Quality Assurance Manual

PDG Domus Manufacturing LLC

PDG Domus Manufacturing LLC
Quality Assurance Manual
Revision B
3-2-2003

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General information section

Corporate information

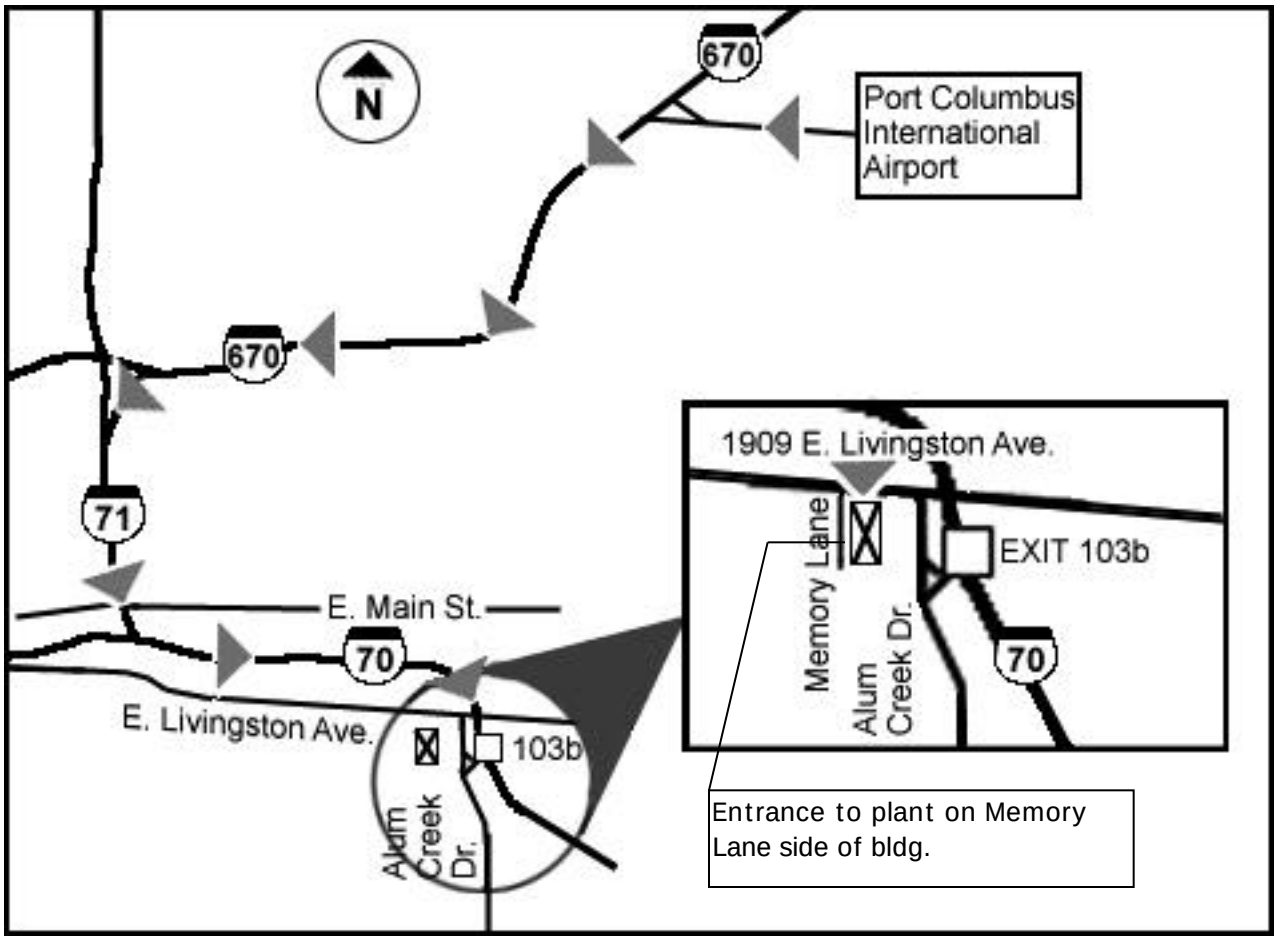
Company name: PDG Domus Manufacturing LLC
Corporate office address: 426 East Whittier St. Columbus, Ohio 43206
Corporate office telephone number: 614-449-8963
Corporate office fax number: 614-449-8967
Corporate office contact person: CEO (Nate) Nathan Pingel
E-mail address for CEO Nathan Pingel: npingel@pdg-inc.com
Cell phone number for CEO Nathan Pingel: 614-795-1285

Manufacturing information

Company name: PDG Domus Manufacturing LLC
Manufacturing plant address: 1909 East Livingston Ave Columbus, Ohio 43209
Manufacturing plant telephone number: 614-253-7186
Manufacturing plant e-mail address: domus1@pdg-inc.com
Manufacturing plant contact person: Plant manager Brian Scott
Hours of operation: 8:00 AM to 4:00 PM Eastern Standard time
Manufacturing plant square footage: 15,000 sq. ft.
Manufacturing plant square footage storage: 1200 sq. ft.
Manufacturing plant personnel: 10
Manufacturing plant production currently: 6 per month

Plant Location Section

PDG Domus Manufacturing Plant Location Map



Manufacturing plant address: 1909 East Livingston Ave Columbus, Ohio 43209
Manufacturing plant contact person: Plant Manager, Brian Scott
Manufacturing plant telephone number: 614-253-7186
Hours of operation: 8:00 AM to 4:00 PM (Eastern Standard Time)

Finished Product Examples
Exterior View

Front view

Front view

Side view

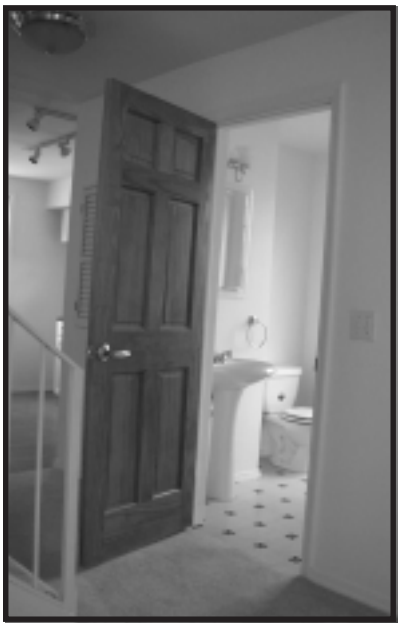
Side view

Rear view

Finished Product Examples
Interior View

Staircase, view from Kitchen

View from Living room



1st floor Bathroom

Living room

Kitchen

3rd floor Bedroom/Loft

Finished Product Example


Finished home.


Foundation detail blends with rest of neighborhood.


Historic look, fit and finish, blend in the neighborhood.


Box gutters blend in with historic neighborhood.


Staircase side of home.


Side view, electrical hook-up. Weatherhead can be set-up for underground cable or traditional method, shown here, to blend with neighborhood.


Rear view with railing installation.


Rear view.


Rear, upper deck.


Rear, lower deck.


Rear view, with upper deck railing and lower deck.


Detail on soffit and end gable.


High efficiency e-glass windows and patio door.


Second floor dormer, over staircase.


Foundation detail; is insulated 4’ in the ground.

Home Assembly Steps

STEP 1: Cell A

STEP 2: Cell B

STEP 3: Cell D

STEP 4: Cell E

STEP 5: G1 (End Gable)

STEP 6: G2 (End Gable)

Home Assembly Steps

STEP 7: L1 & U1 (Lower & Upper roof sections)

STEP 8: L2 & U2 (Lower & Upper roof sections)

STEP 9: Cell C

STEP 10: Caulking and Sealant, Railing system

In-Plant Product Examples

Finish Area; plaster work, paint and window installation.

End wall adhesive and sealant installation.

Installation of windows and door.

Installation of windows and door.

Door and windows installed.

Detail: window installed.

Clean-up and preparation for shipping.

Cell A, electrical testing.

Finished living room.

Cell A & B matched, area to be finished in-field.

Cell A & B matched, area to be finished in-field.

Cell A & B matched, area to be finished in-field.

Railing being fitted and removed for shipping.

Door and trim installation in progress.

Carpet cut, cell ready for cleaning, switch and recepticle installation.

Cell D, carpet cut, ready for cleaning and shipping.

Cell B & C ready for shipping.

Interior finishing in 2nd floor bathroom.

In-Plant Product Examples

Kitchen (Cell C) prepared for flooring.

Kitchen, installation of flooring.

Rear view of Cell C (kitchen).

Detail; Foundation rat wall.

Finished roof section (U1 & L1).

Second floor deck (rear view of Cell E).

End gable (G1 & G2).

Detail: 2nd floor bath-room cabinet.

Finished kitchen, fit and finish.

Finished kitchen, fit and finish.

Finished kitchen.

Finished kitchen/dining room flooring.

Quality Mission Statement

PDG Domus Manufacturing LLC

Our pledge

Executive management and all associates of PDG Domus Manufacturing LLC recognize quality design and engineering standards integrated with customer satisfaction is the paramount measure of success. In order to meet and secure this measure, we pledge the following:

1. We regard Quality as "meeting the customer's requirements". Therefore we commit to gaining a thorough understanding of those requirements before attempting to produce and deliver goods and services.

2. We regard all associates as the most important part of the QA/CA process. QA/CA process helps us achieve our quality goals, Prompt, accurate, and consistent service in accordance with our particular task assignments.

3. We carefully plan and perform our tasks using properly maintained equipment and properly trained staff. We regard planning as the most important process in the chain of processes necessary for achieving high quality goods and services.

4. We recognize suppliers as vital partners in our efforts to satisfy our external customers and regard these suppliers as customers themselves in matters of work instructions and directives. We foster effective communication with our suppliers. We seek business success for our suppliers, for our customers, and for ourselves.

5.In our execution to achieve our goals we will not except a standard lower then 100% correct as set forth by our QA/CA standards.

Introductory Notes

Manual layout and document history

In an effort to make reading, use, and revision of this quality manual as easy as possible, each policy statement is regarded as a separate document.

The section numbering of the individual policy statements follows the numbering of the twenty requirement clauses of ISO 9001; 1994

Each policy statement can be revised separate from the other policy statements. Changes to the statements are recorded as separate document histories and are found at the end of this manual.

The use of individual policy statements to organize this quality manual is not to imply that the manual is not to be considered as a whole and used as such. On the contrary, the necessary ingredients must come together to produce an effective quality management system.

Control of this manual

The manual is controlled as a unit, having one entry in the Master Index. The edition level of the entire manual provides assurance against use of obsolete versions.

This manual may be provided to external parties upon request as a non-controlled document. The Company assumes no responsibility for updating non-controlled copies of this manual.

History of Quality Manual Document Changes

Original Document (Quality Manual A) 8-12-2002
Revision (Quality Manual B) 3-2-2003

Management Responsibility

Definition and Policy for Quality **Policy 1**

PDG Domus Manufacturing LLC (herein referred to as the Company) defines quality as "quality design and engineering standards integrated with customer's requirements" and publicly declares its commitment to quality with its Quality Mission Statement.

To ensure that quality is achieved, a twenty-element Quality Management System exists. The Company's policies concerning the individual elements of the Quality Management System are stated in the individual policy statements of this manual.

Every associate, regardless of status in the Company, is to understand and practice the commitment to quality summarized in the Quality Mission Statement and detailed in this manual. No one is excused from accepting full responsibility for providing quality goods and services.

Organizational Responsibility for the Quality Management System

The Company Quality Director is the Management Representative for the Quality Management System. The Quality Director is responsible for establishing and maintaining the Quality Management System and fostering its continuous improvement.

However, this responsibility is shared because all Company managers are responsible for establishing and maintaining the procedures and work instructions necessary for the Quality Management System within their departments or areas as defined elsewhere in this manual. To satisfy this responsibility, managers are expected to:

1. Initiate actions that assure product conformity.
2. Identify and document quality problems.
3. Develop and implement solutions to quality problems while communicating these efforts to all necessary parties to prevent confusion, waste, and rework.
4. Verify that solutions are implemented and institutionalized.
5. Control and account for what happens with nonconforming products from time of production to time of delivery.

Resource Requirements and Provisions

The Company recognizes that resources must be provided to enable the managers and general associates to successfully meet customer requirements. These resources include, but are not limited to; adequate personnel and adequate time to perform work correctly and completely, appropriate tools and equipment, and proper training and education.

The company recognizes that managers have to have the educational tools to direct associates. These tools are administrative, managerial, and leadership skills developed over time and through a variety of sources. The Company recognizes that managers must have associate staffing at a level that prevents quality problems caused by excessive work load and that allows time for associate training and development.

The fact that an associate shows technical expertise and good work habits does not automatically "qualify" person for a leadership role in the business. Rather, care must be taken to place associates in job roles where they have the greatest possibility for success.

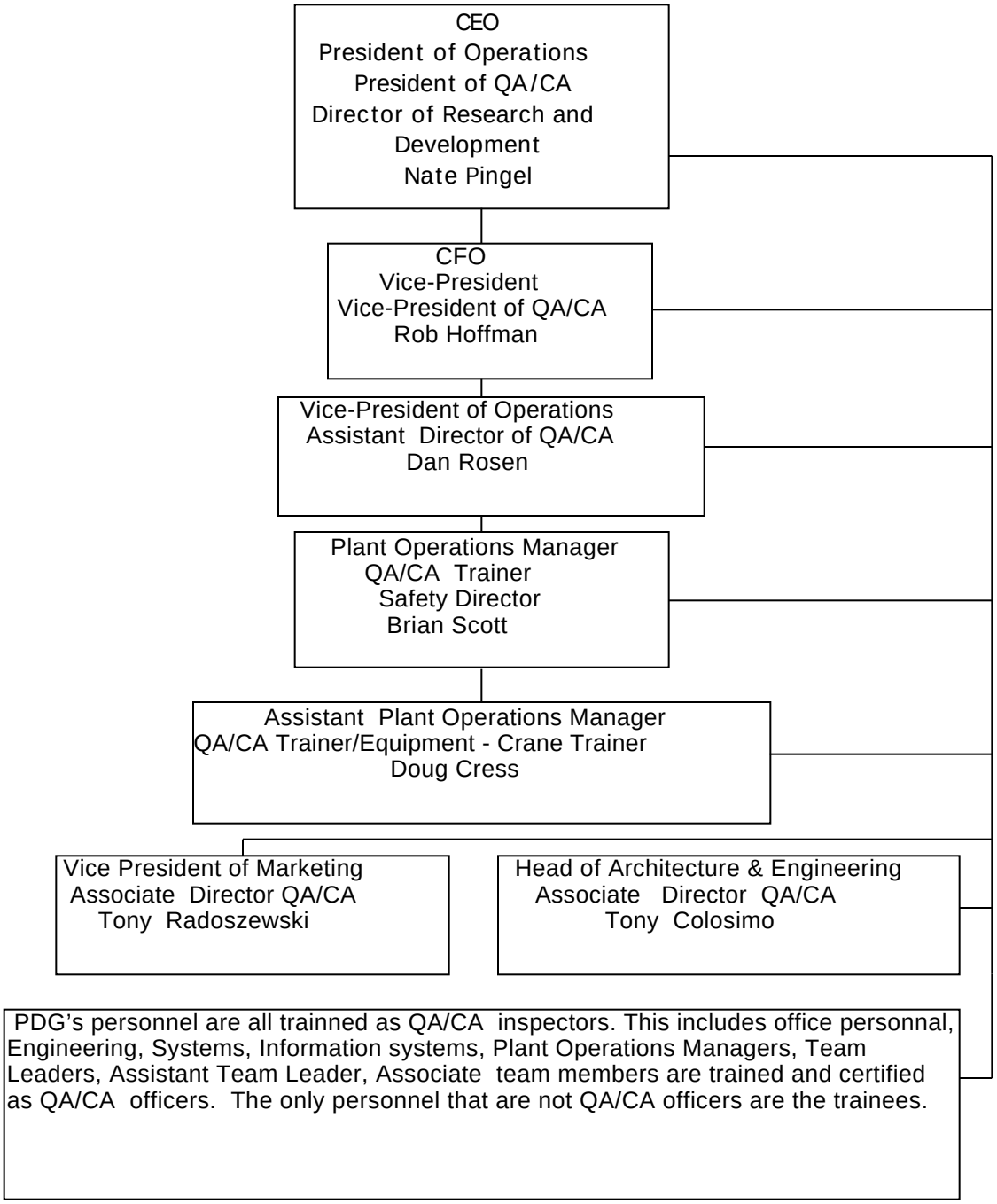
The Company commitment to manager and associate growth does not absolve individuals from assuming responsibility for personal development and job performance, nor does it prevent a manager or associate from serving, as necessary, in a role for which he or she is not yet fully "qualified."

