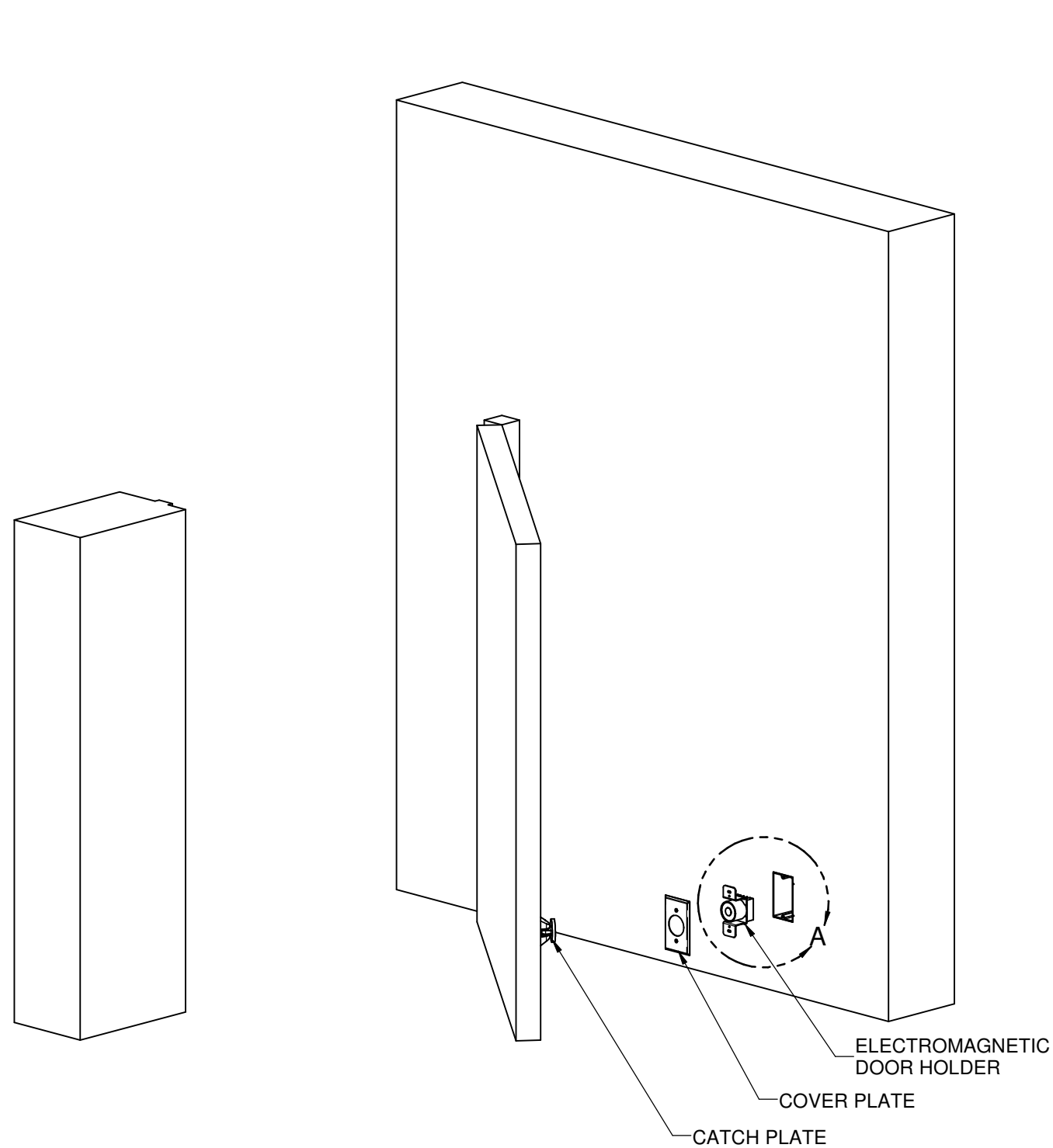


LIFT ENVELOPE DIMENSIONS

REFERENCE ONLY

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<p>TITLE LIFT CONFIGURATION, 6" - 18" RISE</p>		
DOCUMENT NO.	910-0092	SHEET NO. 5 OF 5
		REVISION A

REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	WAC	10-27-11		



DETAIL A

NOTES:

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THE DIMENSIONS AND DETAILS WILL VARY FOR EACH APPLICATION, REFER TO ITS CORRESPONDING LIFT CONFIGURATION.

CLEARANCE AND/OR OPENINGS INSIDE THE MILLWORK WALLS MUST BE PROVIDED FOR ROUTING OF ELECTROMAGNETIC DOOR HOLDER WIRING.

REFER TO DRAWING 910-0026 FOR ADDITIONAL RECOMMENDED MILLWORK WALL INTERFACE DESIGN PRINCIPLES.

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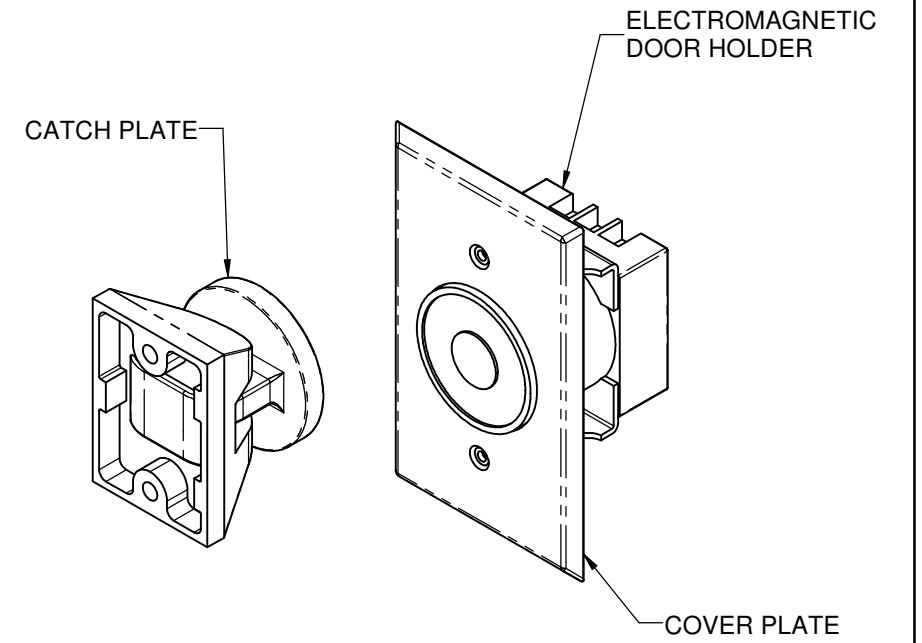
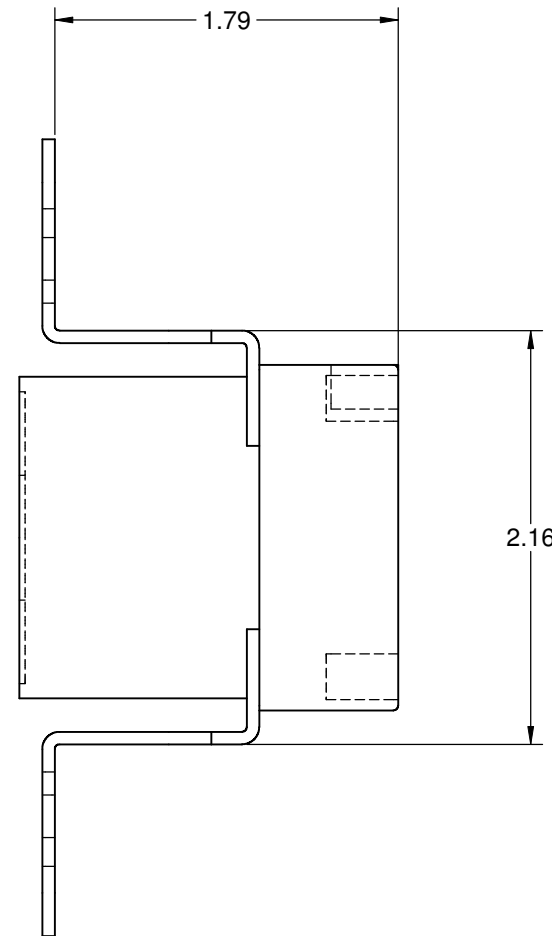
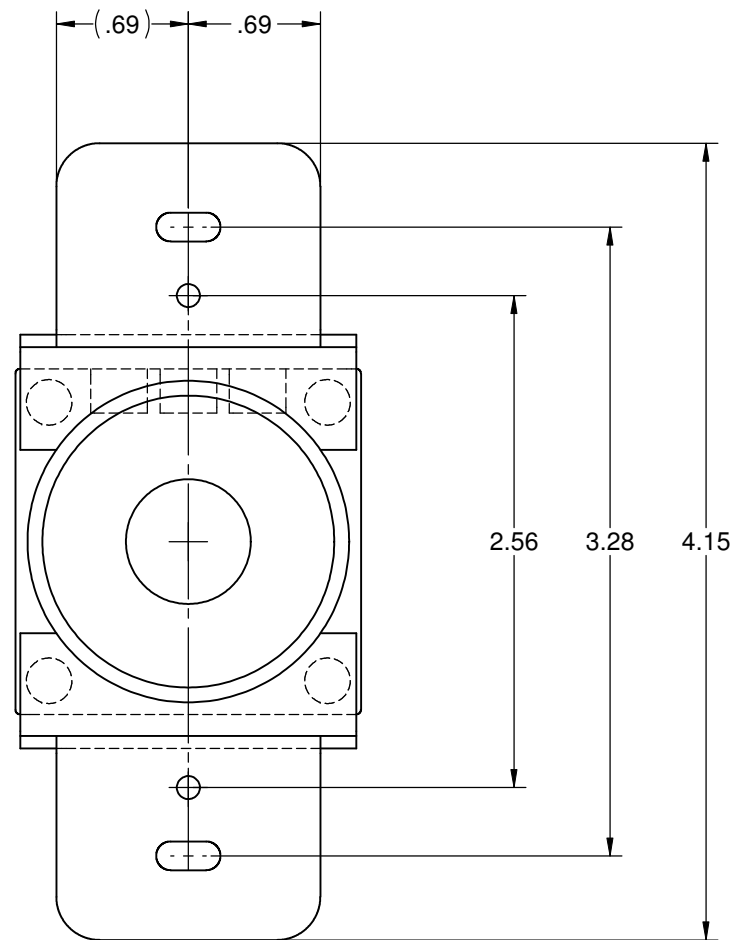
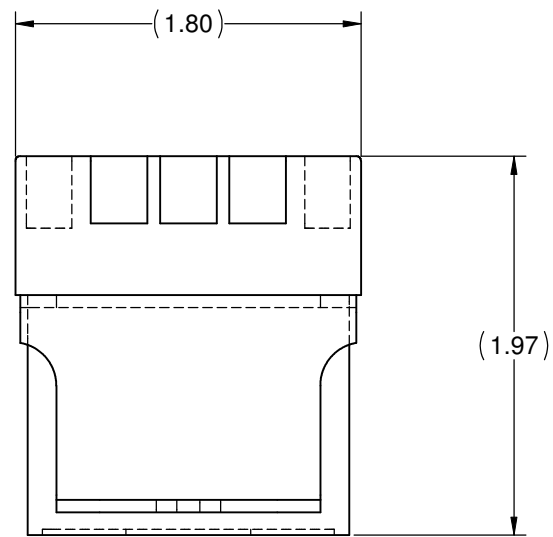
LOCATION OF DOOR HOLDER IS FOR ILLUSTRATION PURPOSES ONLY.

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TITLE	DOOR HOLDER / MILLWORK INTERFACE		
DOCUMENT NO.	910-0093	SHEET NO.	1 OF 2
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PERSPECTIVE VIEW OF ELECTRIOMAGNETIC DOOR HOLDER



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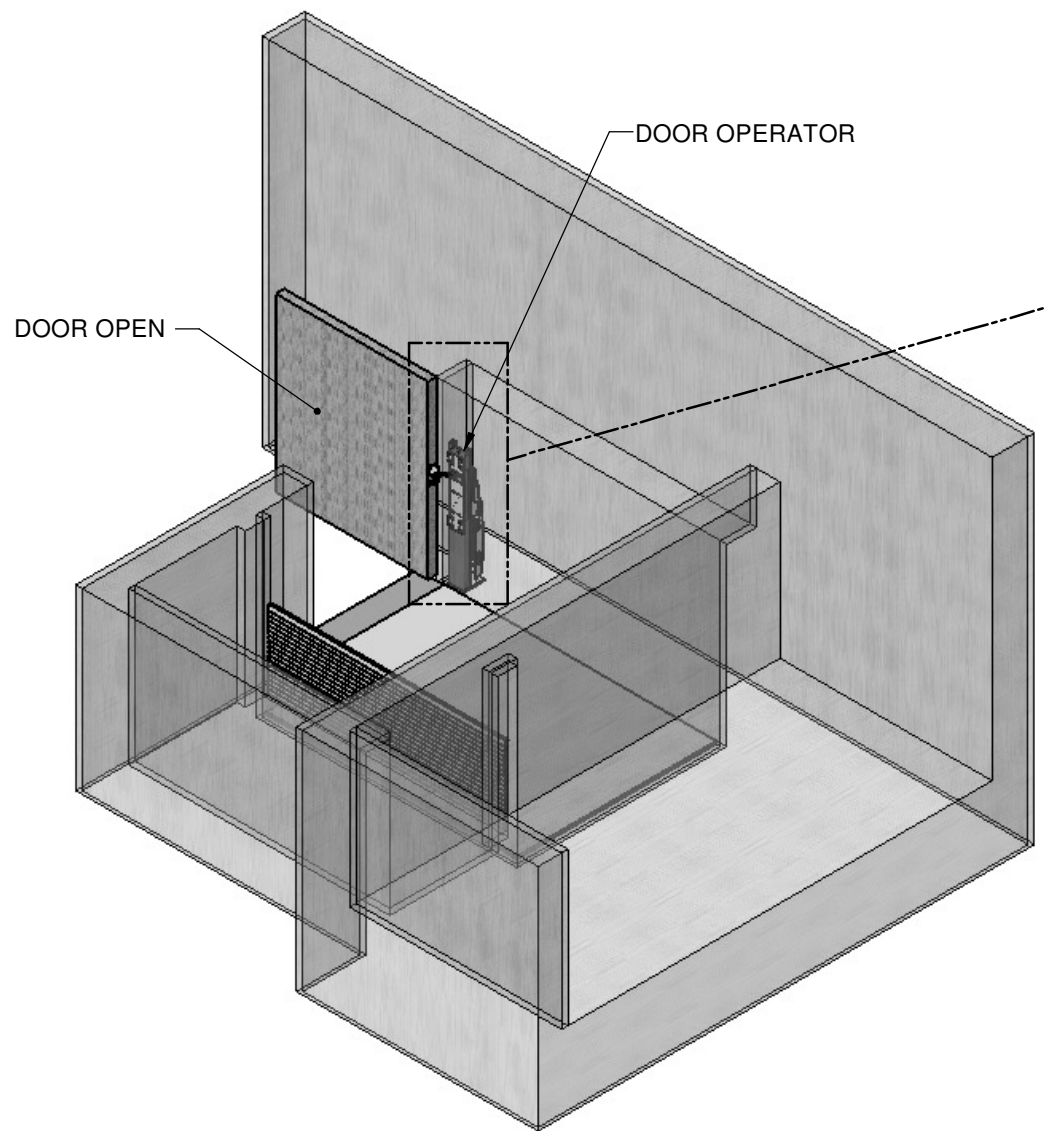
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DOCUMENT NO. **910-0093**

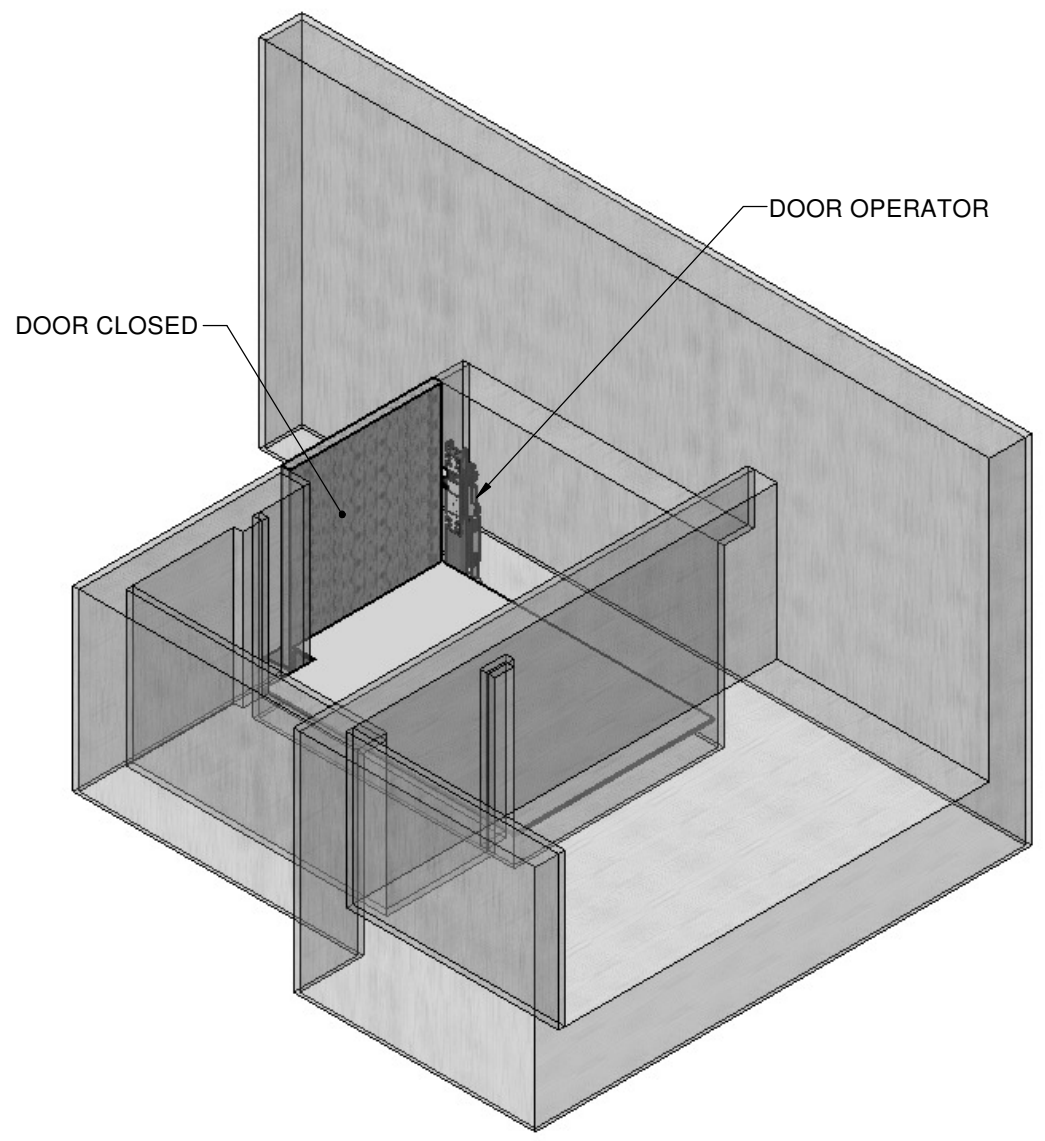
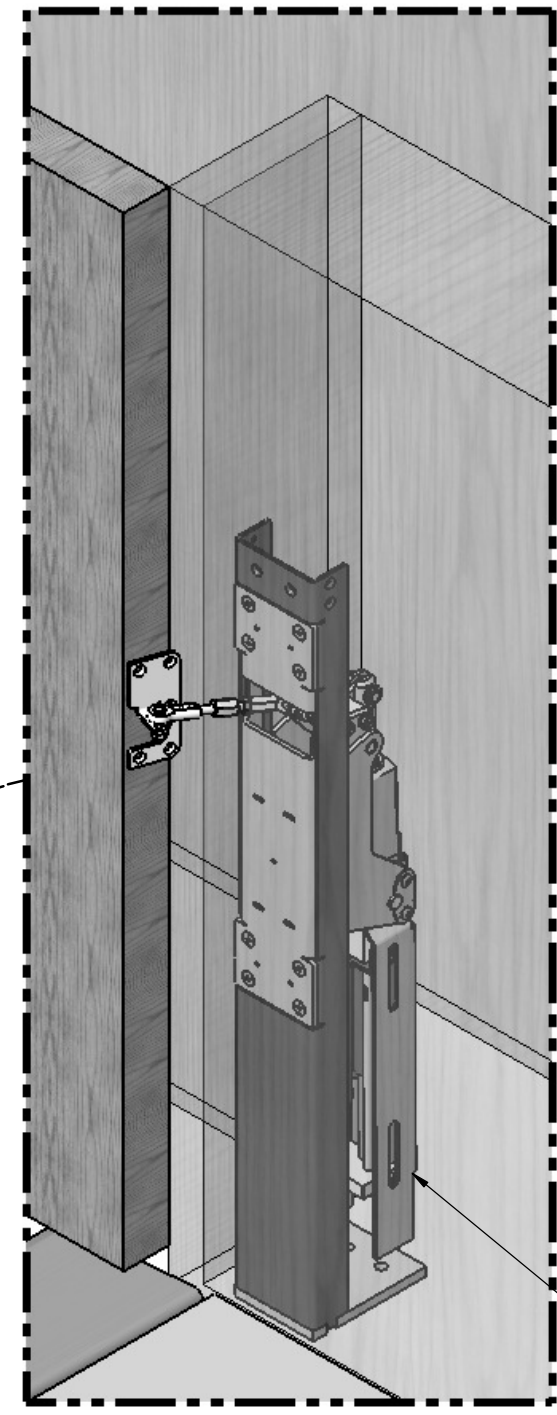
SHEET NO. **2 OF 2**

