SECTION 04082

MASONRY ANCHORAGE, REINFORCEMENT & ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Masonry Veneer Anchors and Ties.

1.02 RELATED SECTIONS

A. Section 04810 – Unit Masonry Assemblies.

1.03 REFERENCES

A. ASCE/ACI 530.1 Specifications for Masonry Structures; 1995.

B. ASTM A 153/A 153M – Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 1998.

C. ASTM A 653/A 653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by Hot-Dip Process; 1998.

D. ASTM B 633 Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; (Re-approved 1994).

1.04 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's data on each type of product furnished.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturer:
Heckmann Building Products Inc.,
1501 N. 31st Avenue
Melrose Park, IL 60160.
Tel: (708) 865-2403 Fax: 708-865-2640
Email: Heckmann@worldnet.att.net
Website: www.heckmannbuildingprods.com

B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

C. Substitutions: Not permitted

2.02 APPLICATIONS

A. Provide anchoring systems that comply with ACI 530.1/ASCE 6/TMS 602.

B. One Piece Anchors

260 CORRUGATED WALLTIE
Premium Grade: 22 gage x 7/8” (22.2mm) x 7” (178mm).

2.03 MATERIALS

A. Steel Types

1. Stainless Steel: Type 304.

A. Sheet Metal: ASTM A 167 or ASTM A 240/A 240M

2. Hot-Dip Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A 153/A 153M, Class B-2.

3. Electro-Galvanized Steel: Electro-galvanized after fabrication in accordance with ASTM B 633, Service Condition 1.

A. Wire: Minimum 3/16 inch (4.76mm) diameter.

4. Mill Galvanized Steel:

A. Sheet Metal: ASTM A 653/A 653M, G60 coating.

B. Wire: ASTM A 641, regular coating; minimum 3/16 inch (4.76mm) diameter.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install as specified in applicable masonry section(s) and in accordance with manufacturer’s instructions.

END OF SECTION

SECTION 04100

MASONRY MORTAR

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Mortar for unit masonry and stone veneer.

1.02 RELATED SECTIONS

A. Section 04200 – Unit Masonry: Mortar for concrete unit masonry.

B. Section 04450 – Stone Veneer: Mortar for natural stone veneer.

1.03 REFERENCES

A. ASTM C150 – Portland Cement.

B. ASTM C144 – Aggregate for Masonry Mortar.

C. ASTM C207 – Hydrated Lime for Masonry Mortar

D. ASTM C270 – Mortar for Unit Masonry

E. International Masonry Industry All-Weather Council (IMIAC) - Recommended Practices and Guide Specifications for Cold Weather Masonry Construction.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site under provisions of Section 01600.

B. Store and protect products under provisions of Section 01600.

C. Protect cement from moisture and humidity

1.05 ENVIRONMENTAL REQUIREMENTS

A. Cold Weather Requirements: IMIAC requirements.

B. Maintain materials and surrounding air temperature to minimum 10 degrees C (40 degrees F) prior to, during, and 48 hours after completion of masonry work.

PART 2 PRODUCTS

2.01 MATERIALS

A. Portland Cement: ASTM C150, Normal – Type I, white color for facebrick and grey color for common brick

B. Mortar aggregate: ASTM C144, standard masonry type; clean dry; protected from dampness, freezing, or foreign matter.

C. Hydrated Lime: ASTM C207, Type S.

D. Water: Clean and potable.

E. Mortar Color: Mineral oxide pigment; chocolate brown color; "Great Stuff" manufactured by Acme Manufacturing Co. Ltd.

2.02 MIXES

A. Mortar for Load Bearing Walls and Partitions: ASTM C270, Type S, using proportion method.

B. Mortar for Non-Load Bearing Walls and Partitions: ASTM C270, Type N, using proportion method.

2.03 MORTAR MIXING

A. Thoroughly mix mortar ingredients in quantities needed for immediate use in accordance with ASTM C270.

B. Add mortar color in accordance with manufacturer's instructions. Provide uniformity of mix and coloration.

C. Do not use anti-freeze compounds to lower the freezing point of mortar.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install mortar in conjunction with Sections 04200 and 04450.

3.02 FIELD QUALITY CONTROL

A. Field testing will be performed under provisions of Section 01400.

END OF SECTION

SECTION 04100

SOLID-CORE WOOD DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Solid core doors with wood veneer facing.

B. Pre-machining and factory finishing of wood doors.

1.02 RELATED SECTIONS

A. Section 06200 – Finish Carpentry

B. Section 06400 – Wood Door Frames

C. Section 08100 – Metal Doors and Frames

D. Section 08700 – Door Hardware

E. Section 09900 – Paints and Coatings

1.03 REFERENCES

A. ASTM E2074 – Standard Test Method for Fire Tests of Door Assemblies

B. ASTM E413 – Classification for Rating Sound Insulation

C. ASTM D5456 – Evaluation of Structural Composite Lumber Products

D. ANSI A208.1 – Standards for Particleboard

E. ANSI A115-W Series, Wood Door Hardware Standards

F. NFPA 80 – Standard for Fire Doors and Fire Windows

G. UL 10 – Fire Tests of Door Assemblies, 9th Edition.

H. Window & Door Manufacturers Association, Industry Standard I.S. 1A-97

I.Architectural Woodwork Institute (AWI) Quality Standards, 7th Edition

1.04 DELIVERY, STORAGE, AND HANDLING

A. Comply with Division 1 Product Requirement Section

B. Deliver materials in original, unopened containers with labels intact.

C. Maintain frame parts in original units with surfaces protected from oxidation and handling damage.

D. Store and protect products in weatherproof storage space.

E. Stack flat and away from moisture.

1.05 ENVIRONMENTAL REQUIREMENTS

A. Protect materials from exposure to harmful environmental conditions, and keep at temperature and humidity conditions recommended by the manufacturer.

B. Some species of hardwoods react to light. Keep from exposure to natural and artificial light. Upon installation, these products will darken naturally.

PART 2 PRODUCTS

2.01 MATERIALS

A. All wood doors should be 5-ply premium grade, bonded core in accordance with the Window & Door Manufacturers Association, “Architectural Wood Flush Doors” I.S. 1A-97. 7-ply or other skin type constructions are not an acceptable substitution.

B. Wood Veneer: AWI Custom Grade ‘A’ Plain Sliced White Maple with book matched grain. Factory applied transparent finish.

C. Core: Particleboard according to ANSI A208.1, or Structural Composite Lumber where cutouts exceed 40%, according to ASTM D5456.

2.02 FABRICATION

A. Fabricate in accordance with AWI quality standards.

B. Fabricate doors in sizes indicated for project-site fitting and to suit frame-opening sizes indicated. Comply with clearance requirements for referenced quality standard for fitting.

C. Machining will be performed to insure proper fitting of doors, frames relite components, and hardware; with tolerances according to ANSI/WDMA I.S. 1-1A 1997.

2.03 FACTORY FINISHING

A. Factory transparent finished doors in accordance with AWI Quality Standard Section 1500 to the following finish designation. AWI finish system TR-2, Custom Grade. Color and degree of sheen as selected by the architect.

PART 3 EXECUTION

3.01 INSTALLATION

A. Align and fit doors in frames with uniform clearances and bevels. Machine doors for hardware. Seal cut surfaces after machining and fitting.

B. Install fire-rated doors in corresponding fire-rated frames/NFPA No. 80.

3.02 ADJUSTING AND PROTECTING

A. Operation: Re-hang or replace that do not swing or operate freely.

B. Finished Doors: Refinish or replace doors damaged during installation.

C. Protect doors as recommended by the door manufacturer to ensure that wood doors are without damage or deterioration at the time of substantial completion.

END OF SECTION

SECTION 04210 – BRICK

PART 1 – GENERAL

1.01 RELATED SECTIONS

A. 05500 Steel Lintels

1.02 MOCK-UP

A. Erect composite mock-up of a typical exterior face brick wall, composite mock-up shall include window opening, steel lintel, and CMU wall.

B. Mock-up shall make use of materials, bond and joint tooling required for final work.

1.03 DELIVERY, HANDLING

A. Inspect all units upon delivery for damage and reject defective units.

B. Handle all units to prevent chipping, cracking, scratching, or other damage.

PART 2 – PRODUCTS

2.01 FACING BRICK

A. All Brick specified and shown on drawing shall be Modular Red Amherst Blend, All Shale-Coarse Grind, as manufactured by The Belden Brick Company, Canton, Ohio.

1. ASTM C 216-00, Grade SW, Type FBS.
2. Dimensions: 3-5/8” X 2-1/4” X 7-5/8”.
3. Minimum Compressive Strength: 16,136psi
   Maximum IRA: 9.77
4. Provide brick similar in texture, color and all physical properties to those available for inspection at the Architect/Engineer’s office and/or as supplied on the approved sample panel.

B. Conventional Mortar shall conform with ASTM C 270-00 under the guidelines provided in BIA Technical Notes, Series 8.

PART 3 – EXECUTION

3.01 BONDING

A. Lay masonry in ½ running bond pattern as indicated.

3.02 TOOLING

B. All joints shall be raked so as to conform to the guidelines provided in BIA Technical Notes 7B revised.

3.03 CLEANING

C. Cleaning by means of sandblasting, pressurized water, and hand cleaning using a bucket and brush shall be as per guidelines in BIA Technical Note #20, Revised II.

END OF SECTION 04210

SECTION 04220

CONCRETE UNIT MASONRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete masonry units.

B. Special shapes and solids.

C. Anchors, ties, and reinforcing.

1.02 RELATED SECTIONS

A. Section 04080 – Joint Reinforcement: Horizontal reinforcement.

B. Section 04090 – Masonry Accessories.

1.03 REFERENCES

A. ASTM A82 – Specification for Steel Wire, Plain, for Concrete Reinforcement.

B. ASTM A615 – Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.

C. ASTM C90 – Specification for Load-Bearing Concrete Masonry Unit.

D. ASTM C129 – Specification for Non-Load-Bearing Concrete Masonry Unit.

E. ASTM E119 – Method of Fire Tests of Building Construction of Materials

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver packaged materials in manufacturer's original unopened packaging with labels intact.

B. Store masonry unit off ground to prevent contamination by mud, dust, or materials likely to cause staining or other defects.

C. Where fire rated construction is indicated, provide materials and assemblies identical to those listed by UL or those tested in compliance with ATM E119 for type of construction shown.

1.05 ENVIRONMENTAL REQUIREMENTS

A. Air temperature 40°F to 32°F heat sand or mixing water to produce mortar temperatures between 40°F and 120°F.

B. For completed masonry and masonry not being worked.
1) Mean daily air temperature 48° F to 32° F
Protect masonry from rain or snow for 24 hours by covering with non-staining, weather resistant membrane.

PART 2 PRODUCTS

2.01 MATERIALS

A. Concrete Masonry Units:
1. Types:
a. Load-Bearing: ASTM C90, Grade N, Type 1
b. Hollow Non-Load-Bearing: ASTM C129, Type 1 Lightweight

2. Dimensions:
a. Nominal Face Dimensions: 16” X 8”
b. Nominal Width: As indicated on drawings

3. Texture: Fine, Smooth and Tight.

2.02 MASONRY ANCHORS AND TIES

A. Joint Reinforcement:
Configuration: Truss type
Material: Cold drawn steel wire; ASTM A82
Finish: Hot-dip galvanize
Gauge: 9 gauge
Width: Width of masonry less 1 ½” to 2”

2.03 CLEANING AGENTS

A. Do not use cleaning agents other than clean, clear water on masonry.

B. Only if stronger additional cleaning measures are needed, use cleaning agents as recommended or approved, in writing, by masonry material manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION
A. Site Verification of Conditions:
1. Examine areas and conditions under which masonry work is to be performed, and correct conditions detrimental to timely and proper execution of work.
2. Do not proceed until unsatisfactory conditions have been corrected.
3. Ascertain that supporting surfaces are clean and at proper elevation and grade to permit masonry to be laid level and to needed vertical dimensions.

3.02 PREPERATION

A. Protection:

Load Application:

a. Do not apply uniform floor and roof loading for at least 12 hours after erecting masonry columns or walls.

b. Do not allow concentrated loads for at least 3 days after erecting masonry columns or walls.

Staining:

a. Grout or mortar shall be removed immediately with a wood paddle or still fiber bristle brush from face of masonry to prevent staining.

b. Protect sills, ledges, and projections from droppings of mortar.

c. Protect door jambs and corners from damage during construction.

Surface Preparation:

a. Remove loose rust, ice and other coating from reinforcement.

b. Remove ice or snow that has formed on masonry bed by carefully applying heat until top surface is dry to touch.

3.03 ERECTION

A. Tooling:

a. For exposed masonry or below grade, tool joints slightly concave,

b. Joints facing interior of cavities and in surfaces to be covered with other masonry shall be struck flush.

Joint Reinforcement:

a. Lap side rods 6” minimum

b. Do not bridge movement joints with reinforcing

c. Reinforce masonry openings greater than 1’ wide, with joint reinforcing. Place reinforcement in two horizontal joints approximately 8” apart, both immediately above lintel and below sill. Extend reinforcing a minimum of 2’ beyond jambs of opening.

Precast Concrete Masonry Lintels:

a. Precast lintels shall be made of same material as load bearing concrete masonry units and reinforced as follows, and tied with #2 tie bars at 9” center:

Opening Width	Lintel Reinforcement
up to 4’	1-#3 top and bottom
4’1”-5’	1-#4 top and bottom
5’1”-7’	1-#5 top and 1#6 bottom
7’1”-8’	1-#6 top and bottom

b. Precast lintels shall be thoroughly cured before handling and installation.

c. Lintels shall be 8” nominal, and sized to have a minimum bearing length of 8”. Proportion lintels as indicated above for each 4” of wall thickness.

d. Provide masonry lintels where shown without structural steel or other supporting lintels.

END OF SECTION

Section 05400

Cold-Formed Metal Framing

Part 1 General

1.01 Description of Work

A. All wall materials, such as studs, tracks, bracing, clip angles, straps, headers and other related accessories shall be furnished as indicated in the construction document.

1.02. Submittals

A. The responsible contractor shall be responsible for submitting all or part of the following items as required by the construction documents.

B. Manufacturer's technical literature and installation instructions covering the products specified in the construction document.

C. Manufacturer's documentation or certification of product compliance with applicable codes and standards.

D. Structural calculations, as required.

E. Connection design and details, as required.

F. Shop drawings, as required.

G. Certification of calculations, connections, and drawings by a registered professional engineer, as required.

1.03 Technical References

The structural framing and its installation shall meet the following standards.

A. AISI, Specification for the Design of Cold-Formed Steel Structural Members, Latest Edition. American Iron and Steel Institute, Washington, DC.

B. AISI, Standard for Cold-Formed Steel Framing - General Provisions, Latest Edition, American Iron and Steel Institute, Washington, DC.

C. ASCE 7, Minimum Design Loads for Buildings and Other Structures, Latest Edition. American Society of Civil Engineers, Reston, VA.

D. ASTM, A1003/A1003M, Standard Specification for Sheet Steel, Carbon, Metallic and Non-Metallic Coated for Cold- Formed Framing Members, American Society for Testing and Materials, West Conshohocken, PA.

E. AWS, Structural Welding Code-Sheet Steel, Latest Edition, American Welding Society, Miami, FL.

F. SAE J78, Latest Edition. Steel Self-Drilling Tapping Screws, Society of Automotive Engineers, Warrendale, PA.

G. ASTM A653/A653M "Sheet Steel, Zinc-Coated (galvanized) or Zinc-Iron Alloy-Coated (Galvanized) by the Hot-Dip Process." American Society for Testing and Materials, West Conshohocken, PA.

H. ASTM C-955 "Standard Specification for Load Bearing (Transverse and Axial) Steel Studs, Runner (Tracks), and Bracing or Bridging for Screw Application of Gypsum Board and Metal Plaster Bases." American Society for Testing and Materials, West Conshohocken, PA.

I. ASTM C-1007 "Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related accessories." American Society for Testing and Materials, West Conshohocken, PA.

1.04 Delivery and Storage

A. Deliver materials in manufacturer's unopened containers or bundles, fully identified by name brand, type and grade. Exercise care to avoid damage during unloading, storing and erection.

B. Studs and tracks are stiff in the strong axis but can be damaged in the weak axis if not properly handled.

C. Studs and tracks should be unloaded in bundles and stored on blocking pallets, platforms or other supports off the ground and in a position sufficiently braced to avoid damage from excessive bending. Steel should never be in direct contact with the ground.

D. During unloading, proper lifting equipment must be used to ensure safety and to prevent damage. Framing members less than 20 foot long

can be lifted by one person while members over 20 feet may require more than one person to prevent buckling.

E. Protect studs, tracks, and accessories from corrosion, deformation, damage and deterioration when stored at job site.

1.05 Quality Assurance

A. Fabrication shall be performed by a cold-formed steel roll former or fabricator with experience in designing and fabricating cold-formed steel wall systems equal in material, design, and extent to the systems required for in the design documents.

B. Cold-formed steel wall system installation shall be performed by an experienced installer approved by the contractor.

C. All welding shall comply with applicable provisions of AWS D1.1 "Structural Welding Code-Steel." And AWS D1.3 "Structural Welding Code-Sheet Steel."

D. Welding of any nature to the studs and tracks shall be in accordance with the design document or shop drawings.

E. All structural calculations shall be performed in accordance with the applicable standards referenced above.

B. Products

1.01 Manufacturers

A. Cold-formed structural framing elements shall be as called for in the construction documents as furnished by NUCONSTEEL™.

B. Other manufacturer's products can be used provided that they submit published data showing their product values to be equal to those published by NUCONSTEEL™ or the ones shown in the design document.

C. Acceptable Wall Panel Manufacturer: Wall panels (NUWALL) shall be manufactured by NUCONSTEEL™, 525 South Locust, Denton TX 76201. (PHONE: 940.891.3050).