Management Review for Quality

A Management Review for quality is conducted at least semi-annually. This meeting is led by the CEO of the Company and is attended by CFO, Vice-president of Operations, Head Architecture/Engineering, Head of Product Design, Vice-president of Marketing, all Plant Managers and invited guests.

The purpose of the meeting is evaluation of the suitability and effectiveness of the Quality Management System and conformance to stated quality policies and objectives. Internal quality audit findings, corrective action reports, production results, and external customer satisfaction levels are examples of information used in the review.
Positive changes to the Quality Management System and to the Company goods and services are expected to result from the Management Review for Quality. The information presented in the meeting is formally documented for appropriate distribution throughout the Company. Management Reviews for Quality are conducted according to the Tier II procedure, "Management Review"

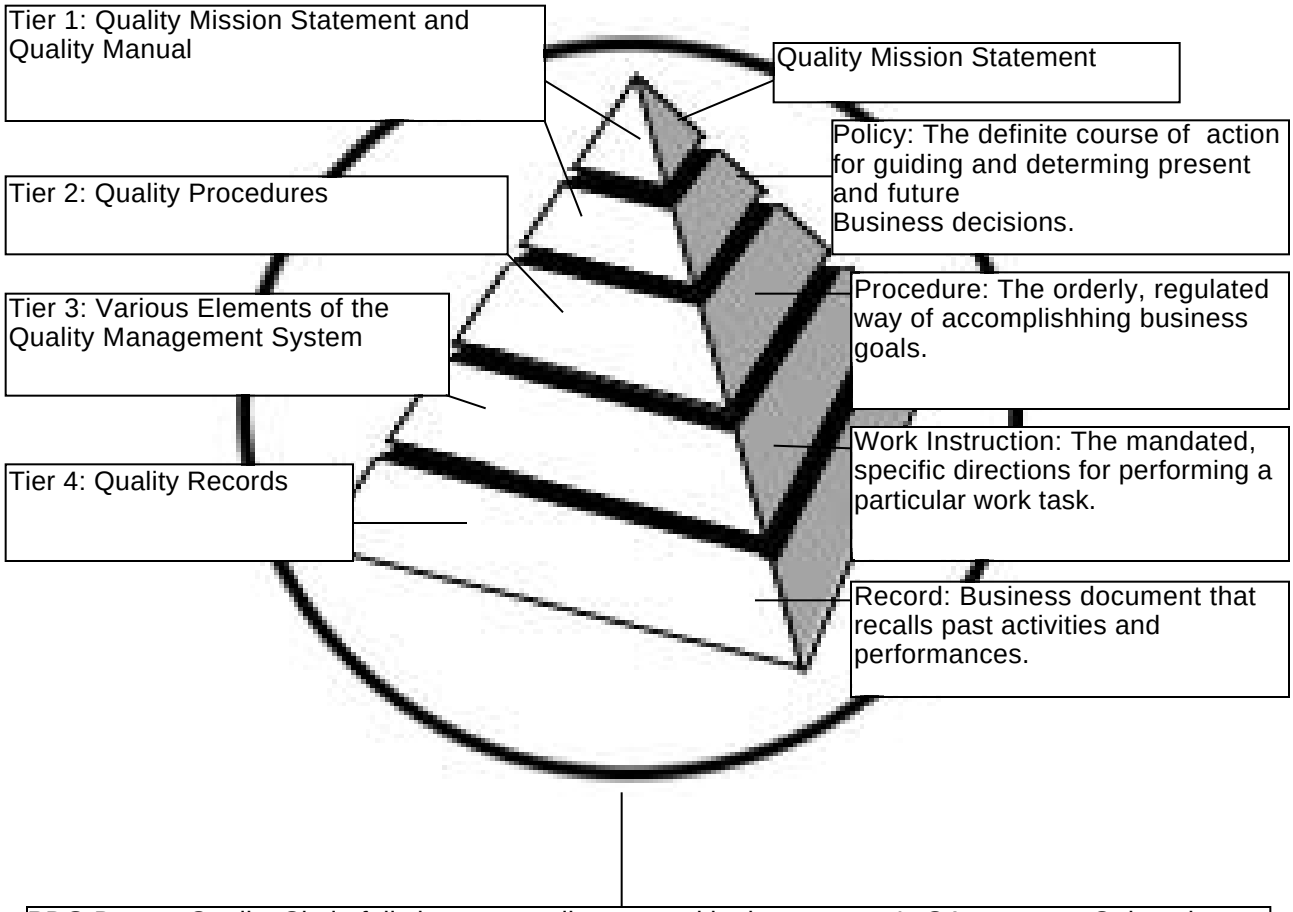
Quality Control Chain of Command Chart



Quality System

Structure of the Quality System **Policy 2**

The Quality Management System consists of individual elements which parallel those of the ISO 9001; 1994 Model for Quality Systems. The individual elements are established using three levels or tiers of controlled documents. A fourth document tier is made up of records that document past performance of Tier II and Tier III documentation. The hierarchical nature of the system is shown below.



PDG Domus Quality Circle fully integrates all personnel in the company's QA process. Only trainees, who do not have the certification for inspecting, are exempt. All others have the responsibility to stop a product from leaving a plant, which does not comply 100% with QA/CA standards.

As the graphic indicates, the Quality Mission Statement and the twenty policy statements of the Quality Manual constitute Tier I documents and state the overall quality policy for the Company. These statements provide the foundation for more specific Tier II procedures and Tier III work instructions.

Tier II procedures establish individual and department responsibility and authority for the specific elements of the Quality Management System. They clarify Company jargon, document how and to what extent the Company will address a particular system element, and establish the records that will be kept. Not all elements of the system require Tier II documentation.

Tier III work instructions are product and/or task specific and provide detailed instructions for implementation of Tier I and Tier II requirements. Tier III documents include technical drawings, customer specifications, product training manuals, task work instructions and workmanship standards. Tier III documents also include repeat use forms that, upon completion, become Records for Quality. Not all elements of the system require Tier III documentation.

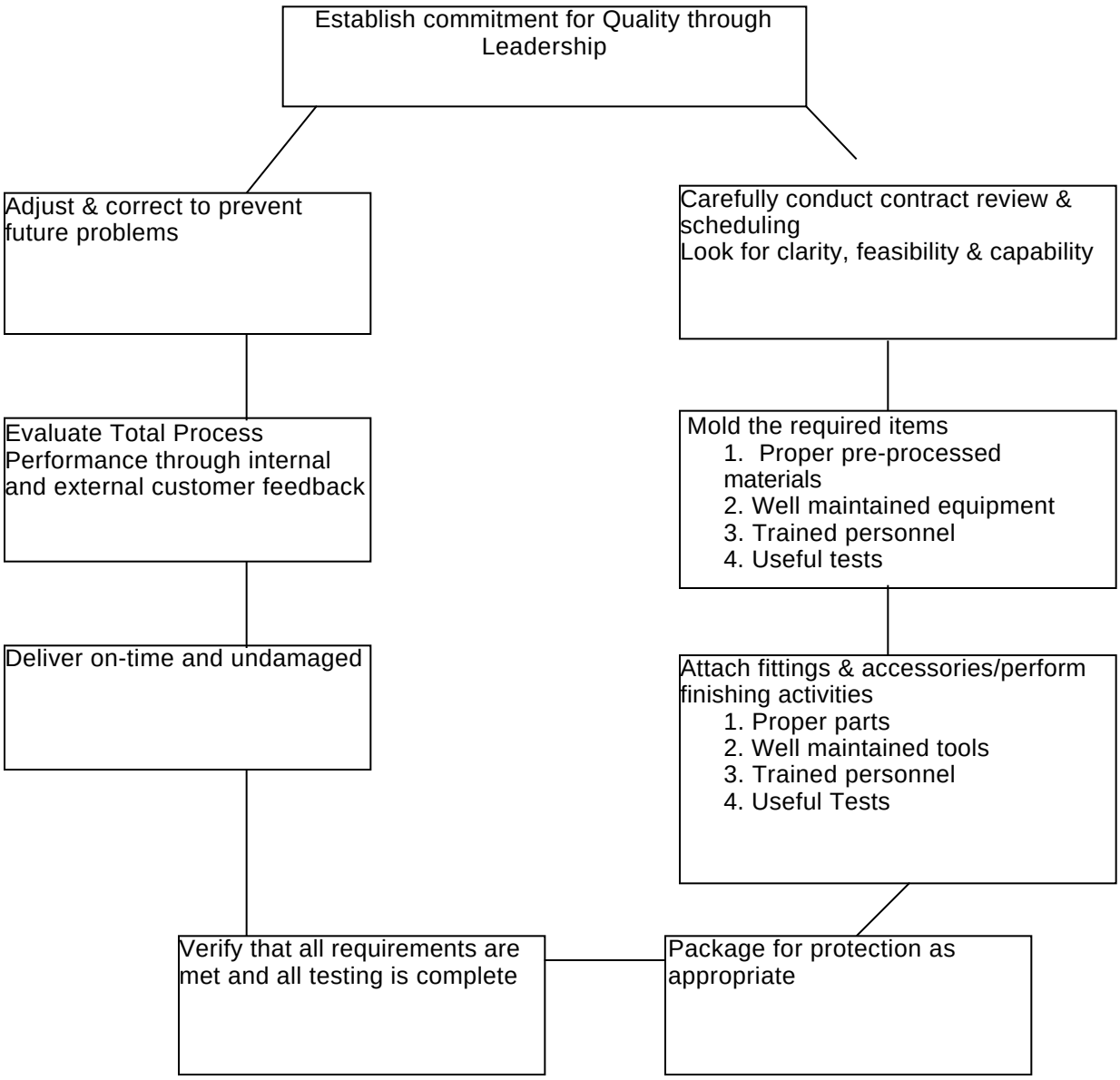
Department managers have full responsibility for the Quality Management System within their department. This responsibility includes, but is not limited to, care of Quality System documents, compliance to all testing and inspection requirements, and maintenance of department generated records.

Planning as a part of the Quality Management System

The Company recognizes planning as the most important process in the chain of processes necessary for producing goods and services. The overall Quality Plan is shown on the following page. In addition, the Company recognizes that particular matters require formal planning to ensure quality. These areas include, but are not limited to:

a) Product quotation and design activities
b) Product specifications and standards of acceptability
c) Production equipment and activities
d) Inspection and testing equipment and activities
e) Record keeping
f) Training

Quality Management System



Contract Review

Definition and Policy for Contract Review **Policy 3**

The Company reviews all customer contracts upon acceptance of an order and prior to release of that order for manufacturing. Contracts are written as Level 1 or Level 2 contracts. Level 1 contracts are complex orders needing full contract review. Level 2 contracts are non-complex orders needing only contract review by the sales department. The sales personnel writing the contract is responsible for determining which level of review is needed for each contract written Contract review is conducted to ensure:
a) The contracts provide clear and precise specifications, instructions, and quantities.
b) The contract requirements are within the Company's actual capabilities.

When contract information or organizational capabilities are found to be inadequate:
a) Contract deficiencies and/or capability limitations are promptly reported to the Company Sales and Order Entry Department for resolution. The Sales Department coordinates any necessary resolutions with the customer.
b) As contract problems are resolved, their resolutions are documented using formal Change Orders and their attachments.

The Sales Manager is responsible for Level 1 and Level 2-contract review and the records of contract review. The Operations Manager is responsible for overseeing the management review team for Level 1 Contracts.

Definition and Policy for Quotation Review

The Company reviews quotations prior to release of the quotation to the customer. Quotations are written as Level 1, Level 2 or self-review quotations. Level 1 quotations are complex tenders needing full quotation review. Level 2 quotations are non-complex tenders needing only quotation review by the sales department. Self-review quotations are non-complex tenders, which can be reviewed by the sales personnel assembling the quote. The sales personnel assembling the quote is responsible for determining which level of review each quotation receives. Quotation review is conducted to ensure:

a) The quotation provides clear and precise specifications, pricing, availability, and any other pertinent information necessary.

When quotation information or organizational capabilities are found to be inadequate:

a) Quotation deficiencies and/or capability limitations are promptly reported to the Company Sales and Order Entry Department for resolution. The Sales Department coordinates any necessary corrections.

The Sales Manager is responsible for Level 1 and Level 2-quotation review and the records of quotation review. The Operations Manager is responsible for overseeing the management review team for Level 1 quotations.
Details concerning Contract Review is outlined in the Tier II procedures "Contract Review (Level 1) and "Contract Review (Level 2)." Details concerning Quotation Review is outlined in the Tier II procedure, "Quotation Review (Level 1) and "Quotation Review (Level 2)."

Design Control

Definition and Policy for Design Control **Policy 4**

The Company recognizes that incorporating quality during the design stage of a project is far more effective than attempting to add quality to the product by means of inspection and rework after manufacture. To ensure that quality is a part of design, the process is multi-functional, utilizing not only personnel specifically assigned to design work, but also department managers, support personnel, and suppliers.

To ensure business profitability and customer satisfaction, the CEO governs design work. The design process is an all-inclusive process requiring technical integration from all departments to create the highest quality product possible. Design processes are listed in (PDG Domus Design Audit document.)

In all design work, careful communication is mandatory. Records of design input and output and design review meetings foster such communication. When appropriate' design verification and design validation procedures are performed and documented. The introduction of new products into the manufacturing process is careful, deliberate, and documented. The CEO or the Operations Manager before implementation must approve design changes. Design changes and their approval must be documented according to the Tier II document "Design Control Procedure."

PDG Domus Manufacturing LLC
Major process points for Product Design Process Phase 1-2-3

Phase 1

Find Information
Review Found Information
Develop Concept from Information
Concept Refinement
Major Concept
Major Concept Points

Phase 2

Product Design Development
Product Design Refinement
Finished Product Design
Execution Plan
Task List
Art of Discovery
Product Design Refinement
Measurement Method
Accountability
Modification through Feedback
Review for Finances

Phase 3

Finance Plan
Execution Plan
Art of Discovery
Refinement

PDG Domus Manufacturing LLC Detailed Outline for Design Process

Sign-off must take place on each step to assure the highest design quality.

Initial Meeting
- Review needs
- Assess which person or persons can help the effect a problem solve
- Discuss timetable
- Timetable is written down in e-mail

Non-Disclosures Signed
- Protection of other parties

Gather Existing Information
- Written
- Articles
- Verbal
- Sites
- Video
- Photographs, illustrations, other graphic elements

Document Client Project Concept
- Written description of concept
- Dream list
- Major points list

Review Client Project Concept
- Review concept for workability
- Day-to-day operation problems
- Difficulty of execution
- Financial feasibility

Contracts
- For starting process
- Fee rates
- Down payment
- Set-up timetable

Rough Concept Discussion
- Major points
- Critical success factors

Rough Cost Review (Please note until all audits are complete no fixed or assured pricing can be given)
- Basic cost for components
- Basic cost for services
- Basic cost for software
- Basic hardware costs
- Integration costs
- Operation costs
- Maintenance costs

Market/Design Audit

Project Objectives

Phase 1 Problem Review

Understand user-buying process

Phase 2 Concept Development

Conceptually explore opportunities to better match user-buying process by enhancing association retail environment

Phase 3 Implementation Testing and Refinement

Recommend program for developing, installing, testing and rolling-out the enhanced user retail environment

Constraints
- Market technology integration
- Information supported by technology
- Information which turns in product

Consumer Analysis covering:
- Core group
- Opportunity group
- Consideration set
- Buying trigger
- Group product services & pricing trigger
- Resources

Summary of Key Findings
- Review of methodology covering:
- Develop consumer-buying model
- Identify distinct groups
- Identify opportunity groups
- Understanding how key groups utilize resources
- Indications for user environment
- Methodology overview
- Understand how opportunity group utilizes resources at various stages

Consumer/User Focus Group
- Confirm elements of buying model
- Tentatively identified discriminating variables
- Review site on Internet
- Interview association staffs
- Document services practices
- Review sales practices
- Types of materials utilized in sales process
- Related association base case

Nature of Findings
- Compellation report

Influences
- Individual
- Situational
- Social
- Passive information gathering
- Active information gathering
- Product evaluation
- Price evaluation
- Purchase delivery
- Post purchase evaluation

Behavioral Groups
- Review:
- Simplified Shopper
- Reluctant Shopper
- Impulse Shopper
- Constant Shopper
- Methodical Shopper
- Casual Shopper

Fundamental Demographic
- Age groups
- Average ages
- Income averages
- Education
- Gender
- Review industry trends and define target audience

Opportunity Group
- Core group
- Competitors core

Comparison Between
- Core group
- Opportunity group

Summary of Research Findings
- Report

Resources Utilized
- Information methods used

Audit Objectives
- User initiatives
- Competitors initiatives
- Related retail practices
- Opportunities for enhancing buying process

Audit Conclusions
- Report

User/Customer Satisfaction
- Setting, meeting clear expectations
- Familiarity/predictability
- Consistency
- Comfort
- Convenience
- Integrity
- Reliability
- Responsiveness

Hierarchy of Informational Needs
- Building consideration set
- Consideration set narrowing
- Option and comparisons
- Price comparison awareness

Resource Checklist
- Site buying process center
- Service center
- Continual access zone
- Information systems
- Buying process center

Conclusions and Recommendations
- Conclusions overview
- Recommendations

Buyers/Users Process

Information centers
Major ideas

Developer Model

Concept
Systematic process that starts with a shopper and ends with a buying customer
Recommendations
Critical success factors
Retail user information systems
Product price point
Product and services systems
Develop look and feel of image
Review current industry media
Prioritize users

Concept Development

Integration of market information and client concept
Detailed process review
Incremental forecasting

Technical Audit

Auditing Components:

Assumption: Each component will represent a module of the audit and would carry its own cost component. The customer can select components and we can recommend what we see as the needs, based on our interaction with them.