REVISION **A**

REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	BSA	8-21-14		



ACCESSOR LIFT WITH DOOR OPERATOR - DOOR OPEN



ACCESSOR LIFT WITH DOOR OPERATOR - DOOR CLOSED

DOOR OPERATOR



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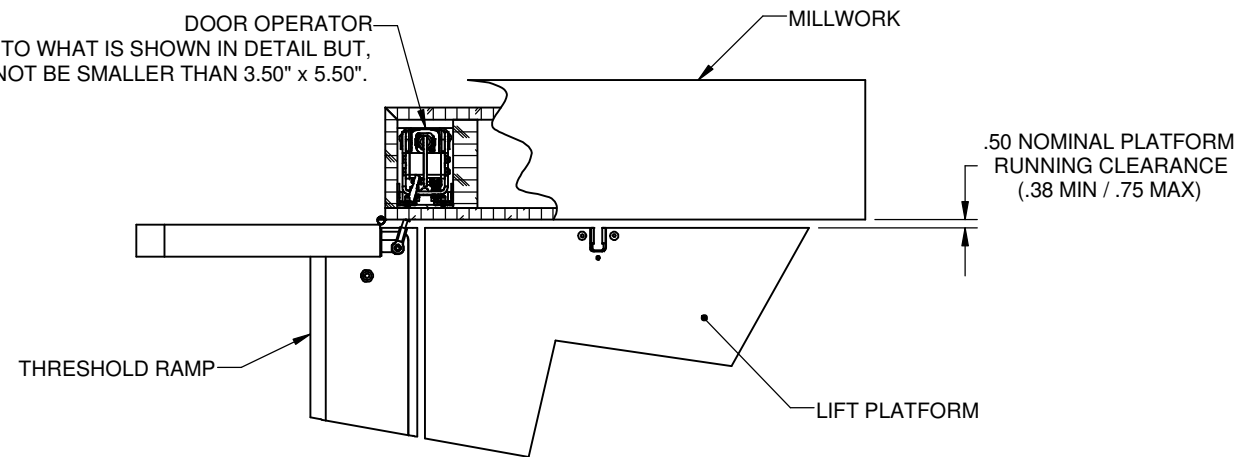
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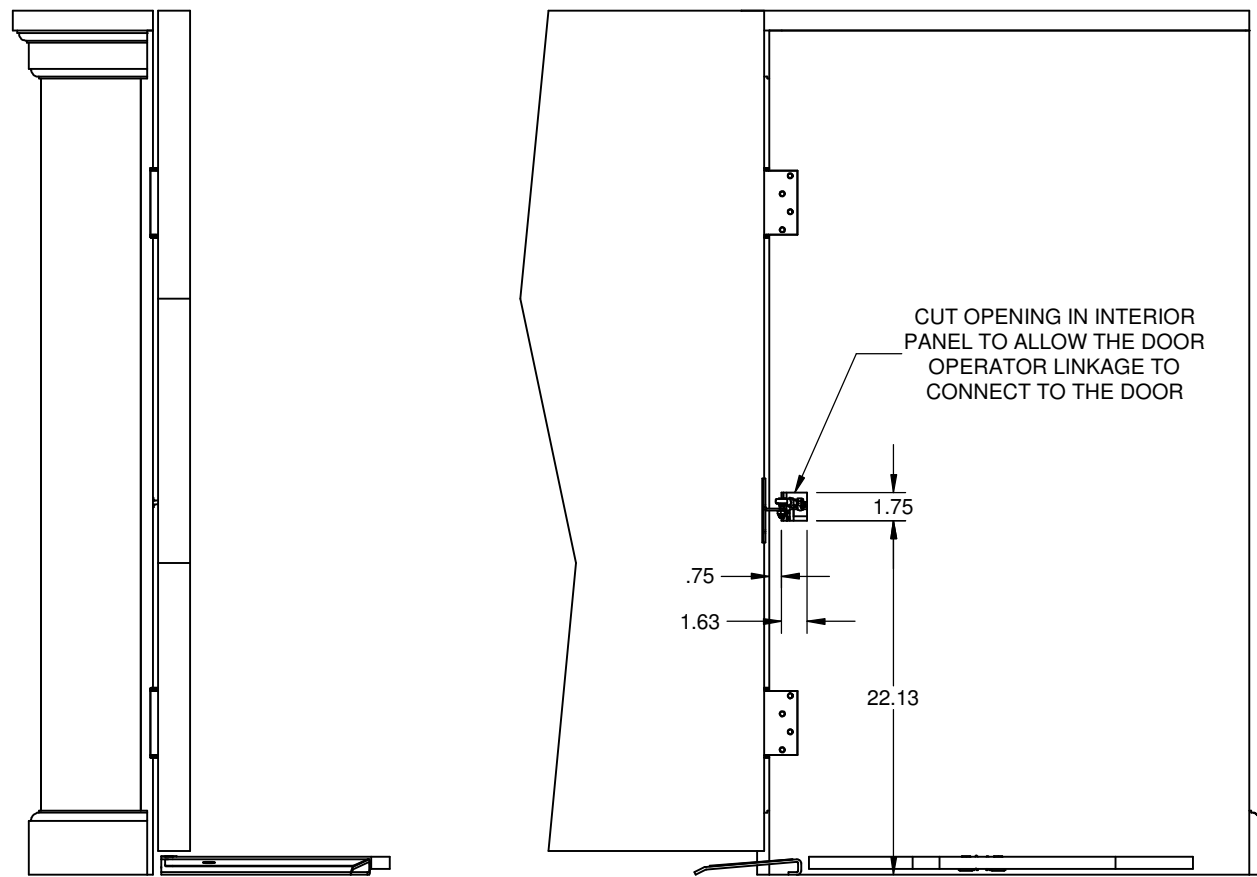
TITLE	DOOR OPERATOR OVERVIEW		
DOCUMENT NO.	910-0101	SHEET NO.	1 OF 1
		REVISION	A

REVISIONS									
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A				RELEASED		8/18/2014			

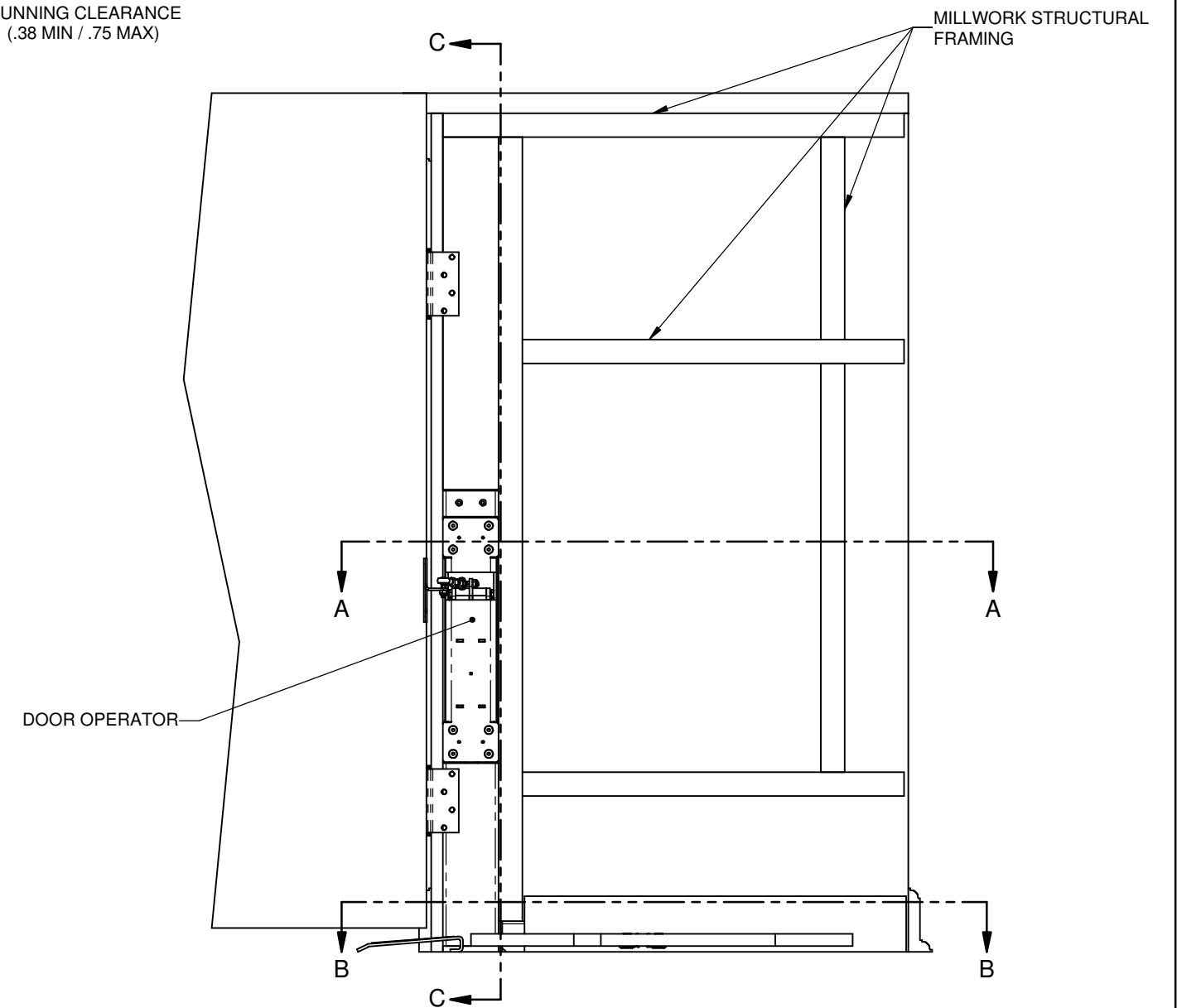
NOTE: UNIT CAN BE INSTALLED 90 DEGREES TO WHAT IS SHOWN IN DETAIL BUT, INSIDE OF WALL DIMENSIONS MUST NOT BE SMALLER THAN 3.50" x 5.50".



WALL SEGMENT PLAN VIEW



WALL SEGMENT ELEVATION VIEW



ENLARGED VIEW OF WALL SEGMENT WITH INTERIOR PANEL REMOVED

(SEE SHEETS 2 FOR SECTIONS AND DETAILS)

NOTES:

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CLEARANCE AND/OR OPENINGS INSIDE THE MILLWORK WALLS MUST BE PROVIDED FOR ROUTING OF ELECTRIC DOOR OPERATOR WIRING.

REFER TO DRAWING 910-0026 FOR ADDITIONAL RECOMMENDED MILLWORK WALL INTERFACE DESIGN PRINCIPLES.

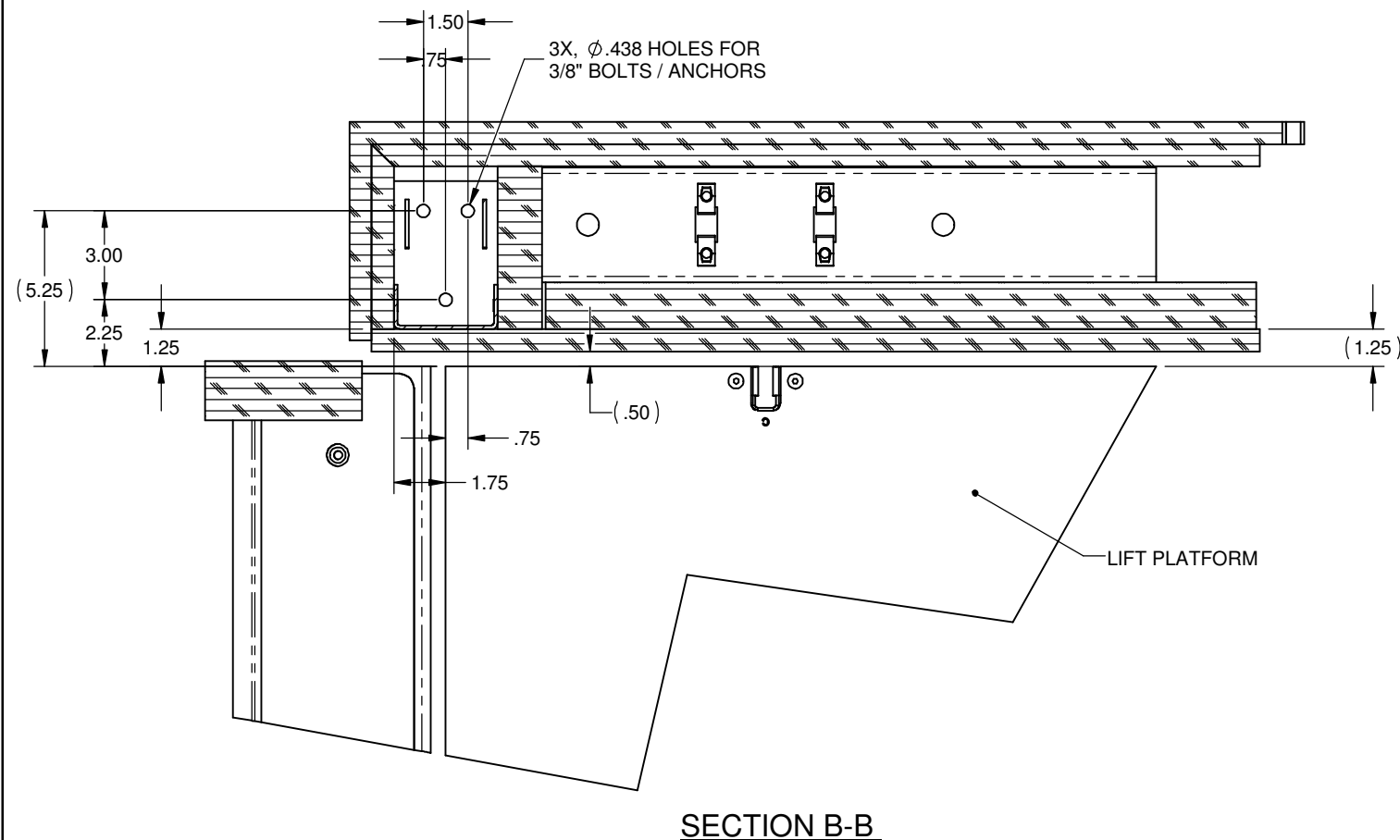
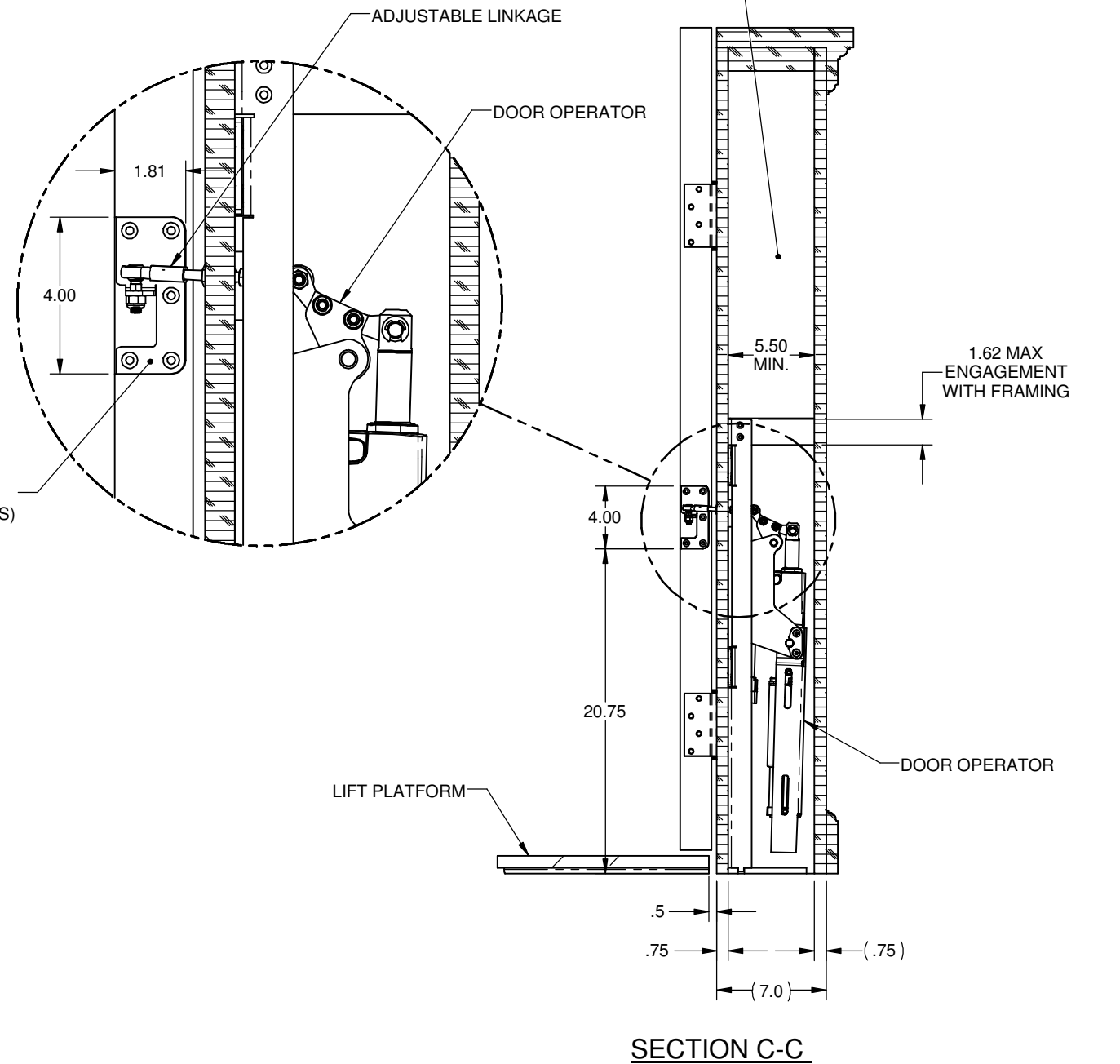
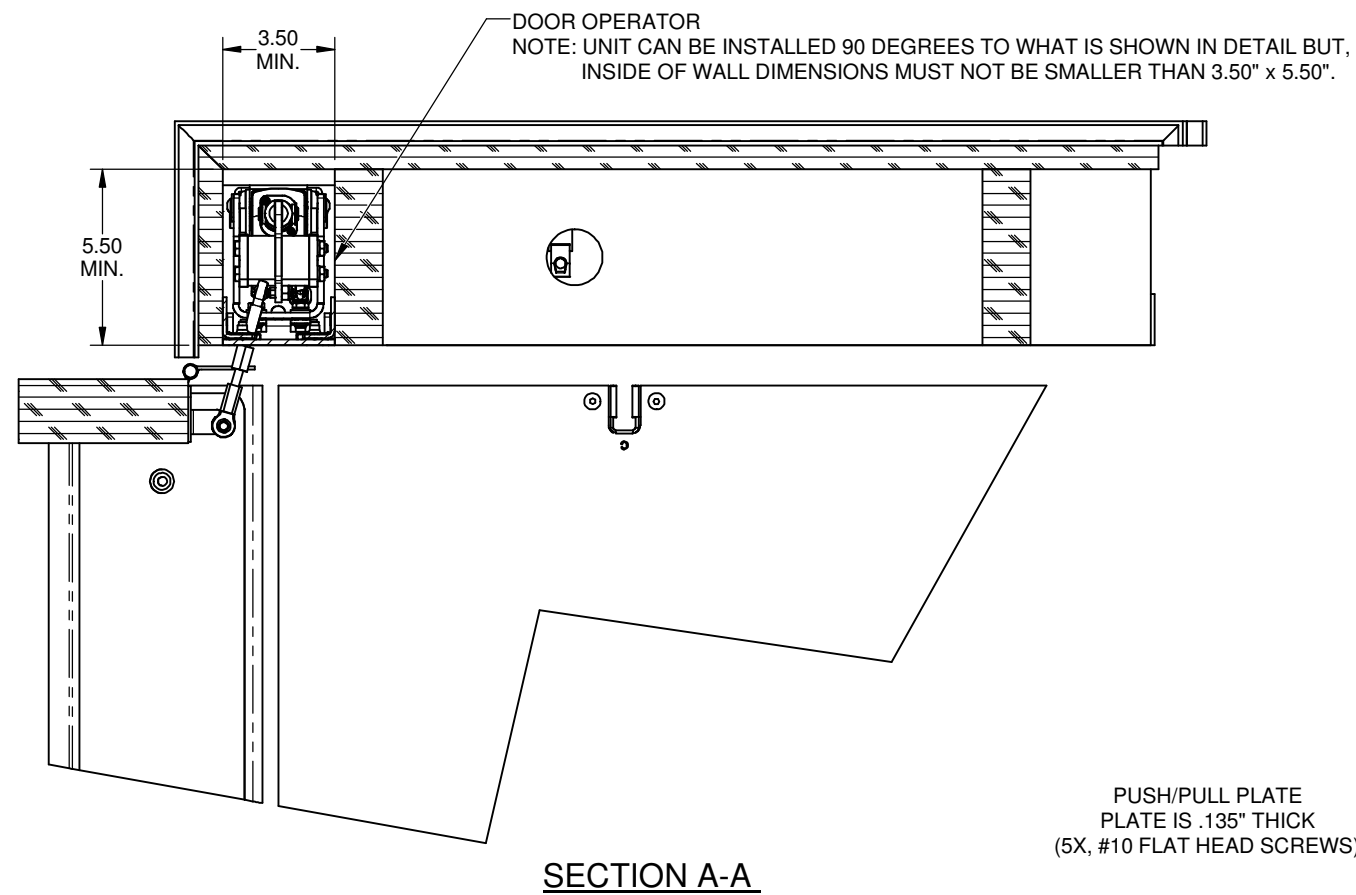
ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT, AS WELL AS DOORS / GATES AND JAMBS ARE FURNISHED AND INSTALLED BY OTHERS.