1.02. Structural Properties

All structural framing components, such as studs, tracks, and related accessories shall be as published by NUCONSTEEL. Equivalency shall

be determined by published dimensional and structural properties including, but not limited to the following:

Member depth

Flange size

Lip size

Steel yield and tensile strength

Corrosion protection

Design steel thickness

Effective Ix and Sx

Gross and effective area

1.03 Materials

A. Load bearing (structural) cold-formed steel members shall be manufactured from structural quality steel having minimum yield strength of 33 ksi, having a minimum protective coating equal to G-60 galvanized finish, and conforming to one of the following standards: ASTM A 653, ASTM A875, ASTM C955, or ASTM C1003.

B. Non-load bearing (non-structural) cold-formed steel members shall have a minimum protective coating equal to G-40 galvanized finish and shall conform to ASTM C-645.

C. Load Bearing cold-formed steel member shall have engineering properties calculated in accordance with the AISI “Specification for the Design of Cold-Formed Steel Structural Members” and have minimum properties as published by NUCONSTEEL™.

D. All structural framing accessories shall be formed from structural quality steel having minimum yield strength of 33ksi with minimum protective coating equal to G-60 galvanized finish.

E. NUWALL components: Provide sizes, shapes and gauges indicated.
   a. Design Uncoated-Steel Thickness: 20 gauge, 0.0350 inch (0.91 mm).
   b. Design Uncoated-Steel Thickness: 18 gauge, 0.0460 inch (1.20 mm).

c. Design Uncoated-Steel Thickness: 16 gauge, 0.0570 inch (1.52 mm).
d. Design Uncoated-Steel Thickness: 14 gauge, 0.0730 inch (1.90 mm).

1.04 Fastening

A. Fastening of cold-formed steel structural members shall be accomplished by screws, power actuated fasteners, welding, clinching, or a combination of those. The type, size, number, and spacing of fasteners shall be as required by the contract documents or approved connection detail.

B. Screwed structural connections shall use a minimum No. 8 self-drilling screws. The fastener size, edge distance, and spacing shall be as noted on the contract documents, approved connection detail, or the drawing, and shall be installed in accordance with the fastener manufacturer recommendations.

C. The screw shall penetrate the last ply in the connection, including gussets as applicable, and at least three threads shall be visible beyond the last ply.

D. Wire tying of structural framing members is not permitted.

E. Structural wall framing members may be fastened in a shop or in the field

F. Structural wall framing members having protective coating removed by welding shall have the coating repaired, at the welds, by painting with a zinc rich primer.

G. All components shall be held firmly in position until properly connected together at all joints.

PART 3 EXECUTION

3.01 Examination

A. Examine structure, substrates and installation conditions. Do not proceed with cold-formed steel wall installations until unsatisfactory conditions have been corrected.

B. Verify that the bearing elevations are correct before walls and wall panels are installed.

C. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.02 Preparation

A. Prepare attachment surfaces so that they are plum, level, and in proper alignment for accepting cold-formed structural framing system.

3.03 Wall Framing

A. Install, bridge, and brace load-bearing (structural) walls according to contract documents and requirements of this Section.

B. Cold-formed structural framing members may be shop or field fabricated into wall assemblies, prior to erection, or stick built in the field.

C. The wall-framing members shall be sized, spaced, and erected in accordance with the contract documents, engineered design, prescriptive requirements, or approved shop drawings. Space studs as shown on the plans.

D. Furnish and install erection (temporary) bracing to hold walls straight and plumb and in safe condition until permanent bracing has been installed in accordance with the drawings.

E. Align load bearing studs with joists or trusses or use a load distribution member to transfer loads to other structural components or foundations.

F. Framing members shall have ends squarely cut by shearing or sawing, be installed plumb, square, true to line and securely fastened per the contract documents or approved connection details.

G. Fabrication, handling, and erection of wall framing members and assemblies shall be done in a manner to prevent any damage or distortion of the framing.

H. Cold-formed tracks, when set to adjacent structures, shall have web contact with a uniform and level bearing surface and be securely anchored with fasteners, sized and spaced per the contract documents or approved connection details.
I. Bracing of wall framing to resist wind loading (transverse) only, (i.e., non-axial loaded), can be accomplished by the attachment of wall sheathing to both sides of the studs. However, during construction, when only the exterior of the studs is sheathed, a steel strap, run

horizontally on the interior flanges, attached to each stud and spaced at a maximum of 4'-0" throughout the height of the wall is recommended to brace the wall during construction.

J. Bracing of axial loaded wall framing (structural walls) shall be accomplished by:

a. Cold rolled channel, run horizontally through the stud punchouts and attached at each stud,

b. Steel straps run horizontally on both sides of the studs and attached at each stud,

c. Sheathing installed on both sides of the studs,

d. A combination of the above.

K. Vertical spacing of the bracing is limited to a maximum of 4'-0" throughout the height of the wall.

L. Structural "C" members are not permitted to have splices or cutouts in the flanges or in the lip stiffeners.

M. Framing of wall openings shall include jack studs, headers, cripples, sill plates and jamb studs as per the contract documents or approved shop drawings.

N. For wall framing assemblies that will form voids, which will not be accessible to the insulation, contractor the framing contractor shall be responsible for filling these voids, with suitable insulation, prior to assembly.

O. Slip connections, allowing for vertical movements of the structure without imposing vertical loads on the wall framing, shall be per the contract documents or approved shop drawings.

P. Temporary bracing of wall framing shall be provided as required and removed only after the framing has been secured with permanent support.

Q. Structural framing shear walls shall be built per the contract documents or approved drawings.

R. Walls shall be level, and true to line of 1/8 inch in 10 feet (1:960) and as follows:

Spacing: Space individual studs no more than plus or minus 1/8 inch (3mm) from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

Sequences: Fabricate each cold-formed steel wall to a maximum out-of-square tolerance of 1/8 inch (3mm).

SECTION 05500 – STEEL LINTEL

PART 1 – GENERAL

1.01 RELATED SECTIONS

A. 04210 – Brick

1.02 QUALITY ASSURANCE

A. Quality assured to BS EN ISO 9002: 1994. All products must comply with BS 5977: Part 2 for corrosion protection, workmanship and material.

PART 2 – PRODUCTS

2.01 STEEL BLOCK LINTEL

A. All lintels specified and shown on drawings shall be #LB 1600 Steel Block Lintels manufactured by Steel Block Company, Inc.

1. ¼" steel plate with 10 gauge webs
2. 44" in length to fit modular length of masonry

B. Exposed face shall be stainless steel of Type 304.

PART 3 – EXECUTION

3.01 PREPARATION

A. Clean concrete and masonry bearing surfaces of bond-reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of lintel.

END OF SECTION 05500

SECTION 06070

WOOD TREATMENT

PART 1 GENERAL

1.01 SUMMARY

A. Section includes: Fire retardant treatment for wood, including framing, decking, sheathing and other wood construction, not exposed to weather.

B. Related Sections: Section(s) related to this section include:

1. Rough Carpentry: Division 6 Rough Carpentry Section.

2. Finish Carpentry: Division 6 Finish Carpentry Section

3. Architectural Woodwork: Division 6 Architectural Woodwork Section.

1.02 REFERENCES

A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation. Most recent editions should be used.

B. American Society for Testing and Materials (ASTM):

1. ASTM D 5516 Standard Test Method for Evaluating the Flexural Properties of Fire Retardant Treated Softwood Plywood Exposed to Elevated Temperatures.

2. ASTM D 5664 Standard Test Method for Evaluating the Effects of Fire-Retardant Treatments and Elevated Temperatures on Strength Properties of Fire-Retardant Treated Lumber.

3. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.

C. American Wood-Preservers' Association (AWPA):

1. AWPA Standard C20 Structural Lumber - Fire Retardant Treatment by Pressure Processes.

2. AWPA Standard C27 Plywood - Fire Retardant Treatment by Pressure Processes.

3. AWPA Standard C31 Lumber Used Out of Contact with the Ground and Continuously Protected From Liquid Water - Treatment by Pressure Processes.

4. AWPA Standard P5 Standard for Waterborne Preservatives.

5. AWPA Standard P17 Fire Retardant Formulations.

6. AWPA Use Category System, Appendix H.

7. AWPA Use Category UC1.

8. AWPA Use Category UC2.

D. Military Specification (Mil. Spec.):

1. Mil. Spec. L-19140E Lumber and Plywood, Fire-Retardant Treated.

E. National Fire Protection Association (NFPA):

1. NFPA 255 Standard Test Method for Surface Burning Characteristics of Building Materials.

F. Underwriters Laboratories, Inc. (UL):

1. UL 723 Test for Surface Burning Characteristics of Building Materials.

2. UL Building Materials Directory.

1.03 SYSTEM DESCRIPTION

A. Performance Requirements: Provide fire retardant treatment which will perform in accordance with manufacturer's stated performance criteria without defects, damage or failure.

1.04 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.

B. Product Data: Submit product data, including manufacturer's SPEC-DATA® product sheet, for specified products.

C. Quality Assurance Submittals: Submit the following:

1. Test Report: Certified test report showing compliance with specified performance characteristics and physical properties. Include in test report certification that fire retardant solution does not contain ammonium phosphate.

a. Evaluation Report: National Evaluation Report NER-303 or ICBO ER-5755 indicating flamespread, strength, corrosion and hygroscopic properties.

2. Certificate: Certification from treatment plant certifying wood treatment applied complies with Dricon fire retardant treatment by Arch Wood Protection.

D. Closeout Submittals: Submit the following:

1. Warranty: Warranty documents specified herein.

1.05 QUALITY ASSURANCE

A. Wood Treatment Plant Qualifications: Wood treatment plant experienced in performing work of this section which has specialized in the treatment of wood similar to that required for this project and a plant licensed by Arch Wood Protection.

B. Regulatory Requirements: Provide fire retardant treatment which complies with the following regulatory requirements:

1. New York City MEA (199-81-M, 200-81-M).
2. FHA Minimum Property Standard #2600.
3. HUD Materials Release 1261.
4. Wisconsin Material Approval 960073-W.

1.06 DELIVERY, STORAGE & HANDLING

A. General: Comply with Division 1 Product Requirements Sections.

B. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.

1.07 WARRANTY

A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under the Contract

Documents.

1. Warranty Period: 40 years commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 FIRE RETARDANT TREATMENT

A. Manufacturer: Arch Wood Protection.

1. Contact: 1955 Lake Park Drive, Suite 250
Smyrna, GA 30080
Telephone: (770) 801-6600; Fax: (770) 801-1990.

B. Product Treatment: Dricon fire retardant treatment for wood is produced by licensed treatment plant. Fire retardant chemical shall provide protection against termites and fungal decay, shall be registered for use as a wood preservative by the U.S. Environmental Protection Agency (EPA), shall comply with formulation FR-1 of the current edition of AWPA Standard P17, and shall be free of halogens, sulfates and ammonium phosphate. Treated wood shall have a flamespread of less than 25 when tested in an extended 30 minute tunnel test in accordance with ASTM E 84, NFPA 255 or UL 723.

1. Corrosion Properties: Fire retardant treated wood in contact with carbon steel, galvanized steel, aluminum, copper and red brass shall exhibit corrosion rates less than 1 mil (0.025 mm) per year when tested in accordance with Fed. Spec. MIL-L-19140, Paragraph 4.6.5.2.

2. Testing: Testing on fire performance, strength and corrosion properties of fire retardant treated wood shall be recognized by issuance of a National Evaluation Services Report.

C. Fire Retardant Treatment: Manufacturer's solution for fire retardant treatment of wood.

1. Lumber Treatment Standard: Comply with AWPA Standard C20, current edition, and Appendix H of AWPA Use Category System.

2. Plywood Treatment Standard: Comply with AWPA Standard C27, current edition, and Appendix H of AWPA Use Category System.

2.02 PRODUCT SUBSTITUTIONS

A. Substitutions: No substitutions permitted.

2.03 RELATED WOOD MATERIALS

A. General: Refer to Division 6 Wood & Plastics Sections for related wood materials specified herein.

B. Moisture Content: Provide fire retardant treated wood with moisture content as follows:

1. Lumber: Dried to a maximum moisture content of 19% after treatment.

C. Lumber: Dressed lumber, S4S, unless otherwise indicated.

1. Light Framing:
   a. Studs: Southern Pine, Interior Type A and 2”x6”.

2.04 SOURCE QUALITY

A. Source Quality: Obtain fire retardant treatment from a single manufacturer.

PART 3 EXECUTION

3.01 MANUFACTURER’S INSTRUCTIONS

A. Compliance: Comply with manufacturer’s product data, including product technical bulletins, for fire retardant treatment installation.

3.02 APPLICATION

A. Fire Retardant Treatment: Apply a fire retardant treatment in accordance with requirements of applicable codes and manufacturer’s requirements.

3.03 PROTECTION

A. Protection: Protect fire retardant treated wood from damage during construction.

END OF SECTION

SECTION 06160

ORIENTED STRAND BOARD

PART 1 GENERAL

1.01 RELATED SECTIONS

A. Section 06070 – Wood Treatments.

B. Section 06900 – Wood Fasteners.

1.02 REFERENCES

A. LP OSB Sheathing and Structural 1 Sheathing

B. HUD bulletin no. UM-40c

1.03 DELIVERY, STORAGE, AND HANDLING

A. Store panels in clean, dry areas off the ground. If possible, store indoors. If stored outside, cover with plastic sheets or tarps. Keep cover open and away from the sides and bottom of panels to allow for air circulation.

B. Additional protective measures may be necessary during extended adverse weather conditions.

1.05 ENVIRONMENTAL IMPACT

A. Use of environmental control technology and energy efficient equipment to conserve resources.

B. Using process by-products to produce heat and electricity, thereby conserving nonrenewable energy sources.

C. Harvesting timberland following the soundest practices dictated by the ecological requirements of the specific type of forest.

PART 2 PRODUCTS

2.01 MATERIALS

A. OSB sheathing panels are manufactured to be free of knots, grain defects, splits and other irregularities. The wood strands are mixed with binder, arranged in layers for maximum strength and stability and bonded under heat and pressure.

B. OSB sheathing panels are of a consistent composition, easily handled, sound on both sides, and free of knots, core voids, splits and checks. They are coated on all four edges for added moisture resistance and dimensional stability.

C. OSB sheathing roof panels have a coarse-textured surface that helps provide safe footing on pitched roofs.

2.02 PHYSICAL PROPERTIES

A. OSB sheathing wall panels provide sufficient racking strength to meet corner bracing requirements.

B. Panels are stiff and strong and have a low coefficient of lineal expansion.

PART 3 EXECUTION

3.01 INSTALLATION

A. Comply with local safety regulations when installing roof, wall or subfloor sheathing.

B. Comply with the following manufacturer's instructions and with APA's "Engineered Wood Construction Guide," Form No. E30R/Revised January 2001

3.02 LIMITATIONS

A. OSB SHEATHING PANELS ARE NOT FOR UNPROTECTED EXTERIOR USE; they must be covered with siding panels or other type of exterior wall cladding or roofing material. Normal exposure to weather during ordinary construction delays will not damage the panels. ADDITIONAL PROTECTIVE MEASURES ARE RECOMMENDED FOR EXTENDED ADVERSE WEATHER CONDITIONS.

B. Slight surface flaking or thickness swells caused by excessive rain or brief exposure to standing water will not affect the panels' structural performance.

END OF SECTION

Section 06220

Wood Floor Truss (floor above)

Part 1—General

1.0—Description:

A. Work in this section includes, but is not limited to: Prefabricated Wood I Beam GPI 20, GPI 40, GPI 65, WI 40, WI 60 and WI 80 ceiling, floor, and roof joists with FiberStrong® webs and lumber flanges (WI) or LVL flanges (GPI).

B. Related work specified elsewhere: Rough carpentry.

1.1—Submittals:

A. Product data:
Submit manufacturer's descriptive literature indicating material composition, thicknesses, dimensions, loading and fabrication details.

B. Shop drawings or installation guide:
Manufacturer's literature indicating installation details. Include locations and details of bearing, blocking, bridging, and cutting and drilling of webs for work by others.

1.2—Quality Assurance:

A. Certification:
All Georgia-Pacific Wood I Beam joists have been qualified to ASTM D5055 by APA-The Engineered Wood Association.

1.3—Delivery, Storage and Handling:

A. Delivery:
Deliver materials to the job site in manufacturer's original packaging, containers and bundles with manufacturer's brand name and identification intact and legible.

B. Storage and handling:
Store and handle materials to protect against contact with damp and wet surfaces, exposure to weather, breakage and damage. Provide air circulation under covering and around stacks of materials. Individual joists shall be handled in the upright position.

1.4—Limitations:

A. Loads:
Concentrated loads shall not be applied to the bottom flange.

B. Cutting:
Except for cutting to length, top and bottom flanges of
Wood I Beam floor and roof joists shall not be cut, drilled
or notched.

C. Wood I Beam joists are for use in covered, dry conditions only.

Part 2.0—Products

2.1—Prefabricated Wood Beams and Joists:
A. Acceptable products:
1. Georgia-Pacific Corporation, WI 40.
2. Georgia-Pacific Corporation, WI 60.
3. Georgia-Pacific Corporation, WI 80.
4. Georgia-Pacific Corporation, GPI 20.
5. Georgia-Pacific Corporation, GPI 40.
6. Georgia-Pacific Corporation, GPI 65.
B. Characteristics:
1. Flanges:
High-grade lumber flanges.
a. WI 40: 2Z\x9.
b. WI 60: 2Z\x9.
c. WI 80: 3Z\x9.
LVL flanges.
a. GPI 20: 1C\v9.
b. GPI 40: 25\169.
c. GPI 65: 21\29.
2. Webs:
C\,9 thick APA Rated FiberStrong OSB.
3. Beam depths:
a. GPI 20: 9Z\x9 and 11M\,9
as required for loading, deflection and span.
b. GPI 40 or WI 40: 9Z\x9, 11M\,9 and 149
as required for loading, deflection and span.
c. WI 60: 11M\,9, 149 and 169
as required for loading, deflection and span.
d. GPI 65: 11M\,9, 149 and 169
as required for loading, deflection and span.
e. WI 80: 11M\,9, 149 and 169

as required for loading, deflection and span.
4. Beam length:
As required for span and bearing.