Information Systems Audit:

The following components will comprise the overall information systems audit:

Audit of Total information Systems Requirements: (This process starts with “discovery” components.)

Part A: Evaluation of Overall Information Management Requirements:

1.] What types of information must be maintained, and for what purpose is it used?
2.] Is the system centralized, or is information maintained is separate modules?
3.] What is the degree of repetition and duplication of information managed within the system?
4.] How accurate is the information perceived to be by key users, and how accurate is the actual information? What is the perception gap?
5.] How accessible is the general deployment of the information perceived to be from the user perspective?

Part B: Evaluation of Current Information Management Tools and Deployment:

1.] What software is deployed in the current information management system?
2.] What is the configuration of the hardware system?
3.] How do these systems function in terms of input, output, and functionality of use?
4.] How functional and intuitive is the user interface?

Part C: Audit of Accounting Functions:

1.] What software is deployed in the current accounting management system?
2.] What is the hardware and software deployment?
3.] How well do the systems function in terms of input, output, and ease of use?
4.] How functional and intuitive is the user interface?

Part D: Audit of System-Wide Software Components:

1.] Applications in use system-wide, constancy across the computing system.
2.] Suitability and ease of use within the computing environment.
3.] Performance of applications in relationship to users’ computing needs, training programming, and skill sets.

Part E: Audit of Hardware Needs:

Audit of Computing Resources:

1.] Assessment of overall hardware platform deployment.

2.] Audit of servers, workstations, and printers: inventory, value, and age of equipment, assessment of current components' ability to support requirements.

Audit of LAN Network Components:

1.] Evaluation of hubs, routers, bridges and firewalls for performance and suitability realized to system-related needs.

2.] Evaluation: of networking wiring, data transfer rates, and overall performance of LAN/WAN computing systems.

Audit of Internet Functions:

1.] Evaluation of Internet connectivity and data stream rates.

2.] Evaluation of hardware and software components for Internet functionality.

Part F: Database Management Audit:

1.] Hardware platform deployed.

2.] Applications, user-interface design, and information management modules deployed.

Audit of Database Functionality:

1.] Reliability, ease of use, training time line. maintenance, consulting expenses, and downtime.

Part G: Web Site Audit:

1.] Audit of server deployment: hardware and software components.

2.] Audit of Web site functionality: serving speed, interactive capability, reporting functions, ISP services.

3.] Evaluation of current and future development requirements for static, dynamic, and interactive Web serving requirements.

System Engineering Review and Design

Step-by-step review of the operation and its procedure
Documentation
Mapping of operation
Staffing requirements
Site architecture

Software Specifications

Review of off-shelf software to meet the needs of the client
Specifications for component software parts

Hardware Specifications

Review of off-shelf hardware components to meet the needs of the client
Specifications for hardware components

Pricing for Finished Design

Description of services
Detailed proposal with related cost
Timeline for execution

Contract for Execution of Finished Design

Compiled cost
Description of services
Down payment

Web Site General Design

Integration of new information and technical development with web design process
Staff meetings between clients company and (PDG's) web develop team
Graphic design integration with operating systems

Web Site Technical Design and Execution

Assemble base components
Integration code writing
System testing and modification
Software patches installation
Design and engineer operations systems
System scalability
System load requirements
Integrate audit information into design

Content Development

Review and development of materials to be placed on the site
Copy writing
Rewriting existing materials
Review of existing photos/computer generated images

Site Graphic Design

Rough design
Layout
Refinement
Review of several designs
Modification to final design

Corporate Identity Design

Design concepts
Review new designs market compatibility
Cross media application review

Testing

Review of all documentation
Step-by-step review of user functionality
Load testing the site
Adjustment

Installation

Download site
Second stage; site testing section by section
Adjustment
Load the site
Sign-off

Training

General introduction of site functionality
Use of site operation components
Upload and download information from site
Staff training

Maintenance

Operation costs
Update costs
Overhaul of the site
Timeline for updates

Document and Data Control

Definition and Policy for Quality **Policy 5**

The Company recognizes that accurate, quickly retrievable written and electronic information is essential for consistently satisfying customer needs. To ensure availability of this information, distribution of all documents and electronic data that impacts product and service quality is restricted or controlled. Such controlled information can be placed in one of three classifications:

1. Controlled information documents.
2. Electronic sales and inventory data.
3. Contract documents.

The Tier II document, "Document and Data Control Procedure" provides detailed information on controlling all three types of documents. The Quality Director is responsible for overseeing Document and Data Control.

Controlled Information Documents

Controlled information documents are those paper-based documents that provide repeat use information and do not have to be attached to contract documents to be considered valid. These documents exist to ensure the quality of internal and external products and the maintenance of the Quality Management System. This classification of documents includes, but is not limited to, drawings and blueprints, product specifications, the Company Quality Manual, Quality System procedures, and Quality System work instructions.

Current controlled information documents must be available at their point of use to all appropriate associates. A Master Index is used to document the location of all controlled information documents. Any controlled information documents sent to external parties, other than certain vendors, must be stamped "Not controlled, information subject to change.'' The Company assumes no responsibility for controlling paper or electronic documents provided to external parties.

All positions at or above the departmental manager level may request that documents be registered to the Master Index. However, only the Quality Director may actually approve registration to the Master Index. All changes to controlled information documents require the approval of the person who originally wrote the document.

The Company recognizes that certain memos and production instruction sheets directly impact quality and therefore must be regarded as controlled information documents. Such documents must be registered to the Master Index. Non-registered copies of such documents are not allowed after their initial circulation.

While sales literature must be properly managed and kept up to date, it is not regarded as controlled information and therefore is not registered to the Master Index.

The Company recognizes that externally generated documentation such as customer drawings or specifications may be used at the site. This documentation will be controlled using specific control mechanisms. The Tier II Procedure Document and Data Control defines these control mechanisms.

Electronic Sales and Inventory Data

The PDG computer system provides customer contract status and product inventory information essential for providing quality goods and services. Limiting input access to the system through personal password controls the information maintained by this system. The Company Controller does authorization of personnel performing data input. The Company is committed to full utilization of and dependency on this system for sales status tracking and inventory management. Backup paper systems are regarded as useful only as a secondary source for information.

Contract Documents

Contract documents include customer contracts, change orders to customer contracts, and purchase orders. Personnel authorized to issue and change such documents are listed in the appropriate Tier II procedures for the documents. Because these documents "travel" throughout the business as internal and external customer requirements are satisfied they are controlled by adherence to process maps showing their distribution and movement within the Company. Items such as bills of materials, specification sheets, and

drawings attached to contract documents are considered controlled by the very fact that they are a necessary part of the documents they accompany.

Purchasing

Definition and Policy for Purchasing **Policy 6**

The Company recognizes its suppliers as vital partners in the production of quality goods and services. The Company selects suppliers on the basis of their ability to meet the Company requirements and who make a positive contribution to its quality commitments, recognizing that low price should not be the only factor in supplier selection.

The Company maintains and uses an approved supplier list and annually holds a documented supplier review as part of its Management Review for Quality. Suppliers are rated using a sub-contractor approval form that lists the requirements for approval. The Purchasing Agent and Operations Manager must approve all suppliers. The Purchasing Agent is responsible for overseeing Purchasing. Details on sub-contractor approval are located in the Tier II Procedure, "Sub-Contractor Approval."

A purchase of goods or services for initial design work or for emergency situations from unapproved suppliers requires approval by the Purchasing Agent and the Department Manager requiring the material or item. Unapproved vendors should be evaluated and, if qualified, approved if they are going to be used on a repetitive basis.

All purchases of goods and services for resale are made using written purchase orders. These purchase orders provide the supplier with clear, unique instructions or specifications for the merchandise being purchased. The supplier's ability to meet purchase order requirements must never be undermined by confusion or inaccuracy in the purchase order. Purchase orders and their attachments are considered contract documents as established in the Document Control Policy section of this Quality Manual.

The Purchasing Agent reviews all purchase requisitions for accuracy and adequacy. The Operations Manager approves all purchase requisitions for items affecting products or product quality. The Tier II document, "Purchase Order Processing" provides guidelines for preparing and processing purchase orders.

The Company's customers do not normally request the right to visit supplier’s facilities to verify product conformance to specification. The Company recognizes that certain situations necessitate such visits and assumes responsibility to facilitate visits that benefit all parties. Suppliers are to be instructed in writing as to the type of product to be examined and discussed during such visits. Also accompanied the written instruction to the customer or suppler is a secrecy/non-disclosure document which must be signed and presented at the time the visit to the plant takes place.

Control of Customer Supplied Product

Definition and Policy for Control of Customer Supplied Product **Policy 7**

The Company accepts customer supplied components for incorporation into finished products.

The Company assumes responsibility for the verification, storage, and maintenance of customer supplied components. The Company immediately reports to the customer any apparent damage, loss, or unfitness for use of the components as soon as it is aware of such. All unacceptable customer supplied products are segregated from acceptable stock and disposed of per the customer's instructions.

The Tier II document, "Control of Customer-Supplied Product," establishes job responsibility and specific instructions for the proper acquisition, receiving, and storage of customer supplied product and for customer notification concerning nonconforming product.

The Purchasing Agent is responsible for overseeing Control of Customer Product.

Product Identification and Traceability

Definition and Policy for Product Identification and Tractability **Policy 8**

The Company establishes product identification of its homes manufactured by identification numbers. As shown in the-matrix below, these identification numbers consist of a (plant-identifying number, production year, unique item identifier, model name and number produced)

Data Plate Section:

The DATA PLATE Identification number example: 1 020203 A Hartford 1

1	020203	A	Hartford 1
Plant identifier	Year identifier	Unique item identifier	Model

In order to make item identification accurate and effective:

a) A PDG database is maintained that pairs the identification number with pertinent information about the home item, such as product description, date of production.

b) Daily production instructions state the identification numbers to be used on home items produced.

c) The Tier II document, "Product Identification and Tractability Procedure" contains procedures, which detail the installation and verification of a home item's identification number.

· Product non-conformities are recorded using the product's identification number.

The following graphic identifies the major house “Unique item identifier” This allows for each part of the home to have its own tracking number and be seen as a whole product in the same Data plate identification number.
This PRODUCT IDENTIFICATION AND TRACEABILITY is important from a life long information tracking perspective. Allowing the company to see information on home part performance, which translates, into enhanced versions of the home better serving our clients.

The above information is on the DATA PLATE. The actual size of the DATA PLATE is 1-5/8”x4”.

Certification Data Cards

Certification Data Cards are used to identification employees and their individual certifications.
Certification Data Cards also act a security device, as the employee must wear the card in visual sight. This keeps persons who do not belong in the plant, out of working areas. The following is an example of the Certification Data Card. The actual size of the card is 2-1/4”x3-1/2”.

Nathan Pingel

Title: CEO
Identification number: 157632
Date Authorization: 01-01-2003 to 01-01-2004

CERTIFICATIONS (• indicates certification)

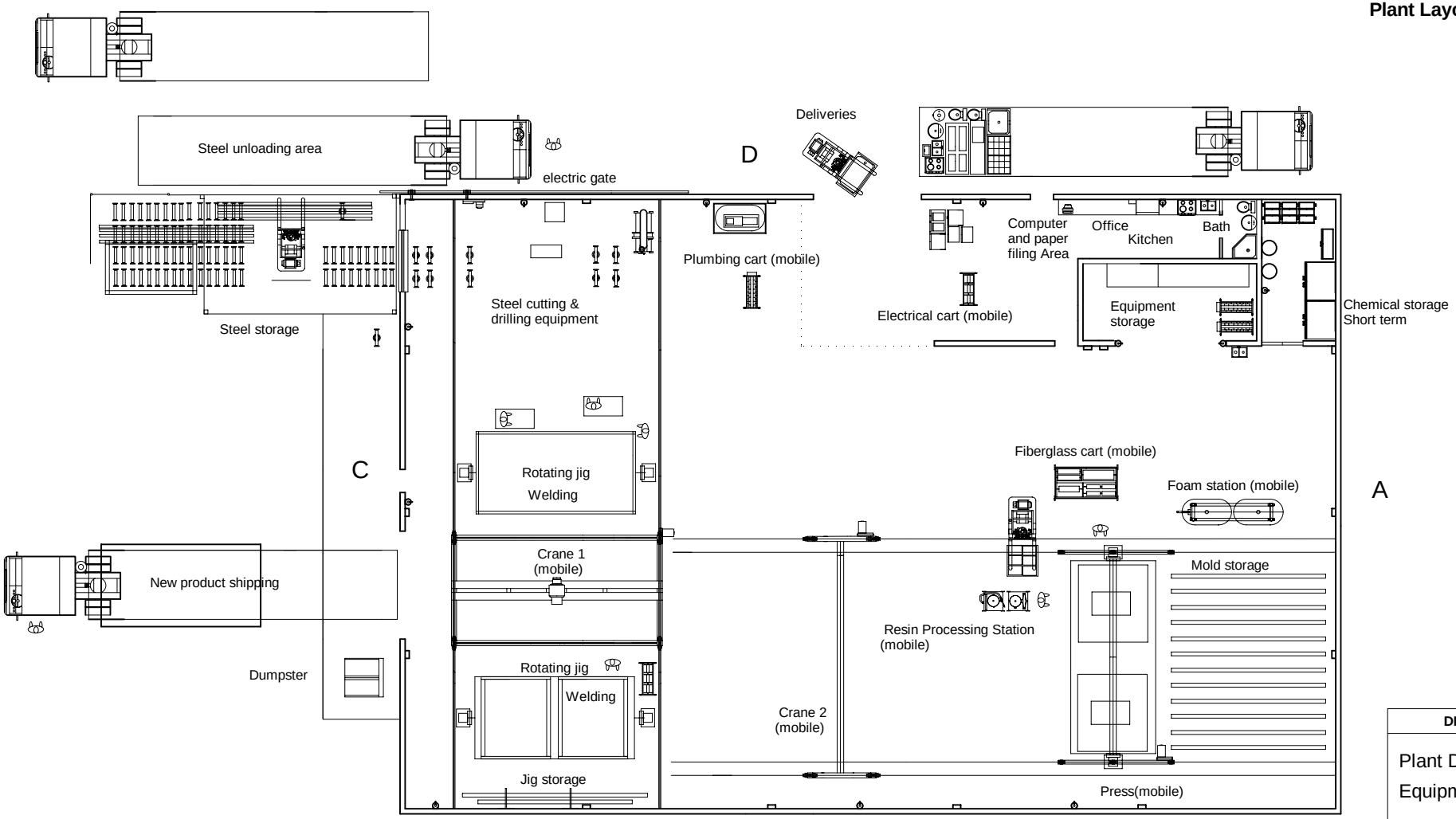
- QA
- Welding
- Electrical
- Plumbing
- HVAC
- Operations
- Computers
- Forklift Operation
- Crane Operation
- Equipment
- Loading/Rigging
- Material Handling
- Interior Finishing
- Surveying
- Foundation Installation
- Structural Assembly
- Lamination
- Foam