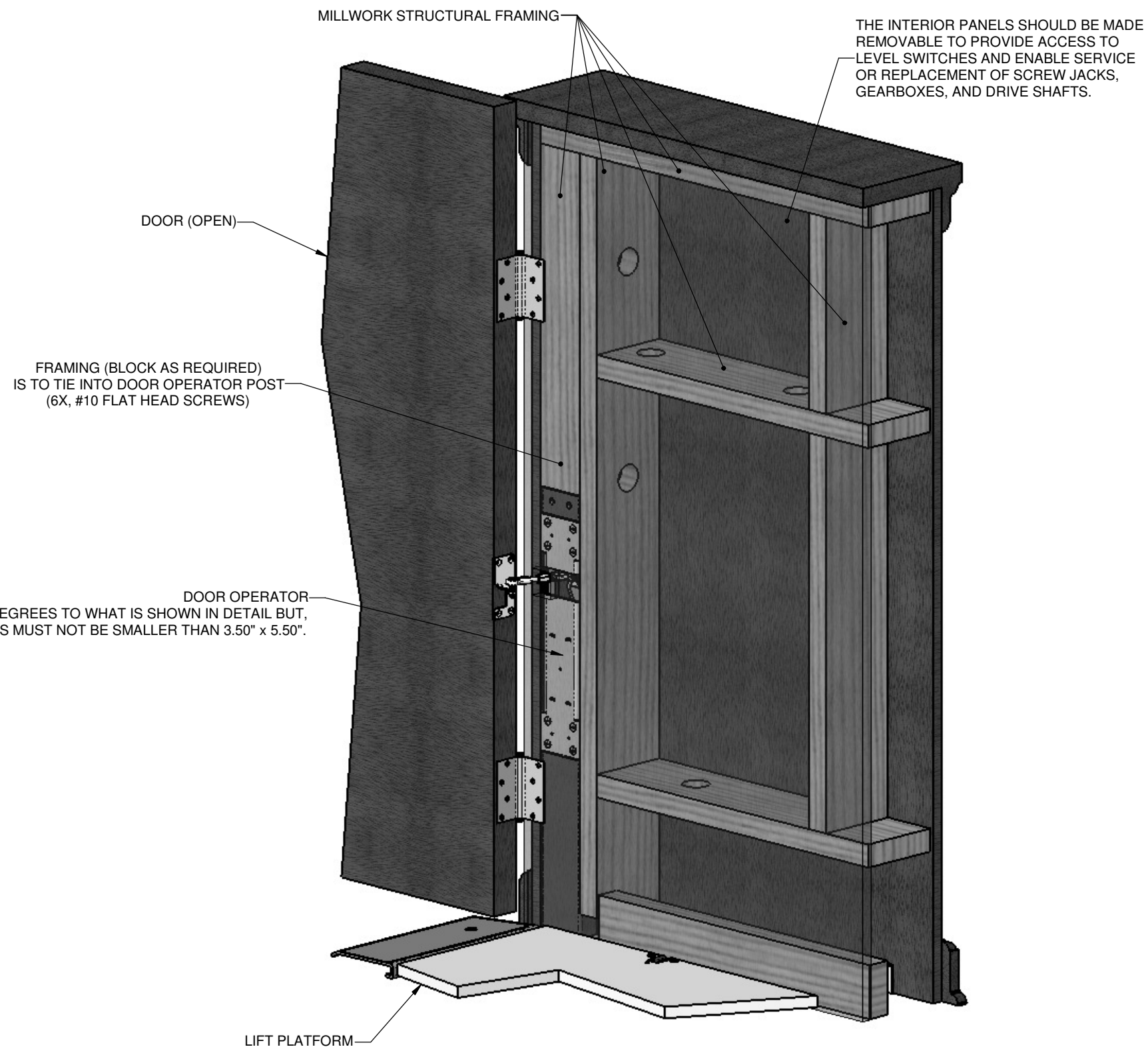
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TITLE	DOOR OPERATOR / MILLWORK INTERFACE		
DOCUMENT NO.	910-0102	SHEET NO.	1 OF 3
		REVISION	A




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TITLE DOOR OPERATOR / MILLWORK INTERFACE		
DOCUMENT NO. 910-0102	SHEET NO. 2 OF 3	REVISION A

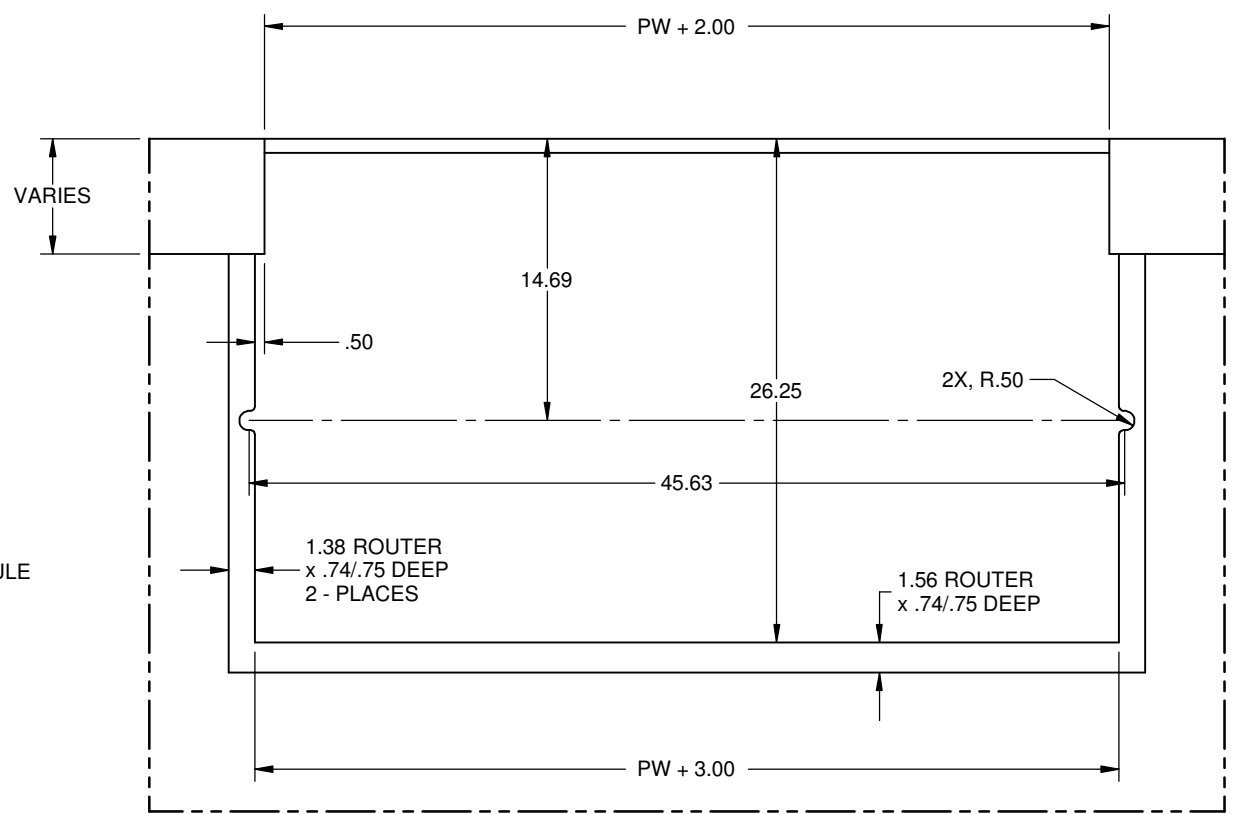
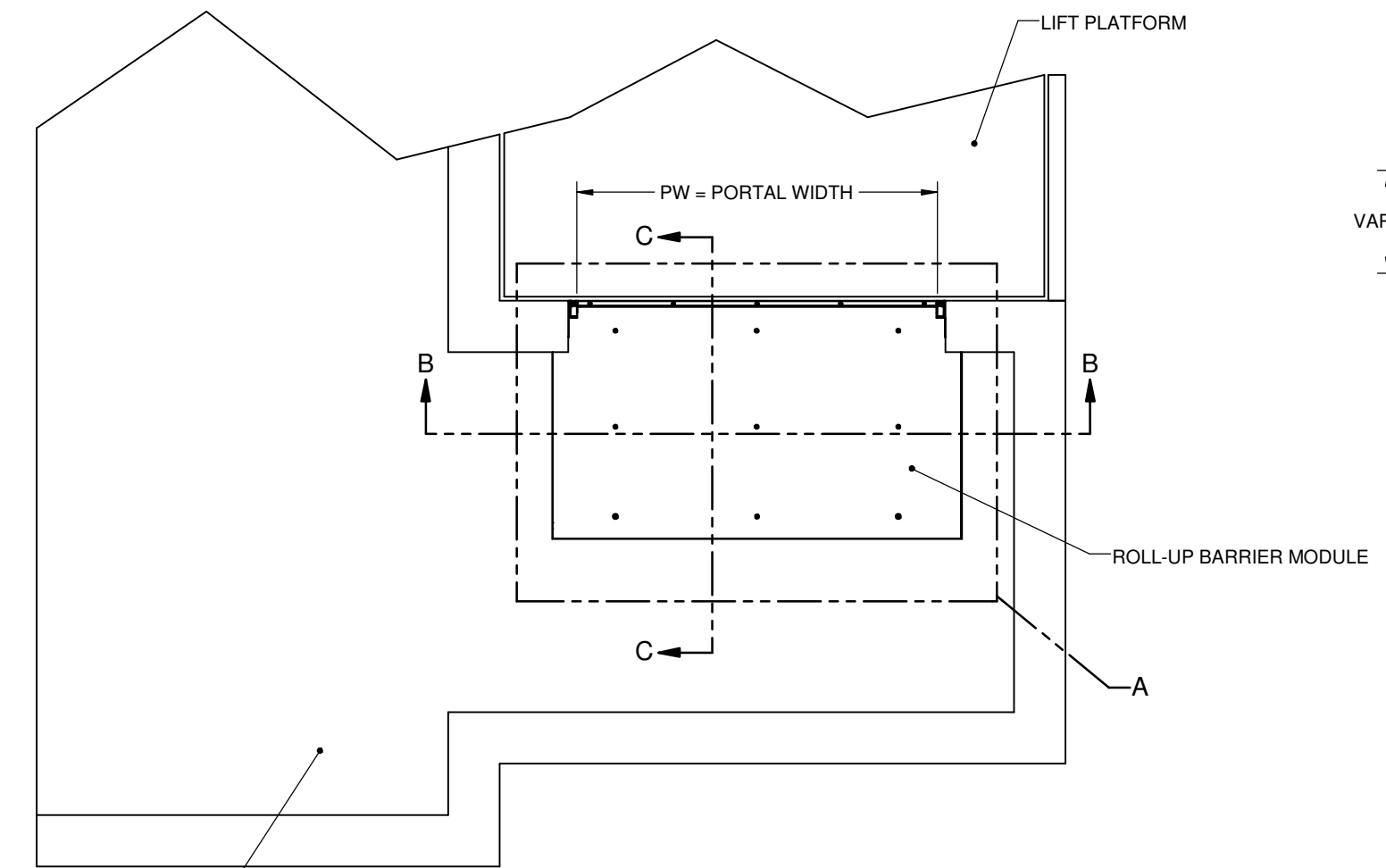


NOTE: UNIT CAN BE INSTALLED 90 DEGREES TO WHAT IS SHOWN IN DETAIL BUT, INSIDE OF WALL DIMENSIONS MUST NOT BE SMALLER THAN 3.50" x 5.50".

PERSPECTIVE VIEW OF WALL SEGMENT

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TITLE DOOR OPERATOR / MILLWORK INTERFACE		
DOCUMENT NO.	910-0102	SHEET NO. 3 OF 3
		REVISION A

REVISIONS						
REV	ECO	DESCRIPTION	CREATED	DATE	APPROVED	DATE
A		RELEASED	BSA	10-3-14		



DETAIL A
FLOOR OPENING AND SUGGESTED PREP TO ACCOMMODATE ROLL-UP BARRIER MODULE

NOTES:

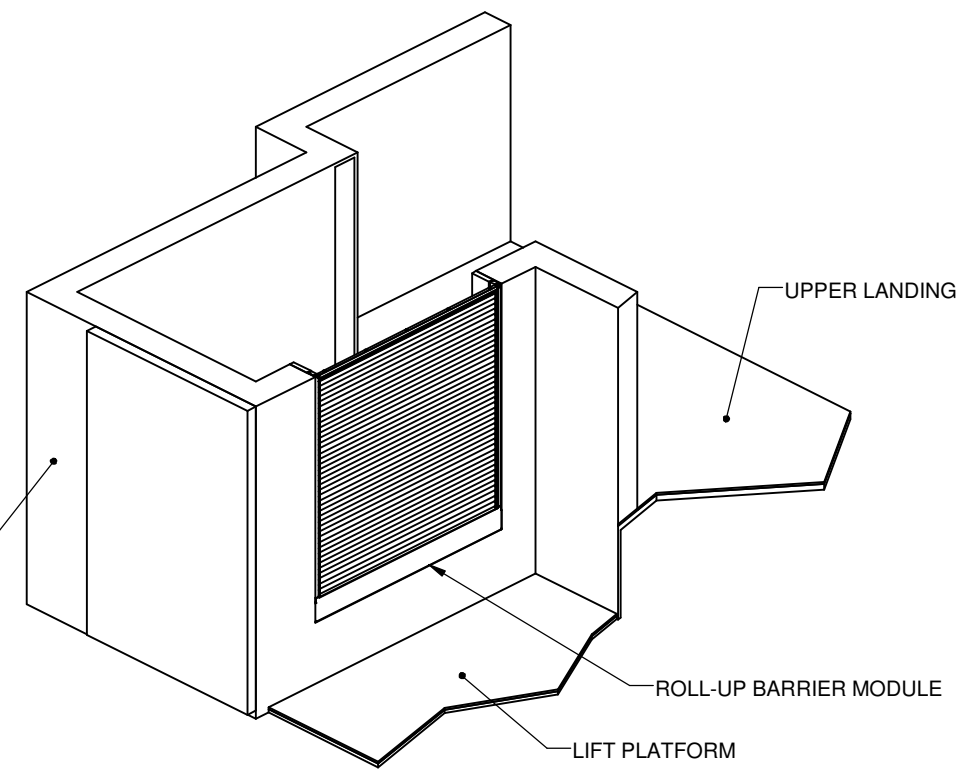
THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED ROLL-UP BARRIER / MILLWORK INTERFACE.

THE ROLL-UP BARRIER PORTAL WIDTH, VERTICAL GUIDES, AND EXTENDED BARRIER HEIGHT WILL VARY FOR EACH APPLICATION. THEREFORE, FOR EACH PROJECT APPLICATION REFER TO ITS CORRESPONDING LIFT CONFIGURATION DRAWING FOR GENERAL ARRANGEMENT LAYOUT, LIFT ENVELOPE DIMENSIONS, AND ROLL-UP BARRIER MODULE DIMENSIONS.