2.2—Accessories:

A. Nails:
8d, 10d, and 12d box, sinker, and common nails.

B. Bracing and blocking:
1. Bearing stiffeners: 2 x 4 or combination of C\,9, Z\x9 or B\,9 plywood or OSB.
2. Band joists and continuous closure at load-bearing walls: per standard approvedWood I Beam details.
3. Lateral support at intermediate supports of multiple span joists: Wood I Beam blocking.

C. Joist hangers:
1. Model numbers are shown for United Steel Products and Simpson Strong-Tie® connectors. Contact Georgia-Pacific for other acceptable connectors.

Part 3—Execution

3.0—General:

A. Provide Wood I Beam floor and roof joists where indicated on drawings using hangers and accessories specified.

B. Install Wood I Beam joists in accordance with manufacturer's recommendations.

C. Install and brace Wood I Beam floor and roof joists to prevent dominoing of system and buckling of top flange.

3.2—Accessories:

Install accessories where indicated and in accordance with manufacturer's instructions.

END OF SECTION

SECTION 06220

Wainscot

PART 1 GENERAL

1.1 DESCRIPTION

A. Classic Beadboard™ Systems shall be New England Classic® Classic Beadboard™ Systems manufactured by New England Classic®, Inc.

1.2 SUBMITTALS

A. Submit manufacturer's literature and installation instructions to determine layout requirements

1.3 DELIVERY, STORAGE AND HANDLING

A. Delivery - the Classic Beadboard™ Systems shall be delivered to the job site in the manufacturer's original packaging with manufacturer's identification intact and legible.

B. Storage & handling - the Classic Beadboard™ Systems shall be stored and handled in such a way to protect against contact with water, exposure to weather, breakage and damage. Do not store directly on concrete without a plastic sheet as a moisture barrier.

1.4 LIMITATIONS

A. Moisture Conditions - the Classic Beadboard™ Systems shall not be used in wet or damp areas.

B. Temperature conditions - the Classic Beadboard™ Systems shall not be used in contact with surfaces where temperatures exceed 120 degrees F.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

New England Classic®, Inc. 465 Congress Street, 7th Floor Portland, ME 04101

2.2 MATERIALS

A. Substrate shall be industrial grade class 1 (fire retardant) or 3, or moisture resistant MDF, product class MD, or EFB Wheatboard (particleboard), product class M3, that conforms with ANSI A208.2-1994.

B. Adhesive for bonding veneers to substrate shall be PVA, EVA, or PUR type adhesive.

C. Paintable veneer shall be recoatable cellulose film, 80 gm. weight.

2.3 COMPONENTS

A. Beadboard panel,
8-5/32"x 23"x 3/8" thick

8-5/32"x 31"x 3/8" thick
8-5/32"x 60"x 3/8" thick
8-5/32"x 95"x 3/8" thick

PART 3 EXECUTION

3.1 INSTALLATION

A. Install per the manufacturer's recommendations using the instructions provided with the product.

3.2 WARRANTY

A. Manufacturer shall furnish a five year warranty against defects in material and workmanship.

3.3 MATERIALS ACCEPTANCES

A. City of New York MEA 190-99-M

.

END OF SECTION

SECTION 06446

WOOD TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Simulated wood ornaments.

B. Railings, posts, crowns, bases and aprons.

1.02 RELATED SECTIONS

A. Section 06200 - Finish Carpentry: Woodwork.

B. Section 08212 - Stile and Rail Wood Doors.

C. Section 08550 - Wood Windows.

1.03 REFERENCES

A. ASCE 7 - Minimum Design Loads for Buildings and Other Structures; American Society of Civil Engineers; 2002.

1.04 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's data sheets on each product to be used, including:

1. Preparation instructions and recommendations.

2. Storage and handling requirements and recommendations.

3. Installation methods.

C. Shop Drawings: Detailed drawings of assembly and installation.

D. Samples: Two of each item required.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Ship in protective packaging; store in unopened packaging until ready for installation.

B. In storage, support items completely on a flat surface; do not stack more than 10 cartons in height.

C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.06 WARRANTY

A. Simulated Wood Ornaments: Provide manufacturer's standard one year warranty against defects in materials and workmanship.

B. Railings, posts, crowns, bases and aprons: Provide manufacturer's standard 10 year warranty against defects in materials and workmanship.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturer: Custom Decorative Mouldings; PO Box 2012, Greenwood, DE 19950. ASD. Tel: (800) 543-0553. Fax: (302) 349-4816. Email: mlewis@custom-moulding.com. www.custom-moulding.com.

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.02 MATERIALS

A. Fastening Adhesive: Water soluble acrylic polymer equal to “Standard Plus” adhesive supplied by Outwater.

B. Jointing Adhesive: Polyisocynaurate prepolymer equal to “Extra Fix” adhesive supplied by Outwater.

C. Joint and Fastener Hole Patch: Comply with wood ornamentation manufacturer’s written recommendations.

D. Fasteners: Comply with wood ornamentation manufacturer’s written recommendations.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install using both mechanical fasteners and adhesive; join adjacent pieces using adhesive recommended by manufacturer.

C. Install linear moldings and trim so that joints do not open due to shrinkage; remove and replace items that develop open joints within one year after installation.

D. Install railings straight and level, or at consistent slope if applicable; install posts and balusters plumb and at consistent spacing.

E. Fill dents, gouges, and errors before applying final coating.

3.04 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 07240

EXTERIOR INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. 1” Exterior insulation on CMU

1.02 RELATED SECTIONS

A. Section 04200 – Unit Masonry: Insulation for unit masonry.

B. Section 07200 – Adhesive for insulation.

1.03 REFERENCES

A. ASTM C578 – Styrofoam scoreboard insulation.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site under provisions of Section

B. Store and protect products under provisions of Section

PART 2 PRODUCTS

2.01 MATERIALS

A. ASTM C578 – Type IV, Styrofoam scoreboard insulation.

B. Insulation/CMU adhesive, Section 07200.

PART 3 EXECUTION

3.01 INSTALLATION

A. Apply insulation horizontally, edges should be tightly butted and vertical joints staggered.

B. Secure insulation panels with adhesive applied to the back. Seal joints with construction tape.

3.02 FIELD QUALITY CONTROL

A. Field testing will be performed under provisions of Section 01400.

END OF SECTION

SECTION 07400

INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. 6” Cavity Insulation for Exterior Walls

B. Acoustic Insulation for Separation Walls

C. Resilient Channels (on staggered 2x4 acoustic wall)

1.02 RELATED SECTIONS

A. Section 07400 – Insulated Roof and Wall Panels

B. Section 07400 – Insulated Structural Panels

C. Section 09820 – Acoustical

D. Section 13080 – Resiliently-Supported Walls and Ceilings

1.03 REFERENCES

A. ASTM E 84 – Surface Burning Characteristics

B. ASTM C 411 – Service Temperature

C. ASTM C 1104 – Water Vapor Sorption

D. ASTM C 1071 – Air Velocity

1.04 DELIVERY, STORAGE, AND HANDLING

A. Use SpaceSaver™ packaging to reduce freight and streamlines handling.

B. For protection against dust and moisture package in Cartons.

1.05 ENVIRONMENTAL REQUIREMENTS

A. Will not support microbial growth - ASTM C 1338, G21, G22

PART 2 PRODUCTS

2.01 MATERIALS

A. Use Flexible Fiber Glass insulation.

B. Use insulation with a vapor retarder for extertior.

C. Use acoustical batt insulation for interior walls.

D. Use 5/8” thick and ½” thick gypsum boards.

E. Use resilient channels to reduce stiffness of the wall.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install insulation by staple or friction fit in cavities. Trim with a utility knife.

B. Do not install insulation on top of or within 3” of recessed light fixtures unless the fixtures are approved of such use.

C. Fill interior wall cavity with Acoustic Batts.

D. Install one layer 5/8” thick Type X or C gypsum board on one side of the acoustical wall and one ½” thick Type C gypsum board on the other side of the acoustical wall. Unequal thicknesses of walls make for better sound control.

E. Install resilient channels before drywall is attached and place the resilient channels on the receiving side of the wall.

3.02 FIELD QUALITY CONTROL

A. Must comply with the ASTM E 84 for properties when expose to heat and flames.

A. Water vapor absorption less than 3% for exterior insulation.

B. Acoustic insulation must have a STC rating of 49.

END OF SECTION

Section 08250
Pre-hung Wood Doors

Part 1: General

1.01 Section Includes

A. Pre-hung wood doors (and transom panels), flush configuration, fire rated.

1.02 Related Sections

A. Section 8150 – Wood Door Frames
B. Section 8712 – Door Hardware
C. Section 9900 – Painting: Site Finishing Doors
D. Section 10255 – Door Louvers

1.03 References

A. ANSI A135.4-Basic Hardboard
B. ANSI/HPMA HP-Hardwood and Decorative Plywood
C. A.W.I.-Quality Standards of Architectural Woodwork Institute
D. ANSI A208.1-Mat Formed Particleboard
E. NFPA 80-Fire Doors and Windows
F. NFPA 252-Methods of Fire Tests for Door Assemblies
G. NFPA 101-Life Safety Code
H. U.L. 10B-Fire Tests of Door Assemblies

1.04 Submittals

A. Submit under provisions of Section 01300
B. Shop Drawings: Illustrate door opening criteria, elevations, sizes, types, swings, [under cuts, special beveling, special blocking for hardware, identify cutouts for glazing, louvers.
C. Product Data: Indicate door core materials and construction; veneer species, type and characteristics; factory machining criteria; factory finishing criteria.
D. Samples: Submit two (2) samples of door construction 8½" x 8½" in
E. Samples: Submit two (2) samples of veneers 8"x 11" in size, illustrating wood grain, stain color, topcoat sheen.
F. Manufacturer's Installation Instructions: Indicate special installation instructions.

1.05 Qualifications

A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum 5 years experience.

1.06 Delivery, Storage, and Handling

A. Deliver, store, protect and handle to site under provision of construction manager.
B. Accept doors on site in manufacturer's packaging. Inspect for damage.

1.09 Field measurements

A. Verify that field measurements are as indicated on shop drawings.

1.10 Coordination

A. Coordinate work under provision of Section 01700
B. Coordinate work with door opening construction, door- frame and door hardware installation.

1.11 Warranty

A. Provide warranty under the provision of Section 01700
1. Lifetime of installation: Interior doors.
B. Include coverage for delamination of veneer, warping beyond specified Installation tolerances, defective materials, telegraphing core construction.

Part 2 Products

2.01 Manufactures
A. Ampco Products, Inc, Opa Locka, Florida
B. Substitutions: Under provisions of section 01600.

2.02 Door Types
A. Flush Interior Doors: 1 ¾ inches thick; solid core construction; non-rated.

2.03 Door Construction
A. Solid Core: AWI Section 1300 Type :FLC- Framed Non-Glued Block
B. Core Solid: no rating: AWI Section 1300
C. Core Solid: AWI Section 1300, Type SR- Sound Retardant

Part 3 Execution

3.01 Pre-Installation
A. Verify frame opening conditions under provisions of Section 01039.
B. Verify that opening sizes and tolerances are acceptable.
C. Do not install doors in frame openings that are not plumb or are out of-Tolerance for size or alignment.

3.02 Installation
A. Install doors in accordance with manufacturer's instructions. or
B. Install non-rated doors in accordance with AWI Quality Standards requirements Section 1300.
C. Trim rated door height by cutting bottom edges by a maximum of ¾ inch only if door has not been factory prefit for length.
D. Install door louvers, plumb and level.

3.03 Installation Tolerances

A. Conform to AWI requirements for fit and clearance.
B. Conform to AWI requirements for maximum diagonal distortion.

3.04 Adjusting

A. Adjust door hardware for smooth and balanced door movement.

3.05 Schedule
A. Provide schedules when door and frame schedules are not described on drawings. The schedules should identify types or categories of doors and associated frames, fire ratings, hardware sets, etc.

END OF SECTION.

SECTION 08350
FOLDING DOORS

PART 1 GENERAL

1.1 SCOPE

A. The requirements of the instructions to Bidders, General Conditions, Supplementary General Conditions and Section apply to all work herein after specified.

B. This section shall include the furnishing of all tools, equipment and labor necessary to complete all folding door work shown on drawings and/or herein specified.

C. Manufacturer shall furnish folding doors complete with hardware, tracks, jambs, and all necessary mechanisms to provide complete operation.

D. The folding doors herein after specified shall be installed by qualified factory trained craftsmen skilled in this trade.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 03300 Cast-in-Place Concrete
B. Section 04200 Unit Masonry
C. Section 05100 Structural Metal Framing
D. Section 06100 Rough Carpentry
E. Section 06200 Finish Carpentry
F. Section 07920 Sealants and Caulking
G. Section 09250 Gypsum Board
H. Section 09300 Finish Ceilings
I. Section 09500 Acoustical Treatment
J. Section 09650 Finish Flooring
K. Section 09680 Carpet
L. Section 09900 Painting
M. Section 09950 Wall Coverings

1.3 SUBMITTALS

A. One sample of each color material to be used on the project.

B. Copies of properly identified manufacturer's literature with proposed catalog numbers identified.

C. Complete shop drawings showing elevations of units, locations in the buildings, conditions at openings with wall thickness and materials, typical and special details of construction, location and installation requirements for hardware and operators, shape and thickness of materials, joints and connections and material finishes.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver materials to job site and protect unsealed materials from abrasions.

B. Identify each container with material name and identification number.

C. Store materials under cover, protected from weather and construction activities. Safe storage of materials prior to installation is to be the responsibility of the general contractor.

1.5 ACCEPTABLE MANUFACTURERS:
The following manufacturers are acceptable if the product bid meets the criteria outlined in the specifications and detailed on the drawings. All others must submit to the architect for approval, no less than 10 days prior to the bidding, sufficient information to show that their product will meet the intent of the specifications: PANELFOLD, INC.

PART 2 PRODUCTS

2.1 FOLDING DOORS shall be manually operated wood, folding type as manufactured by Panelfold, Inc., Miami, Florida, U.S.A. and installed by an authorized representative of the manufacturer in openings prepared by others to SCALE/6 Decorative Accents requirements.

2.2 TRACK AND HANGERS: Track shall be extruded aluminum. Hanger assemblies with two ballbearing wheels shall be suspended on alternate panels. A four-wheel truck hanger assembly shall be installed on each end post.

2.3 DECORATIVE ACCENTS shall be (specify: open woven cane inserts; closed woven cane inserts; clear cracked ice translucent inserts; amber cracked ice translucent inserts; clear transparent inserts, or carved (one or both sides) panels).

2.4 PANEL SURFACES: Panels shall be specially laminated engineered wood core, bonded with water-resistant, plastic glue and surfaced with one of the following (colors to be selected from manufacturer's standards):

A. Woodtex wood grain vinyl, Class A flame spread.
B. Startex solid color vinyl, Class A flame spread,
C. Fabrictex fabric textured vinyl, Class A flame spread.
D. Ropetex rope textured vinyl, Class A flame spread.
E. Genuine wood veneer shall be (specify: clear lacquer finished; unfinished, sanded ready for field finishing by others; factory specially finished to match owner's submitted sample) species as specified: White Ash; Red Oak; Natural Birch, White Maple; or American Walnut.
F. High pressure plastic laminate, vertical grade.

2.5 CONNECTOR HINGES: Panels shall be hinged and edge sealed against sound light and air transmission with heavy duty, dual-wall, flame resistant, extruded vinyl, Hinges shall be securely locked into and protect the panel edges. They shall provide "Memory-Action" causing the panels to extend and stack equally, smoothly, and quietly. Color from manufacturer's selector.

2.6 TRIM: Doors shall be supplied with (specify: decorative track; optional plain track with track mould to conceal track, or optional plain track with extruded aluminum sub-channel for recessed track). A jamb mould for jamb closure shall be furnished.

2.7 HARDWARE: Handles, Touch-Bar automatic latches, all necessary screws, installation hardware and instructions shall be furnished. Security units shall be as specified: Privacy latch and emergency release, cylinder lock one side only; cylinder lock one side, privacy lock other, cylinder lock two sides. Optional. Master-keyed insert type cylinder with lazy cam and flat tail piece, by others, shall be installed in lieu of regularly furnished cylinder.

2.8 STACK FORMULA: Approximately 1-1/4"/ft. (105mm/m) plus 3" (76mm) for each end post assembly.

2.9 HANGING WEIGHT

PART 3 EXECUTION

3.1 EXECUTION
Before installation is commenced, inspect the opening. Surfaces shall be clean and dry. Concrete surfaces shall be free of excess mortar and lumps. Wood surfaces shall be well nailed and/or glued, nailed heads driven flush, and wood free of voids. Metal surfaces shall be free of grease, oil,dirt, rust corrosion and welding slag, without sharp edges.

3.2 PREPARATION
Open containers and verify that all required parts are available and undamaged before disposing of containers. Arrange materials in proper sequence to conform with manufacturer's information and installation instructions.

3.3 INSTALLATION
A. Installer shall conform to the manufacturer's installation instruction sheets.
B. Lubricate all bearing and sliding parts and adjust for smooth and easy operation.
C. Adjust locking hardware for accurate fit.

3.4 CLEANING
A. Clean all wood, metal, vinyl and plastic laminate surfaces to remove soil without using abrasive cleaners of solutions containing corrosive solvents.
B. Remove debris from worksite.