Nathan Pingel

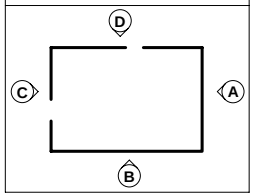
Address: 426 E. Whittier St.
Columbus, OH 43206
Social Security number: 157-632-000
Health Care Group number: 239960
Health Care Member number: BBAAGGWVGB
Birthdate: 11-07-1952
Hire date: 01-06-1999

PDG Domus Manufacturing LLC
426 E. Whittier St. • Columbus, OH • 614-449-8963

Plant Layout Section



KEY PLAN



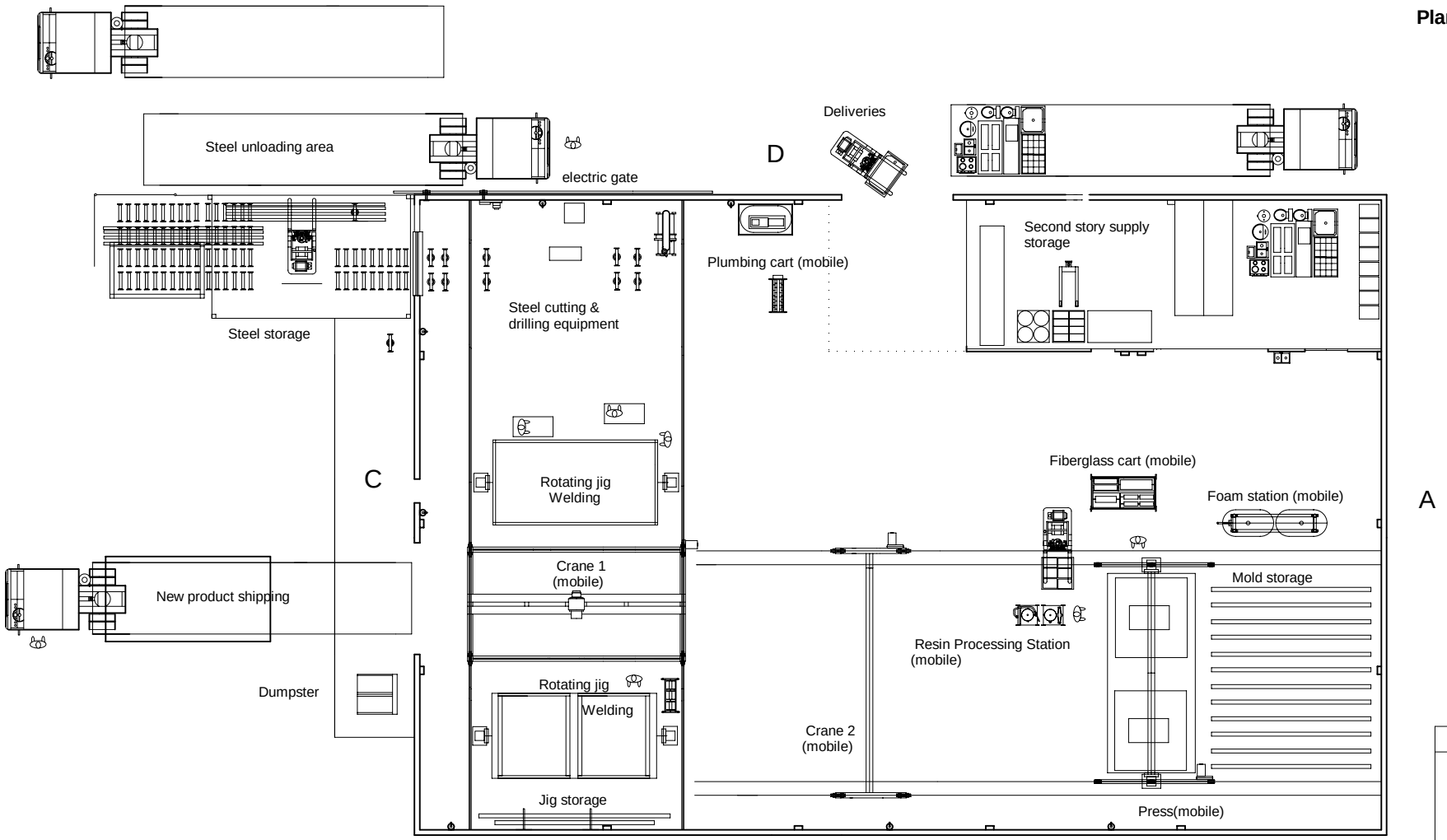
DRAWING

Plant Definitions 1

Equipment 1

MODEL(S): Plant 1

Plant Layout Section



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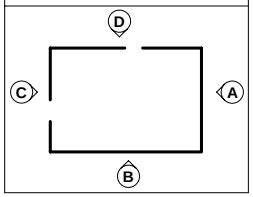


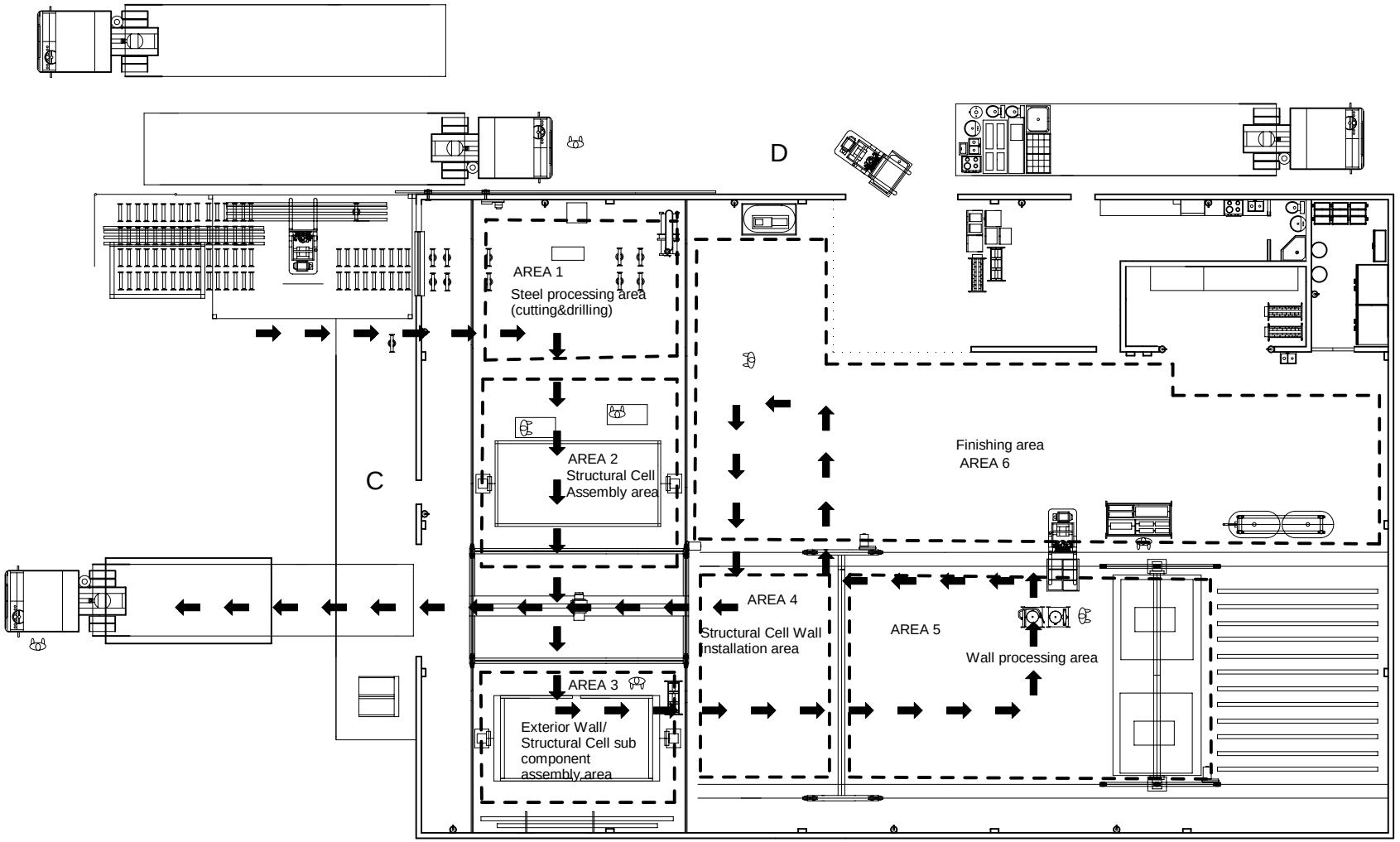
DRAWING

Plant Definitions 1

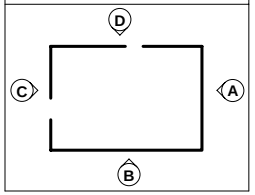
Equipment 2

MODEL(S): Plant 1

Plant Layout Section



KEY PLAN



DRAWING

Plant Definitions 2
Plant work zones

(Basic) Plant
Production Flow

MODEL(S): Plant 1

Plant Layout Section

Plant Definitions 1 (Equipment 1) First floor: Description of the equipment in the plant
Plant Definitions 1 (Equipment 2) Second story Supplies Storage. Description of the equipment in the plant

List of equipment description

Bathroom (shower)
Chemical Storage Short term
Crane 1 (Mobile)
Crane 2 (Mobile)
Deliveries
Dumpster
Electrical cart (mobile)
Electric gate
Equipment storage
Fiberglass cart (Mobile)
Foam station (Mobile)
Jig Storage
Kitchen
Mold Storage
New Product shipping
Office
Press (Mobile)
Plumbing cart (Mobile)
Resin Processing Station (Mobile)
Rotating Jig 1
Rotating Jig 2
Second Story Supply Storage
Steel Cutting & Drilling Equipment
Steel Storage
Steel Unloading Area

Plant Definitions 2 (Plant Work Area - Basic Plant Production Flow) Description of what is performed in each Area 1-6

1. **Steel Processing Area 1**
2. **Structural Cell Assembly Area 2**
3. **Exterior wall/ Structural cell sub-components assembly Area 3**
4. **Structural Cell Wall Installation Area 4**
5. **Wall Processing Area 5**
6. **Finishing Area 6**

1. Steel Processing Area 1: Area 1 primary function is processing steel from Steel Storage area to Steel Processing Area 1, were the steel is cut/drilled to meet specification. The processing is accomplished by the following method: Plasma cutting, Mag Drill, Chop/Band saw. Measuring is accomplished by tape measure. After a group of cut/processed parts are ready, they are moved by crane to Area 2 and Area 3.

2. Structural Cell Assembly Area 2: Area 2 primary function is to jig small sub-components and weld them together. This is accomplished by having Area 1 and Area 3 supply sub-components to the central jig system. After the jig has been loaded, the welding process takes place. The jig can be rotated for easy access during the manufacturing process. After welding QA, some wiring and plumbing on the appropriate cell takes place. After QA on electrical and plumbing process takes place, insulation is installed. This is accomplished with a mobile computerized Insulation foam gun/station. After QA, the cell has wheels attached to it. The cell is rolled to the next area, Area 4.

3. Exterior Walls and Structural Cell Sub-components Assembly Area 3: Area 3 primary function is to jig and weld pre-cut steel tubing into finished wall components and assemble sub-components.
This is accomplished by receiving pre-cut QA steel feed stock from Area 1. The tubing is jigged and welded.

Some wiring and insulation is installed in this area. After welding QA, wiring on the appropriate sub-component takes place. After QA on electrical, insulation is installed. This is accomplished with a mobile computerized insulation foam gun/station. After QA, wall components and sub-components are moved by trolley or crane to Areas 2 and 5.

4. Structural Cell Wall Installation Area 4: Area 4 primary function is the installation of finished exterior and interior wall sections. This is accomplished by using a light crane to lift wall sections into place. During this process adhesives and sealants are used on wall sections before bolting components into place. After QA, cell is moved to Finishing Area 6.

5. Wall Processing Area 5: Area 5 premiere function is the production of Fiberglass exterior wall parts and the assembly of those parts with steel structure components into a finished wall component. This is achieved by bonding and bolting the steel wall section on to the fiberglass panel. Drywall is boned and screwed to the wall studs. The wall section is placed into a press to contain the wall during the installation of foam insulation. This is accomplished with a Mobile computerized Insulation foam gun / station. After QA, wall components are moved by trolley or crane to mold storage until the components are needed in Area 4.

6. Finishing Area 6: Area 6 primary function is the finishing steps for the housing cells. The following items are installed/performed in Area 6; Interior painting, floorcovering, cabinets, doors, windows, electrical fixtures/electrical wire, HVAC vent covers, trim, sinks/toilets, wallpaper, cleaning, packaging and finished QA.

Process Control

Definition and Policy for Process Control **Policy 9**

The Company monitors and controls its manufacturing process to ensure quality products. In-process inspection of products is used as a tool for evaluating the manufacturing process; however, the emphasis is on controlling the process itself.

The Company recognizes that the most important stage of a process is the planning stage. Time and resources are provided to fulfill this vital process function.

Before a process begins, Company managers, clerks, and operators commit the necessary time to develop and maintain necessary equipment and hand tools, suitable and safe workspaces, and adequately trained personnel. This is done with the conviction that personnel can only function effectively if supplied with suitable and adequate resources to carry out their tasks.

The tools that the Company uses to control its process includes, but are not limited to:
a) Deliberate and careful contract review and activity scheduling.
b) Production Standards which document all procedures and processes.
c) A documented product grading system having clearly defined language for describing product defects.
d) PDG's electronic tracking system for all items and customer contracts.
e) Representative samples or photographs for evaluating home items.
f) Work instructions, blueprints, and test criteria available at point of use.

Whenever required to produce products that cannot be fully inspected and tested prior to use, the Company takes extra care to educate workers on the final use of the product and to control the production process. Such activity is known as a "special process.' The Tier II Document, "Process Control" details this activity.

These special processes shall be continuously monitored and controlled to ensure the process parameters are met Records of these special processes shall be maintained by the department manager responsible for the process for a minimum of two years.

The Operations Manager is responsible for overseeing Process Control.

Quality Control Procedures

Steel

All steel used in the PDG Domus home meets and or exceeded Federal, State and City standards.
All steel is visually examined for deformity and surface abnormality such as pits, porosity or bend.

1. Who is responsible for review of the steel products: Only associates with QA certification.
If the steel is rejected, by the associate receiving the shipment of steel the associate will coordinate with the plant manager according to QA Policy 7, the product will be returned to supplier.

2. A Pit - is a steel deformity .0625 "deep x .0625" across. There should not be more then more then 20 pits in a 20' section of steel. If any such occurrence takes place, the steel is rejected and according to QA Policy 7 the product will be returned to supplier.

3. Porosity - is a worm like deformity in the steel. If porosity is found and the porosity is .0625 deep x .1875". There should not be more then 10 Porosity deformities in a 20' section of steel. If any such occurrence takes place, the steel is rejected and according to QA Policy 7 the product will be returned to supplier.

4. Bend - is a deformity .25" long in any direction. There should not be more then 1 bend in a 20' of steel. If any such occurrence takes place, the steel is rejected and according to QA Policy 7 the product will be returned to supplier.

5. For QA process at the supplier level see reference document (Support Document 2 section 14)

6. During assembly of steel sections into jigs, steel is double-checked for quality and measurement accuracy. Measurement is executed by measuring tape. To keep measuring the same, a single supply source is used to keep measuring tapes the same. As tapes wear out they are replaced from inventory, using the same measuring tape supplier.

7. For steel standards and specification review (Steel Framing Member Schedule, in the Architectural Plans - pages S1, S2, S3, S4, S5, S6, S7)

Welding
Who is responsible for review of welds: Only associates with welding certification.

Welding Schedule
1. All welding (Types) are listed in the following documents: (Architectural Plans, page S8 Welding Schedule) and a repeat of the same information in (In-Field Assembly Manual, pages 19 through 22), (Plant Manufacturing Manual, Pages 17 through 20).