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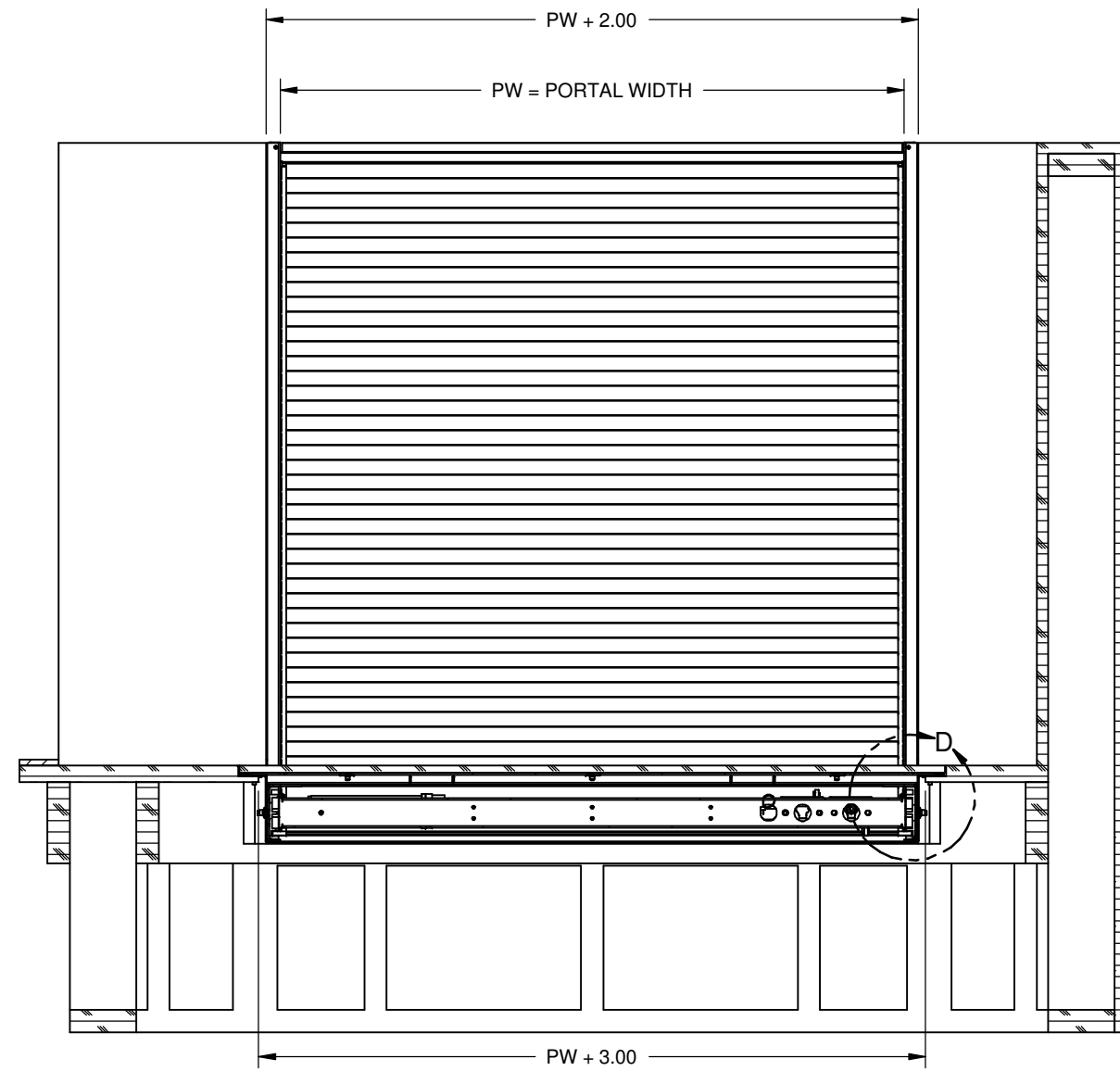
UPPER LANDING
PLAN VIEW

ALL MILLWORK, INCLUDING STRUCTURAL FRAMING AND VENEERED PANEL FINISHES, ARE BY OTHERS.

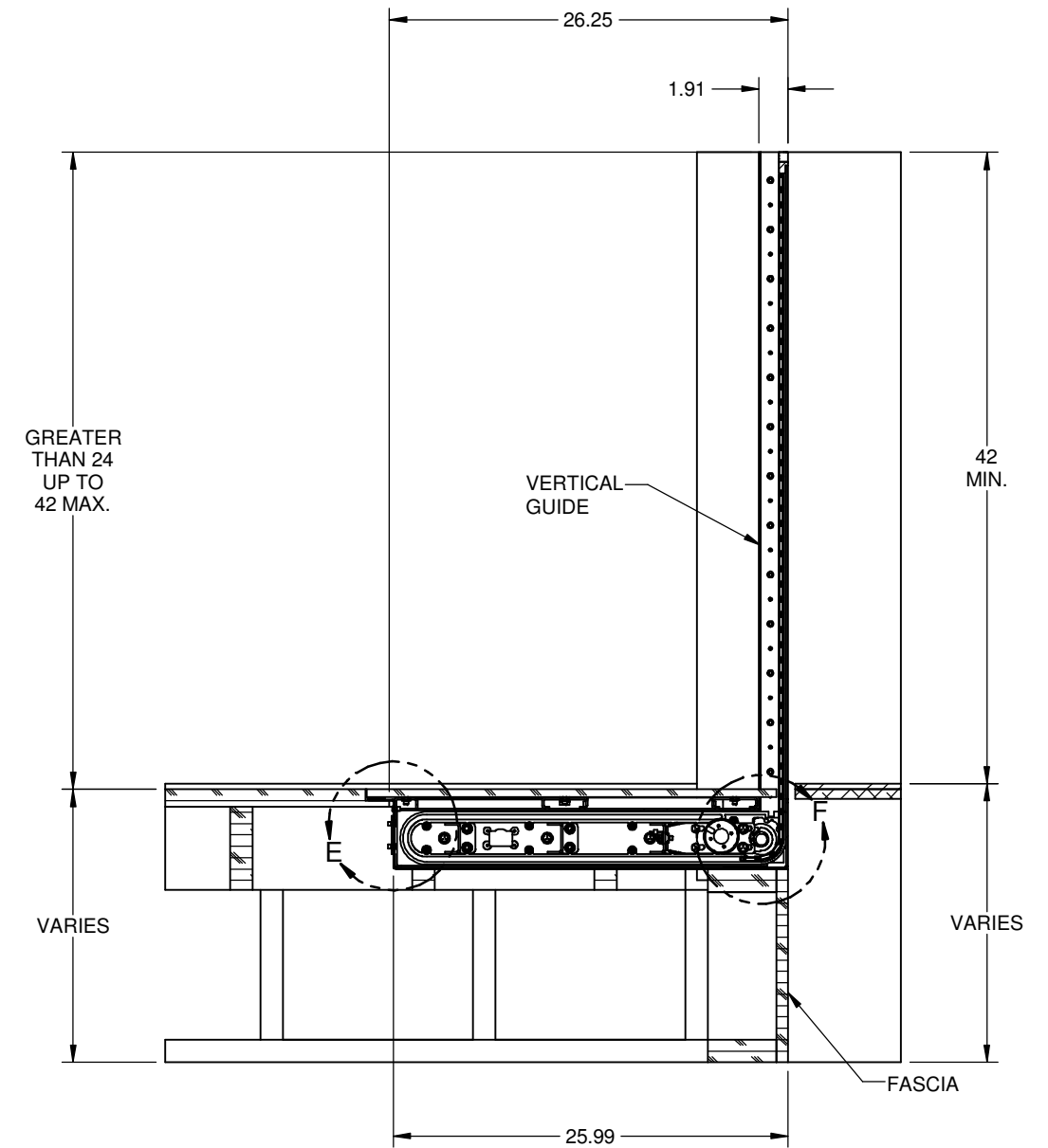


REVERSE ISO VIEW FOR REFERENCE

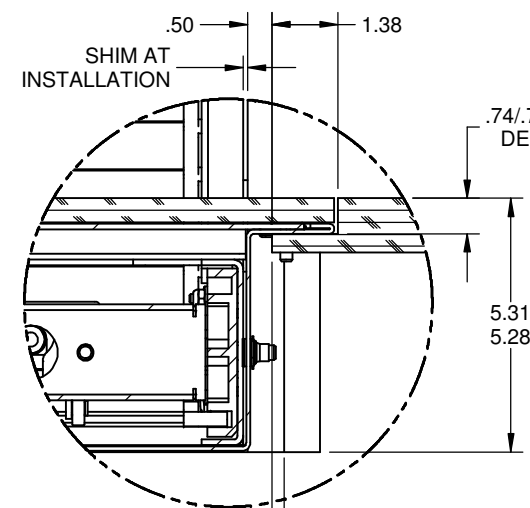
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	TITLE UPPER LANDING ROLL-UP BARRIER / MILLWORK INTERFACE	
DOCUMENT NO. 910-0103	SHEET NO. 1 OF 3	REVISION A



SECTION B-B

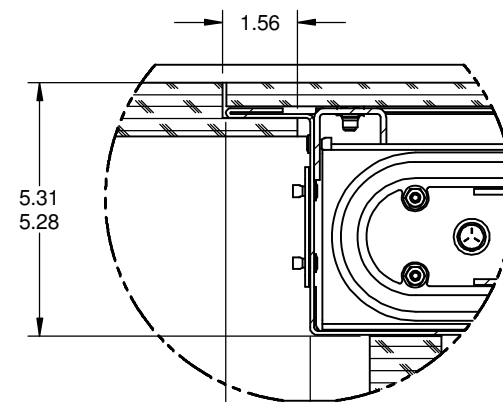


SECTION C-C

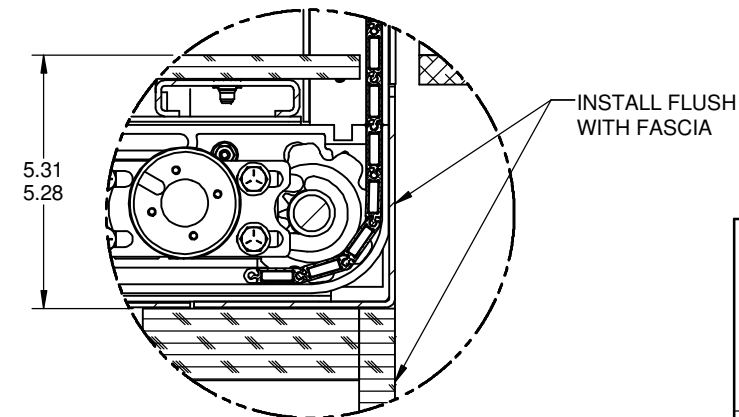


DETAIL D

.25 OR PROVIDE VERTICAL NOTCHES FOR CLIP NUT/BOLT CLEARANCE



DETAIL E



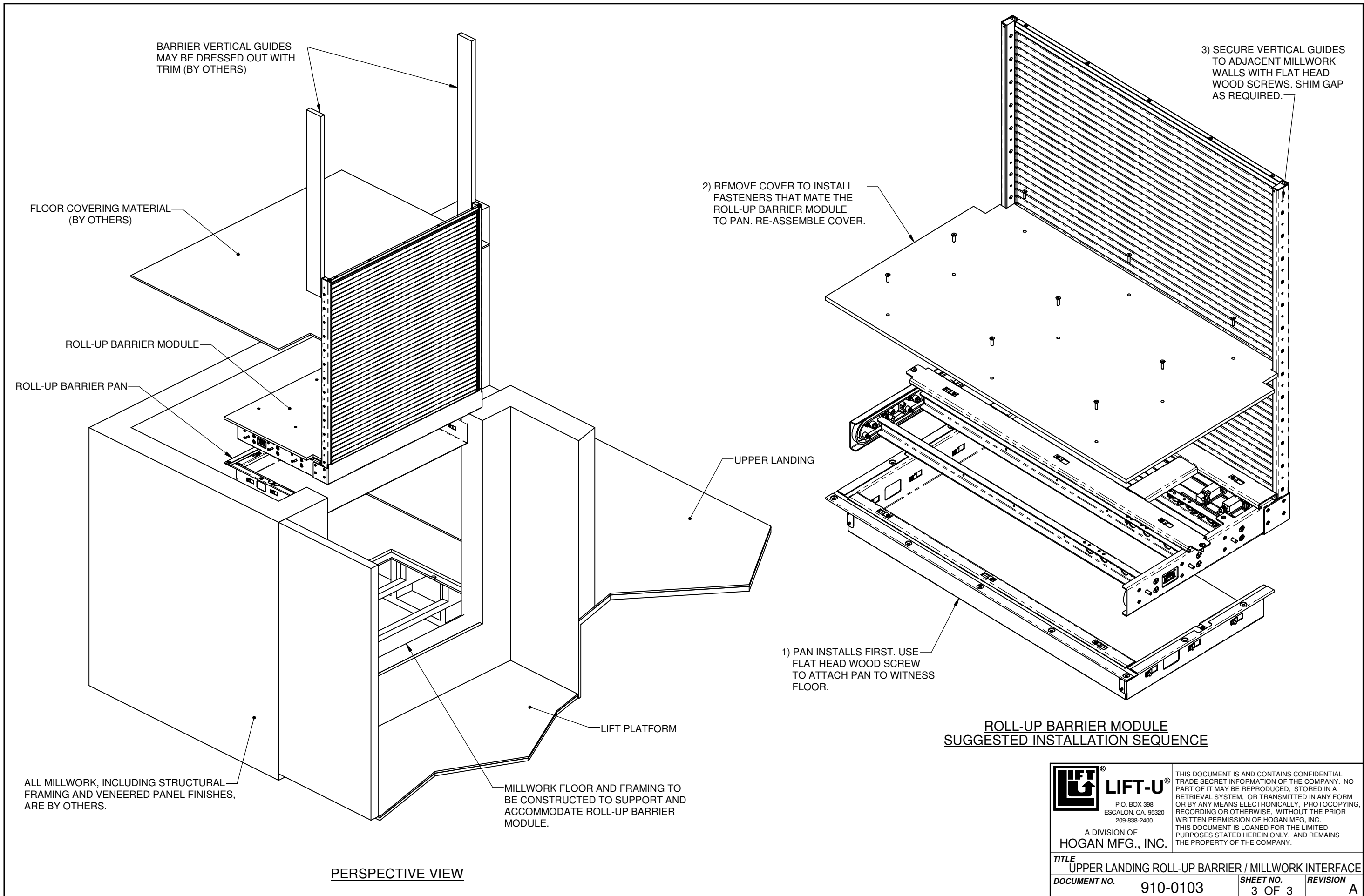
DETAIL F

LIFT-U
 P.O. BOX 398
 ESCALON, CA. 95320
 209-838-2400


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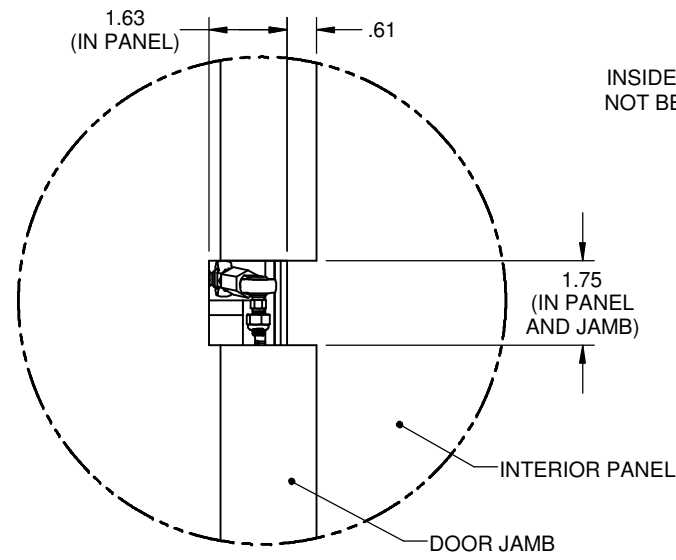
TITLE UPPER LANDING ROLL-UP BARRIER / MILLWORK INTERFACE		
DOCUMENT NO.	910-0103	SHEET NO. 2 OF 3
		REVISION A



PERSPECTIVE VIEW

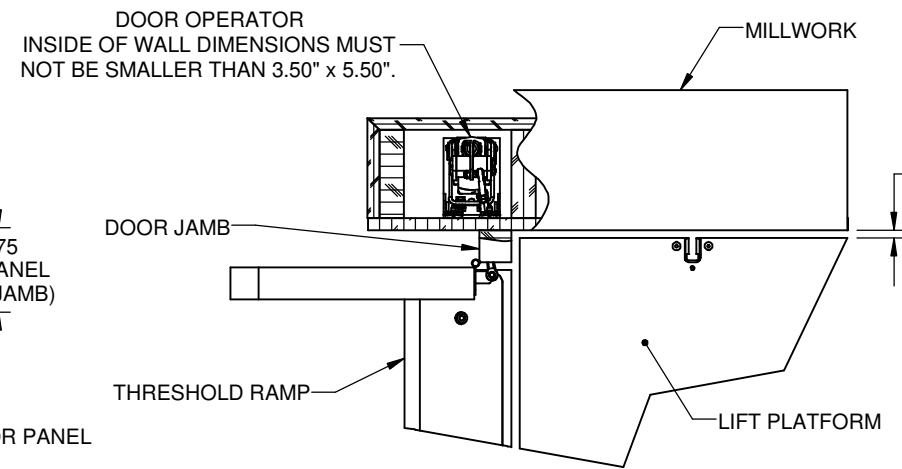
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	TITLE UPPER LANDING ROLL-UP BARRIER / MILLWORK INTERFACE	DOCUMENT NO. 910-0103
		REVISION A