3.5 DEMONSTRATION
A. After all adjustments, lubrications and clean-up, the installer shall demonstrate and instruct the proper operation, function and maintenance procedures for the walls.
B. Deliver all keys, operation and maintenance manuals to the owner.

Section 08700

Door Hardware

Part 1 – General

1.1 - SUMMARY

This section includes the requirements for door hardware including latches and locks, threshold, peep hole, door stop, weather strip for acoustics, etc.

1.2 – RELATED WORK

A. Work not included: Installation of hardware, painting, door frames and glazing, metal doors and frames.

B. The following sections may contain information pertaining to Standard Door Hardware:

1. Division 1 – All sections – General Requirements

2. Section 08710 – Door hardware

3. Section 08770 – Door accessories

1.3 References

A. DHI – Installation Guide for Doors and Hardware

B. BHMA – Builders Hardware Manufacturers Association

C. CSI – Construction Specifications Institute

D. ANSI – A117.1 – Specifications for Making Buildings and Facilities Accessible to and usable by Physically Handicapped People. CABO/ANSI A117.1-1999

E. NFPA 80 – Fire Doors and Windows

F. UL10B Labeled for Rated Doors

1.4 – QUALITY ASSURANCE

A. All products shall conform to requirements of ANSI – 117.1

B. Substitutions: Manufacturer's and model numbers are listed to establish a standard of quality and design. The architect must approve all product substitutions. In accordance with Section 016000, required data and physical samples must be submitted.

C. Supplier Qualifications: Suppliers shall be recognized architectural hardware suppliers, with warehousing facilities, who is or employs a DHI Certified A.H.C., who is available at reasonable times during the course of the work for consultation about products hardware requirements, to owner, architect and contractor.

D. Fire Rated Doors:
1. Doors and hardware shall be tested in accordance with UL-10B and NFPA 80.

2. Doors shall comply with local building code requirements.

3. Provide only hardware tested and listed by UL.

1.5 – SUBMITTALS

A. Submit shop drawings under provisions of Section.

B. Submit manufacturer's installation instructions.

C. Submit Technical Data information relating to products used on project.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Hardware shall be delivered packaged and wrapped to provide protection while in transit.

B. Mark each item or package separately, with identification to hardware set number, door number and key set symbol.

C. At time of delivery, all items should be inventoried and checked for damage.

D. All materials should be stored under cover. The use of non-vented plastic or canvas shelters should be avoided to prevent forming of humidity chambers thus causing rust of metal parts and deterioration of rubber/other material parts. Should the cardboard boxes containing hardware become wet, the hardware should be removed immediately to prevent such damage as stated above. A secure, dry lock-up with sufficient shelving would provide the best housing.

PART 2 – PRODUCTS

2.1 – MATERIALS

A. Lockset: all materials shall be included in the packaged product including screws, handles, locks, and keys.

B. Deadbolt: all materials shall be included in the packaged product including screws, bolt, and keys.

C. Door Viewer: all materials shall be included in the packaged product including viewer and casing.

D. Door Stop: all materials shall be included in the packaged product including door stop, screws, rubber head, hook, and eyehole.

E. Threshold: aluminum threshold shall be installed with screws with a small rubber lining around hole to prevent leakage.

Note: all hardware accessories shall conform to ANSI and UL standards.

2.2 – HARDWARE CONSTRUCTION

A. All hardware shall be flush with surface of door.

B. Aluminum threshold shall be level and flush on both sides with floor.

C. All rough edges shall be ground off.

D. Inside edge of threshold shall be lined with caulking to provide weatherproofing and a sealant against water leakage.

2.3 – KEYING

A. Keys shall be provided in the hardware packaging.

B. Additional keys shall be provided so as to supply 4 keys per lock.

C. Control keys and a master key ring shall be furnished.

D. All keys shall be delivered to the owners' representative.

2.4 – FINISH

A. All metal shavings from drilling holes shall be cleaned up and disposed of as required. All adjacent surfaces soiled by hardware installation shall be cleaned.

B. Adjust, clean, and inspect all hardware to ensure proper operation and function of every opening. Replace items that have defects or cannot be adjusted as to allow freely and smoothly operational doors.

END OF SECTION

Section 08700

Door Hardware

PART 1 – GENERAL

1.1 DESCRIPTION

A. Furnish factory pre-finished hardware for interior and exterior doors. Refer to architectural drawings, schedules, and details for required types.
B. See Division 8 for information on doors, glazing, etc.

1.2 QUALITY ASSURANCE

A. All hardware shall be approved and shall comply with the product standards of the said door that they shall be installed in.
B. Assembly and installation, including field modifications, shall be performed by qualified workmen who have been approved by the architect or owners' representative.

1.3 SUBMITTALS

A. Submit manufacturer's specifications for fabrication showing details of design, construction, and installation.
B. Provide detail drawings and color chips as needed for selection of approval by the architect.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver packaged and wrapped to provide protection during transit and storage.
B. Inspect upon delivery to assure quality.
C. Inventory upon delivery to assure proper number of hardware items.

PART 2 – PRODUCTS

2.1 HARDWARE

A. Lockset: all materials shall be included in the packaged product including screws, handles, locks, and keys.
B. Deadbolt: all materials shall be included in the packaged product including screws, bolt, and keys.
C. Door Viewer: all materials shall be included in the packaged product including viewer and casing.

D. Door Stop: all materials shall be included in the packaged product including door stop, screws, rubber head, hook, and eyehole.
E. Threshold: aluminum threshold shall be installed with screws with a small rubber lining around hole to prevent leakage.

Note: all hardware accessories shall conform to ANSI and UL standards.

2.1 FINISHES

A. All metal shavings from drilling holes shall be cleaned up and disposed of as required.
B. All adjacent surfaces soiled by hardware installation shall be cleaned.

PART 3 – FINISHES

A. Verify that all doors open smoothly with all hardware installed.
B. Repair all damaged or defective frames prior to job closeout or final inspection.

END OF SECTION

SECTION 09250

GYPSUM BOARD

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Gypsum board , including joint treatment

1.02 RELATED SECTIONS

A. Section 07210 - Building Insulation: Thermal insulation.

B. Section 05400 - Cold Formed Metal Framing.

C. Section 07840 - Firestopping.

D. Section 08310 - Access Doors and Panels.

1.03 REFERENCES

A. ASTM C36 - Standard Specification for Gypsum Wallboard.

B. ASTM C79 - Standard Specification for Treated Core and Non-treated Core Gypsum Sheathing Board.

C. ASTM C442 - Standard Specification for Gypsum Backing Board, Gypsum Core board, and Gypsum Shaft liner Board.

D. ASTM C475 Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.

E. ASTM C630 - Standard Specification for Water-Resistant Gypsum Backing Board.

F. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.

G. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.

H. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications.

I. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.

J. GA-214 - Recommended Levels of Gypsum Board Finish, published by the Gypsum Association (GA).

K. GA-600 - Fire Resistance Design Manual.

L. Underwriters Laboratories, Inc (UL) Fire Resistance Directory.

1.04 DELIVERY AND STORAGE

A. Deliver materials in original unopened packages, containers or bundles bearing manufacturer's name, and product name and number.

B. Store materials in compliance with manufacturer's recommendations, and in an enclosed ventilated shelter providing protection from the elements. Store flat and off floor.

C. Remove damaged or deteriorated materials and replace with new at no additional cost to LBNL.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. United States Gypsum Company, National Gypsum Company, or G-P Gypsum Ccorporation.

B. All materials included in this Section shall be the products of one manufacturer, unless noted otherwise.

2.02 MATERIALS

A. Gypsum Board Materials: Maximum permissible lengths, Type X, fire rated, ends square cut, tapered edges on boards to be finished, unless otherwise indicated.

1. Gypsum Board: ASTM C36, type X, 5/8" thick.

3. Gypsum Shaft liner Board: ASTM C442, 1" thick.

4. Water Resistant Gypsum Backing Board: ASTM C 630 – ½" to 5/8" thickness.

5. Gypsum Sheathing Board: ASTM C79, moisture resistant board, 5/8" thick, tongue and groove edges.

6. Gypsum Backing Board ASTM 36 or ASTM 442.

7. Gypsum Ceiling Board: A gypsum core ceiling panel with additives to enhance the sag resistance of the core and surfaced with paper on front, back, and long edges.

   Thickness: 5/8" thick

B. Accessories:

1. Fasteners: Metal screws meeting ASTM C1002, minimum S-12 screws for 20 gage or heavier metal.

2. Trim: Coated steel, designed to be concealed in finished construction by tape and joint compound.

   a. Edge Trim: GA-216 "L", "LK" of "LC".

   b. Corner Beads: Manufacturer's standard metal bead.

c. Control Joints: **[Manufacturer's standard metal with removable strip.] [Back to back edge trim, backed with 4 mil thick polyethylene air seal.]**

3. Aluminum Moldings: Fry Corp., or equal, extruded aluminum, profiles indicated on Drawings, natural finish, longest lengths possible to minimize joints.

4. Joint Materials: Reinforcing tape, joint compound, adhesive, water: ASTM C475.

   a. Fiberglass reinforcing tape where joining to existing plaster**.**

5. Compressible Tape: Closed cell neoprene tape, adhesive back, width and thickness as required for gap.

6. Electrical Box Sealer (Non-Fire-Rated Partitions): Lowry's "Electrical Box Pads" (Van Nuys, CA) no known equal, 6" x 8" x 1/8" thick, resilient sealer pads. Use to seal back and sides of all junction boxes recessed in acoustically-rated partitions.

7. Backing Rod: Closed-cell polyethylene foam.

PART 3 EXECUTION

3.01 EXAMINATION

A. Coordinate with other trades for provisions for insulation, refractory fiber, blocking, metal backing plates, special anchors, access doors and panels, and ensure that such items are properly located and installed prior to installing wall finish.

B. Inspect surfaces, backing, framing and furring systems to receive gypsum board, and report any discrepancies. Starting work implies acceptance of existing conditions.

3.02 PREPARATION

A. Protect adjacent areas and air distribution systems from gypsum dust.

B. Verify that plenum surfaces above gypsum board ceilings are free of dirt, dust and loose construction soil, that construction is otherwise complete and equipment installed, and that surfaces and openings are sealed to prevent leaks, prior to commencing installation of ceiling assembly.

3.03 INSTALLATION

A. Gypsum Board: Install in accordance with ASTM C840 and manufacturer's recommendations.

1. Fasten gypsum board with screws.

2. Install gypsum board plumb, level, and plane.

3. Erect gypsum board with edges and ends occurring over firm bearing.

4. Locate joints on opposite sides on different studs. Joints are not permitted at corners of openings unless detailed otherwise.

5. Double Layer Applications: Gypsum backer board is permitted for first layer. Secure second layer to first with adhesive and sufficient mechanical support to hold in place. Apply adhesive in accordance with manufacturer's recommendations.

   a. Ensure joints of second layer do not occur over joints of first layer.

6. Water Resistant Gypsum Board: Treat cut edges and holes with sealant.

7. Tolerances: Maximum variation of finished surface from true flatness 1/8" in 10 feet.

   a. Gypsum Board To Receive Ceramic Tile Finish: As above, and 1/16" in one foot. Install gypsum board plumb with square corners so that tile may be installed without variations in joints.

8. Gypsum Sheathing: Erect panels horizontally; stagger vertical joints by at least two stud spacings. Install horizontal tongue-and-groove joint with groove on bottom of panels to prevent water from migrating to interior.

10. Finish: Comply with GA-214.

    a. Level 1: At areas concealed from view. At fire rated assemblies, comply with requirements of approved fire rating designs.

    b. Level 2: At tile substrates, and areas not indicated to be painted.

    c. Level 3: Where heavily textured wall coverings are indicated.

    d. Level 4: Smooth finish. Where flat paints or light wall coverings are indicated.

    e. Level 5: Smooth finish. Where gloss, semi-gloss, enamel or non-textured flat paints are specified, at severe lighting conditions, and at clean rooms.

B. Accessories:

1. Control Joints: Place consistent with lines of building spaces and as directed by Project Manager. Provide at the following conditions:

   a. Where system abuts structual elements.

   b. At dissimilar materials.

   c. Partitions exceeding 30'-0" lengths.

   d. Ceilings exceeding 50 feet or 2,500 square feet.

e. Wings of “L”, “T” or “U” shaped ceilings.

2. Corner Beads: Place at external corners; use longest practical lengths.

3. Edge Trim: Place where gypsum board abuts dissimilar materials.

4. Tape, fill and sand exposed joints, edges, corners and openings to produce surface ready to receive finishes. Feather coats onto adjoining surfaces.

C. Air Sealed Systems:

1. Fill all gaps with compressible neoprene tape where gypsum board systems abut window mullions or other surfaces inaccessible for sealant work.

2. Seal the backs of electrical boxes in sound insulated construction airtight using specified resilient sealer pads.

3. All seals shall be concealed

D. Remove and replace defective work.

E. Protect gypsum board work from moisture and contaminants.

3.04 WASTE MANAGEMENT

Separate clean waste gypsum and metal products from contaminants for recycling in accordance with the Waste Management Plan in Section 01570 - Construction Waste Management. Do not include plastic, asphalt impregnated gypsum board or gypsum board coated with glass fiber, paint or other finish. Place in designated area and protect from moisture and contamination.

END OF SECTION

SECTION 09510

ACOUSTICAL CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Drawings and general conditions of Contract, including General and Supplementary Conditions and Divisions-1 Specification sections apply to work of this section.

1.2 SUMMARY

A. Section Includes:
   1. Acoustical ceiling panels.
   2. Exposed grid suspension system.
   3. Wire hangers, fasteners, main runners, cross tees, and wall angle moldings.

B. Related Sections:
   1. Section 09250 - Gypsum Board
   2. Section 09120 - Suspension System Framing and Furring for Plaster and Gypsum Board Assemblies
   3. Division 15 Sections - Mechanical Work
   4. Division 16 Sections - Electrical Work

C. Alternates
   1. Prior Approval: Unless otherwise provided for in the Contract documents, proposed product substitutions may be submitted no later than TEN (10) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability and approved products will be set forth by the Addenda. If included in a Bid are substitute products which have not been approved by Addenda, the specified products shall be provided without additional compensation.
   2. Submittals which do not provide adequate data for the product evaluation will not be considered. The proposed substitution must meet all requirements of this section, including but not necessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); Underwriters' Laboratories Classified Acoustical performance; Panel design, size, composition, color, and finish; Suspension system component profiles and sizes; Compliance with the referenced standards.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. ASTM A 1008 Standard Specification for Steel, Sheet, Cold Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
   2. ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
   3. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.
   4. ASTM C 423 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
   5. ASTM C 635 Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.

6. ASTM C 636 Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
7. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.
8. ASTM E 1414 Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum.
9. ASTM E 1111 Standard Test Method for Measuring the Interzone Attenuation of Ceilings Systems.
10. ASTM E 1264 Classification for Acoustical Ceiling Products.
11. ASTM E 1477 Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.
12. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
13. ASTM E 119 Standard Test Methods for Fire Tests of Building Construction and Material.

1.4 SUBMITTALS

A. Product Data: Submit manufacturer's technical data for each type of acoustical ceiling unit and suspension system required.
B. Samples: Minimum 6 inch x 6 inch samples of specified acoustical panel; 8 inch long samples of exposed wall molding and suspension system, including main runner and 4 foot cross tees.
C. Shop Drawings: Layout and details of acoustical ceilings. Show locations of items which are to be coordinated with, or supported by the ceilings.
D. Certifications: Manufacturer's certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards. For acoustical performance, each carton of material must carry an approved independent laboratory classification of NRC, CAC, and AC.
E. If the material supplied by the acoustical subcontractor does not have an Underwriter's Laboratory classification of acoustical performance on every carton, subcontractor shall be required to send material from every production run appearing on the job to an independent or NVLAP approved laboratory for testing, at the architect's or owner's discretion. All products not conforming to manufacturer's current published values must be removed, disposed of and replaced with complying product at the expense of the Contractor performing the work.

1.5 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer.
B. Fire Performance Characteristics: Identify acoustical ceiling components with appropriate markings of applicable testing and inspecting organization.
    1. Surface Burning Characteristics: As follows, tested per ASTM E 84 and complying with ASTM E 1264 for Class A products.
        a. Flame Spread: 25 or less
        b. Smoke Developed: 50 or less
C. Handle acoustical ceiling units carefully to avoid chipping edges or damaged units in any way.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.

B. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content.
C. Handle acoustical ceiling units carefully to avoid chipping edges or damaged units in any way.

1.7 PROJECT CONDITIONS

A. Space Enclosure:

HumiGuard Plus Ceilings: Building areas to receive ceilings shall be free of construction dust and debris. Products with HumiGuard Plus performance and hot dipped galvanized steel, aluminum, or stainless steel suspension systems can be installed up to 120 F (49 C) and in spaces before the building is enclosed, where HVAC systems are cycled or not operating. Cannot be used in exterior applications where standing water is present or where moisture will come in direct contact with the ceiling.

1.8 WARRANTY

A. Acoustical Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace acoustical panels that fail within the warranty period. Failures include, but are not limited to:
    1. Acoustical Panels: Sagging and warping
    2. Grid System: Rusting and manufacturer's defects
B. Warranty Period:
    1. Acoustical panels: Ten (10) years from date of substantial completion.
    2. Grid: Ten (10) years from date of substantial completion.
    3. Acoustical panels and grid systems with HumiGuard Plus or HumiGuard Max performance supplied by one source manufacturer is fifteen (15) years from date of substantial completion.
C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

1.9 MAINTENANCE

A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.
    1. Acoustical Ceiling Units: Furnish quality of full-size units equal to 5.0 percent of amount installed.
    2. Exposed Suspension System Components: Furnish quantity of each exposed suspension component equal to 2.0 percent of amount installed.