Welding Procedure
1. For welding procedures and specifications see reference document (Support document 2 section 15)
    1-1. For welding detail method and type see reference document (Plant Manufacturing Manual, pages 27 through 37).
2. All welding will meet or exceed “Specification for Carbon Steel Filler Metals for Gas Shielded Arc welding” see reference document (Support document 2 section 17)
3. Who is responsible for review of the welding inspection: Any associate, which has a welding certification and has the rating of “Associate”, not a “Trainee”.
4. During weld inspection, a weld size gauge is used to make sure that the weld meets weld specification.
    4-1. If the weld does not meet specification due to size, the weld is rejected.
    4-2. The Corrective Action to the failed weld due to size, takes place immediately. The weld is cleaned with wire brush and re-welded. The weld is inspected a second time with a weld size gauge.
    4-3. During weld inspection, if a weld does not pass a visual inspection due to porosity in the weld or incomplete weld due to poor penetration the weld is rejected.
    4-4. The Corrective Action to the failed weld due to porosity or poor penetration, takes place immediately. The weld is ground out and cleaned with wire brush and re-welded. The weld is inspected a second time with a weld size gauge.
5. During start up of welding, the welding Associate shall weld five, 1” welds in start/stop fashion to make sure the welding machine is correctly set. The weld pre-test is tested on scrap steel. If the machine has a technical problem, the sample weld accompanies the machine for repairs.
6. If any associate notices a welding machine starting to have technical problems, the machine in question is removed immediately and replaced.

Steel Assembly Jigs
Who is responsible for review of the jig inspection: The plant manager will execute the review or solicit an Associate to perform the review.
Jigs are designed for a tolerance of plus or minus 0.25”.
Jigs are tested for tolerance every 20 (twenty) structures built. The test is measuring the jig by measuring tape and squared by laser. If there is a problem with the jig, the Corrective Action is as follows; weld shim plate or replacement parts onto the jig. Check tolerances by measuring tape and square by laser. The data is entered into a QA file and dated at the plant. QA; for verification of activities an e-mail file is sent to corporate.

Fiberglass Panels and Parts
Fiberglass panels and parts vary in size and form; this is why the QA process for manufacturing panel parts will be conducted in percentage method rather then in specific amount formula. Each panel part has a specific formula based on the resin manufacturers' performance test. These percentages are strictly adhered to.

Formula for a Class 2 fiberglass parts:
Note: The manufacturing formula is strictly adhered to, manufacturing performance data is seen in (Support Document 1, Section 2 pages 1 through 10 on Modar 814A & 816A).

Resin Modar 814A or 816A	100%
Oxidizer Cobalt	.5% of resin weight
Oxidizer DMA	.3% to .5% of resin weight
Oxidizer High Point 90	3% of resin weight
ATH	100% of resin weight
Fiberglass chop strand mat	15 oz. per sq.ft. or more depending on mold.

Process: Closed mold process
Who is responsible for review of gel-coat installation and laminating process: Only Associates with lamination certification.

1. Blow mold out with air pressure to remove dust.
2. Apply mold release: Mold release is a water-based product, which can be sprayed on the mold. Drying time is 15 to 25 minutes.
3. Brush on gel coat on designated area follow up with pump applicator.
    3-1. Standards for thickness: The thickness for gel-coat is 18 to 24 mils thick. A mil thickness gauge is used to check thickness. Although thickness problems are partly a self-regulating function, due to the fact that gel-coat put on under 18 mils will have see through problems which is seen easily.
    3-2. The Corrective Action is to put gel-coat with a brush on the area in question.
    3-3. Gel-coat that is put on too thick, or over 24 mils will pre-release before mold processing takes place, the Corrective Action is removal of the gel-coat and reapplication.
4. Using Pump Applicator, coat Class 2 resin mixture onto 5 sheets of 3 oz. fiberglass. Each sheet is thoroughly coated laying the next sheet on top of the last sheet.
5. Place mold into press, aligning with top part of mold.
6. Press is activated to press position.
7. Inflate air bladder on press with 5 to 10 lbs. of compressed air. Each mold has a tag with specific air pressure specifications.
8. Allow 2.5 hours of curing.
9. Remove part from mold.
10. Part is measured in several areas for thickness. The standard for thickness is 0.25". If the part is found to be sub-standard, the Corrective Action is removal of the part and reapplication of steps 1-10.
11. After the part has passed QA review, the part is placed back in the mold.
12. The mold is placed back in storage until the part is needed.

Insulation
Who is responsible for review of computerized gun injects insulation equipment (AUTOFROTH® SL360/SL-390): Only Associates with foam certification.

A computerized gun injects insulation. The gun has times and amounts of foam to inject for each wall section. The equipment is known as (AUTOFROTH® SL360/SL-390). For equipment trouble shooting review ((AUTOFROTH SL360/SL-390) OPERATION MANUAL.
Calibration and start up of foam equipment:

Start Up Procedure
1. Turn on power to heat tapes.
2. Open the nitrogen valve(s). Make sure that pressure is 235 psig and a sufficient supply of dry nitrogen is available.
3. Open the ball valves on the chemical storage cylinders.
4. Ensure that the chemical storage room temperature is correct.
5. Make sure the dispense head manifold is clean.
6. Ensure the air purge function at the dispense head is operational. (Check bleed air and full purge).
7. Check that water flush is operational, if applicable.

8. Slowly open the ball valves at the flow controllers.
9. Turn on the timer, if applicable.
10. Attach a clean mixer and perform daily foam tests once the chemicals are up to proper temperature.
11. Begin production if results of foam tests are acceptable.

Routine Operation
Ratio Check
Remove mixer tube. Close B-side ball valve on the B-side flow controller assembly and open the A-side ball valve on the A-side flow controller assembly. Make sure the rear flow valve (D) on the air purge assembly is in the off position to minimize A-side atomization. Pull trigger and hold for 3 seconds pouring the A-side into a plastic bag, (for SL-360/SL390 units with timers, set timer for 3 seconds, pull trigger and release). After the shot, open the rear and front flow valves to purge the A-side from the gun, the close them. Tie the plastic bag to minimize the escape of the blowing agent. Weigh the bag shot and record the net weight (the very small amount of B-side which will exit the gun during the A-side pour will not cause any detectable error).

Now, close the A-side ball valve on the A-side controller assembly and open the B-side ball valve on the B-side flow controller assembly. Pull the trigger and hold for 3 seconds pouring the B-side into a plastic bag. After the shot, tie the bag to minimize blowing agent loss. Weigh the bag shot and record the net weight (the very small amount of A-side which will exit the gun will not cause any detectable error). At this point, a small amount of B-side will appear to be leaking from the gun. This is not leakage but simply a small amount of residual B-side remaining between the exit port and the check valve in the B-side flow controller assembly. This will stop in a short time.

Compare the net weights and determine the “A” to “B” ratio using the A-side net weight as 100%. Compare the calculate ratio to the specifications on your AUTOFROTH® system datasheet. Record the results in a log. It is recommended that the ratio be taken daily at start-up. QA -for verification of activities an e-mail file is sent to corporate.

Plumbing
Who is responsible for review of plumbing: Only Associates with plumbing certification.

Drainage and vent water test
A water test shall be applied to the drainage system either in its entirety or in sections. If applied to the entire system, all openings in the piping shall be tightly closed, except the highest opening, and the system shall be filled with water to point of overflow. If the system is tested in sections, each opening shall be tightly plugged except the highest openings of the section under test, and each section shall be filled with water, but no section shall be tested with less than a 10 foot (3048mm) head of water. In testing successive sections, at least the upper 10 feet (3048mm) of the next preceding section shall be tested so that no joint or pipe in the building, except the uppermost 10 feet (3048mm) of the system, shall have been submitted to a test of less than a 10 foot (3048mm) head of water. The water shall be kept in the system, or in the portion under test, for at least 15 minutes before inspection starts. The system shall then be tight at all points.

Drainage and vent air test
An air test shall be made by forcing air into the system until there is a uniform gauge pressure of 5 pounds per square inch (psi) (34.5 kPa) or sufficient to balance a 10 inch (254mm) column of mercury. This pressure shall be held for a test period of at least 15 minutes. Any adjustments to the test pressure required because of changes in ambient temperature or the seating of gaskets shall be made prior to the beginning of the test period.

Drainage and vent final test
The final test of the completed drainage and vent system shall be made by air test after the fixtures are connected, with or without smoke or peppermint as follows:
- Close stack openings;
- Apply air pressure to the entire drainage and vent system or to sections thereof equivalent to at least 1 inch water column (248.8 Pa);
- Maintain this pressure starting 15 minutes before beginning inspection;
- Test shall indicate system to be tight at all points.

Water supply system test
Upon completion of a section of, or the entire water supply system, the system, or portion completed, shall be tested and proved tight under a water pressure not less than 10 percent in excess of the working pressure under which the system is to be used; or, for piping systems other than plastic, by an air test of not less than 50 psi (344 kPa). The water utilized for tests shall be obtained from a potable source of supply. The required tests shall be performed in accordance with this section and Section 109 of the building code.

Corrective Action
If the part is found to be sub-standard, the Corrective Action is removal of the part, replacing the defective part and re-testing the water system. QA sign-off after each system is tested in plant. QA sign-off after the home has been tested.

Electrical
Who is responsible for electrical review: Only Associates with electrical certification.

Pulling wire: Requires reviewing (Architectural Plans, pages 27A, 28A, 29A Electric Plan) for wire size, outlet and switch positioning.
As wiring is being pulled, check to see if the wall grommet is still in place. If the grommet is not in place, the following Corrective Action takes place.

1. Check visually to see if the wire's insulation has been breached.
2. Test wire with a continuity test.
    2-1. Hook up 110 volt AC to line.
    2-2. Apply power to line.
    2-3. Check line with a voltage meter at the 110 volt AC setting.
    2-4. If the line shows no voltage, check all connections.
    2-5. If no connection problems are found, remove last section of wire installed and discard. Replace with new wire section.

After a section of the home is finished, the following review takes place.
1. Check visually to see if the wire's insulation has been breached or incorrectly installed.
2. Test wire with a continuity test.
    2-1. Hook up 110 volt AC to line.
    2-2. Apply power to line.
    2-3. Check receptacles with a voltage meter at the setting 110-volt AC.
    2-4. If no voltage is seen on the meter, check section by section until problem area is found. Corrective Action once problem area is found, replace wiring or fixture.
    2-5. Check switches and fixtures by turning switches on and off.
    2-6. If the line shows problems by turning lights on and off, check section by section until problem area is found. Corrective Action once problem area is found, replace wiring or fixture.
3. Sign-off on each wire, switch, receptacle, light fixture and appliance.

After the home is assembled, a generator will be hooked-up to the home for a home wide system test.
1. Turn on and off all appliances
2. Check receptacles with a voltage meter at the 110-volt AC setting.
3. Check switches and fixtures by turning switches on and off.
4. Turn on heating and cooling system. (Heating system pre-tested in plant.)
5. If a problem is found, test back through the system until the problem is found.
    5-1. Corrective Action once problem area is found, replace wiring or fixture.
6. Sign-off on each switch, receptacle, light fixture and appliance.

HVAC
Who is responsible for HVAC review: Only Associates with HVAC certification.
Process
1. Mount gas furnace on mounting brackets.
2. Hook wiring to wiring box for furnace.

3. Cooling system (connect unions on refrigerant tubing) use only manufacturer's sealant on the connecting union.
4. Release coolant from compressor side of system.
5. Using soap water on coupling, to check if unions leak.
    5-1. If a leak is found, the Corrective Action is to replace or fix the defective part
    5-2. If union leaks, evacuate refrigerant with refrigerant pump and tank.
6. Find problem area and repair.
    6-1. Recharge system to manufacture specification
7. QA Test, hook-up HVAC system to 220 Volt AC to compressor and 110 Volt AC to circuit for thermostat control.
8. Operate HVAC system through a full operation cycle with pressure gauge on refrigerant line. Check manufacturer's specifications attached to furnace. Temperature of the air from blower should be 23 to 25 degrees colder then ambient air temperature. Testing is done with a digital temperature gun.
9. QA sign-off on test.
10. Heating system test, hook test gas line to furnace.
    10-1. Test for leaks by soap water method.
    10-2. Start furnace and operate for one cycle.
11. QA sign-off on test.

Assembly
Who is responsible for assembly review: Only Associates with structural assembly certification.

The assembly process has two major steps:

1. In-plant assembly Housing components (Structural cells, exterior walls, interior walls, foundation components, staircase and roof sections)
2. In-field assembly The assembly of components into a finished home.

In-plant Assembly
Housing components (Structural cells, exterior walls, interior walls, foundation components, staircase and roof sections)
For detailed assembly instruction review (Plant Manufacturing Manual).
Parts move to Structural Cell Assembly Area or Wall processing Area

1. Structural Cell sub-components
2. Measure for square with tape measure
    2-1. Review welds visually with welding gauge
3. Review components to manufacturing drawings
4. Electrical
5. Plumbing
6. Insulation
7. Mounting holes
8. Coatings

Structural Cell
Parts move to Structural Cell Assembly Area or Wall processing Area

1. Structural Cell sub-components
2. Measure for square with tape measure
    2-1. Review welds visually/welding gage
3. Review components to manufacturing drawings
4. Electrical
5. Plumbing
6. Insulation
7. Mounting Holes
8. Coatings

Structural Cell Finished Assembly

Parts move to Structural Cell Wall Installation Area

1. Installation of wall components
2. Sealant
3. Fasteners
4. Electrical
5. Plumbing
6. Review components to manufacturing drawings
7. Sign-off on each of the major areas listed
8. Move Cell to Finishing Area
    - 8-1. Plaster work and sanding
    - 8-2. Trim installation
    - 8-3. Paint
    - 8-4. Review of finishing
    - 8-5. Clean
    - 8-6. Carpet cut and fit
    - 8-7. Finished checklist
9. QA review of the above steps 1-8.
10. Sign-off on Manufacturing Assembly Manual.

In-Field House Assembly

Who is responsible for final sign-off on the home: Only an Associate with the following group of certifications; QA, Operations, Structural Assembly, Foundation Installation, Interior Finishing, HVAC, Plumbing, Electrical. Associates may sign-off on individual areas they hold certifications in, but not on the total finished home.

PDG Domus Quality Assurance Installation Process
There are 125 steps.
Installation of home from the foundation up.

The PDG Domus home comes to the construction site in the order in which it is to be assembled. This can be verified by reviewing the homes' assembly drawings. On the assembly drawings are the identification numbers indicating the order that the home is to be assembled.
These numbers also correspond to the building drawing, which accompany the home to the site.

This sample section of QA shows the steps of the installation of Cell 1 and Cell 2 seen on the following steps 1 through 12 detailed steps. Cell 3-5 and roof sections use similar QA steps.

Step 1 (QA Procedure 1)
There is a minimum of 5 sets of drawings at the site. The following is where the sets of drawings are located at the site and elsewhere.
1. A drawing set which accompanies the first cell of the home, is in a plastic covering taped to the inside of the front door.
2. Every Associate who works on the home, at the site, has a drawing set.
3. The wireless computer, which accompanies the home, has a drawing set on it.
4. The plant.
5. Corporate office.

Step 2 (QA Procedure 2)
Upon arriving at the property where the home is to be assembled, check the foundation for any missing parts or damage. Review foundation drawings for specifics.

Step 3 (QA Procedure 3)
Review site drawings: Establish the direction the home is to face.

Last check before commencing construction:

1. Make sure the assembly area is fenced off with safety tape/cones/grid.
2. No unauthorized personnel are within the fenced-off work area.

3. Make sure safety equipment is being used (hard hats, safety glasses /shields, safety harnesses and gloves).

When first cell arrives, check the following QA items.

Step 4 (QA Procedure 4)
Are the home components damaged in the following areas: Surface or Structural

Surface: Exterior panels; look for scrapes, dents, cracks, chips and discoloring. Windows; cracked glass, torn or misaligned window tracks. Sealed areas; is there sealant in the following areas, windows, doors, exterior electrical boxes, external air ducts, panel attachment edges and water outlets.

If there is damage to any of the areas, note damaged area on the house drawing and digitally photograph the damaged area. This documentation will be added to the finished QA review list for repairs or replacement.

Structural: Is there any deformation to any steel, corner columns, top or bottom beam, top or bottom girder.

If there is damage to any of the areas, note damaged area on the house drawing and digitally photograph the damaged area. This documentation will be added to the finished QA review list for repairs or replacement.