REVISIONS									
LTR	ECO	APPD	DATE	DESCRIPTION	DFTR	DATE	CHKR	DATE	
A				RELEASED		12/23/2014			



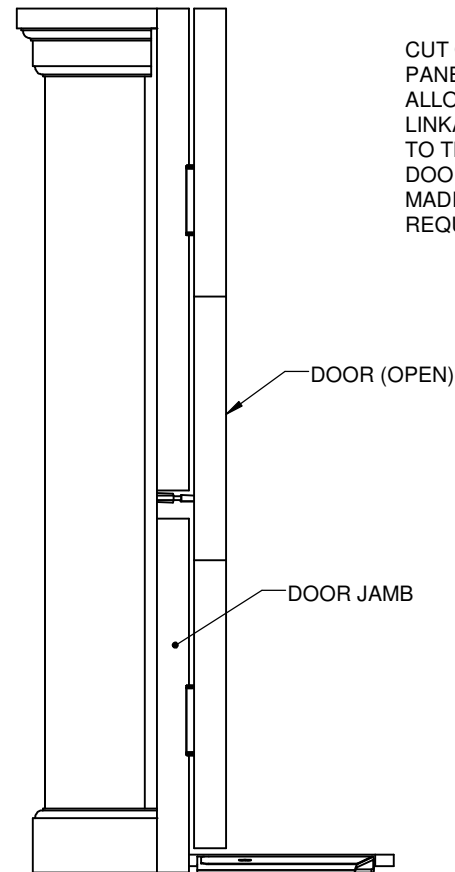
DETAIL D

DOOR AND PUSH/PULL PLATE NOT SHOWN FOR CLARITY

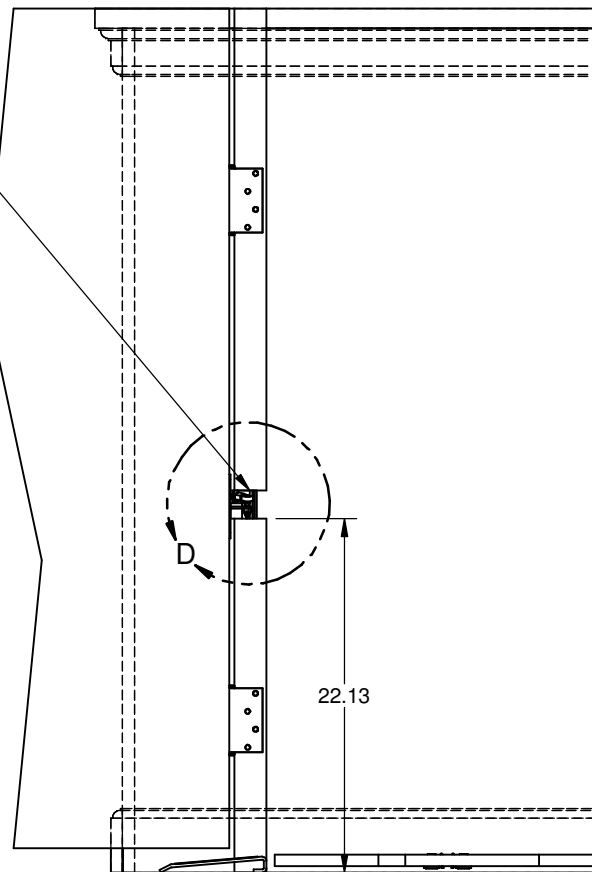


WALL SEGMENT PLAN VIEW

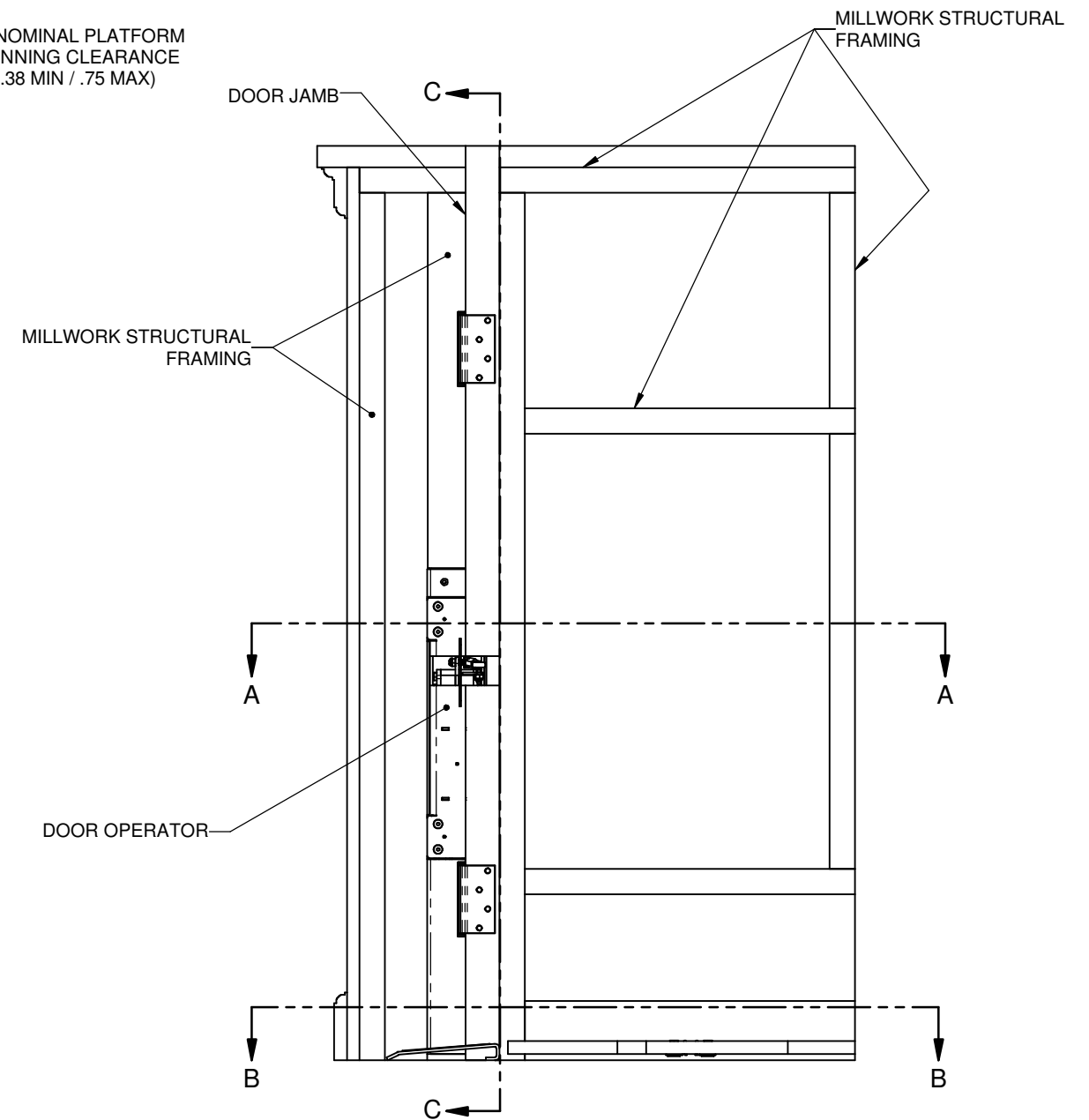
.50 NOMINAL PLATFORM RUNNING CLEARANCE (.38 MIN / .75 MAX)



CUT OPENING IN INTERIOR PANEL & DOOR JAMB TO ALLOW THE DOOR OPERATOR LINKAGE TO CONNECT TO THE DOOR. DOOR JAMB CAN ALSO BE MADE IN 2 PIECES IF OPENING REQUIRES.



WALL SEGMENT ELEVATION VIEW



ENLARGED VIEW OF WALL SEGMENT WITH INTERIOR PANEL & DOOR REMOVED

(SEE SHEETS 2 FOR SECTIONS AND DETAILS)

NOTES:

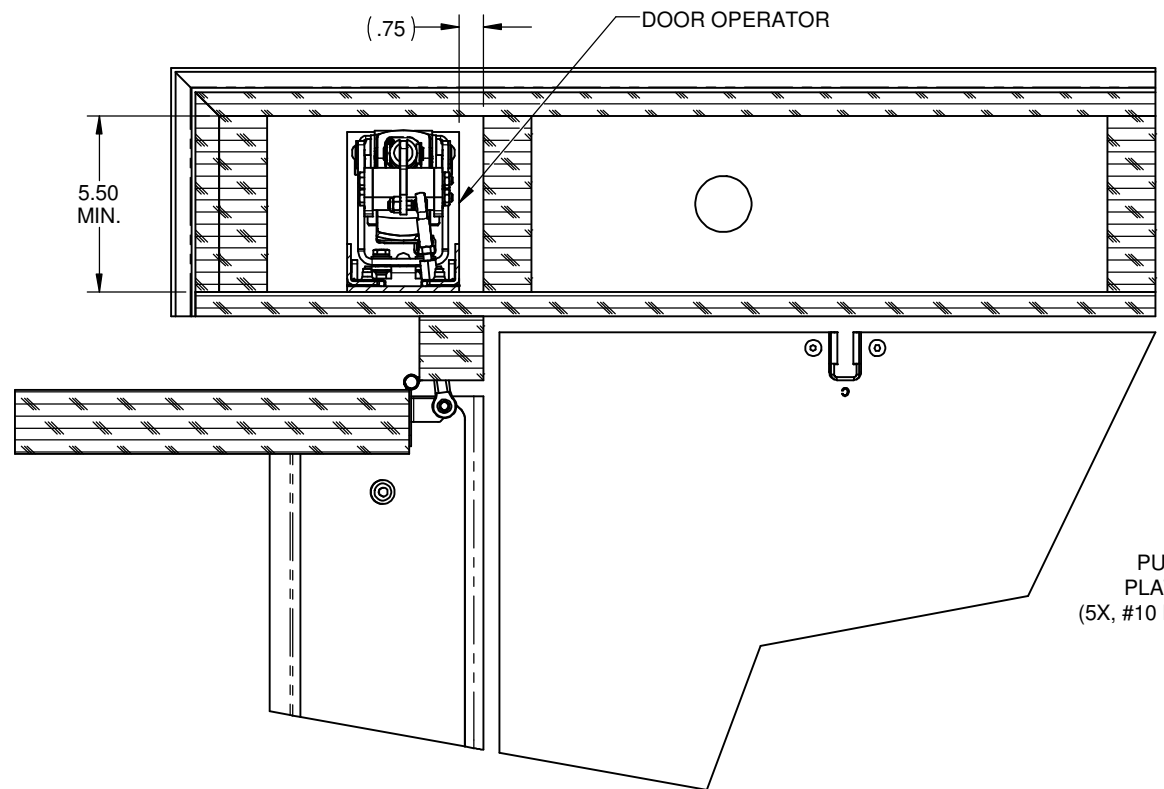
- 1.) THIS DRAWING IS GENERIC AND PROVIDED TO ILLUSTRATE LIFT-U'S RECOMMENDED DOOR OPERATOR / MILLWORK INTERFACE.
- 2.) CLEARANCE AND/OR OPENINGS INSIDE THE MILLWORK WALLS MUST BE PROVIDED FOR ROUTING OF ELECTRIC DOOR OPERATOR WIRING.
- 3.) REFER TO DRAWING 910-0026 FOR ADDITIONAL RECOMMENDED MILLWORK WALL INTERFACE DESIGN PRINCIPLES.
- 4.) ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT, AS WELL AS DOORS / GATES AND JAMBS ARE FURNISHED AND INSTALLED BY OTHERS.



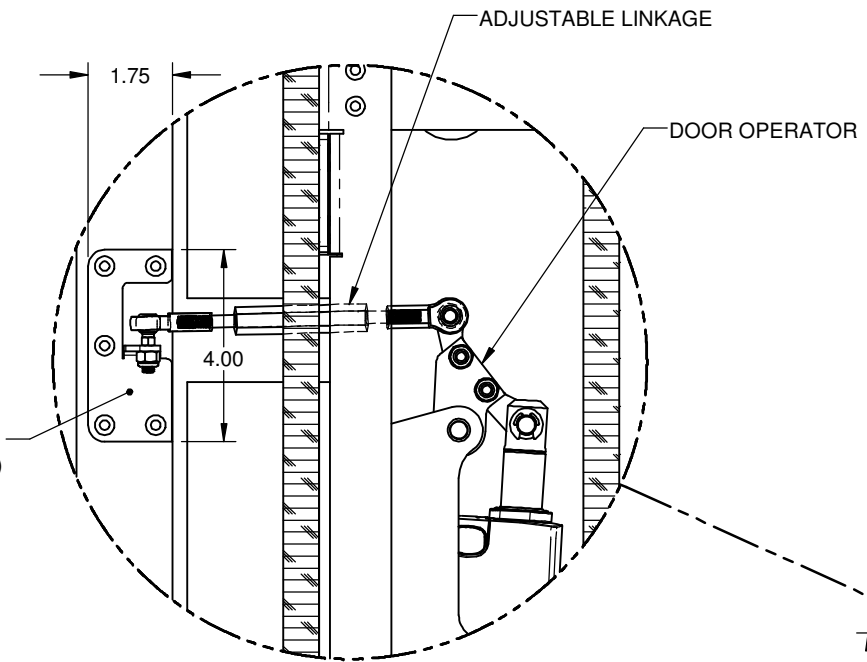
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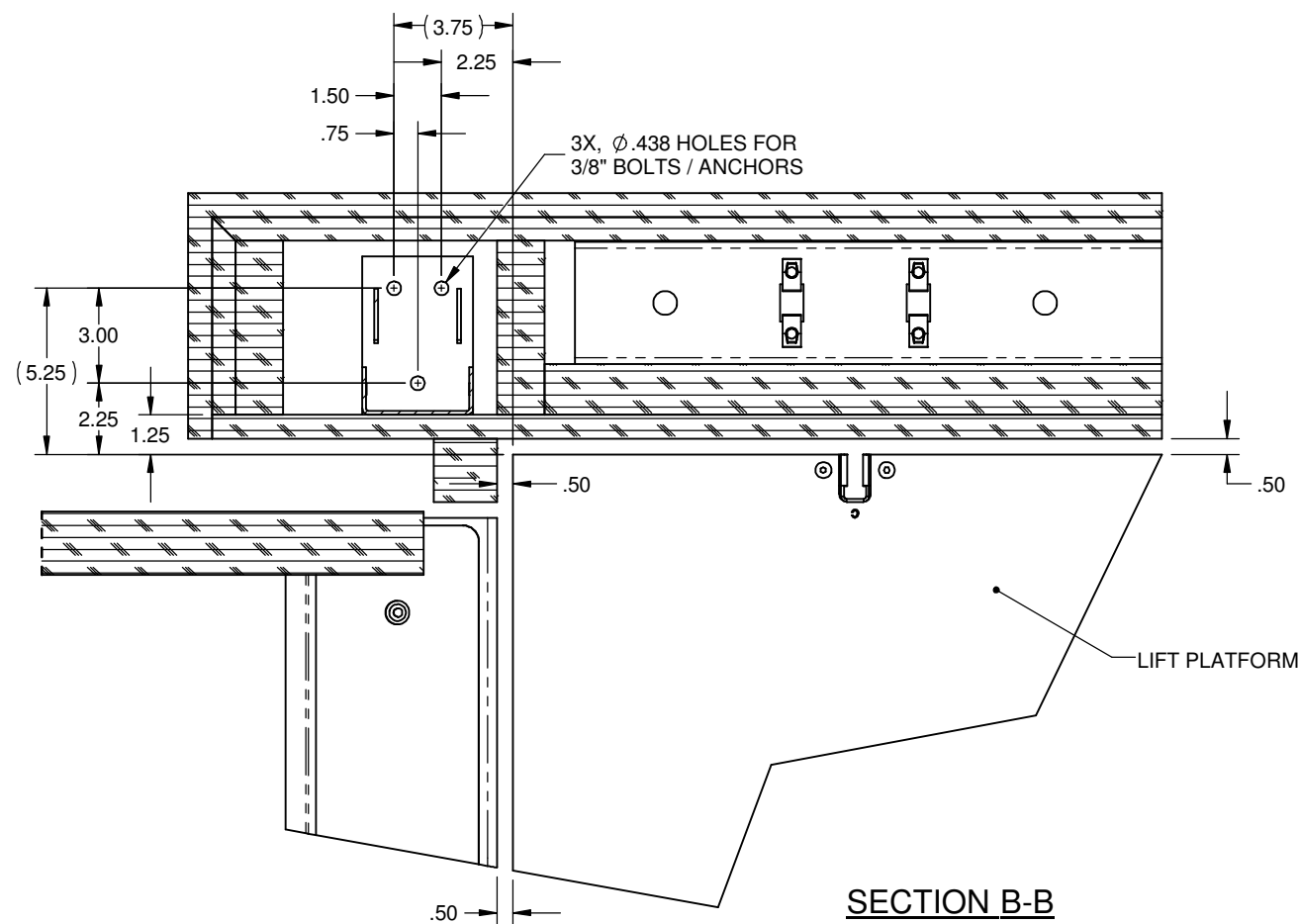
TITLE	DOOR OPERATOR / MILLWORK INTERFACE		
DOCUMENT NO.	910-0104	SHEET NO.	1 OF 3
		REVISION	A



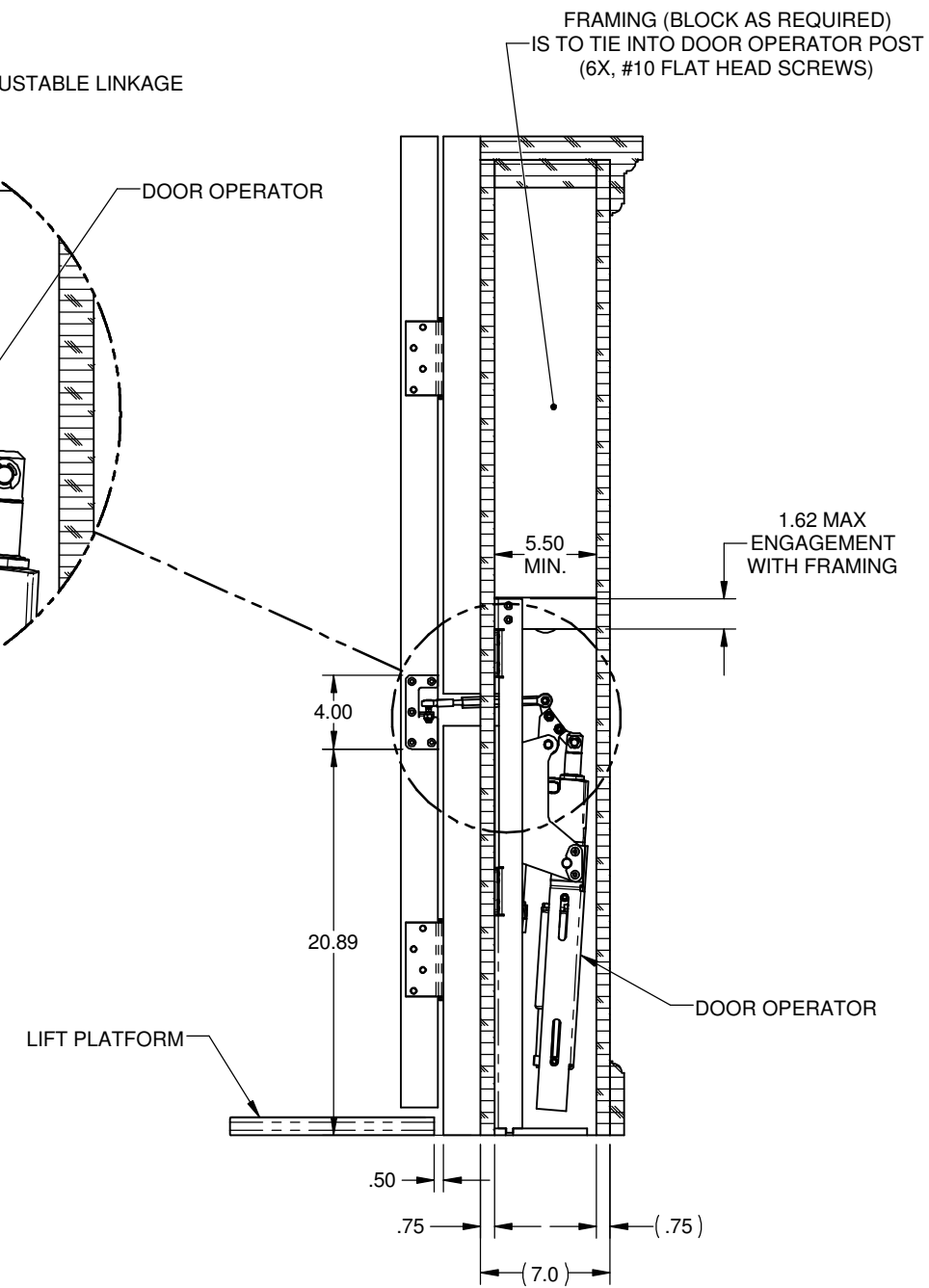
SECTION A-A



PUSH/PULL PLATE
PLATE IS .135" THICK
(5X, #10 FLAT HEAD SCREWS)