Part 2-PRODUCTS

2.1 MANUFACTURERS

A. Ceiling Panels:

1. Armstrong World Industries, Inc.

2.2.0 ACOUSTICAL CEILING UNITS

A. Acoustical Panels Type ACT-1:

1. Surface Texture: Fine
2. Composition: Mineral Fiber
3. Color: White
4. Size: 12in X 12in X 3/4in
5. Edge Profile: Beveled K4C4 for interface with compatible Armstrong grid.
6. Noise Reduction Coefficient (NRC): ASTM C 423; Classified with UL label on product carton, 0.60.
7. Ceiling Attenuation Class (CAC): ASTM C 1414; Classified with UL label on product carton, 35
8. Articulation Class (AC): ASTM E 1111; Classified with UL label on product carton N/A.
9. Flame Spread: ASTM E 1264; Class A (UL)
10. Light Reflectance (LR): ASTM E 1477; White Panel: Light Reflectance: 0.86.
11. Dimensional Stability: HumiGuard Plus - temperatures up to 120 degrees F and high humidity excluding only exterior use,
    use over standing water, and direct contact with moisture .
12. Mold/Mildew Inhibitor: The front and back of the product have been treated with BioBlock, a paint that contains a special
    biocide that inhibits or retards the growth of mold or mildew, ASTM D 3273.
13. Acceptable Product: Cirrus Tile & Lay-In, 580, as manufactured by Armstrong World Industries.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer's printed recommendations. (Exception: HumiGuard Max Ceilings)

3.2 PREPARATION

A. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less than half width units at borders, and comply with reflected ceiling plans. Coordinate panel layout with mechanical and electrical fixtures.
B. Coordination: Furnish layouts for preset inserts, clips, and other ceiling anchors whose installation is specified in other sections.
    1. Furnish concrete inserts and similar devices to other trades for installation well in advance of time needed for coordination of other work.

3.3 INSTALLATION

A. Adhesive: Subcontractor shall install ceiling tile by glue-up method to drywall using acoustical tile cement.
B. Wall Moldings: Shall be slip-on molding with 15/16" flange as follows:
    a. 1/2" thick, Item #7841
    b. 5/8" thick, Item #7842
    c. 3/4" thick, Item #7843
C. Accessories: To assist in leveling tiles use 1/16" thick fiber spline approximately 3" long at each corner

3.4 ADJUSTING AND CLEANING

A. Replace damaged and broken panels.
B. Clean exposed surfaces of acoustical ceilings, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION

SECTION 09616

AcoustiCORK™ Products Suggested Specifications

Part 1 - GENERAL

1.01 Related Work:
Drawings and general provisions of the contract including General and Supplemental Conditions and Divisions 1 Specification Sections apply to the work of this section.

Part 2 - PRODUCT

2.01 Manufacturer: Amorim Industrial Solutions, Trevor, Wisconsin. Phone: 800-255-2675; Fax: 262-862-2500. Website: www.acousticorkusa.com

A. Product: 6mm AcoustiCORK™ R60 underlayment. Product shall consist of pure granulated cork combined with a polyurethane resin binder. Product to be furnished in 48" wide continuous rolls, 100 linear feet long, or 4' x 6' sheets and 6mm thick, ± .010” tolerance. Density shall be a minimum of 11.4 lbs. per cubic foot and not to exceed 13 Lbs. per cubic foot.

B. Product: 1/2" AcoustiCORK™ S130 underlayment. Product shall consist of pure granulated cork combined with a polyurethane resin binder. Product to be furnished in 24" x 36" x 1/2" sheets, ± .010” tolerance. Density shall be a minimum of 11.8 Lbs. per cubic foot and not to exceed 13.6 Lbs. per cubic foot.

2.02 SYSTEM PERFORMANCE

A. Acoustical: Product shall be tested for acoustical values in accordance with ASTM E90-90 and E492-90 for STC and IIC values respectively. Testing of acoustical values shall be conducted by an independent laboratory accredited by the U.S. Dept. of Commerce, National Voluntary Laboratory Accreditation Program.

B. Structural: Product shall be tested for structural and deflection performance in accordance with ASTM C627-88, and shall have a minimum of a residential construction rating.

C. Thermal Resistance: Product shall be tested for thermal resistance in accordance with ASTM C 177-85 and shall have a minimum "R" value of 3.125 (per inch of thickness).

D. Limited 10 Year Warranty: Manufacturer warrants AcoustiCORK™ Products to free of defects in material and workmanship appearing within ten (10) years from date of installation. If a defect covered by this warranty is proven to exist, AcoustiCORK™ Products will replace or at its option, refund the cost of

the defective material. Such replacement or refund will be AcoustiCORK™ Products only responsibility and the purchaser's sole remedy in connection with the defective material. AcoustiCORK™ Products will not be responsible for the cost of removal of the defective material or finished floor installed over it, replacement of finished floor installed over defective material or installation associated therewith. AcoustiCORK™ Products will also have no responsibility for replacement of or refund for warranted material damaged by (1) installation which is sub-standard or performed contrary to manufacturer's instructions and/or recommendations, (2) accident or abuse, or (3) irregularities of the subfloor, (4) hydrostatic pressure (5) or acts of God.
To make a warranty claim contact:
AcoustiCORK™ Products at 800-255-2675 or write PO Box 25, Trevor, Wisconsin 53179.

Part 3 – EXECUTION

3.01. Installation: In accordance with manufacturer's recommended installation instructions for appropriate floor construction and in compliance to ANSI A 108.1 A,B,C; and A108.4 or A 108.5 depending upon method of installation.

A. Subfloor shall be properly sloped, structurally sound, level and clean. All subfloor work shall be in accordance with recommended installation procedures as provided for various floor system details as published by the Tile Council of America or the National Wood Flooring Association or as specified by the American National Standards Institute (ANSI).

B. Install AcoustiCORK™ B60, a precut 3/4" wide, 6mm thick perimeter isolation barrier vertically around the perimeter of the entire floor including any openings in the subfloor installation. Remove the release liner from the self-adhesive backing and place flat against the wall flush to the floor. After positioning, press the isolation barrier firmly into place at all wall or vertical partitions surrounding the perimeter area using AcoustiCORK™ underlayments. Never mechanically fasten the isolation barrier with screws, nails or staples as this will severely diminish the acoustical value of the sound rated floor system. After the floor is installed and grouted, trim the isolation barrier 1/4" below the finished floor surface. Caulk the trimmed areas with a bead of non-hardening acoustical sealant flush to the finished floor.

C. Cut 6mm AcoustiCORK™ to desired length and install directly over the subfloor or place 1/2" sheets in place tight to the perimeter isolation barrier. Depending on the subfloor and method of installation, either glue the AcoustiCORK™ to the subfloor with a multipurpose, latex based ceramic tile adhesive (Type I organic), or with wood flooring, using the same adhesive that will be used to bond the finished floor to the AcoustiCORK and roll the AcoustiCORK removing all trapped air. Loose lay when an overlay or floating floor system is used. Be sure to butt cork tightly to the isolation barrier already

installed. Joints shall be butted together tightly. Never mechanically fasten the cork to the subfloor, as this will severely diminish the acoustical values of the system.

D. For ceramic tile installations, a bond coat of dry set mortar or latex-modified Portland cement mortar shall be used conforming to ANSI A- 118.1 and A-118.4.

E. Tile and marble shall be standard grade in compliance to ANSI A137.1 and have a breaking strength of not less than 250 pounds.

END OF SECTION

SECTION 09650

VINYL COMPOSITION TILE

PART 1 GENERAL

1.01 This section shall conform and be complementary to the drawings and general provisions of the contract, including General and Supplementary Conditions and other Division 1 specification sections. In no way shall any part of this section alter or waive any part of those conditions.

1.02 Scope of work covered by this section is all work shown on the plans or reasonably inferred therefrom for the complete installation of resilient flooring.

1.03 Provide each type of resilient flooring and accessories as produced by a single manufacturer, including recommended primers, adhesives, sealant, and leveling compounds.

1.04 SUBMITTALS:

A. For initial selection of colors and patterns, submit, prior to above, samples in form of actual sections of resilient flooring, including accessories, showing full range of colors and patterns available, for each type of resilient flooring required.

B. Submit 6 copies of manufacturer's recommended maintenance practices for each type of resilient flooring and accessories required.

C. After completion of work, submit replacement materials from same manufactured lot as materials installed, as follows:

For tile flooring, one box for each 50 boxes, or fraction thereof, for each type, size, and color installed.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS:

Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include the following:

Commercial Floor Tile
Congoleum Corporation, P.O. Box 3127, Mercerville, NJ 08619
Phone: (609) 584-3000, FAX: (609) 584-3518
Web site: http://www.congoleum.com

2.02 MATERIALS:

A. Vinyl Composition Floor Tile
Choices, Alternatives, Selections and Special Effects non-asbestos vinyl composition floor tiles in 1/8" gauge. Base and accent color extend through the thickness of the product. All tiles are 12" x 12" and packed 45 sq. ft. per carton with an approximate weight of 63 lbs.

B. Standards
Applicable Standards:
- ASTM F 1066, Composition 1, Class 2
- SS-T-312b, Type IV, Composition 1
- MIL STD-1623D for Deck Covering (Choices, Alternatives only)

Fire Test Data:
- ASTM E 648; NFPA-253; Critical Radiant Flux - 0.45 watts/cm² or greater
- ASTM E 662; NFPA-258; NBS Smoke Density - 450 or less

Recommended Load Limit:
- 125 psi

C. Colors and Patterns
Choices, Alternatives, Selections or Special Effects color number _____ (give color number).

D. Adhesives
Provide Congoleum AD-42 Clear Thin-Spread Adhesive.

E. Leveling Compound
Portland cement-latex patching compound.

PART 3 EXECUTION

3.01 PREPARATION:

A. The subfloor surface must be clean, dry, smooth, level, structurally sound, and free of extraneous materials including grease, wax, paint, and adhesive residue.

B. Fill cracks, holes, and uneven areas with a portland cement-latex patching compound. Gypsum-based compounds and underlayments are not recommended by Congoleum for commercial flooring applications.

C. Concrete floors should be constructed, finished, and cured in accordance with the American Concrete institute (ACl) 302 "Guide for Concrete Floor and Slab Construction," Class 2 or 4, and have a minimum compressive strength of 3500 psi. On- and below-grade concrete floors must be constructed with an effective

moisture barrier. Conduct moisture tests to determine if concrete floors are sufficiently dry prior to installation. Allow new concrete to dry for at least 6 weeks before conducting moisture test.

D. Wood floors must be double-layer construction, a minimum 1" (25.6 mm) thick with at least 18" (457 mm) of well-ventilated air space below structural supports. Veneer plywood panels with the American Plywood Association (APA) trademark which include one of the following grade designations are suitable underlayments for resilient flooring: underlayment, underlayment A-C or B-C or C-C plugged, and C-C plugged exterior. Underlayment for resilient flooring must have a fully sanded surface and an exposure 1 or exterior exposure rating. Install APA-rated underlayment following the procedures outlined in the brochure titled "Installation and Preparation of Plywood Underlayment for Thin Resilient (Non-Textile) Flooring" (APA Form L335F).

E. Congoleum commercial tile may also be installed over properly prepared metal, terrazzo, ceramic tile, marble, and qualifying non-cushioned sheet vinyl or tile. For detailed information, refer to the brochure titled "Congoleum Commercial Flooring Manual" (M2483).

3.02 JOB CONDITIONS:

A. Maintain minimum temperature of 68° F in spaces to receive resilient flooring for at least 48 hours prior to installation, during installation, and for not less than 48 hours after installation. Store resilient flooring materials in spaces where they will be installed for at least 48 hours before beginning installation. Subsequently, maintain minimum temperature of 55° F in areas where work is completed.

B. Install resilient flooring and accessories after other finishing operations, including painting, have been completed.

3.03 INSTALLATION:

Refer to Congoleum Commercial Flooring Installation Manual (M2483) for complete detailed installation and subfloor recommendations.

A. Install Congoleum commercial tile over all properly prepared subfloors with Congoleum AD-42 Clear Thin-Spread Adhesive. Install tile from the same lot number in each room and adjoining area(s). Mix tiles of the same color from several different cartons to avoid shading. For best appearance, turn alternating tile 90° when installing a single color or style.

B. Avoid rolling loads and heavy traffic until tile is seated (minimum 48 hours). Thereafter, use plywood or hardboard to protect the floor when returning or moving furniture, appliances, or equipment.

3.04 CLEANING AND PROTECTION:

A. Initial Maintenance:

1. Allow adhesive to dry a minimum of 48 hours before washing or waxing the floor.

2. Remove scuffs and adhesive smears with a neutral cleaner as recommended by Congoleum.

3. Damp-mop with a dilute solution of Congoleum Commercial No-Rinse Cleaner and rinse with water. Avoid flooding the floor.

4. Allow floor to dry and apply three to five thin coats of Congoleum Commercial Floor Polish following all label instructions. Five coats are recommended in medium to heavy commercial applications.

5. Protect the floor with heavy kraft paper like FortiFiber Seekure® on construction sites where other trades are active. DO NOT USE ASPHALT SATURATED FELT OR PAPER.

B. Regular Maintenance:

1. Vacuum, sweep, or dust with an untreated mop, daily, to remove loose dirt and grit. Do not use sweeping compounds or oil treated mops.

2. Damp-mop floor regularly with a dilute solution of Congoleum No-Rinse Cleaner following label instructions. To remove heavy soil, use a slow speed floor machine equipped with a medium-grade, natural fiber scrubbing brush and a concentrated cleaner. Rinse floor after scrubbing.

3. To refurbish and restore the gloss, clean the floor and spray buff with a high speed floor machine (1000 to 1500 RPM) equipped with a white, tan, or red-colored buffing pad. A dilute solution (1 part polish/2 parts water) can be used for spray buffing.

4. After repeated spray buffing operations, additional coats of polish must be applied.

C. Periodic Maintenance:

1. Periodically, once or twice a year or as needed, strip the floor polish to avoid buildup.

2. Use a floor machine (170 to 330 RPM) equipped with a blue or green pad of a natural fiber, medium-grade scrubbing brush and a liquid stripping solution such

as Congoleum Stripper/Polish Remover following label instructions.

3. Use a wet/dry vacuum to remove the residual polish and stripping solution.

4. Rinse the floor thoroughly with a clean mop, changing water frequently. Allow to dry.

5. Re-apply two to five thin coats of floor polish.

END OF SECTION

SECTION 09650

Vinyl Cove Base Suggested Specifications

PART 1 - GENERAL

1.01 SUMMARY

A. Cove base for wall protection

1.02 SECTION INCLUDES

A. Vinyl Cove Base

1.03 REFERENCES

A. American Society for Testing and Materials (ASTM)

1.04 SYSTEM DESCRIPTION

A. Performance Requirements: Provide cove base that conform to the following requirements of regulatory agencies and the quality control of IPC Door and Wall Protection Systems, InPro Corporation.

1. Provide vinyl cove base complying with Federal Specification SS-W-40a, Type II.
2. Provide vinyl cove base complying with ASTM F-1861-98, Standard Specification for Resilient Wall Base.

1.05 SUBMITTALS

A. Product Data: Manufacturer's printed product data for each type of cove base specified.

B. Detail Drawings: Mounting details with the appropriate adhesives for specific project substrates.

C. Samples: Verification samples of cove base, 5" (127mm) long, of each type and color indicated.

D. Manufacturer's Installation Instruction: Printed installation instructions for cove base.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in unopened factory packaging to the jobsite.

B. Inspect materials at delivery to assure that specified product have been received.

C. Store in original packaging in a climate controlled location away from direct sunlight.

1.07 PROJECT CONDITIONS

A. Environmental Requirements: Products must be installed in an interior climate controlled environment.

1.08 WARRANTY

A. Standard IPC Limited Lifetime Warranty against material and manufacturing defects.

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. Acceptable Manufacturer/Distributors: IPC Door and Wall Protection Systems, InPro Corporation, PO Box 406 Muskego, WI 53150 USA; Telephone: 800-222-5556, Fax: 888-715-8407, Internet address: http://www.inprocorp.com

B. Substitutions: Not permitted

C. Provide all vinyl cove base and wall protection from a single source.

2.02 MANUFACTURED UNITS

A. Vinyl Cove Base

1. CB4125VR-(color #) 4" (102mm) x .125" (3mm) thick, roll
   CB4125VC-(color #) 4" (102mm) x .125" (3mm) thick, carton
   CB6125VR-(color #) 6" (152mm) x .125" (3mm) thick, roll
   CB6125VC-(color #) 6" (152mm) x .125" (3mm) thick, carton

Height: 4" (102mm) or 6" (152mm)
Length: 4", Cartons: 30 four foot pieces, rolls: 120 feet.
6", Cartons: 24 four foot pieces, rolls: 96 feet.
Thickness: .125" (3mm)
Finish: Low gloss, satin (matte)
Style: Coved
Corners: Factory made outside corners or job made corners.

2.03 MATERIALS

A. Vinyl: Cove base of .125" (3mm) thickness shall be manufactured from chemical and stain resistant flexible polyvinyl chloride.

2.04. FINISHES

A. Color of cove base to be selected by the architect from the IPC finish selection. Surface shall be low gloss, satin (matte).

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine areas and conditions in which the cove base systems will be installed.

1. Complete all finishing operations, including painting, before beginning installation of cove base system materials.

B. Wall surface shall be dry and free from dirt, grease and loose paint.

3.02 PREPARATION

A. General: Prior to installation, clean substrate to remove dust, debris and loose particles.

3.03 INSTALLATION

A. General: Locate the cove base as indicated on the approved detail drawing for the appropriate substrate and in compliance with the IPC installation instructions. Install cove base level and plumb at the height indicated on the drawings.