Step 5 (QA Procedure 5)
Set cell (number 1) on the Corner connector pins/Intermediate connector pins. Check to see if all four pins are inserted into Corner connectors/Intermediate connectors fully.
Ref: Install Corner connector pins #49 into Corner connector #12
Check to see if the corner connector #12 is setting flush on the Corner connector post #56

Step 6 Repeat (QA Procedure 5) on all other connectors.

Step 7 (QA Procedure 6)
Before installing bolt into Corner connector #12, inspect the bolt. The bolt specification is: Grade #5 (6”x3/4”)

Step 8 (QA Procedure 7)
Install bolt into Corner connector #12. Set torque wrench or air impact to 40 foot pounds torque.

Step 9 (QA Procedure 8)
After installing bolts into all Corner Connectors/Intermediate Connectors on Cell 1, place level on floor of the cell to check levelness.

When second cell arrives. Check the following QA items.

Step 10 (QA Procedure 4)
Are the home components damaged in the following areas: Surface or Structural

Surface: Exterior panels; look for scrapes, dents, cracks, chips and discoloring. Windows; cracked glass, torn or misaligned window tracks. Sealed areas; is there sealant in the following areas; windows, doors, exterior electrical boxes, external air ducts, panel attachment edges and water outlets.

If there is damage to any of the areas, note damaged area on house drawing and digitally photograph the damaged area. This documentation will be added to the finished QA review list for repairs or replacement.

Structural: is there any deformation to any steel, corner columns, top or bottom beam, top or bottom girder.

If there is damage to any of the areas, note damaged area on house drawing and digitally photograph the damaged area. This documentation will be added to the finished QA review list for repairs or replacement.

Step 11 (QA Procedure 5)

Set cell (number 1) on the Corner connector pins/Intermediate connector pin. Check to see if all four pins are inserted into Corner connectors/Intermediate connectors fully.
Ref: Install Intermediate connector pins #50 into Intermediate column connector #16
Check to see if the Intermediate column connector #16 is setting flush on the Intermediate connecting post #57

Step 12 (QA Procedure 6)
Repeat Procedure 5 on all other connectors.

(QA procedure 7)
Before installing bolt into Corner connector #12, inspect the bolt. The bolt specification is: Grade #5 (6”x3/4”)

(QA procedure 8)
Install bolt into Corner connector #12. Set torque wrench or air impact to 40 foot pounds torque.

(QA procedure 9)
After installing bolts into all Corner Connectors/ Intermediate Connector on cell one, place level on floor of the cell to check levelness.

In-Field Assembly
125 individual steps with QA standards and sign-off.

Site Assembly Standards and Processes see (In-Field Assembly Manual pages 24-149)

Testing Section:

Note: The company uses a comparative method of comparing test equipment gauges by having a “known quantity”, the company can group the gauges together to see if the group has a comparable operation. If a gauge is 1/2% different than the group, it is disposed of.

Plumbing Test:
Equipment: Plumbing pressure gauge
Calibration Period: Every 200 homes, all equipment is checked.

Test procedure and Limits of the test being performed.

Drainage and vent air test
An air test shall be made by forcing air into the system until there is a uniform gauge pressure of 5 pounds per square inch (psi) (34.5 kPa) or sufficient to balance a 10 inch (254mm) column of mercury. This pressure shall be held for a test period of at least 15 minutes. Any adjustments to the test pressure required because

of changes in ambient temperature or the seating of gaskets shall be made prior to the beginning of the test period.

Drainage and vent final test
The final test of the completed drainage and vent system shall be made by air test after the fixtures are connected, with or without smoke or peppermint as follows:
· Close stack openings;
· Apply air pressure to the entire drainage and vent system or to sections thereof equivalent to at least 1 inch water column (248.8 Pa);
· Maintain this pressure starting 15 minutes before beginning inspection;
· Test shall indicate system to be tight at all points.

Water supply system test
Upon completion of a section of, or the entire water supply system, the system, or portion completed, shall be tested and proved tight under a water pressure not less than 10 percent in excess of the working pressure under which the system is to be used; or, for piping systems other than plastic, by an air test of not less than 50 psi (344 kPa). The water utilized for tests shall be obtained from a potable source of supply. The required tests shall be performed in accordance with this section and Section 109 of the building code.

Testing Equipment: plumbing Pressure gauges
Testing plumbing Pressure gauges are grouped two together to do a comparative test if any gauge is 1/2% different then the group of gauges it is disposed of.

HVAC Test:
Equipment: HVAC pressure gauge set for refrigerant
HVAC temperature gauge
Calibration Period: Every 200 homes, all equipment is checked.

Test procedure and Limits of the test being performed.

Who is responsible for HVAC review: Only Associates with HVAC certification.

1. Hook-wiring to wiring box for furnace
2. Cooling system (connect unions on refrigerant tubing) use only manufacturer's sealant on the connecting union.
3. Release coolant from compressor side of system.
4. Use soap water on coupling to check if unions leak.
5. Hook up HVAC system to 220 Volt AC to compressor and 110 Volt AC to circuit for thermostat control.
6. Operate HVAC system through a full operation cycle with pressure gauge on refrigerant line. Check manufacturers' specifications attached to furnace. Temperature of the air from blower should be 23 to 25 degrees colder then ambient air temperature. Testing is done with a digital temperature gun.
7. Heating system test: Hook test gas line to furnace. .
8. Test for leaks by soap water method.
9. Start furnace and operate for one cycle.

Testing HVAC pressure gauges
Testing HVAC pressure gauges are grouped two together to do a comparative test, if any gauge is 1/2% different than the group of gauges, it is disposed of.

Testing HVAC temperature gauge
Temperature gauges are digital, the US government division of Standards Weights and Measures determines set standards in which the gauges must operate. The method the company uses to check against the US government is a comparative method. By comparing gauges against a "known quantity" the company can group the gauges together to see if the group has a comparable operation. If a gauge is 1/2% different than the group, it is disposed of.

Electrical Test:
Equipment: Electrical multi-meter gauge
Calibration Period: Every 200 homes, all equipment is checked.

Test procedure and limits of the test being performed.

1. Check visually to see if the wires' insulation has been breached.
2. Test wire with continuity test.
3. Hook-up 110 volt AC to line.
4. Apply electrical power to line.
5. Check line with a voltage meter at the setting 110 volt AC.
6. If the line shows no voltage, check all connections.

After a section of the home is finished the following review takes place.

7. Check visually to see if the wire's insulation has been breached or incorrectly installed.
8. Test wire with continuity test.
9. Hook-up 110 volt AC to line.
10. Apply power to line.
11. Check receptacles with a voltage meter at the setting 110-volt AC.
12. Check switches and fixtures by turning switches on and off.

After the home is assembled, a generator will be hooked-up to the home for a home wide system test.

1. Turn on and off all appliances
2. Check receptacles with a voltage meter at the 110-volt AC setting.
3. Check switches and fixtures by turning switches on and off in the home.
4. Turn on heating and cooling system. (Heating system pre-tested in plant.)

Testing electrical multi-meter gauge.
Electrical multi-meter gauges are digital, the US government division of Standards Weights and Measures determines set standards in which the gauges must operate. The method the company uses to check against the US government is a comparative method. By comparing gauges against a "known quantity" the company can group the gauges together to see if the group has a comparable operation. If a gauge is 1/2% different than the group, it is disposed of.

Home Energy Test:
Once a year the Ohio EPA and the Ohio Department of Development test our homes for energy efficiency. The current rating for the PDG Domus home is 87.8% efficiency or a 5 star rating. The specifications for the test are seen in (Support Document 2 Section 11).

Inspection and Testing

Policy for Inspection and Testing Policy 10

The Company inspects and/or tests manufactured products and purchased 1 product to ensure quality at all stages of production and assembly.

Incoming Material Inspection and Testing

The Company conducts receiving inspections of purchased goods as deemed necessary by experience or by the critical nature of the product. The level of inspection required is documented as part of supplier approval. The Purchasing Agent is responsible for receiving inspection as documented in the Tier II document, "Incoming Inspection and Testing Procedure."

Receipt of resin and its release for use is done according to the Tier II document, "Incoming Inspection and Testing Procedure," and utilizes certificates of compliance for product quality verification. Use of resin prior to receipt of certificates of compliance is allowed only under the "Provision for Emergency Release" outlined in the Tier II document " Incoming Inspection and Testing Procedure."

Regardless of the Company's confidence level with a particular supplier, all incoming products undergoes a minimum receiving inspection consisting of verification of quantity, verification of type or size, and absence of damage from transportation, handling, or storage. In the event that material is found to be unacceptable and therefore rejected, corrective action is undertaken and the results are documented in a Record for Quality.

In-process Inspection and Testing

The Tier II document, “In-Process Inspection and Testing Procedure" establishes the normal inspections and tests necessary as part of the Company's assembly process. This document also establishes the inspections and tests necessary for the Company's fitting and finishing process and for site manufactured support metalwork.

Customer contracts are used to document the completion of appropriate in process inspections and tests. Nonconformance Reports document product deficiencies and the actions taken to correct those deficiencies. Process corrective action is performed following the discovery of a product deficiency.

A final product inspection is conducted to ensure successful completion of all production inspections, tests, processes and proper performance of all assembly requirements. Final inspection is the responsibility of the Quality Assurance Manager or his appointed substitute and is documented by signature on the customer contract. No product shall be shipped or dispatched until all activities have been satisfactorily completed and documented. After product shipment, the customer contract is filed alphabetically in the Finance Office by distributor name. Details are found in the Tier II Procedure "Final Inspection and Testing"

The Company Quality Manager is responsible for overseeing Inspection and Testing.

Control of Inspection, Measuring and Test Equipment

Definition and Policy for Control of IMTE Policy 11

The Company identifies all inspection, measuring, and testing necessary for process and product quality. Appropriate equipment for such activities is obtained, initially calibrated, and then routinely maintained and calibrated on a fixed schedule. All equipment calibration is performed according to documented instructions and records of these activities are maintained. The Tier II document, "Control of IMTE," provides general guidance for the calibration processes.

When the equipment is found to be within tolerance, the findings are documented and the equipment returned to service. When the equipment is found to be out of tolerance, corrective action is taken and the initial finding, corrective action, and resulting acceptable findings are all documented. Whenever equipment is found to be out of calibration, recently produced products are rechecked using properly calibrated equipment.

The Quality Manager and plant Manager oversees all aspects of Measuring and Test Equipment and maintains Calibration work instructions, calendars, adjusted intervals and records. The work instructions themselves state that Company personnel are responsible for the calibration of inspection, measuring, and test equipment. All calibration is traceable back to national standards where such standards exist. Records identifying all equipment needing calibration and the corresponding data and history for the equipment are maintained.

The Company recognizes that certain equipment may require specific environmental conditions for use or calibration. This information is included in the Tier II document, "Control of IMTE."

The Company recognizes the need for ownership of appropriate calibration devices. When Company ownership is necessary, suitable storage and maintenance of the devices is provided.

Inspection and Test Status

Definition and Policy for Inspection and Test Status Policy 12

The Company establishes the inspection and test status of product in a simple and straightforward manner. The status of incoming supplies and metalwork is communicated by storage location. The status of all manufactured items is communicated by temporary "hold points" on the process line and by permanent product labeling and segregation of substandard parts. Completed products that are ready for shipment are stored in "Staging" areas and are segregated from other products. Details of this Company policy are documented in the Tier II procedures, "Inspection and Test Status" and "Control of Nonconforming Product."

In addition to physical location and labeling, home item test results and resulting molded item grades are tracked using the PDG computer system. Negative findings during molded item inspection are documented using Nonconformance Reports that are entered into the PDG computer system. The Company Quality Manager is responsible for overseeing Inspection and Test Status.

Control of Nonconforming Product

Definition and Policy for Control of Nonconforming Product Policy 13

The Company recognizes that inspection and testing efforts are wasted if identified nonconforming products, either vendor supplied or Company produced, are not immediately and consistently labeled as such and segregated from products that do conform to specifications.

The Company also recognizes that the disposition of the nonconforming product must take place as soon as possible after it is labeled and segregated from conforming product. Specific instructions and storage locations are detailed in the Tier II procedures "Control of Nonconforming Product (Purchased Items)', and "Control of Nonconforming Product (Manufactured Items)."

Nonconforming products are processed in one of the following ways:

a) It is reworked/repaired and subsequently re-tested to meet specified requirements.
b) It is re-graded for alternative applications.
c) It is provided to the intended customer after negotiating an engineering resolution with the customer.
d) It is regarded as having "no value" and therefore destroyed, given away or reprocessed or scrapped.

Regardless of the status of the nonconforming product, records are kept on the deficiencies and location of the product. In the case of Company manufactured nonconforming molded items, both written nonconformance reports, reject reports and the PDG electronic tracking system files are kept.

The Company Operations Manager is responsible for overseeing Control of Non-Conforming Product.

Customer Returned Merchandise

A Return to Vendor form must be completed for all customers returned goods. Such goods are regarded as nonconforming products and must be stored in areas specifically dedicated for returned products. Returned goods cannot be removed from the return merchandise holding areas until their condition has been determined by inspection and documented. Decisions concerning product disposition must involve the Company personnel who issued the Return to Vendor and the Inventory Control Manager. Details for processing and storage of customer returned merchandise are located in the Tier II Procedure "Control of Nonconforming Product (Customer Returned Merchandise)."

Corrective and Preventive Action

Policy for Quality Policy 14

The Company is committed to active response to reported product defects. This response must be cause-focused and prevention-based.

While it is always necessary to rectify situations involving substandard products and services created both internally and externally, true corrective action occurs when the root causes of the problems are identified and eliminated.

Corrective Action

The Company defines corrective action as "a positive response to a negative occurrence." Internal and external audit findings, customer complaints, internal quality indicators, and in-process product failures all point to areas needing corrective action. The Company management team makes decisions concerning the appropriate corrective action for product and process deficiencies. All associates are expected to diligently carry out all corrective action assignments. Corrective action work and the results are reported during the monthly Manager's meeting.

Preventive Action

The Company defines preventive action as 'a deliberate effort to avoid negative product and service occurrences from ever taking place." Preventive action includes, but is not limited to, associate training on new products and product revisions, careful planning for contract fulfillment, control of nonconforming products, and tool and equipment maintenance. Preventive action is always more desirable than corrective action and is the direct result of the Company's commitment to planning and preparing for meeting customer requirements.

Preventive Maintenance

While preventive maintenance is only one aspect of preventive action, the maintenance of tools and equipment is considered to have the utmost importance. Failure of machinery and tools during manufacturing is never regarded as acceptable. To avoid such failure, preventive maintenance is practiced throughout the plant and documented w hen necessary by record keeping. Likewise, molds and other equipment are stored, handled, and maintained with utmost care.

The need, value, and viability of corrective and preventive action are weighed against resources required. Keeping the business goals in mind, sound business judgment is used in determining corrective and preventive action efforts.

The Tier II documents, "Corrective Action" and "Preventive Action, l' provide greater detail for carrying out and documenting corrective and preventive action.

The Company Operations Manager is responsible for overseeing Corrective and Preventive Action.

Handling, Storage, Packaging, Preservation and Delivery

Definition and Policy for Handling, Storage, Packaging, Preservation and Delivery — Policy 15

The Company emphasizes the importance of proper handling, storage, packaging, and delivery of incoming and outgoing products. The Company ensures that equipment for handling materials is adequate for the task and storage facilities are appropriate to prevent damage and deterioration of products. Personnel operating handling equipment have proper training to provide handling that protects both product and personnel.

Customer contracts must include clear and complete shipping instructions and customer addresses.

Packaging of products to ensure protection is done on an order by order basis.

The Company uses dedicated storage areas and specific labeling of the product to help prevent damage and deterioration.

The Company assumes full responsibility for the protection of its products during delivery on Company trucks. The Company assumes limited responsibility for protection of its products shipped by other means. This limited responsibility is accomplished by contracting with freight vendors having the correct equipment and qualified associates. A list of qualified freight vendors is maintained by the PDG central computer listed as (Delivery).

Product preservation of home items and is not an issue, given the durability of the product. Preservation of purchased parts is ensured with proper storage. Storing them in designated areas protects manufactured and purchased metalwork.

The Tier II Procedures "Handling" and "Storage" provide details for these items.

The Company Operations Manager is responsible for overseeing Handling Storage, Packaging, Preservation and Delivery.