SECTION B-B



SECTION C-C



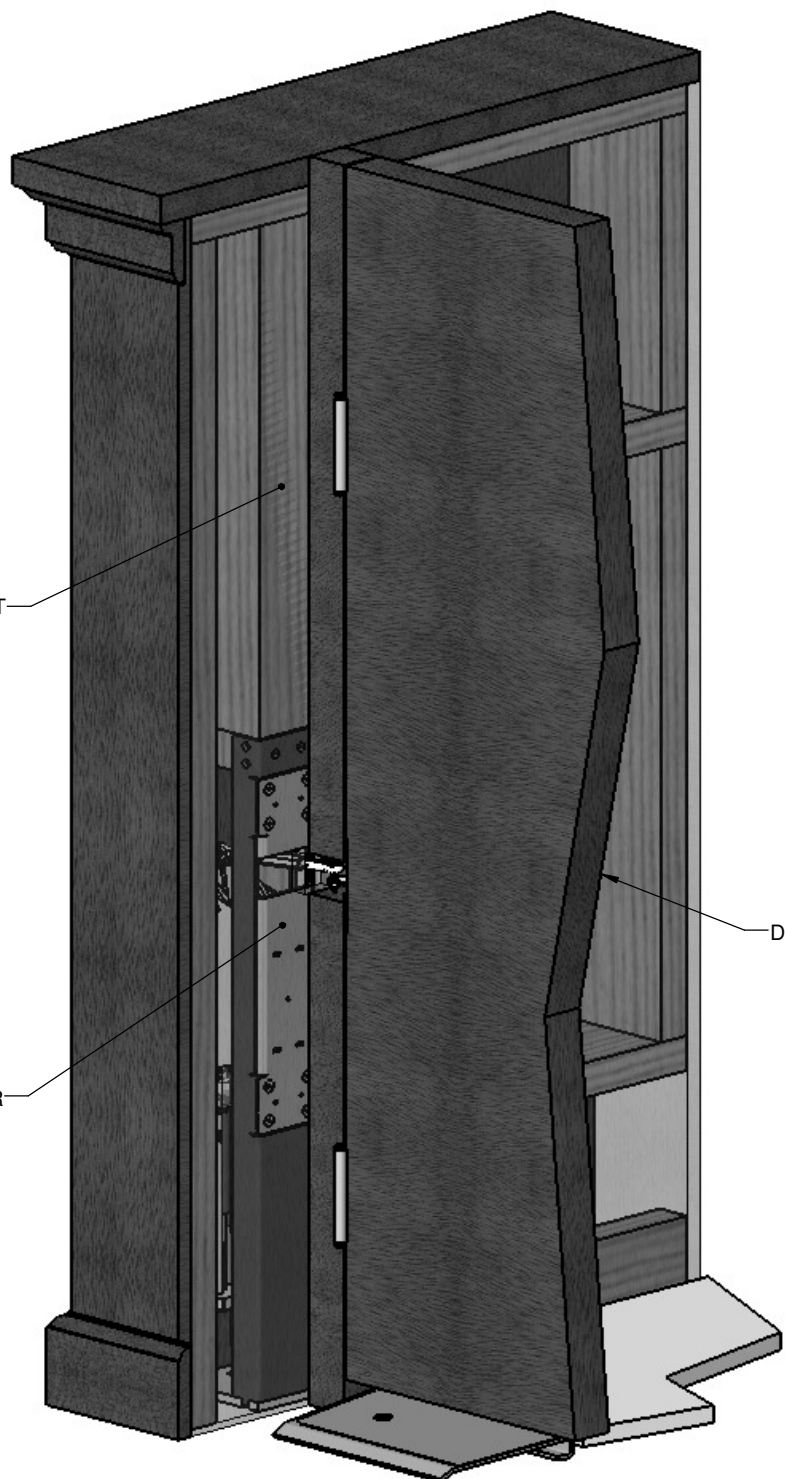
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TITLE	DOOR OPERATOR / MILLWORK INTERFACE		
DOCUMENT NO.	910-0104	SHEET NO.	2 OF 3
		REVISION	A

FRAMING (BLOCK AS REQUIRED)
IS TO TIE INTO DOOR OPERATOR POST
(6X, #10 FLAT HEAD SCREWS)

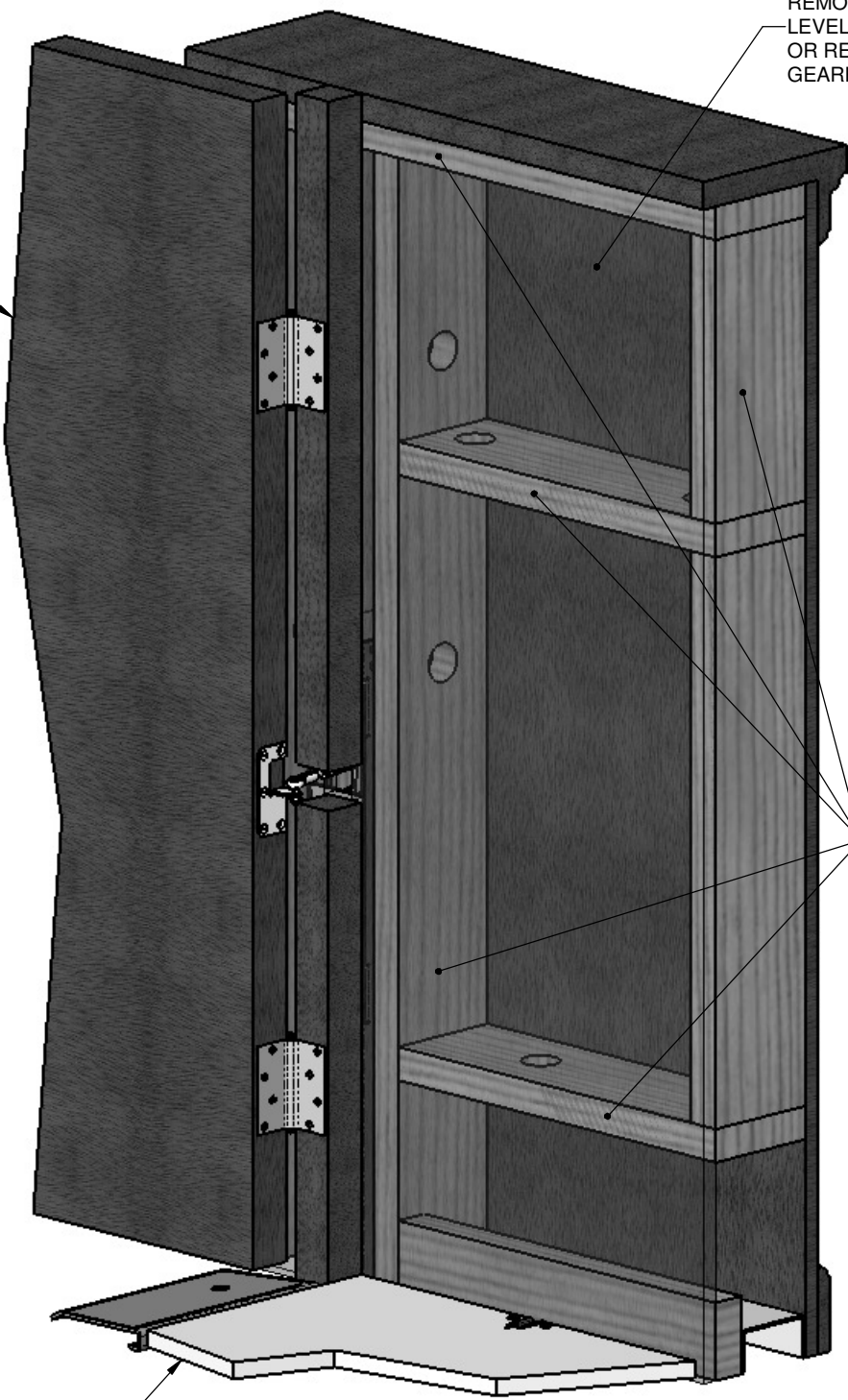
DOOR OPERATOR



DOOR (CLOSED)

DOOR (OPEN)


LIFT PLATFORM



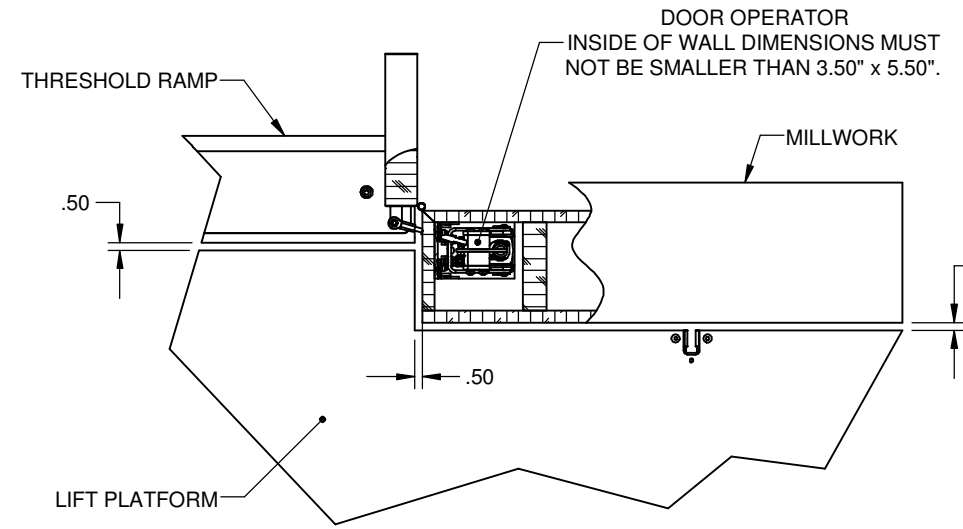
THE INTERIOR PANELS SHOULD BE MADE
REMOVABLE TO PROVIDE ACCESS TO
LEVEL SWITCHES AND ENABLE SERVICE
OR REPLACEMENT OF SCREW JACKS,
GEARBOXES, AND DRIVE SHAFTS.

MILLWORK STRUCTURAL FRAMING

PERSPECTIVE VIEWS OF WALL SEGMENT

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TITLE DOOR OPERATOR / MILLWORK INTERFACE		
DOCUMENT NO. 910-0104	SHEET NO. 3 OF 3	REVISION A

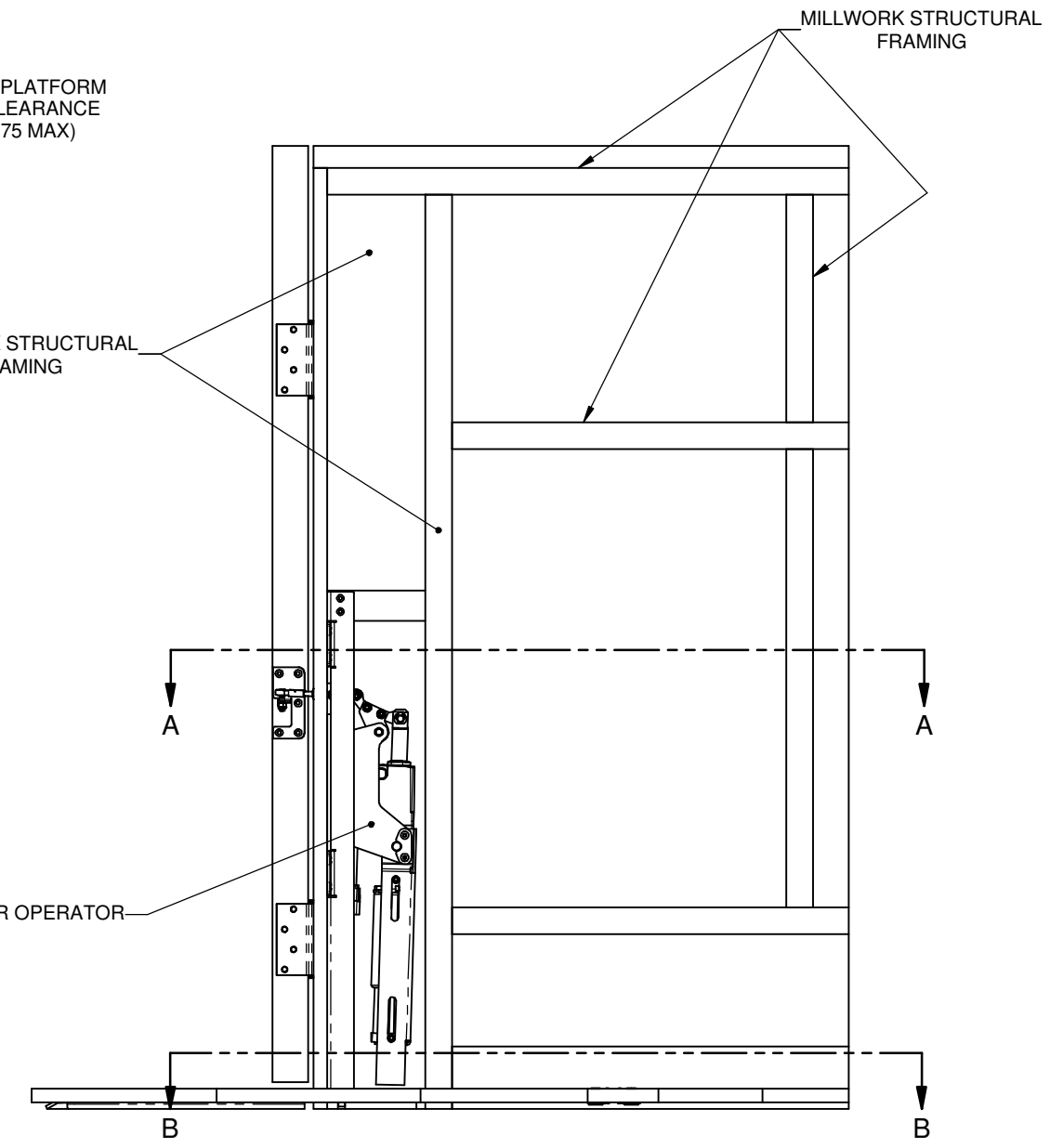
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A				RELEASED		12/23/2014			



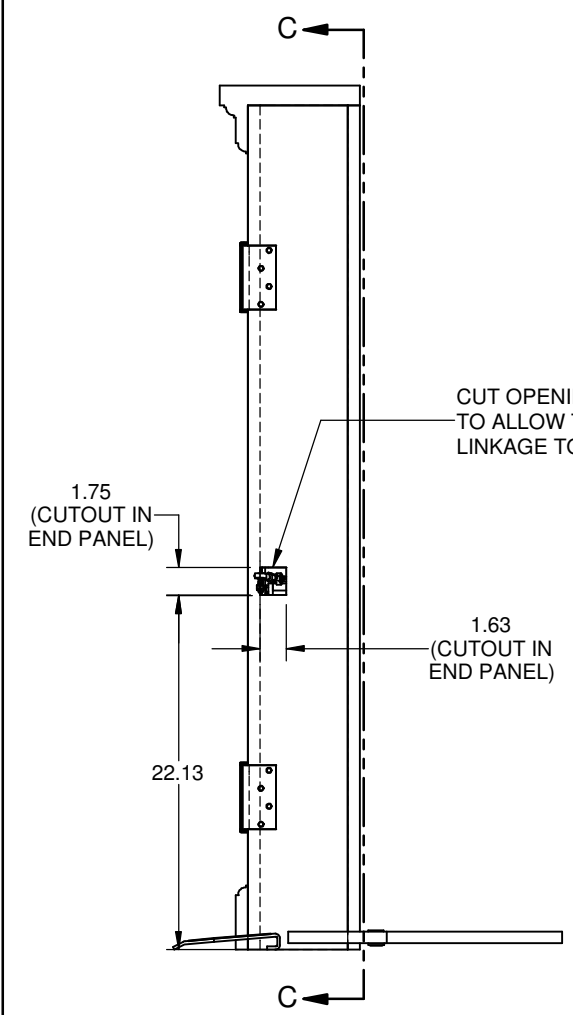
WALL SEGMENT PLAN VIEW

.50 NOMINAL PLATFORM RUNNING CLEARANCE (.38 MIN / .75 MAX)

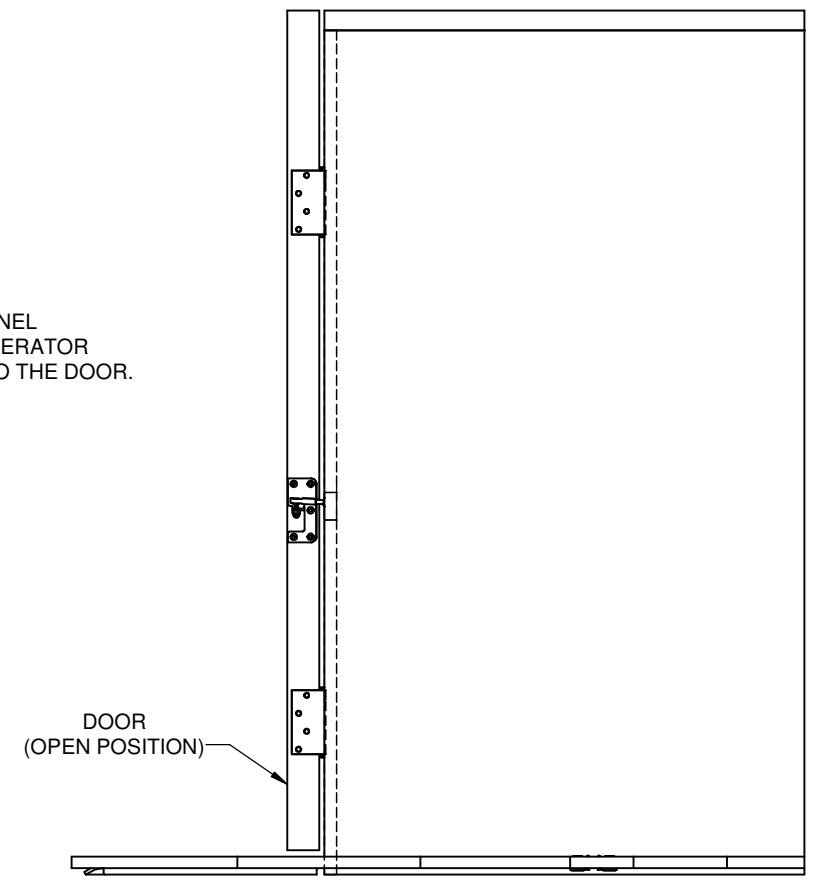
MILLWORK STRUCTURAL FRAMING



ENLARGED VIEW OF WALL SEGMENT WITH INTERIOR PANEL REMOVED
(SEE SHEETS 2 FOR SECTIONS AND DETAILS)



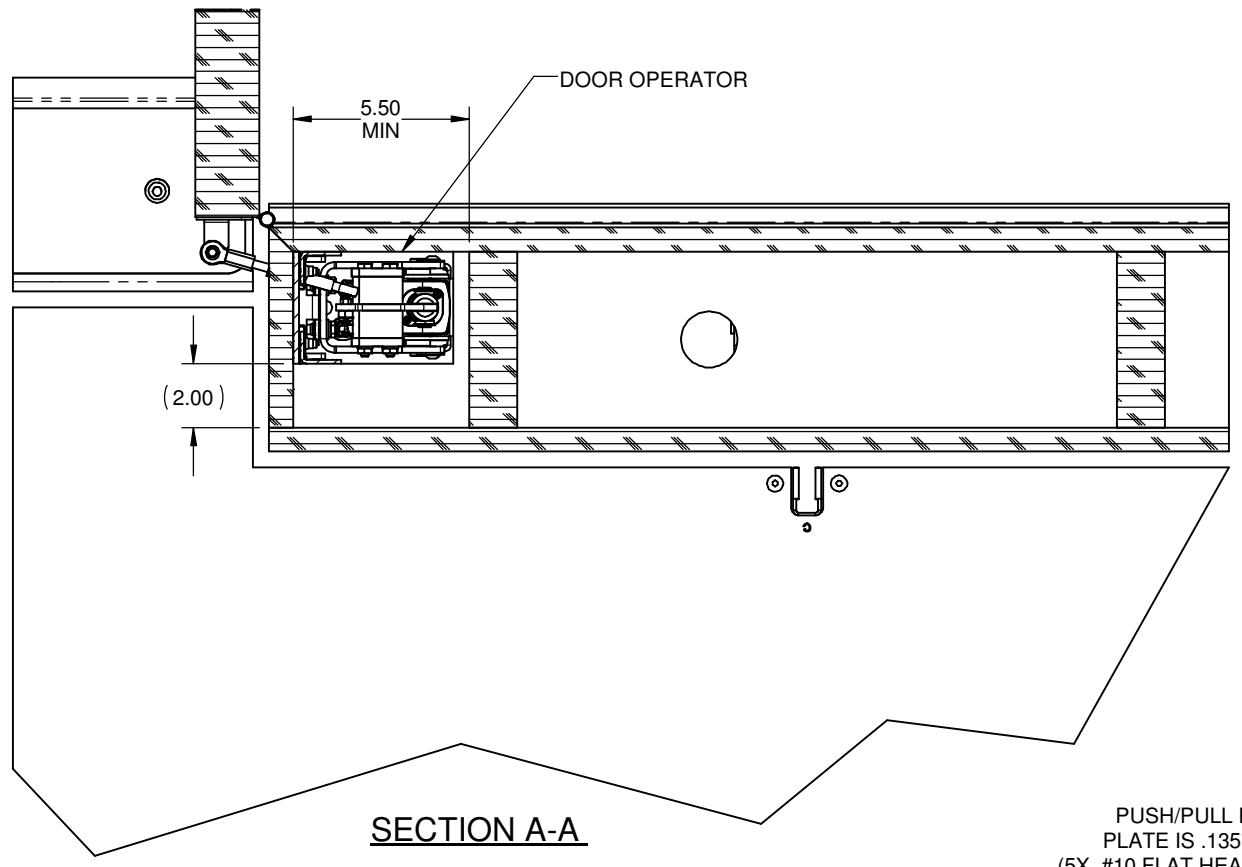
(DOOR AND PUSH/PULL PLATE NOT SHOWN FOR CLARITY)



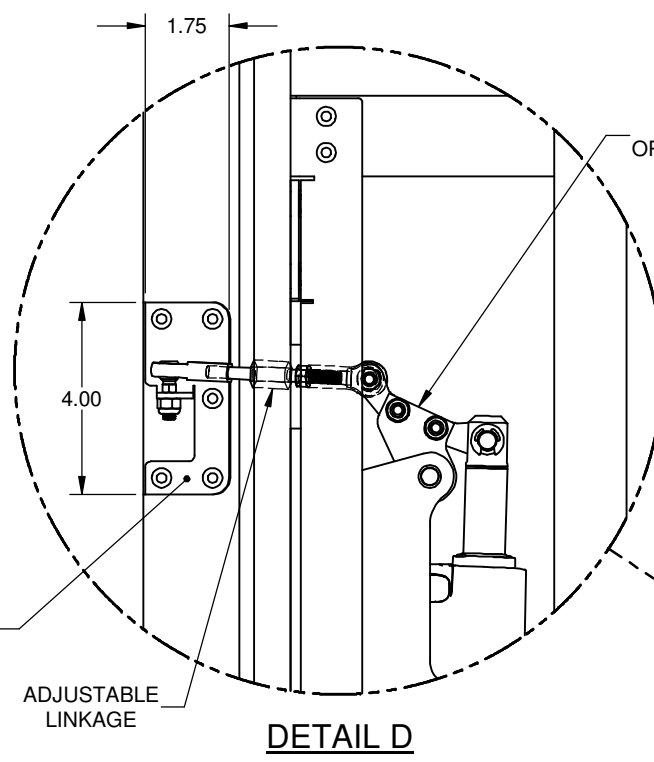
WALL SEGMENT ELEVATION VIEW

- NOTES:
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 - 3.) REFER TO DRAWING 910-0026 FOR ADDITIONAL RECOMMENDED MILLWORK WALL INTERFACE DESIGN PRINCIPLES.
 - 4.) ALL MILLWORK FRAMING AND VENEERED PANEL FINISHES ENCASING THE LIFT, AS WELL AS DOORS / GATES AND JAMBS ARE FURNISHED AND INSTALLED BY OTHERS.