B. Cove Base Installation

1. Wall surface must be thoroughly dry, smooth and free from dirt, wallpaper, vinyl wallcovering, grease, old adhesives and other extraneous material. DO NOT apply directly over outside walls in direct contact with earth (such as unfurred basement walls) or over ceramic tile, metals or other impervious surfaces because poor adhesion may result. Maintain base, adhesive and room air at a uniform temperature of at least 70° F for 24 hours prior to, during and for 48 hours after installation. Rolled base should be unrolled and allowed to lie flat for 24 hours prior to installation to regain normal shape. Vinyl cove base MUST NOT be stretched.

2. Install factory formed corners first. Apply adhesive to the ribbed back and position the corner in place. Roll cove base corners with a hand roller to insure a secure bond.

3. Spread adhesive to the back of the base using a triangular notched trowel or cove base adhesive gun. Trowel notches should be 3/32" deep by 3/32" wide with 3/32" flats. If applying adhesive with a gun use a 3-hole nozzle for 4" base and a 5-hole nozzle for 6" base. Apply adhesive at least 1/4" from the top of the base is using a trowel and 1" from the top if using a gun so adhesive does not seep out as base is rolled.

4. Bond base within 20 minutes of adhesive application. Roll thoroughly with hand roller immediately after applying base. If roller is unavailable, wipe the base with a soft cloth, firmly pressing the base against the wall. Base applied to curved or irregular surfaces may require bracing.

If wall or floor is uneven, it may be necessary to trim edges before installing adjoining pieces of the base. Use a utility knife, cutting base from face to back.

5. Immediately remove excess adhesive from base or wall with water. Excess adhesive may leave a stain if not removed promptly.

3.04 CLEANING

A. At completion of the installation, clean surfaces in accordance with the IPC clean-up and maintenance instructions.

END OF SECTION

SECTION 09650/JOH

REDUCER STRIPS

PART 1 - GENERAL

1.01 Summary

A. Section includes: (Note to specifier: Edit list below to suit project requirements. Refer to Part 2 - Products for specific product selection)

1. Rubber floor tiles,
2. Rubber sports floor tiles,
3. Vinyl floor tiles,
4. Rubber sheet flooring,
5. Rubber entrance barrier matting,
6. Rubber entrance tiles,
7. Rubber stair treads,
8. Vinyl stair treads,
9. Vinyl stair nosings,
10. Bronze and Rigid PVC stair nosings,
11. Resilient wall base,
12. Resilient mouldings.

B. Related Sections: Other Specification Sections which directly relate to the work of the section include, but are not limited to, the following:

1. Concrete: Refer to Division 3 Concrete sections for cast-in-place concrete, concrete underlayments, slab surface tolerances, vapor barrier for applications on or below grade.

2. Wood Subflooring: Refer to Division 6 Carpentry section for wood subflooring and underlayments.

C. References (Industry Standards)

1. American Society for Testing and Materials (ASTM)

a. ASTM D-2047 - Static coefficient of friction.
b. ASTM D-2240 - Material hardness.
c. ASTM D-2859 - Test method for flammability of finished textile floor covering materials,
d. ASTM D-3389 - Resistance to tabor abrasion using H-18 wheels, 500 gram load, at 1,000 cycles.
e. ASTM E-84 - Test method of surface burning characteristics of building materials. (Steiner Tunnel Test) (Note: For wall or ceiling mounted materials only)
f. ASTM E-492 - Test method for noise reduction (impact insulation class).
g. ASTM E-648 - Test method for critical radiant flux of floor covering systems using a radiant energy source.
h. ASTM E-662 - Test method for specific density of smoke generated by solid materials.

i. ASTM F-710 - Practice for preparing concrete floors and other monolithic floors to receive resilient flooring.
j. ASTM F-925 - Test method for resistance to chemicals.
k. ASTM F-970 - Test method for static load limit.
l. ASTM F-1344 - Standard specification for rubber floor tile.
m. ASTM F-1514 - Test method for measuring heat stability.
n. ASTM F-1515 - Test method for measuring light stability.
o. ASTM F-1700 - Standard specification for solid vinyl floor tiles.
p. ASTM F-1860 - Standard specification for rubber sheet flooring with backing
q. ASTM F-1861 - Standard specification for resilient wall base.
r. ASTM F-1914 - Test method for measuring residual indentation.
s. ASTM F-2169 - Standard Specification for Resilient Stair Treads

2. National Fire Protection Association (NFPA)

a. NFPA 253 - Test method for critical radiant flux of floor covering systems using a radiant energy source.
b. NFPA 255 - Test method of surface burning characteristics of building materials (Steiner Tunnel Test).
c. NFPA 258 - Test method for specific density of smoke generated by solid materials.

3. Federal Specifications (Note: The following standards have been cancelled by the General Services Administration and replaced with new ASTM standards listed in Section C-1 above.)

a. FS RR-T-650 - Treads, Metallic and Nonmetallic, Skid Resistant.
b. FS SS-W-40a - Wall Base, Rubber and Vinyl Plastics.
c. FS SS-T-312b - Resilient Rubber Flooring

4. Other references

a. Americans with Disabilities Act - ADA.
b. California Disabled Access Regulations, Title 24, Section 3306.
c. American National Standards Institute - ANSI
1. ANSI - A117.1-1986 - Tactile Surface.

1.02 Submittals

A. Product Data: Submit manufacturer's product data, installation instructions, and maintenance recommendations for each material proposed for use.
B. Samples: Submit verification samples of each product specified in color selected for use.
C. Certificates: Attesting fire rated materials tested by independent testing agency and comply with specifications.
D. Material Safety Data Sheets (MSDS): Submit MSDS for each manufacturer's recommended adhesive proposed for use.

1.03 Quality Assurance

A. Manufacturer: Provide resilient flooring manufactured by a firm with a minimum of 10 years experience in the production of resilient flooring of

types equivalent to those specified. Manufacturers proposed for use, which are not named in the Section, shall submit evidence of ability to meet performance requirements specified not less than 10 days prior to bid date.

1. Color Matching: Provide resilient flooring products, including wall base and accessories, from one manufacturer to ensure color matching.

2. Manufacturer capable of providing field service representation

B. Installer's Qualifications: Installer experienced (minimum of 2 years) to perform work of this Section, who has specialized in the installation of work similar to that required for this project and who is acceptable to the product manufacturer. A list of flooring contractors is available on request, call 1-800-899-8916, Technical Service.

C. Materials: For each type of material required for the work of this Section, provide primary materials, which are the products of one manufacturer. Provide secondary materials, which are acceptable to the manufacturer of the primary materials. Comply with applicable regulations regarding VOC (volatile organic compound) content of the adhesives.

1.04 Delivery, Storage, and Handling

A. Deliver materials in labeled packages. Store and handle in strict compliance with manufacturer's recommendations. Protect from damage due to weather, excessive temperatures, and construction operations.

B. Deliver materials sufficiently in advance of installation to condition materials to room temperature prior to installation.

1.05 Project Conditions

A. Maintain a temperature of 70^0 F (21^0 C) plus or minus 5^0 F (3^0 C) in spaces to receive resilient flooring products. Specified temperature shall be maintained at least 48 hours before, during, and 48 hours after the installation.

1.06 Warranty

A. Provide manufacturer's standard one-year warranty against defects in manufacturing and workmanship of resilient flooring products. Provide manufacturer's standard limited wear warranty as specified under each product, as applicable.

PART 2 - PRODUCTS

2.01 Acceptable Manufacturer

A. Provide resilient flooring products manufactured by:

Johnsonite

16910 Munn Road, Chagrin Falls, Ohio 44023;
Telephone: 1-800-899-8916 or 1-440-543-8916; Fax 1-440-543-8920.
In Canada: 560 Weber Street North, Waterloo, Ontario N2L5C6 1-800-661-2162
Web site: www.johnsonite.com
E-mail: info@ johnsonite.com.

2.02 Resilient Glue-Down Transitional Mouldings (Select: "Product & Color")

A. Product Name: Johnsonite CTA-A:
1/4" (6.35 mm) carpet to 1/8" (3.17 mm) resilient materials.
1-3/8" (3.49 cm) cap with 1/8" (3.17 mm) wide support.

B. Product Name: Johnsonite CTA-C:
1/4" (6.35 mm) carpet to 1/8" (3.17 mm) resilient materials.
1" (2.54 cm) cap with 1/8" (3.17 mm) wide support.

C. Product Name: Johnsonite CTA-D:
5/16" (7.94 mm) carpet to 1/16" (1.57 mm) or 1/8" (3.17 mm) resilient materials.
1-5/8" (4.13 cm) cap with 1/4" (6.35 mm) wide support.
Anti-rock design for roller traffic.

D. Product Name: Johnsonite CCA:
5/16" (7.94 mm) carpet to 3/8" (9.53 mm) ceramic tile.
1" (2.54 cm) cap with 3/8" (9.53 mm) wide support.

E. Product Name: Johnsonite CWA:
5/16" (7.94 mm) carpet to 1/2" (12.7 mm) wood flooring.
1" (2.54 cm) cap with 3/8" (9.53 mm) wide support.

F. Material: Homogeneous composition of polyvinyl chloride, high quality additives, and colorants.

G. Length: 12' (3.66 m)

H. Warranty: 1 year.

I. Standard: Not applicable.

J. Abrasion Resistance: ASTM D-3389, H-18 wheel, 500 gram load 1000 cycles, gram weight loss not greater than 1.

K. Hardness: ASTM D-2240, Shore A, not less than 85.

L. Slip Resistance: Static coefficient of friction (James Machine), ASTM D-2047, not less than .6

M. Flammability: ASTM E-648; NFPA 253; result to be not less than .45 watts per square centimeter, Class 1.

N. Smoke Density: ASTM E-662; NFPA 258, smoke density less than 450.

O. Asbestos-Free: Products shall contain no asbestos.

P. Color: Select color (XX) from Johnsonite color palette.

2.03 Resilient Laminate Wood Flooring Transitional Mouldings
(Select: "Product & Color")

A. Product Name: Johnsonite CD-B1:
5/8" (15.9 mm) Pergo Publiq Wood Flooring to 5/8" (15.9 mm) ceramic, terrazzo, or similar hard surface materials. Designed specifically for straight, curved, or radius type installations.
(Note: This profile requires CDB or MT track base for installation.)

B. Product Name: Johnsonite DPT-A:
2-3/4" (7 cm) wide transition for laminate wood flooring to similar height hard surface materials. Can be used to address expansion requirements between laminate flooring sections. Designed specifically for straight, curved, or radius type installations.
(Note: This profile requires DPT-00-C track base for installation.)

C. Product Name: Johnsonite DPT-B:
3" (7.6 cm) wide transition for laminate wood flooring to resilient, carpet, and lesser height materials.
Designed specifically for straight, curved, or radius type installations.
(Note: This profile requires DPT-00-C track base for installation.)

D. Product Name: Johnsonite DPT-00-C:
3/4" (19 mm) wide flexible track base designed specifically for the installation of the DPT-A and DPT-B transitional profiles.

E. Product Name: Johnsonite DPT-D:
1-1/4" (3.18 cm) wide cap for finishing exposed laminate floor edges where normal wall termination is not available. (i.e.: sliding glass doors, glass walls, and similar surfaces.)

F. Product Name: Johnsonite DPT-FR:
4-3/4" (12 cm) wide reducer for transitioning from laminate wood flooring to the substrate.

G. Material: Homogeneous composition of polyvinyl chloride, high quality additives, and colorants.

H. Length: 12' (3.66 m), except DPT-FR = 4 ft. (1.2 m)

I. Warranty: 1 year.

J. Standard Not applicable.

K. Abrasion Resistance: ASTM D 3389, H-18 wheel, 500 gram load, 1000 cycles, gram weight loss not greater than 1.

L. Hardness: ASTM D-2240, Shore A, not less than 85.

M. Slip Resistance: Static coefficient of friction (James Machine), ASTM D-2047, not less than .6

N. Flammability: ASTM E-648; NFPA 253; result to be not less than .45 watts per square centimeter, Class 1.

O. Smoke Density: ASTM E-662; NFPA 258, smoke density less than 450.

P. Asbestos-Free: Products shall contain no asbestos.

Q. Color: Select color (XX) from Johnsonite color palette.

2.04 Resilient Reducer Mouldings (Select: "Product & Color")

A. Product Name: Johnsonite CRS-A:
1/4" (6.35 mm) butt-to reducer with 1-1/2" (3.81 cm) taper.
12 ft. (3.66 m) lengths - 120 ft. (36.58 m) per carton.

B. Product Name: Johnsonite CRS-B:
3/8" (9.53 mm) butt-to reducer with 1-1/2" (3.81 cm) taper.
12 ft. (3.66 m) lengths - 120 ft. (36.58 m) per carton.

C. Product Name: Johnsonite CRS-C:
3/16" (4.76 mm) butt-to reducer with 1" (2.54 cm) taper.

50' (15.24 m) lengths - 300 ft. (91.44 m) per carton.

D. Product Name: Johnsonite CRS-D:
1/2" (12.7 mm) butt-to reducer with 2" (5.08 cm) taper.
12 ft. (3.66 m) lengths - 120 ft. (36.58 m) per carton.

E. Product Name: Johnsonite CRS-E:
9/32" (7.14 mm) butt-to reducer with
2-1/2" (6.35 cm) taper.
12 ft. (3.66 m) lengths - 120 ft. (36.58 m) per carton.

F. Product Name: Johnsonite SSR-A:
Binder-Bar edging for 1/16" (1.57 mm) and
1/8" (3.17 mm) resilient materials with self-stick backing.
3' (.91 m) lengths - 66 ft. (20.12 m) per carton.

G. Product Name: Johnsonite SSR-B:
Same as SSR-XX-A, but without self-stick backing.
35' (10.67 m) coiled lengths - 70 ft. (21.34 m) per carton.

H. Product Name: Johnsonite SSR-C:
Binder-Bar edging for transitioning from .080" (2.03 mm)
to 1/8" (3.18 mm) resilient materials.
12 ft. (3.66 m) lengths - 480 ft. (146.3 m) per carton.

I. Product Name: Johnsonite RRS-A:
1/16" (1.57 mm) reducer with 1-1/8" (2.86 cm) taper.
3' (.91 m) lengths - 150 ft. (45.72 m) per carton.

J. Product Name: Johnsonite RRS-B:
.080" (2.03 mm) reducer with 1-1/8" (2.86 cm) taper.
3' (.91 m) lengths - 150 ft. (45.72 m) per carton.

K. Product Name: Johnsonite RRS-C:
1/8" (3.17 mm) reducer with 1-1/4" (3.17 cm) taper.
3' (.91 m) lengths - 150 ft. (45.72 m) per carton.

L. Product Name: Johnsonite RRS-D:
1/8" (3.17 mm) reducer with 1-1/4" (3.17 cm) taper.
25' (7.62 m) coiled lengths - 100 ft. (30.48 m) per carton.

M. Material: Homogeneous composition of polyvinyl chloride, high quality additives, and colorants.

N. Length 12' (3.66 m), except where noted above.

O. Warranty: 1 year.

P. Standard: Not applicable.

Q. Abrasion Resistance: ASTM D 3389, H-18 wheel, 500 gram load, 1000 cycles, gram weight loss not greater than 1.

R. Hardness: ASTM D-2240, Shore A, not less than 85.

S. Slip Resistance: Static coefficient of friction (James Machine), ASTM D-2047, not less than .6

T. Flammability: ASTM E-648; NFPA 253; result to be not less than .45 watts per square centimeter, Class 1.

U. Smoke Density: ASTM E-662; NFPA 258, smoke density less than 450.

V. Asbestos-Free: Products shall contain no asbestos.

W. Color: Select color (XX) from Johnsonite color palette.

PART 3 - EXECUTION

3.01 Examination

A. Verify that spaces to receive resilient materials are suitable for installation. Do not proceed with work until unsatisfactory conditions are corrected. Comply with manufacturer's recommendations including the following:

1. Substrates shall be clean and dry.
2. Substrates shall be free of depressions, raised areas, or other defects which would telegraph through the installed resilient material.
3. Temperature of resilient materials and substrate shall be within specified tolerances.
4. Moisture condition and adhesive bond tests shall be performed as specified.

B. For applications on concrete, verify curing, hardening, and sealing compounds have not been used. If there are any, do not proceed until compounds have been removed.

C. For applications on concrete slabs "on-grade or below grade", verify vapor barrier below slab was installed. If no vapor barrier was installed, do not proceed with work unless written acceptance of such conditions is received and submitted.

D. Perform moisture condition test in each major area. a minimum of 1 test per 1000 sq. ft. prior to installation. Moisture condition shall not exceed 3 pounds per 1000 sq. ft. per 24 hours in accordance with ASTM F-1869 Standard Test Method for Measuring Moisture Vapor Emission of Concrete Subfloor Using Anhydrous Calcium Chloride. Do not proceed with work until results of moisture condition tests are acceptable.

E. Perform adhesive bond test in each major area, minimum of 1 test per 1000 sq. ft., prior to installation. Examine after 72 hours to determine whether bond is solid and no moisture is evident. Do not proceed with work until results of bond test are acceptable.

3.02 Preparation

A. Comply with ASTM F-710 and manufacturer's recommendations for surface preparation. Remove substances incompatible with resilient flooring adhesive by method acceptable to manufacturer.

1. Concrete floors with steel troweled (slick) finish shall be properly roughened or sanded to ensure suitable adhesion.

2. Concrete floors with curing, hardening, or sealing compounds shall be abraded by mechanical methods, i.e.: bead blast, to remove compounds.

B. Fill all voids, cracks, and depressions with a trowel applied cementitious compound acceptable to the manufacturer. Remove projections and repair other defects to tolerances acceptable to the manufacturer.