Control of Quality Records

Definition and Policy for Control of Quality Records Policy 16

The Company maintains Records for Quality to document past process I activities and product characteristics. Such documentation is essential for demonstrating product conformance to specified requirements and for monitoring the overall effectiveness of the Quality Management System. This record keeping is also essential in quality improvement efforts.

The Company maintains a matrix showing all Records for Quality, their retention times, and their storage location. Company Records for Quality may be in paper form or in electronic media. All printed versions of electronic records are for general information only and subject to obsolescence at any time. Records are kept concerning incoming materials, contract reviews, purchasing, internal auditing, corrective action, associate training for quality, and other matters directly affecting process and product quality. Details are located in the Tier II Procedure "Control of Quality Records."

Record keeping is of the utmost importance to the business and must be evaluated and considered annually during the Management Review for Quality. When deemed necessary, formal changes in the type and number of records being kept will be made to prevent record keeping from becoming too bureaucratic or too simplistic. There is to be no unauthorized change in record keeping practice by any associate or group of associates.

Records are to be legible, protected from damage, and readily retrievable. All paper Records for Quality are to be stored in cabinets dedicated and marked for their storage. Record retention time should be established based on business and legal importance.
The Company makes available to its customer's records concerning products and shipments as long as the information is not deemed proprietary by the Regional Operations Manager. The Company Quality Director is responsible for overseeing Control of Quality Records.

Paperwork Section

The following is a brief description of each document in this section. The example documents are in order of use.

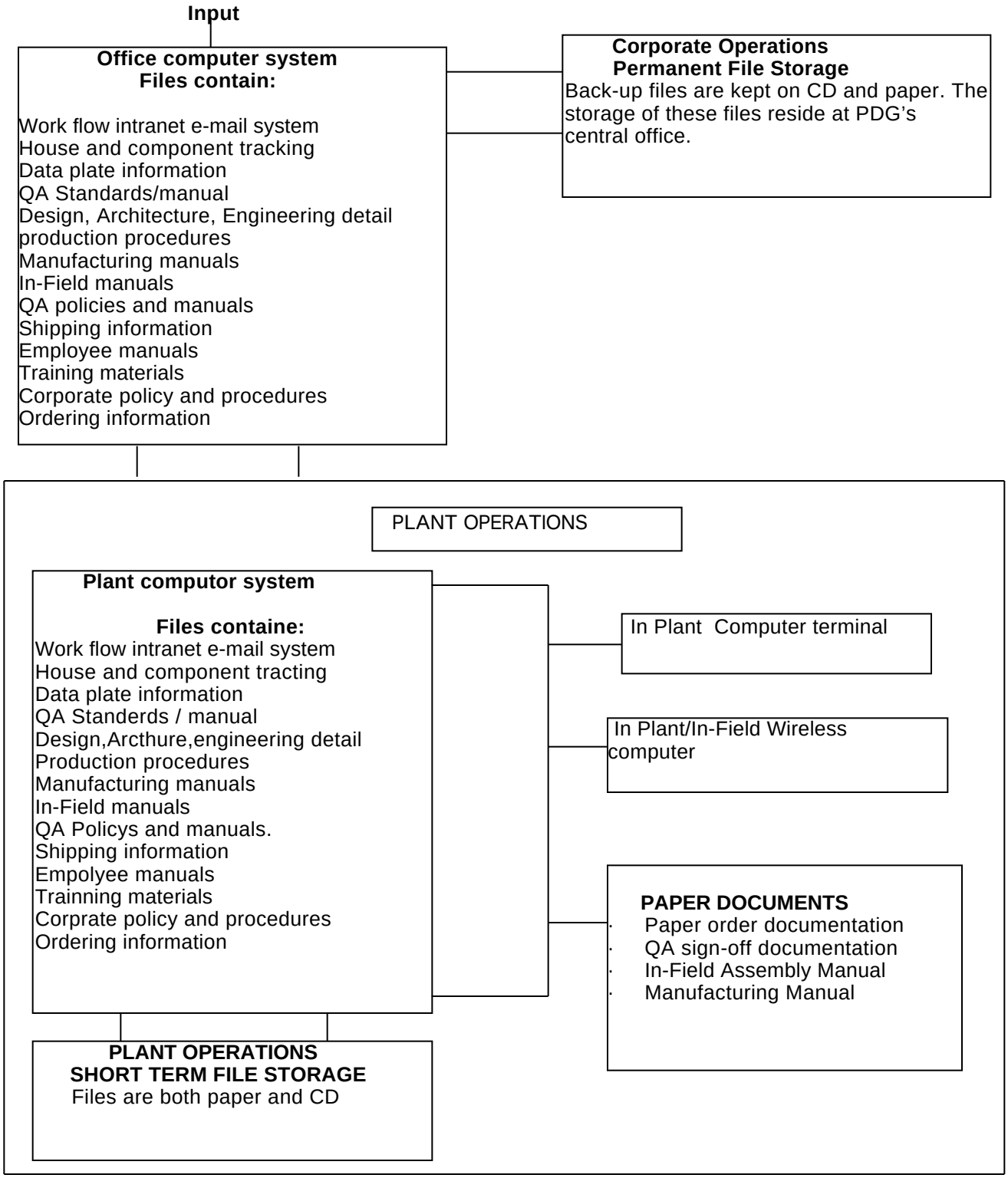
Written QA Document Flow

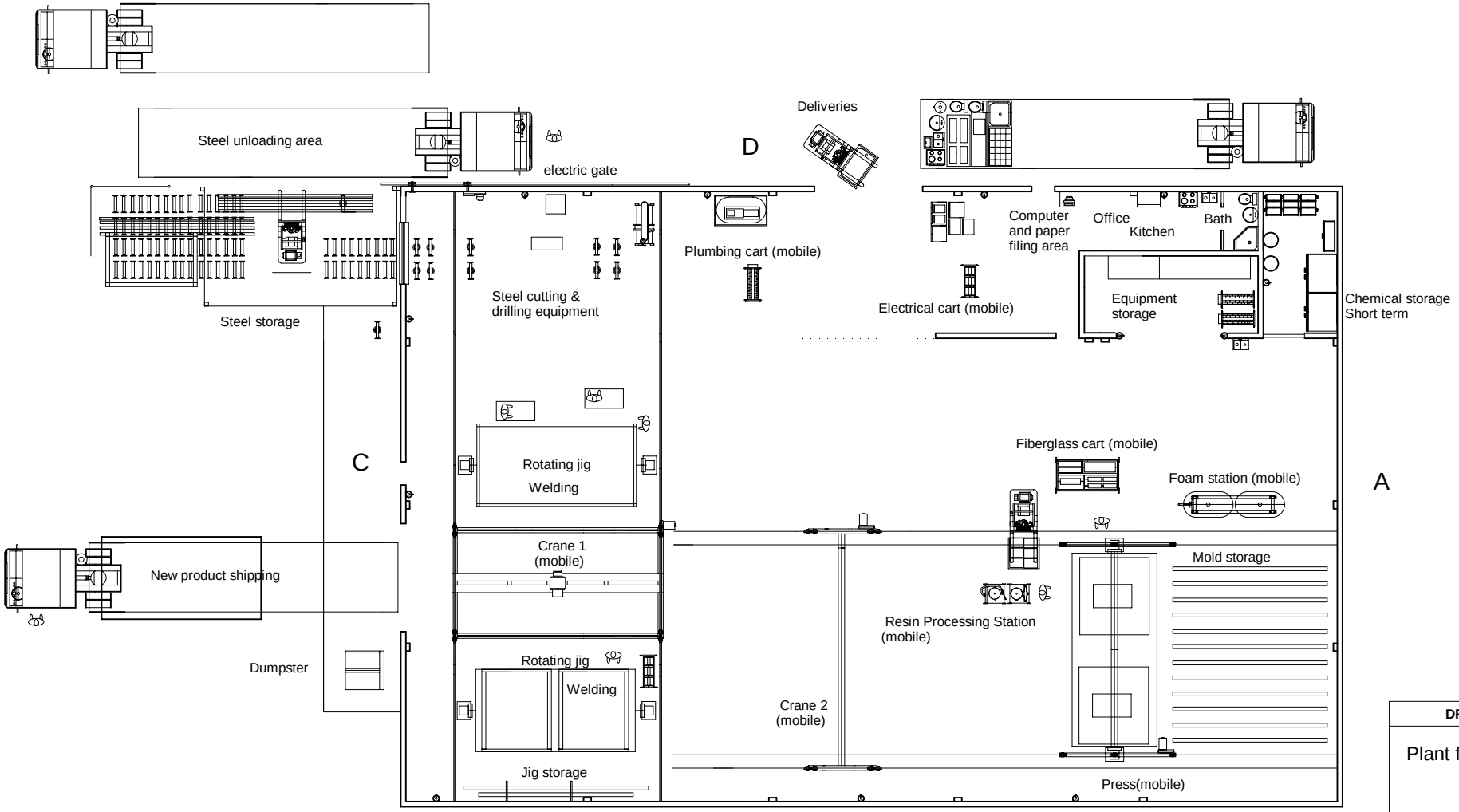
1. Orders flow for the central PDG office by Intranet system to the plant.
2. Once the order is received at the plant (paper documents for Plans, Manufacturing manual, In-field Assembly manual and QA documents are printed out.
3. The QA document moves with the component through the manufacturing process.
4. As the components are being manufactured the QA documents move with each components to a finished state.
5. At the finished point of any housing component the documents are assembled as a group. An Associate reviews the combined documents for QA and sign off.
6. The computer documentation is sent to PDG central computer and a CD of the file is created. The paper documentation is filed at the plant with a CD.
7. When the home is assembled digital photos are taken of each QA step. These photos along with the In-field assembly QA document are sent back to the plant for review and sign-off by the plant manager.
8. The files are stored at the plant for a short period of time.
9. Documentation is moved to the PDG central office.

PDG Computer system
The PDG Domus manufacturing operates a mirrored system, which uses both computer and paper as a back-up. The paperwork flows through a mirrored server from the central office. This allows the plant to operate semi-independent for short periods of time without interruption to operations.

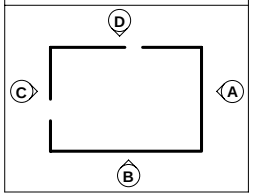
QA Document work flow map

PDG Central server holds files in PDF format.





KEY PLAN



DRAWING

Plant file storage

MODEL(S): Plant 1

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SALES ORDER

PDG Domus Mfg Representative:
Address:
Phone:
Cell/Mobile phone:

Customer Name:	
Address:	
Phone:	Cell/Mobile phone:
E-mail:	

Contract signing date:	Delivery date:	Finishing date:
Ship to:		Payment terms

Model:	Description:	
Color:	Trim color:	Light fixture package:
Carpet:	Color:	Weight:
Bathroom floorcovering 1:		
Bathroom floorcovering 2:		
Kitchen Floorcovering:		
SPECIAL MANUFACTURING NOTES:		

PDG Domus Corporation ⋄ PDG Domus Manufacturing LLC

426 E. Whittier St. ⋄ Columbus, Ohio 43206 ⋄ 614.449.8963 ⋄ Fax 614.449.8968
e-mail: info@pdg-inc.com ⋄ http://www.pdg-domus.com

In Plant QA Sign-Off **PAGE 1 of 3**

DATA PLATE

Plant #	Year Identifier	Unique item identifier	Model/Serial #
1	02022003	A	Hartford 1

Major Component	Date	Associates Name	Associates #
A			

Structural Cell Assembly		NOTES:
	Steel	
	Floor Assembly	
	Insulation foam	
	Electrical	
	Plumbing	
	Welding	

Exterior Wall Assembly (front A)		Exterior Wall Assembly (side B)		Exterior Wall Assembly (side D)	
	Steel		Steel		Steel
	Insulation foam		Insulation foam		Insulation foam
	Drywall		Drywall		Drywall
	Trim		Trim		Trim
	Paint		Paint		Paint
	Plaster finishing		Plaster finishing		Plaster finishing
	Electrical		Electrical		Electrical
	Doors		Doors		Doors
	Windows		Windows		Windows
	Welding		Welding		Welding
	Plumbing		Plumbing		Plumbing

In Plant QA Sign-Off **PAGE 2 of 3**

DATA PLATE

Plant #	Year Identifier	Unique item identifier	Model/Serial #
1	02022003	A	Hartford 1

Major Component	Date	Associates Name	Associates #
A			

	Ceiling Assembly		Interior Wall Assembly
	Steel		Steel
	Insulation foam		Insulation foam
	Drywall		Drywall
	Trim		Trim
	Paint		Paint
	Plaster finishing		Plaster finishing
	Electrical		Electrical
	Welding		Doors
			Welding
			Plumbing
			Shelves
			Cabinets

	Cell A Assembly	
	Structural Cell Assembly	
	Exterior Wall Assembly (front)	
	Exterior Wall Assembly (side)	
	Exterior Wall Assembly (side)	
	Ceiling Assembly	
	Interior Wall Assembly	
		Insulation foam
		Drywall
		Trim
		Paint
		Plaster finishing
		Electrical
		Doors
		Windows
		Plumbing
		Shelves
		Cabinets
		HVAC
		Floor covering/carpet

In Plant QA Sign-Off **PAGE 3 of 3**

DATA PLATE

Plant #	Year Identifier	Unique item identifier	Model/Serial #
1	02022003	A	Hartford 1

Major Component	Date	Associates Name	Associates #
A			

Foundation Pilaster		NOTES:
	Rat wall/varmint guard	
	Welding	
	Coating	

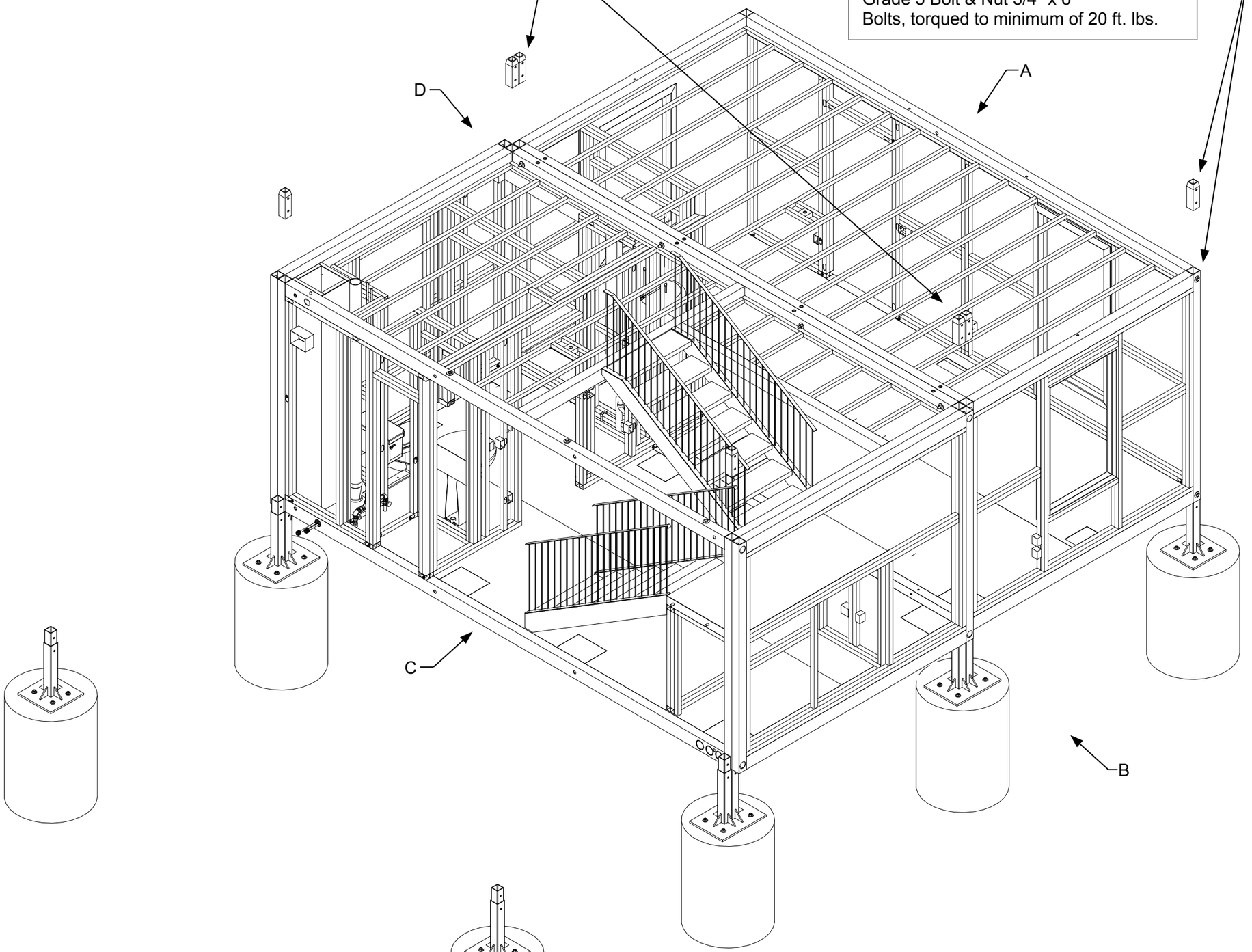
Shipping		NOTES:
	Cleaning	
	Canvas covering for cell shipping	
	Materials kit to finish home at site	
	Assembly manual/site drawings	
	Shipping document	

FIELD NOTES

Install Intermediate
Connector Pins

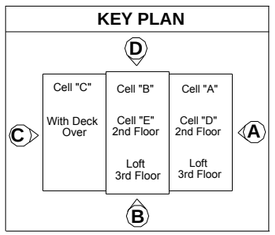
FIELD NOTES

Second Floor
Connector Pins
Corner and Intermediate Connectors
Grade 5 Bolt & Nut 3/4" x 6"
Bolts, torqued to minimum of 20 ft. lbs.