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TITLE DOOR OPERATOR / MILLWORK INTERFACE		
DOCUMENT NO. 910-0105	SHEET NO. 1 OF 3	REVISION A



SECTION A-A



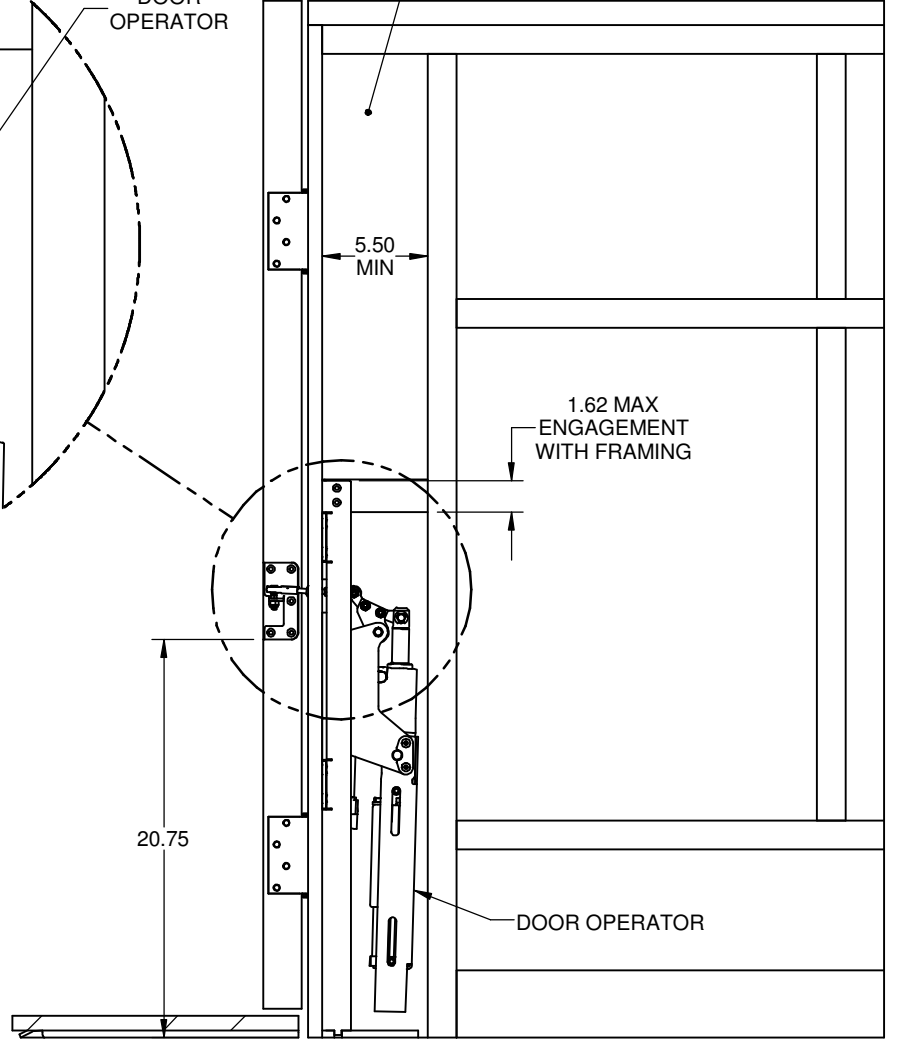
DETAIL D

PUSH/PULL PLATE
PLATE IS .135" THICK
(5X, #10 FLAT HEAD SCREWS)

ADJUSTABLE
LINKAGE

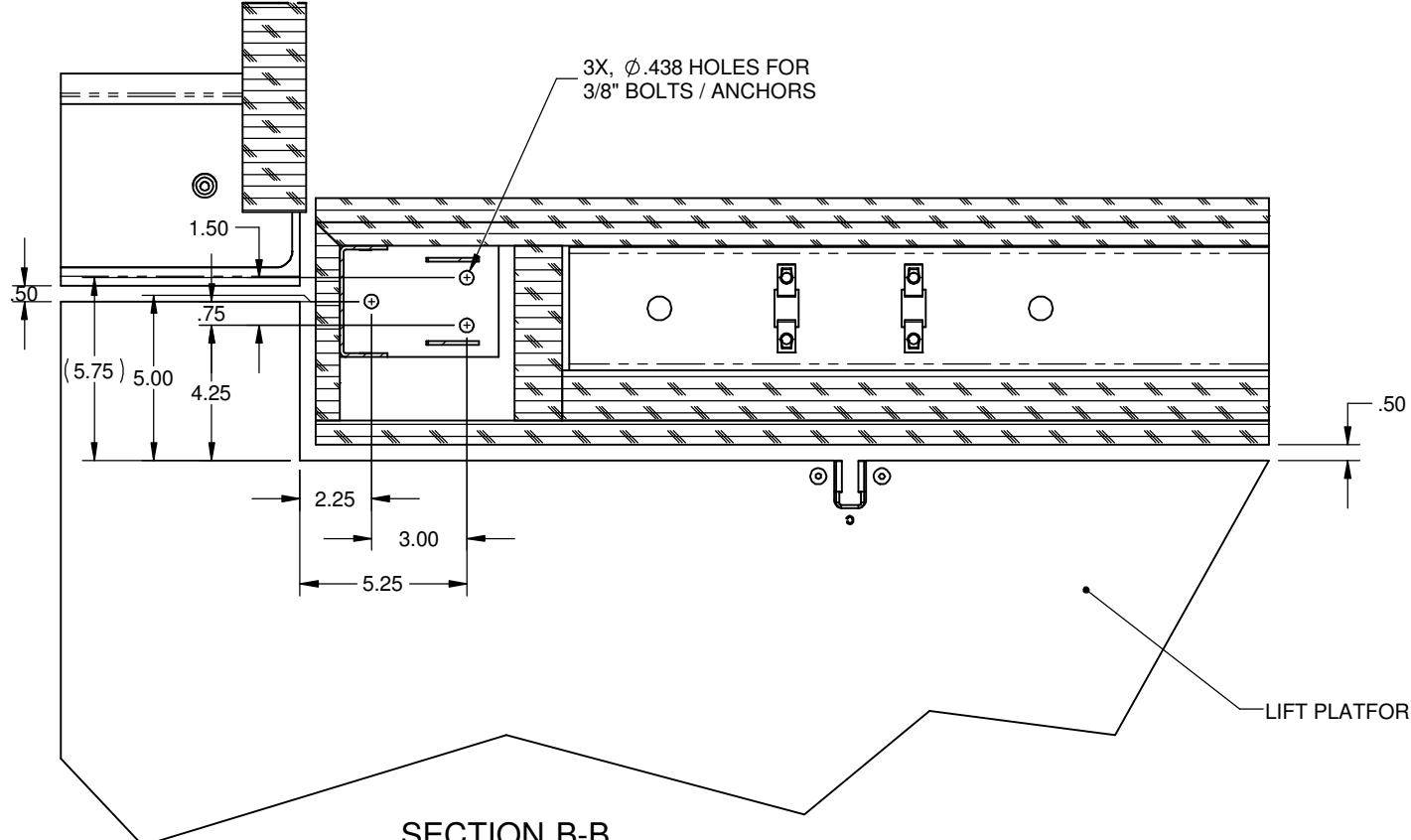
DOOR
OPERATOR

FRAMING (BLOCK AS REQUIRED)
IS TO TIE INTO DOOR OPERATOR POST
(6X, #10 FLAT HEAD SCREWS)



SECTION C-C

DOOR OPERATOR



SECTION B-B

LIFT PLATFORM



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DOCUMENT NO.	910-0105	SHEET NO.	2 OF 3
		REVISION	A

FRAMING (BLOCK AS REQUIRED)
IS TO TIE INTO DOOR OPERATOR POST
(6X, #10 FLAT HEAD SCREWS)

THE INTERIOR PANELS SHOULD BE MADE
REMOVABLE TO PROVIDE ACCESS TO
LEVEL SWITCHES AND ENABLE SERVICE
OR REPLACEMENT OF SCREW JACKS,
GEARBOXES, AND DRIVE SHAFTS.

DOOR (OPEN)

DOOR OPERATOR

MILLWORK STRUCTURAL FRAMING

LIFT PLATFORM

PERSPECTIVE VIEWS OF WALL SEGMENT



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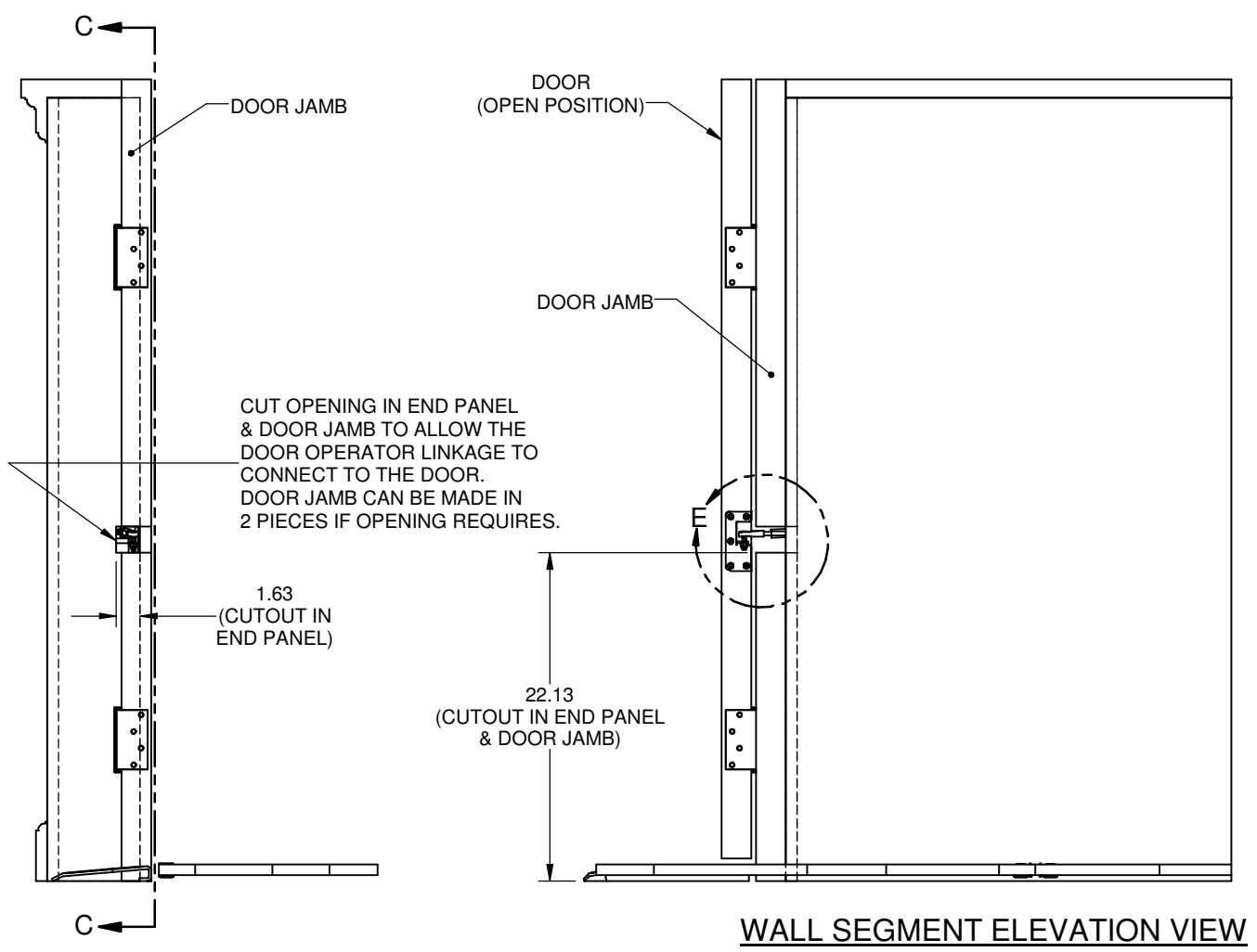
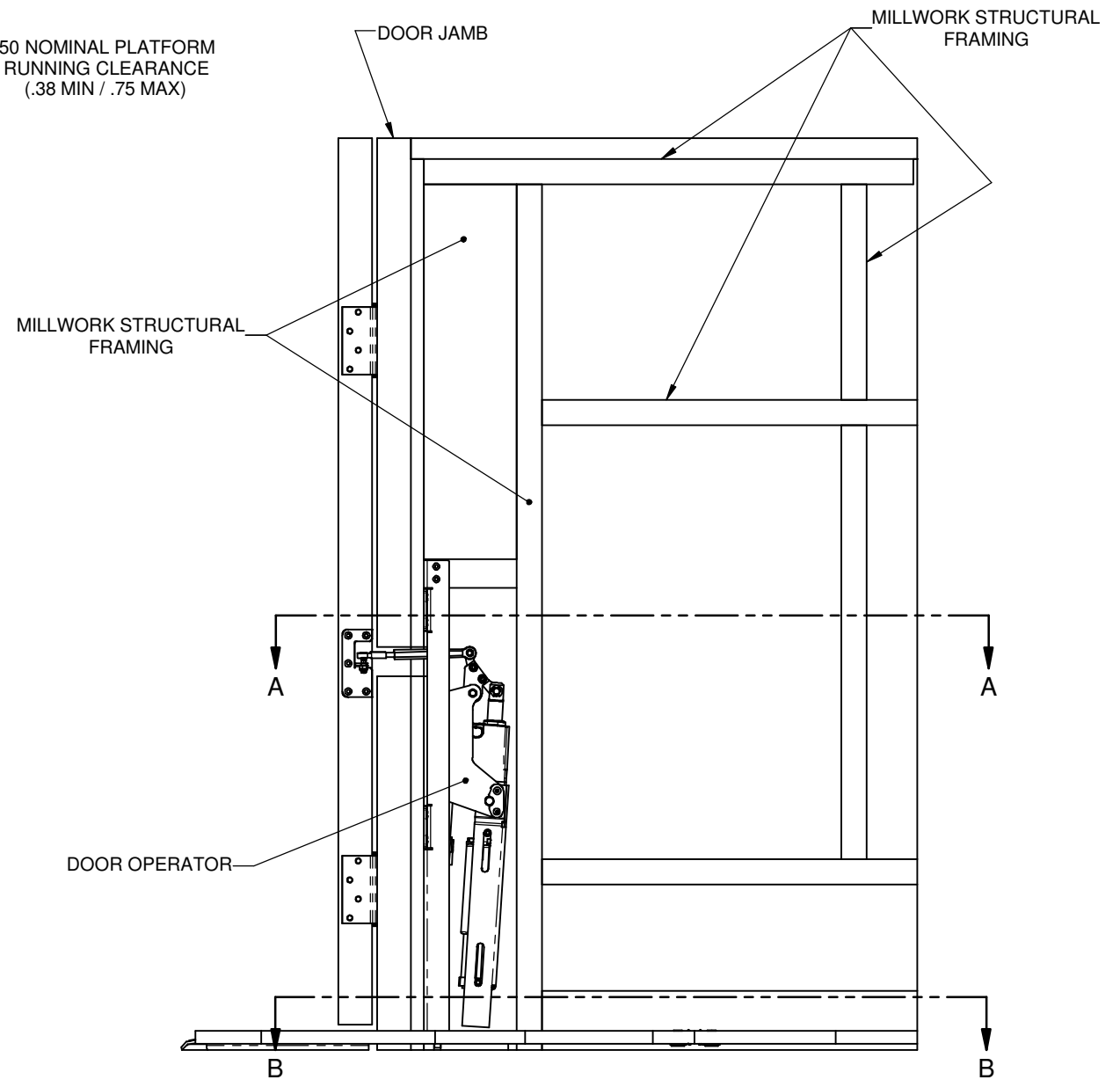
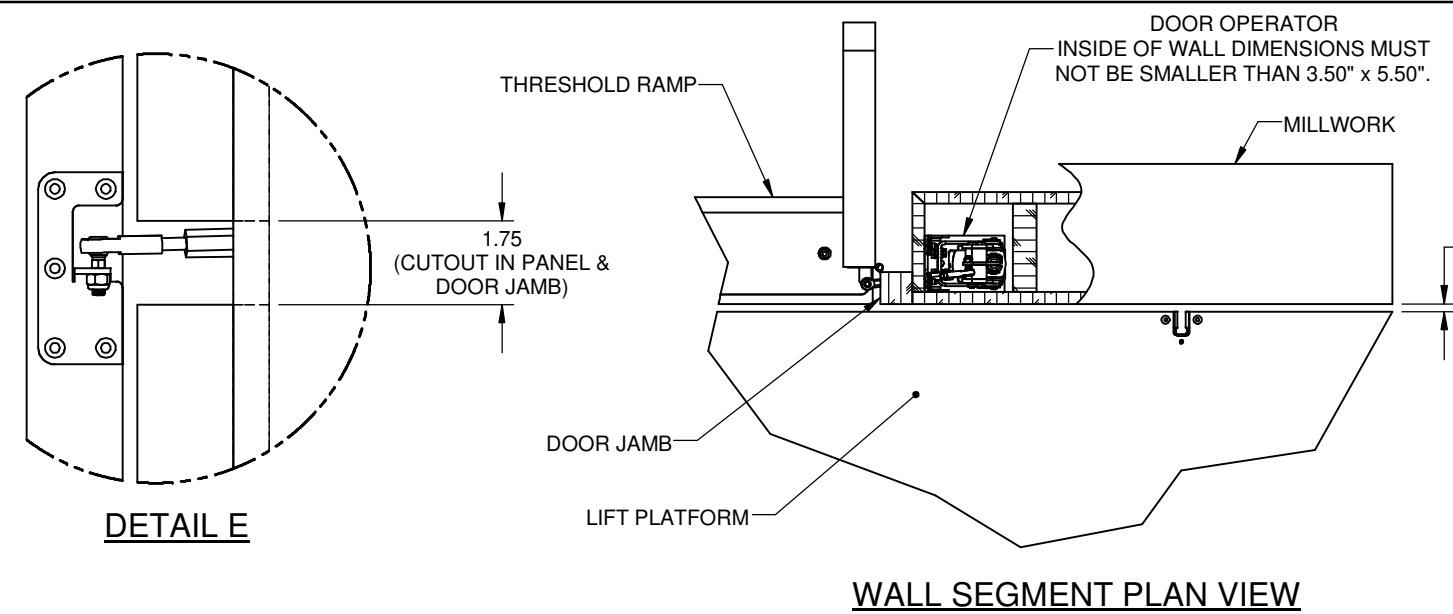
TITLE DOOR OPERATOR / MILLWORK INTERFACE