C. Vacuum subfloors immediately prior to installation.

3.03 Installation

A. Resilient Flooring: Install resilient flooring in accordance with manufacturer's printed installation instructions.
Comply to the following:

1. Dry lay resilient flooring to provide equal size at perimeter. Adjust layout as necessary to eliminate resilient flooring which is cut to less than half full width.
2. Dry lay resilient flooring with arrows in same direction and running parallel.
3. Inspect dry laid installation and verify color match and any defects present. If color match is not correct or defects are present, do not proceed with the installation.
4. Install resilient flooring without cracks or voids at seams. Lay seams together without stress.
5. Extend resilient flooring into closets, alcoves, and similar openings.
6. Install reducer mouldings at exposed edges.
7. Do not install resilient flooring over building expansion joints.
8. Do not install damaged or defective resilient flooring.
9. Remove adhesive residue immediately, before it dries.

B. Resilient Stair Treads and Nosings: Install resilient stair treads and nosings in accordance with manufacturer's printed installation instructions.
Comply to the following:

1. Fill all cracks, voids, and repair step edges with manufacturer's recommended filler.
2. Apply manufacturer's recommended filler in nose of tread or nosing to eliminate voids between step edge and nose.
3. Install in longest practical lengths.
4. Tightly adhere nosing portion of tread or nosing directly to substrate. Do not overlap nosing portion of tread or nosing over resilient riser material.
5. Install risers and stringers in accordance with manufacturer's recommended printed installation instructions.

C. Resilient Wall Base: Install resilient wall base in accordance with manufacturer's recommended printed installation instructions.

D. Resilient Mouldings: Install resilient moulding in accordance with manufacturer's recommended printed installation instructions.

3.04 Maintenance

A. Do not perform manufacturer's recommended maintenance procedures until adhesive has fully cured, no sooner than 72 hours after installation.

B. Use only cleaning products recommended by the manufacturer.

C. Protect installed product from damage and construction operations and inspect immediately before final acceptance of project.

End of Section

(Angela Nudy)
SECTION 09655

RESILIENT SHEET FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. The installation of sheet flooring with backing and integral cove space.

1.02 RELATED SECTIONS

A. Section 09050- Interior/Exterior Finishes, Materials, and Finish Schedules: Color and Pattern.

B. Section 09679 – Resilient Base, Stair Treads, Accessories: Resilient base over base of equipment.

C. Section 09666 – Resilient Sheet Flooring: Heat Welded Seams

1.03 REFERENCES

A. ASTM E648-00- Crotoca; Radiant Flux for floor covering systems.

B. ASTM E662-01- Specific Optical Density of Smoke Generated by Solid Materials

C. ASTM F710-98- Preparing Concrete Floors and Other Monolithic Floors to Receive Resilient Flooring.

D. ASTM F1303-99- Sheet Vinyl Floor Covering with Backing.

E. RFCI- MRP- Moisture Related Problems Relevant to Resilient Floor Covering Installation

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver sheet flooring full width roll, completely enclosed in factor wrap, clearly marked with the manufacturer's number, type, and color, production run number and manufacture date.

B. Store materials in a weather tight and dry storage facility.

C. Store sheet flooring on end.

D. Protect from damage from handling, weather, and construction operation before, during and after installation.

1.05 ENVIRONMENTAL REQUIREMENTS

A. Cold Weather Requirements: IMIAC requirements.

PART 2 PRODUCTS

2.01 MATERIALS

A. Sheet Flooring- ASTM F1303 Type 2 Grade 1, minimal nominal thickness 2 mm and 1800 mm minimal width. Critical Radiant Flux- 045 watts per sq. cm or more, Class 1, ASTM E648

B. Adhesives- Water resistant type recommended by the sheet flooring manufacturer for the conditions of use

C. Base Cap Strip and Cove Strip- Extruded vinyl compatible with the sheet flooring, Cap Strip "J" shape with feathered edge flange approximately 25 mm, top designed to receive sheet flooring with 13 mm flange lapping top of flooring, Cove strip 70 mm radius.

D. Leveling Compound (For Concrete Floors)- Provide cementitous products with latex or polyvinyl acetate resins in the mix.

E. Primer (For Concrete Sub Floors)- As recommended by the adhesive or sheet flooring manufacturer.

F. Edge Strips- Extruded aluminum, mill finish, mechanically cleaned, 28 mm wide, 6 mm thick, bevel one edge to 3 mm thick, drill and counter edge strips for flat head screws.

G. Sealant- As specified in section Sealants and Caulking- compatible with sheet flooring.

PART 3 EXECUTION

3.01 INSTALLATION

A. Follow sheet flooring manufacturer's instructions for the installation for obtaining the specified results.

B. Install sheet in full coverage adhesives. Air pockets or loose edges will not be accepted. Trim sheet materials to touch in the length of intersection at pipes and vertical projections; seal joints at pipe with waterproof cement if needed.

C. Keep Joints to a minimum; avoid small filler pieces or strips. Follow manufacturer's recommendations for seams at butt joints; do not leave any open joints that would be readily visible from a standing position.

D. Installation of edge strips: Locate edge strips under center lines of doors unless otherwise indicated. Set aluminum strips in adhesive, anchor with lead anchors and stainless steel Phillips screws.

E. Installation of Cove Base: Set preformed filled strip to receive base. Install the base with adhesive; terminate exposed edge with the cap strip. Form internal and external corners to the geometric shape generated by the cove at either straight or radius corners. Solvent weld joints as specified for the flooring and seal cap strip to the wall with an adhesive type sealant. Provide integral base at intersection of floor and vertical surfaces. Provide sheet flooring and base schedule for room on floors and walls under and behind areas where casework and other equipment occurs, except where mounted in wall recesses.

3.02 FIELD QUALITY CONTROL

A. Clean small adhesive marks during application of sheet flooring and base before adhesive sets, excessive smearing will not be accepted. Keep traffic off sheet flooring for 24 hours after installation. Clean and polish material per flooring manufacturer's written recommendations. Where construction traffic is anticipated, cover sheet flooring with reinforced Kraft paper. Where protective materials are removed and immediately prior to acceptance repair any damage, re-clean sheet flooring and lightly re-apply polish/buff floor.

END OF SECTION

SECTION 09680

CARPET

PART 1 GENERAL

1.01 SECTION INCLUDES

A. This section includes carpet and installation.

1.02 RELATED SECTIONS

A. Division 3 sections for underlayment.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Comply with the Carpet and Rug Institute's CRI 104, Section 5: "Storage and Handling."

B. Deliver materials to Project site in factory wrappings labeled with manufacturer identification, brand name and lot number.

C. Store materials on site in factory wrappings away from weather, moisture, extreme temperatures and humidity

1.05 ENVIRONMENTAL REQUIREMENTS

A. Do not install until temperature and humidity conditions are and will be continuously maintained at values near those indicated for final occupancy.

PART 2 PRODUCTS

2.01 CARPET

A. Shaw Industries Inc., nylon fiber plush carpeting.

2.02 CARPET CUSHION

A. Shaw Industries Inc., "Soft Foundation Carpet Cushions" made from recycled bonded foam.

PART 3 EXECUTION

3.01 INSTALLATION

A. Comply with carpet manufacturers recommendations for seam locations and direction of carpet.

B. Maintain uniformity of carpet direction and lay of pile.

C. Cut and fit carpet to butt tightly to vertical surfaces and permanent fixtures.

3.02 PROTECTION

A. Comply with CRI 104, Section 15: “ Protection of Indoor Installation”

B. Provide final protection and maintain conditions in a manner that is acceptable to the manufacturer and installer.

END OF SECTION

Section 09720 and Section 09772

Wall Covering and Wall Panels

Part 1 General

1.01 Summary

A. This section includes the following types of wall coverings:

1. Wall Covering

2. Impact Resistant Sheeting

3. High Impact Panels

B. Related Sections: The following sections contain requirements related to this section:

1. Wall Protection Systems Section 10260

2. Kickplates and door protection; refer to section 08710 "Finish Hardware"

1.02 References

A. American National Standard Institute (ANSI)

B. American Society for Testing and Materials (ASTM)

C. Underwriters Laboratories (UL)

D. Society of Automobile Engineers (SAE)

1.03 Quality Assurance

A. Installer qualifications: Engage an installer who has not less than 3 years experience in installation of wall coverings/wall panels similar in complexity to those required for this project.

B. Manufacturer’s qualifications: Not less than 5 years experience in the production of specified products and a record of successful in-service performance.

C. Fire performance characteristics: Provide wall coverings with a UL label indicating that they are identical to those tested in accordance with UL-723 (ASTM-E84-98) for Class I characteristics listed below:

1. Flame spread: 20 or less

2. Smoke developed: 400 or less

D. Chemical and stain resistance: Provide wall coverings with chemical and stain resistance in accordance with ASTM D-1308.

E. Color Match: Provide wall coverings that are color matched in accordance with the following:

1. Delta E difference of no greater than 1.0 using the Hunter (Lab) Scale when matched under cool white fluorescent light.

F. Single source responsibility: Provide all components of the wall protection system manufactured by the same company to ensure compatibility of color, texture and physical properties.

1.04 Project Conditions

A. Materials must be stored flat in a clean and dry area where temperature shall be maintained above 50°F (10°C). Do not stand rolls on end.

B. Materials must be acclimated in an environment of 65° - 75°F (18° - 24°C) for at least 24 hours prior to beginning the installation.

Part 2 Products

2.01 Manufacturers

A. Furnish and install as detailed and scheduled on the drawings. C/S Acrovyn High Impact Wall Coverings/Wall Panels as manufactured by Construction Specialties, Inc., Muncy, PA; Mississauga, Ontario. Complete details, location schedules and material samples (including texture, color and pattern selection) shall be submitted to the architect for approval.

2.02 Materials

A. .030" Semi-Rigid Wall Covering Acrovyn Semi-Rigid Wall Covering shall be semi-rigid vinyl, .030" (.76mm) thickness with fabric backing and supplied in 54" x 20 yard rolls (1.37m x 18.29m). Available in (3) textures. Colors to be as indicat4d in the finish schedule from manufacturer's standard color range.

B. .040" High Impact Sheeting Acrovyn Wall Covering shall be rigid vinyl/acrylic .040" (1.02mm) thickness and supplied in 4' x 8' (1.22m x 2.44m) or 4' x 10' (1.22m x 3.05m) sheet sizes in Pebblette, Suede or Matte texture in (60) solid colors, (24) standard patterns and (3) woodgrains. (11) other textures are supplied in a maximum 43" x 114" (1.09m x 2.90m) sheet size.

C. .060" High Impact Sheeting .060" Impact Resistant Sheeting shall be rigid vinyl/acrylic .060" (1.52mm) thickness and supplied in 4' x 8' (1.22m x 2.44m) or 4' x 10' (1.22m x 3.05m) sheet sizes in standard Pebblette texture. Available in (60) colors.

D. High Impact Wall Panels (Beveled and Square Edge) Beveled panels shall be manufactured of .040" (1.02mm) thick vinyl/acrylic in one of (60) solid colors, (24) standard patterns, (3) woodgrains and (11) textures as selected. The vinyl/acrylic covering shall be factory bonded to the face of a 3/8 (9.53mm) thick high-impact fiberboard core, extending over the beveled edges on 4 sides. The backside of the panel to be laminated with a moisture resistant vapor barrier. Maximum size of a beveled panel shall be 43" x 114" (1.09m x 2.90m). Maximum size of a standard square edge panel shall be 46" x 118" (1.17m x 3.00m), available in (60) solid colors, (24) standard patterns, (3) woodgrains and (14) textures. All trim members to be vinyl/acrylic alloy, supplied in order to coordinate (or contrast) with panel color. Adhesive and mounting hardware supplied by the manufacture.

E. Door and Frame Protection Acrovyn Door Frame Protection shall be formed from .040" or .060" thick semi-rigid vinyl/acrylic sheeting. Available in custom formed shapes as shown on architectural details in one of (32) standard and (28) optional colors. Some models available in (24) standard patterns.

2.03 Accessories

A. Trims and Adhesive: Acrovyn Wall Covering shall be furnished as a complete packaged system, containing all trim members, primers and adhesive. Primer and adhesive materials shall be water based and non-hazardous.

Part 3 Execution

3.01 Installation

A. Temperature at the time of installation must be between 65° - 75°F (18° - 24°C) and be maintained for at least 48 hours after the installation to allow for proper adhesive set up.

B. Relative humidity shall not exceed 80%.

C. Do not expose wall covering to direct sunlight during or after installation. This will cause the surface temperature to rise, which in turn will cause bubbles and delamination.

D. Do not install Acrovyn Wall Covering in any rooms that will experience more than a 20°F (12°C) temperature change.

E. Installation shall be in accordance with manufacturer's printed installation instructions.

3.02 Cleaning

A. General: Immediately upon completion of installation, clean wall covering/wall panels and accessories in accordance with manufacturer's recommended cleaning method.

B. Remove surplus materials, rubbish and debris resulting from installation as work progresses and upon completion of work.

END OF SECTION

SECTION 09940

WOOD FINISHES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Wood Stain and Finish.

1.02 QUALIFICATIONS

A. All materials, unless otherwise indicated, shall be applied in accordance with its current printed directions.

1.03 SUBMITTALS

A. Upon request, the contractor shall provide samples prepared in advance with the specified materials which, when approved, shall be the standards of finish to be provided.

1.04 DELIVERY, STORAGE, AND HANDLING

A. All materials shall be delivered in their original unopened containers bearing the manufacturer's name, brand name, and directions of use.

B. All Containers shall be kept tightly closed when in storage, stored at moderate temperatures, and protected from damage by tampering and exposure to the elements.

1.05 ENVIRONMENTAL CONDITIONS

A. During cold weather, thermostatically controlled heat shall be provided to maintain 55 degrees F minimum temperature during and after application until building is occupied. Unvented gas or oil heaters shall not be used to provide heat. Adequate ventilation shall be provided at all times for proper drying.

PART 2 PRODUCTS

2.01 MATERIALS

A. Specify surface treatment and finish materials.

2.02 MIXING AND EQUIPMENT

A. Mix texture finish products with water only as directed by manufacturer. Do not overdilute. Use equipment of a size and type to assure acceptable results.

PART 3 EXECUTION

3.01 SURFACE PREPARATION

A. All surfaces, including joint compound applications, filling treatments, and patching treatments, shall be dry, clean, and sound.

B. Remove oils, grease, parting materials and other deposits from surfaces. Finish rough areas to provide a uniform texture and surface. Grind down any ridges or other protrusions.

3.02 APPLICATION

A. Apply in as many coats as are needed to provide the necessary finish.

B. Apply at a coverage rate not to exceed directions printed on container. Apply material to blend uniformly and cover fully without starved spots or other evidence of thin application. Provide uniform texture without application patterns. Remove any texture droppings or overspray from walls, windows, and floor, leaving room clean for following trades.

END OF SECTION

SECTION 10810

Toilet Accessories

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Toilet room, lavatory, and shower accessories.

1.02 RELATED SECTIONS

A. Section 09300 - Tile.

B. Section 10250 - Service Wall Units.

C. Section 10260 - Wall and Corner Guards.

D. Section 09260 - Gypsum Board Assemblies

1.03 REFERENCES

A. Americans with Disabilities Act Accessibility Guidelines.

B. ASTM A 240/A 240M - Standard Specification for Heat-Resisting Chromium and Chromium-Nickel Steel Plate, Sheet, and Strip for Pressure Vessels.

C. ASTM A 554 - Standard Specification for Welded Stainless Steel Mechanical Tubing.

D. ASTM C 1036 - Standard Specification for Flat Glass.

E. ASTM F 446 - Standard Consumer Safety Specification for Grab bars and Accessories Installed in the Bathing Area.

1.04 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's product data for products specified, indicating selected options and accessories.

C. Shop Drawings:
1. Plans: Locate each specified unit in project.
2. Elevations: Indicate mounting height of each product.
3. Details: Indicate anchoring and fastening details, required locations and types of anchors and reinforcement, and materials required for installation of specified products.

D. Verification Samples: Two sample chips of each specified color and finish.

E. Quality Assurance Submittals:
   1. Manufacturer's printed installation instructions for each specified product.
   2. Documentation of Manufacturer's Qualifications, specified in 1.5 of this Section.

F. Closeout Submittals: Warranty, issued and executed by manufacturer, and countersigned by Contractor.

1.05 QUALITY ASSURANCE

G. Manufacturer Qualifications: Minimum five (5) years documented experience producing products specified.

1.06 DELIVERY, STORAGE, AND HANDLING

H. Ship products in manufacturer's standard protective packaging with vinyl coating on exposed surfaces.

I. Storage and Protection: Store products in manufacturer's protective packaging until installation.

1.07 SEQUENCING

J. Supply locations, dimensions, and other pertinent details for use by list in 1.2, RELATED SECTIONS.

1.08 WARRANTY

K. Manufacturer's standard warranty against defects in product workmanship and materials.

L. Manufacturer's 15-year warranty against silver spoilage of mirrors.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers: ASI-American Specialties, Inc.; 441 Saw Mill River Road, Yonkers NY 10701-4913; ASD. Tel: (914) 476-9000, Fax: (914) 476-0688.

B. Supply all products from a single manufacturer.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

D. Substitutions: Not permitted.

2.02 MATERIALS

A.- Stainless Steel Sheet: ASTM A 240/A 240M, Type 304.

2.03 TOILET ACCESSORIES

A. Toilet Paper Holder TA-____: Model _____.

B. Robe Hook TA-____: Model _____.

C. Heavy Duty Towel Hook TA-____: Model _____.

D. Soap Dish TA-____: Model _____.

E. Shower Curtain Rod TA-____: Model _____.

F. Shower Curtain TA-____: Model _____, with Model _____ hooks.

G. Shower Seat TA-____: Model _____.

H. Medicine Cabinet TA-____: Model _____.

2.04 MIRRORS

A. Mirror TA-___: Model _____.
1. Frame: Angle.
2. Frame: Channel.
3. Mirror: Plate glass.
4. Mirror: Tempered glass.
5. Mirror: Metal.
6. Mirror: Polycarbonate (Lexan(tm)).
7. Mirror: Acrylic (Plexiglas(R)).
8. Mirror: Laminated glass.
9. Shelf.
10. Size: As indicated on drawings.
11. Finish: No.4 satin stainless steel.