QA Checklist	
	Digital photos each execution task for QA verification and check off on drawing package
	Install 2nd Floor Corner Connector Pins
	Pin Count - 2
	Install Corner Connector Bolt/Nuts Grade 5 - 3/4" x 6" Torqued to minimum of 20 ft. lbs.
	Bolt/Nut Count - 2
	Install Intermediate Connector Pins
	Pin Count - 6
	Install Intermediate Connector Bolt/Nuts Grade 5 - 3/4" x 6" Torqued to minimum of 20 ft. lbs.
	Bolt/Nut Count - 6

KEY PLAN



DRAWING

Site Assembly
Cell A & B
View B & C
Installation-
Connector pins to
Install cell D
Setting pins

MODEL(S): Hartford

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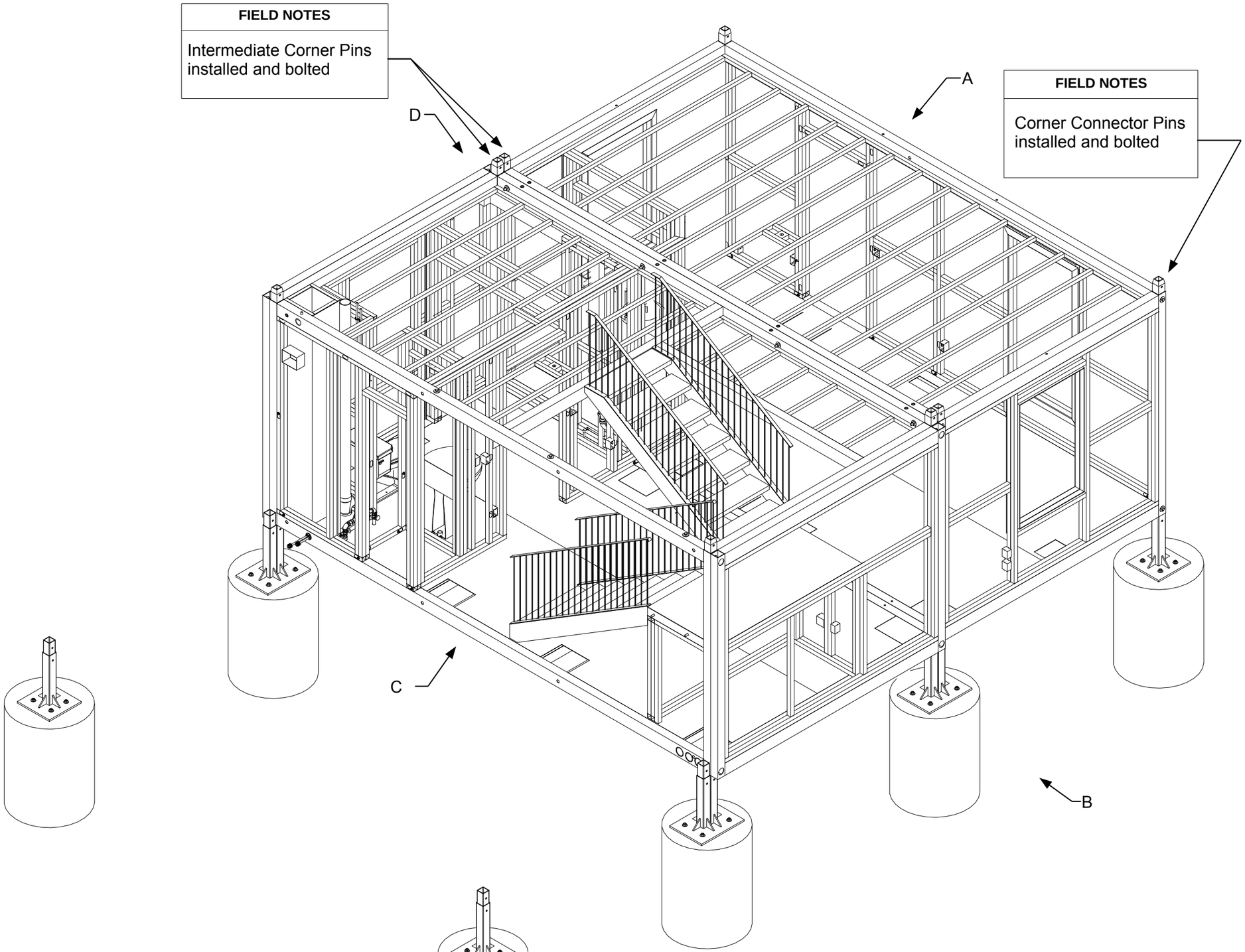
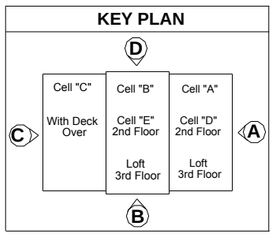


QA Finished Checklist	
	Digital photos each execution task for QA verification and check off on drawing package
	Install 2nd Floor Corner Connector Pins
	Pin Count - 2
	Install Corner Connector Bolt/Nuts Grade 5 - 3/4" x 6" Torqued to minimum of 20 ft. lbs.
	Bolt/Nut Count - 2
	Install Intermediate Connector Pins
	Pin Count - 6
	Install Intermediate Connector Bolt/Nuts Grade 5 - 3/4" x 6" Torqued to minimum of 20 ft. lbs.
	Bolt/Nut Count - 6

KEY PLAN

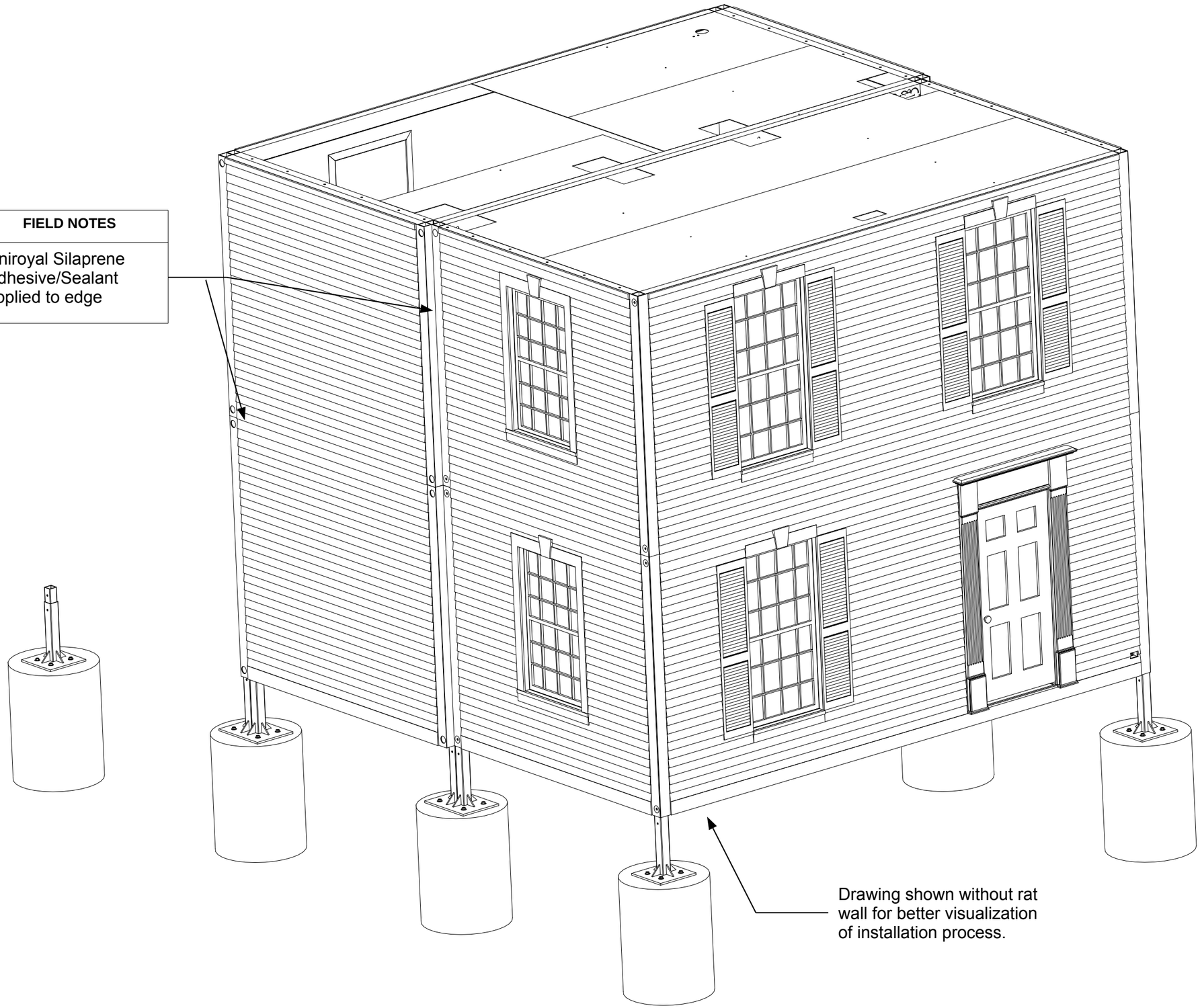


DRAWING

Site Assembly
Cell A & B
View B & C
Installation-
Connector pins
Install cell D
Pins mounted
Finished checklist

MODEL(S): Hartford

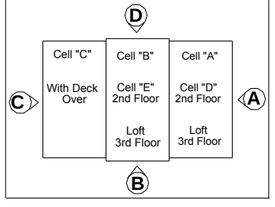
FIELD NOTES
Uniroyal Silaprene Adhesive/Sealant applied to edge



Drawing shown without rat wall for better visualization of installation process.

QA Finished Checklist	
	Digital photos each execution task for QA verification and check off on drawing package
	Adhesive/Sealant applied to frame
	Bolts and Nuts installed
	Bolt/Nut Count - 22
	Plumbing reconnection
	Plumbing test
	Electrical reconnection
	Electrical test
	Edges between cell and Access hatches are filled level with Weld-On Sealant
	Plaster work: Embed elastomeric plaster and tape
	Adhesive/Sealant applied to exterior edges between Cell
	United Duct Seal "Uni-Seal" sealant applied to duct edge

KEY PLAN



DRAWING

Site Assembly
Cell E
View A & B
Installation-Cell to cell
Cell mounted
Exterior view
Finished checklist

MODEL(S): Hartford

In-Field Assembly QA Sign-Off

DATA PLATE

Plant #	Year Identifier	Unique item identifier	Model/Serial #
1	02022003	A	Hartford 1

Date **Associates Name** **Associates #**

In-Field Assembly QA Sign-Off

125 individual steps with QA standards and sign-off.

Site Assembly Standards and Processes see *(In-Field Assembly Manual pages 24-149)*

DATA PLATE

Plant #	Year Identifier	Unique item identifier	Model/Serial #
1	02022003	A	Hartford 1

Date	Associates Name	Associates #

DATA PLATE

Plant #	Year Identifier	Unique item identifier	Model/Serial #
1	02022003	A	Hartford 1

Date	Associates Name	Associates #

DATA PLATE

Plant #	Year Identifier	Unique item identifier	Model/Serial #
1	02022003	A	Hartford 1

Date	Associates Name	Associates #

DATA PLATE

Plant #	Year Identifier	Unique item identifier	Model/Serial #
1	02022003	A	Hartford 1

Date	Associates Name	Associates #

DATA PLATE

Plant #	Year Identifier	Unique item identifier	Model/Serial #
1	02022003	A	Hartford 1

Date	Associates Name	Associates #

Internal Quality Audits

Definition and Policy for Internal Quality Audits Policy 17

The Company conducts internal quality audits to verify that policies, procedures, and work instructions are being followed and to determine the effectiveness of the Quality Management System. These audits are scheduled based on status and importance of the activity. All associates are expected to participate in internal audits when required. All internal auditing is to be non-adversarial, existing solely for the improvement of the Company, its Quality Management System, and its products.

Internal audits are conducted according to a schedule developed by the CEO/Quality Director and utilize associates independent of the area being audited. All internal auditors are formally trained concerning the purpose and value of internal auditing and in the procedures for conducting an internal audit.

The Tier II procedure "Internal Quality Audits" exists for the planning, execution, and follow-up of audits. Corrective action in response to deficiencies found in audits is expected and must be done in a time frame consistent with the nature of the noncompliance. Planning for, and execution of, corrective action is the responsibility of personnel overseeing the area where the noncompliance was found. Records of internal audits, the findings, and the corrective action responses must be maintained.

A summary of audit findings and related corrective and preventive action must be reported at each Management Review for Quality.

The Company Quality Director is responsible for overseeing Internal Auditing.

Training

Definition and Policy for Training Policy 18

The Company recognizes that associates must be prepared to perform their jobs after appropriate training. The Company defines training, as the acquisition of knowledge and skills needed for the performance of a job task. Training may be either hands-on skill development or formal classroom education.

All training at the Company must be conducted for the advancement of a business end goal, such as the reduction of operating cost the improvement of internal or external product quality, or the start-up of a new product. The majority of training activities should utilize the procedures and work instructions that constitute the Quality Management System.

Senior Managers determine the necessary qualifications for the various jobs under their supervision and assess the training needs of their associates against job requirements. The Company provides opportunities for training to meet job requirements while individual associates are responsible for participating in such opportunities and for continually advancing their skills.

Both managers and associates must ensure that training is done at the optimum time. Training must not be conducted too far in advance or associate knowledge and skills may become stale, training must not be conducted too close to the need or associate knowledge and skill development be rushed and therefore incomplete. Also when needed a senior teacher mentor's the associate to hone skills furthering readiness.

Records of associate training needs and associate training accomplishments are maintained. These records provide managers with data for planning future training activities. Plans for associate training must also be maintained.

Training activities and plans and training effectiveness are a topic for the quarterly Management Review for Quality. The Quality Director is responsible for overseeing Training. The Tier II Document," Training" addresses the previous policies in more detail.

Major areas for plant certification:
QA Officer
Welding
Electrical
Plumbing
HVAC
Operations
Computers
Forklift Operation
Crane Operation
Equipment
Loading/Rigging
Material Handling
Interior Finishing
Surveying
Foundation Installation
Structural Assembly
Lamination
Foam

Servicing

Definition and Policy for Servicing Policy 19

The Company supply's after sale servicing as part of any of its contracts. Each contract is tailored for each client.

The company does follow up calls/visits to see if the full satisfaction of the client has been meet.

The Company Service Technician visits customer's only in response to customer complaints or in order to perform minor, non-contractual repairs for which are covered under warranty. All other repairs for clients are paid on a time and materials basis.

Statistical Techniques

Policy for Statistical Techniques — Policy 20

The Company has no present business need for the use of statistical techniques for establishing, controlling, and verifying process capability and product characteristics.

As the business develops over time, such needs will be considered and statistical techniques will be implemented if appropriate.