DOCUMENT NO. 910-0105

SHEET NO. 3 OF 3

REVISION A

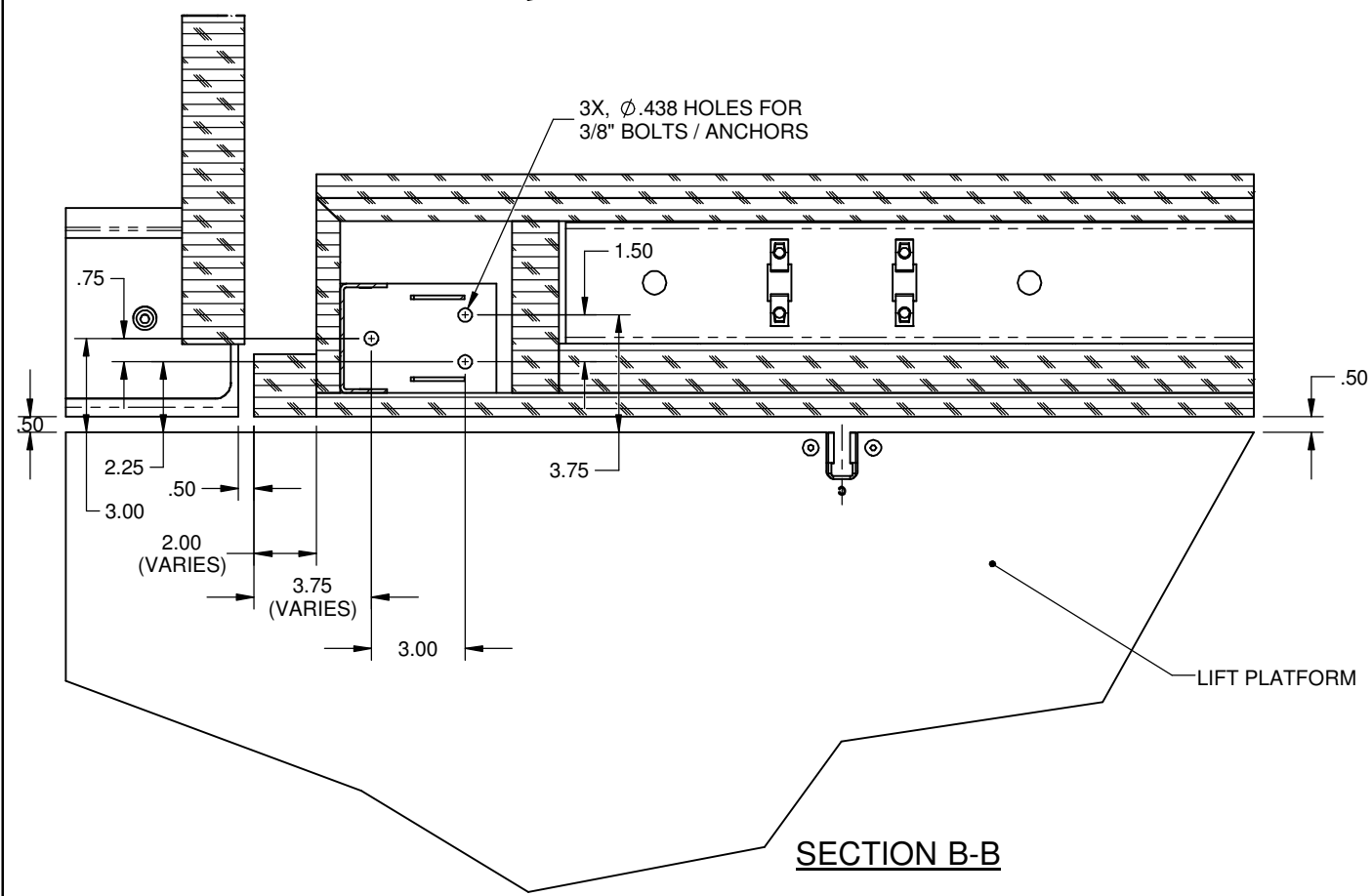
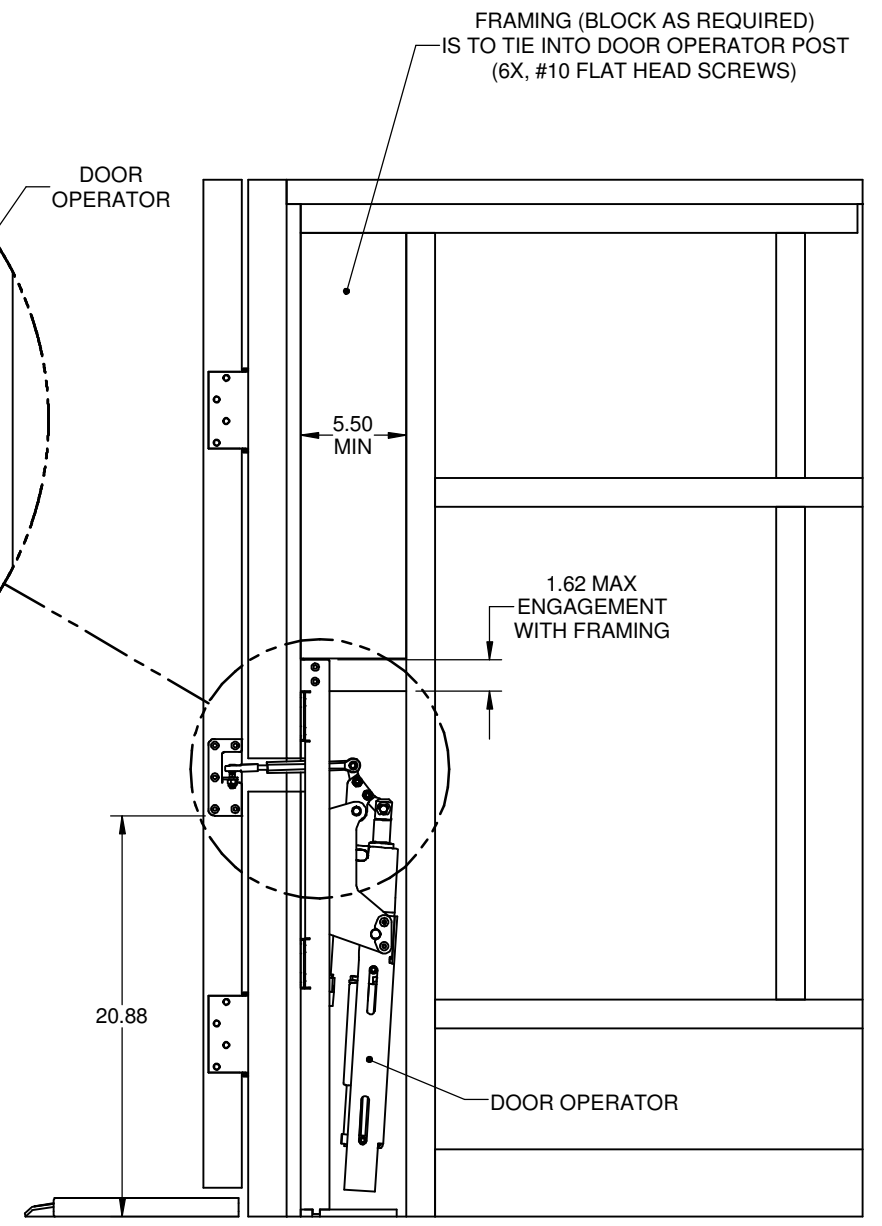
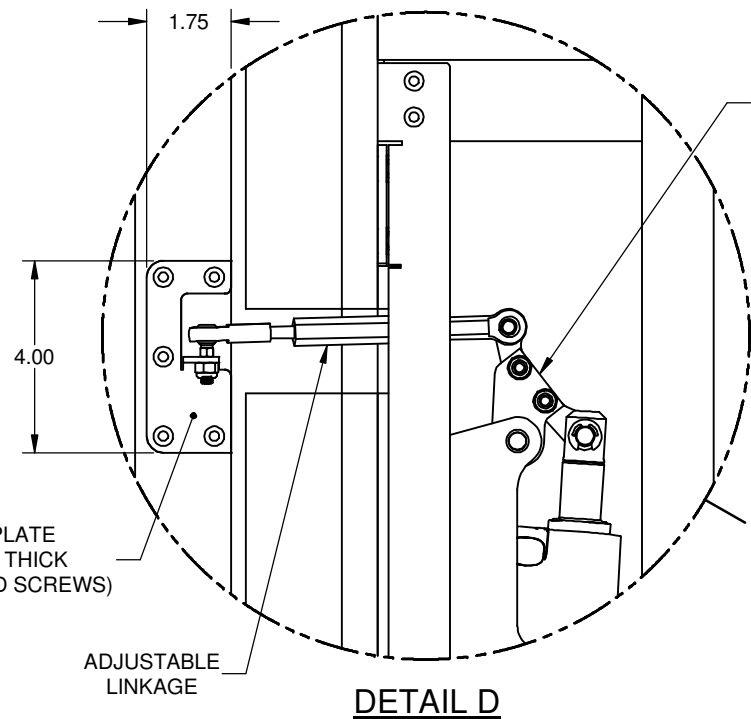
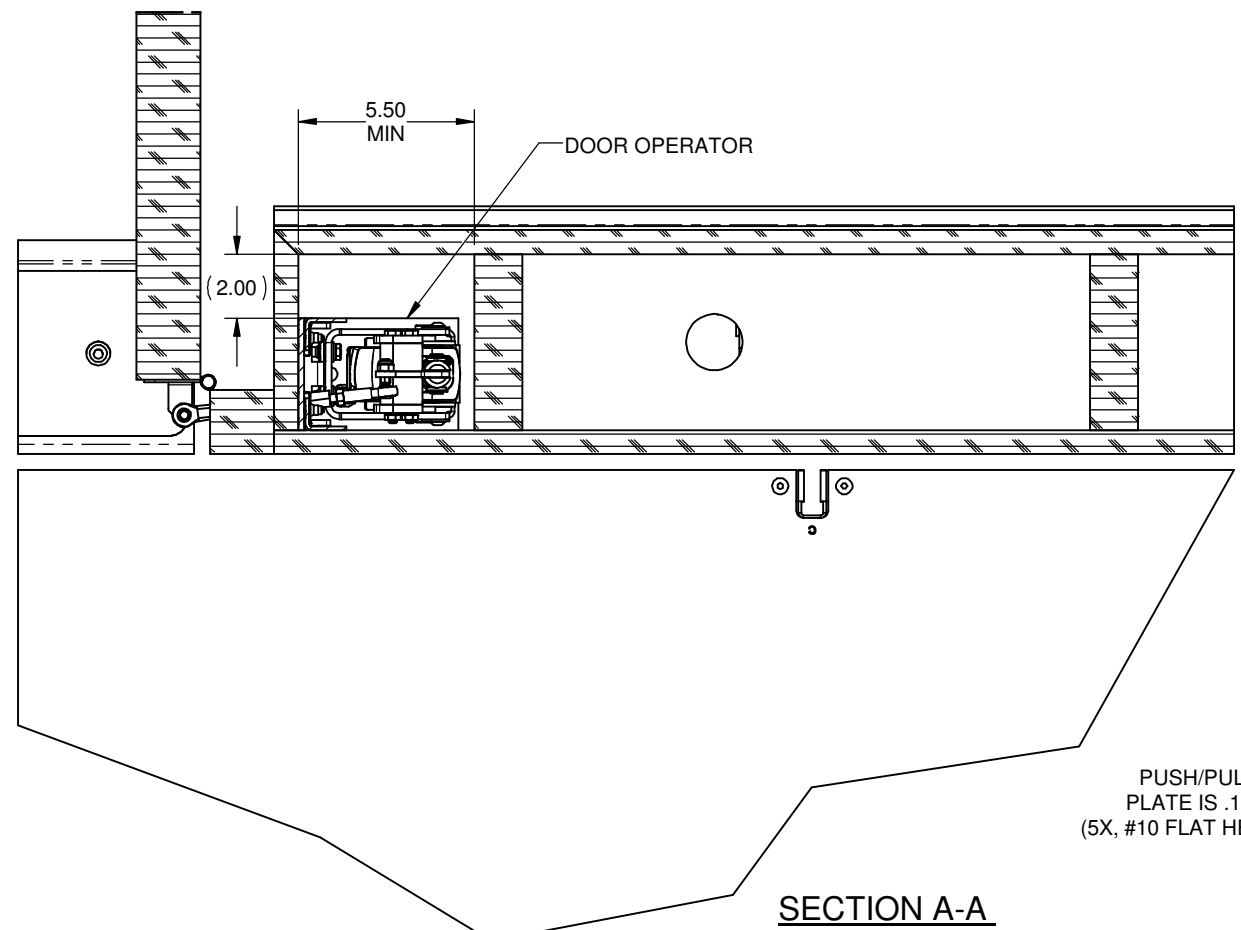
REVISIONS									
LTR	ECO	APPD	DATE	DESCRIPTION	DFTR	DATE	CHKR	DATE	
A				RELEASED		12/23/2014			




(DOOR AND PUSH/PULL PLATE NOT SHOWN FOR CLARITY)

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 - 3.) REFER TO DRAWING 910-0026 FOR ADDITIONAL RECOMMENDED MILLWORK WALL INTERFACE DESIGN PRINCIPLES.
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	<p>TITLE DOOR OPERATOR / MILLWORK INTERFACE</p> <p>DOCUMENT NO. 910-0106</p> <p>SHEET NO. 1 OF 3</p> <p>REVISION A</p>

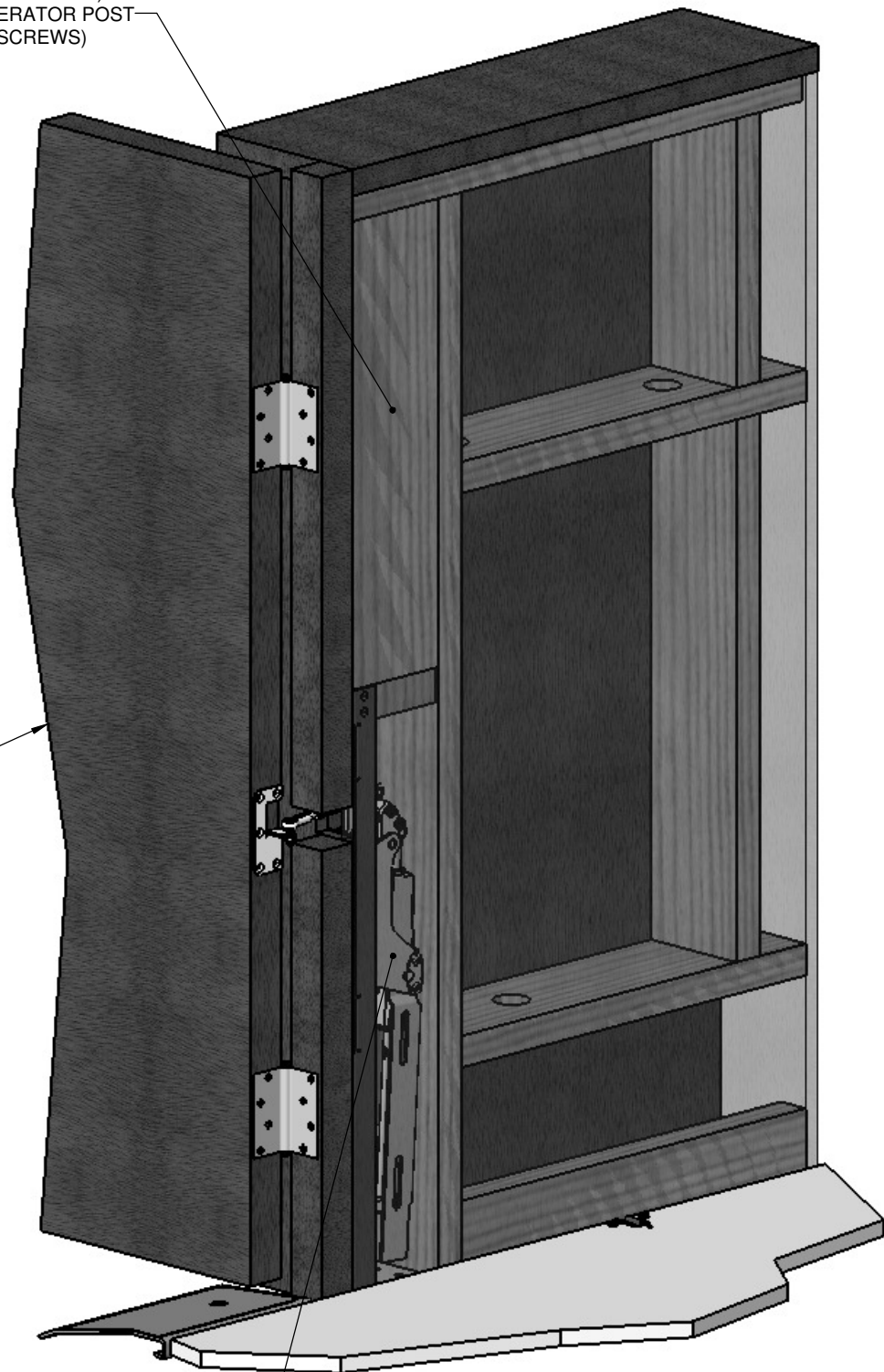


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TITLE DOOR OPERATOR / MILLWORK INTERFACE		
DOCUMENT NO. 910-0106	SHEET NO. 2 OF 3	REVISION A

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IS TO TIE INTO DOOR OPERATOR POST
(6X, #10 FLAT HEAD SCREWS)

DOOR (OPEN)

DOOR OPERATOR



THE INTERIOR PANELS SHOULD BE MADE
REMOVABLE TO PROVIDE ACCESS TO
LEVEL SWITCHES AND ENABLE SERVICE
OR REPLACEMENT OF SCREW JACKS,
GEARBOXES, AND DRIVE SHAFTS.

MILLWORK STRUCTURAL FRAMING

LIFT PLATFORM



PERSPECTIVE VIEWS OF WALL SEGMENT



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TITLE **DOOR OPERATOR / MILLWORK INTERFACE**

DOCUMENT NO. **910-0106**

SHEET NO. **3 OF 3**

REVISION **A**