B. Angle Mirror Frames: 18 gauge stainless steel, formed to 3/4 inch by 5/8 inch angle; heliarc-welded corners, No. 4 satin finish; concealed "H" type mounting bracket with tamper-resistant fasteners.

C. Channel Mirror Frames: 20 gauge stainless steel, formed to 1/2 inch by 1/2 inch by 1/2 inch channel; No. 4 satin finish; concealed mounting brackets with tamper-resistant fasteners.

D. Plate Glass Mirror: 1/4 inch thick polished plate glass, ASTM C 1036, Type I, Class 1, quality No. 1 mirror select; silver-coated, hermetically sealed with uniform electrolytically-deposited copper plating.

E. Tempered Glass Mirror: 1/4 inch thick polished tempered glass, two coats silver, hermetically sealed with uniform electrolytically-deposited copper plating, backpainted with waterproof coating.

F. Metal Mirror: Stainless steel, Type 304, No. 8 finish.

G. Polycarbonate Mirror: 1/4 inch thick polycarbonate sheet ("Lexan"), silver-coated, sealed against silver spoilage.

H. Acrylic Mirror: 1/4 inch thick acrylic sheet ("Plexiglas"), silver-coated, sealed against silver spoilage.

I. Laminated Glass Mirror: Two sheets heat-treated 3/32 inch thick float glass laminated with 1/16 inch thick clear polyvinyl interlayer, two coats silver, hermetically sealed with uniform electrolytically-deposited copper plating, backpainted with waterproof coating.

J. Shelves: 18 gauge stainless steel, No. 4 satin finish, formed to 5 inches deep with return and hemmed edges; spot-welded to mirror frame and with gussets at corners.

2.05 GRAB BARS

A. Grab Bars: Comply with ASTM F 446 from ASTM A 554 stainless steel tubing, 18 gauge, Type 304; formed 1-1/2 inch radius return to wall at each end; heliarc-welded to minimum 11 gauge stainless steel flange.

B. Grab Bars: Series _____.

1. Peened finish.

2. Sizes and configurations: As indicated on drawings.

3. Sizes and configurations: As indicated in Schedule at end of section.

4. Grab Bar TA-____: Series _____, Type _____.

C. Concealed Mounting Flanges: Stainless steel, 3 inch diameter by 1/2 inch deep, with 13 gauge steel tenon plate for concealed attachment, using three set screws.

D. Snap-on Mounting Flanges: Stainless steel cover, 22 gauge, 3 inch diameter by 1/2 inch deep, snaps over 1/8 inch thick stainless steel mounting flange.

E. Exposed Mounting Flange: Stainless steel, 1/8 inch thick, 3 inch diameter, with 3 countersunk screw holes.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions:

1. Prepared openings are sized and located in accordance with shop drawings.

2. Reinforcement and anchoring devices are correct type and are located in accordance with shop drawings.

B. Installer's Examination:

1. Installer shall examine conditions under which construction activities are to be performed, then submit written notification if such conditions are unacceptable.

2. Transmit two copies of installer's report to Architect within 24 hr of receipt.

3. Installation activities before unacceptable conditions have been corrected is prohibited.

4. Installation indicates installer's acceptance of conditions.

3.02 INSTALLATION

A. Install toilet accessories plumb and level in accordance with shop drawings and manufacturer's printed installation instructions.

B. Locate toilet accessories at heights specified by Americans with Disabilities Act.

3.03 CLEANING

A. Remove manufacturer's protective vinyl coating from sight-exposed surfaces 24 hours before final inspection.

B. Clean surfaces in accordance with manufacturer's recommendations.

3.04 PROTECTION OF INSTALLED PRODUCTS

A. Protect products from damage caused by subsequent construction activities.

B. Field repair of damaged product finishes is prohibited; replace products having damaged finishes caused by subsequent construction activities.

END OF SECTION

SECTION 12350

CABINETS AND COUNTERTOPS

PART 1 GENERAL

1.01 Summary

A. The scope of this specification is to cover the design, construction and installation of the kitchen unit(s) as provided by Dwyer Compact Kitchens, 418 N. Calumet Ave., Michigan City, IN, 46360-5019.

1.02 Regulatory Requirements

A. Electrical Components shall be listed by Underwriters laboratories, Inc. (UL).
B. Gas Appliances shall be Canadian Standards Association (CSA) designed certified.
C. Wood cabinets shall carry the Kitchen Cabinet Manufacturers Association (KCMA) certified cabinet seal; and meet or exceed the recommended minimum construction and performance standards as outlined in the American National Standards Institute (ANSI) ANSI/KCMA A161.1-1990.
D. Kitchen units for the physically challenged shall meet New York City Local Law 58/87, California Title 24 and NSI A117.1 specifications for accessibility.
E. Refrigerators shall meet or exceed all Federal Department of Energy and/or applicable state energy consumption standards.

1.03 Submittals

A. Dwyer shall furnish rough-in drawings with layout of kitchen detailing the location of the appliances and cabinet sizes as well as electrical and plumbing locations.
B. Samples of components, finishes and hardware shall be furnished at the discretion of the owner, architect or their agent.

1.04 Warranties

A. Full One-Year Warranty
Dwyer Kitchens shall have a full one-year warranty in which the owner shall be provided, at no additional charge, parts and service in the owner's place of business to repair or replace any part of the kitchen that fails because of a manufacturing defect while in use in the United States.
B. Additional warranties (U.S. Installations only)
    1. Steel cabinets shall have a five-year warranty on cabinets and doors. Parts and labor for one full year, parts only for additional four years.
    2. Aluminum cabinets shall have a ten-year warranty on cabinets and doors. Parts and labor for one full year, parts only for an additional nine years.
    3. Porcelain and stainless steel countertops shall have a five-year warranty. Parts and labor for one full year, parts only for an additional four years.
    4. With complete steel or aluminum Dwyer kitchens, the refrigerator system and other appliances, excluding the free-standing icemakers, shall have a five-year warranty. The owner shall be provided, at no additional charge, parts and service in the owner's place of business to repair or replace any part of the refrigeration system (the compressor, condenser, evaporator, drier and all connecting tubing) or other appliance that fails because of a manufacturing defect while in use in the United States for the first year, parts only for additional four years.

PART TWO-PRODUCTS

2.01 Porcelain Countertop with Integral Sink Bowl

A. Porcelain Countertop Construction
Shall be finished in acid-resistant porcelain enamel. Countertop base metal shall be one-piece seamless 14-gauge vitreous enameling steel and shall have an embossed drain board. Vitreous enameling steel is cold rolled from pure iron ingots specifically for porcelain enameling and has a textured surface for superior coating adherence. Vitreous enameling steel conforms to ASTM A-424 and is certified to have carbon content of less than or equal to 0.008%.

B. Back wall shield shall be textured steel as standard.
C. Integral Sink Bowl
Shall be 12-1/2" x 17-3/4" x 6-1/2" [318 mm x 451 mm x 165 mm] (5-1/4" [133 mm] deep on HC sinks). The drain shall be 3-1/2" [89 mm] dia.
D. Optional Countertop Finishes
Information and availability of optional stainless steel, laminate and Corian countertop finishes shall be found in the options section that follows.

2.02 Single Lever Faucet

A. Shall be single-handle chrome finish faucet with limited swing spout that controls water flow within the confines of the bowl.

2.03 Basket Strainer

A. The 3-1/2" [89 mm] (2" [51 mm] on 30" kitchen) stainless steel basket strainer shall be furnished with a 6" x 1-1/2" [152 mm x 38 mm] diameter tail piece. (HC units shall be furnished with a 7" [178 mm] angle, 1-1/2" [38 mm] diameter tail piece.)

2.04 Steel Cabinets with Textured Steel, Thermofoil, High Pressure Laminate or Stainless Steel Fronts

A. Textured steel doors and drawer fronts shall be constructed of 22-gauge textured steel. The doors and drawers shall be reinforced and sound-deadened.
B. Thermofoil doors shall be a ¾" thick 16-mil cabinet door that is practically indistinguishable from expensive hardwood. Thermofoil is hypoallergenic and comes in a wide variety of colors and design options. Thermofoil features a stain and scratch-resistant surface.
C. High pressure laminate doors and drawer fronts shall be .030" [.76 mm] high pressure laminate on front and back of 5/8" [16 mm] industrial-grade particleboard, with a 90 degree wrap and 5/16" [8 mm] radius on sides. Top and bottom to have .020" [.51 mm] PVC edging.
D. Stainless steel doors and drawer fronts shall be 20-gauge (type 304) chrome nickel stainless steel with a No. 4 satin polish. The doors and drawers shall be reinforced and sound-deadened.
E. Drawer guides shall be epoxy coated with nylon rollers providing a positive stop.
F. Hinges shall be concealed, self closing and adjustable.
G. Shelves shall have rolled fronts and shall be adjustable.
H. Handles shall be Eurostyle bail handle.
I. Cabinet Construction
    1. Wall cabinets shall be constructed with flush double bottoms.
    2. Sides of baked enamel cabinets shall be constructed of 20-gauge steel.
    3. Sides of stainless steel cabinets shall be constructed of 20-gauge stainless steel.

2.05 Aluminum Cabinets

A. All cabinet boxes shall be constructed using heavy gauge .063 aluminum. Aluminum shall be 5052 alloy offering superior corrosion resistance, formability, and impact resistance. Tensile strength range 31,000 to 44,000 psi. Conforms to Federal Specification QQ-A250/8 and ASTM B-209.
B. Cabinet boxes shall be fabricated to a maximum tolerance of 1/16" and plug welded. All cabinets shall be frameless design and feature flush bottoms. Each hinge attachment point shall be reinforced using a #62121811125 RIVNUT EZ threaded insert by Bollhoff Co. The rivnut insert shall be swaged into each attachment point at time of cabinet fabrication and will provide full depth thread contact for each hinge fastener. Shelves shall be reinforced with hemmed edges, and shall be fully adjustable.
C. Cabinet metal preparation shall consist of a cleaning operation that uses a two-step detergent-acid bath. After cleaning, a powder epoxy finish is applied to all surfaces of the cabinet by an electro-static application method. Cabinet shall be exposed to a baking process to smooth and

"set" the finish. Cabinet boxes carry a ten-year warranty against defects in material or workmanship.

D. Thermofoil door and drawer fronts shall have rigid thermofoil, heated and applied with top pressure and bottom vacuum. Finish shall be as selected from manufactures standard and applied, without seams, to front and edge surface of double refined medium density fiberboard. The backing is white thermo-fused melamine. Door design shall be as selected from manufacturers standard designs. Doors shall exceed ANSI/KCMA specifications and carry a five-year warranty. Optional fronts include aluminum, stainless steel, and laminates. Laminate fronts carry a one-year warranty.

2.06 Wood Cabinets (Light Oak, Medium Oak, Natural Oak, Bleached Maple, Carmel Maple, Natural Maple, Cherry Burgundy, Cherry Spice and Cherry Natural)

A. Face frames shall be constructed of 3/4" [19 mm] solid wood.
B. Shelves shall be adjustable and constructed of 3/4" [19 mm] particleboard with wood grain vinyl laminated sides and PVC edge banded on exposed edges.
C. Drawer boxes shall be 4-sided with 1/2" [13 mm] particleboard front, back and sides and 1/4" [6 mm] particleboard bottom. All exposed surfaces will be wood grain vinyl laminated.
D. Drawer fronts shall be constructed of 3/4" [19 mm] solid wood and edged to match door frames.
E. Doors shall be constructed of a 3/4" [19 mm] solid wood frame with mortise and tenon joints and fixed solid wood insert panel secured into frame groove, glued and power stapled.
F. Cabinet shall be constructed of 3/8" [10 mm] particleboard top, bottom and end panels with wood grain vinyl laminate on both sides. Back panels are 3/8" [10 mm] particleboard with wood grain laminate on interior surface. Toe boards are 3/8" [10 mm] particleboard and roller-coated with a brown finish.
G. Hinges shall be adjustable and self-closing.

2.07 Laminated Melamine Cabinets

A. Shall be available in framed or frameless construction. Shall be available with melamine or thermofoil doors. Cabinet top, bottom, end panels and shelves shall be constructed of particleboard vinyl laminated on both sides and PVC edged banded on exposed edges. Backs shall be particleboard with vinyl laminate on interior surface. Cabinet components are glued and doweled under pressure for strength and squareness. Toe boards shall be particleboard with vinyl laminate surface and PVC edge banded on ends.
B. Drawer boxes shall be constructed of 1/2" [13 mm] particleboard front, back and sides with vinyl laminate facings and PVC edge banded exposed edges. Bottom will be 1/4" [6 mm] with vinyl laminate on one side.
C. Doors and drawer fronts shall be constructed of 5/8" [16 mm] medium density particleboard laminated with melamine on both sides.
D. Hinges shall be fully concealed, six-way adjustable and open 110º.
E. Cabinet pulls shall be supplied and shall require installation.

2.08 5.3 cu. ft. Removable Undercounter Refrigerator/Freezer

A. Shall have a net capacity of 5.3 cu. Ft.
B. Features
    1. The frozen food compartment shall be manual defrost and keep ice cream frozen.
    2. The fresh food compartment shall have a separate evaporator (w/cycle defrosting).
    3. The refrigerator shall include an interior light, a large clear crisper, adjustable thermostat and door storage.
    4. The refrigerator shall be ADA height and can be used in recessed applications
    5. The refrigerator shall be available in white or black and can be trimmed to match any Dwyer cabinetry.
C. Refrigerator dimensions: 23.625" [600mm] wide, 25.5" [648mm] deep, 32.75" [832mm] high.
D. U.L. listed. Plug-in appliance. Wired for 120 volt A.C., 60 Hz. Requires 15 Amp. grounded circuit.

2.09 6.1 cu. ft. Removable Undercounter Refrigerator

A. Shall have a net capacity of 6.1 cu. ft. [0.17 cu. m.] and a net shelf area of 10.3 cu. ft. [0.96 cu. m.]. The short-term, pre-frozen food compartment capacity shall be 30 pounds [13.6 kg].
B. Features
    1. Condenser shall be fan-cooled.

2. The refrigerator shall have three (3) full-width shelves and three (3) shelves on door, push-button defrost, interior light and two (2) flex-grid ice cube trays.
3. The cold control shall be mounted in the interior of the refrigerator cabinet.
4. The short-term pre-frozen food compartment is not a freezer and is subject to this limitation. Compartment shall make ice, but shall not freeze fresh foods, provide long term frozen food storage or keep ice cream frozen.
5. The refrigerator shall be available in White or Almond and can be trimmed to match any Dwyer cabinetry.

C. U.L. listed. Plug-in appliance. Wired for 120 volt A.C., 60 Hz. Requires 15 Amp. grounded circuit.

2.10 2.9 cu. ft. Refrigerator/Freezer

A. Shall have a net capacity of 2.1 cu. ft. [0.06 cu. m.] and a freezer capacity of 0.75 cu. ft. [0.02 cu. m.].
B. Features
1. The refrigerator and freezer shall have separate doors that provide storage areas.
2. The refrigerator shall have adjustable temperature control.
3. The refrigerator shall have two slide-out shelves and a glass covered vegetable crisper/fruit keeper.
4. The freezer section shall be frost-free and shall be capable of storing frozen ice cream.
5. Euro-style non-trimmable door.
6. Available in White or Black.

C. U.L. listed. Plug-in appliance. Wired for 120 volt A.C., 60 Hz. Requires 15 Amp. grounded circuit.

2.11 4.8 cu. ft. Refrigerator/Freezer

A. Shall have a net capacity of 4.8 cu. ft. [0.14 cu. m.] with a fresh food section capacity of 3.46 cu. ft. [0.1 cu. m.] and freezer capacity of 1.38 cu. ft. [0.04 cu. m.]. The shelf area shall be 6.4 cu. ft.[0.60 cu. m.].
B. Features
1. The refrigerator and freezer shall have separate doors that provided storage areas.
2. The refrigerator shall have adjustable temperature control.
3. The refrigerator shall have two (2) adjustable wire shelves and a glass covered vegetable crisper/fruit keeper.
4. The freezer section shall be frost-free and shall be capable of storing frozen ice cream.
5. Euro-style non-trimmable door.
6. Available in White or Black.

C. Refrigerator dimensions: 18.5" [470mm] wide, 22.25" [565mm] deep, 45.75" [1162mm] Ht.
D. U.L. listed. Plug-in appliance. Wired for 120 volt A.C., 60 Hz. Requires 15 Amp. grounded circuit.

2.12 10.3 cu. ft. Upright Refrigerator/Freezer Frost Free 2 Door

A. Shall have a net capacity of 10.3 cu. ft. [0.29 cu. m.] with a fresh food section capacity of 7.95 cu. ft. [0.22 cu. m.] and freezer capacity of 2.36 cu. ft. [0.07 cu. m.]. The shelf area shall be 14.0 cu. ft.[1.30 cu. m.].
B. Features
1. The refrigerator shall have two (2) adjustable wire shelves, four (4) door racks, glass covered crisper, reversible doors and interior light.
2. The refrigerator shall have adjustable temperature control.
3. The freezer section shall be frost-free and shall be capable of storing frozen ice cream.

C. Refrigerator dimensions: 23.625" [600mm] wide, 26.75" [679mm] deep, 58.75" [1492mm] Ht.
D. U.L. listed. Plug-in appliance. Wired for 120 volt A.C., 60 Hz. Requires 15 Amp. grounded circuit. Energystar Qualified.

2.13 12 cu. ft. 2-Door Upright Refrigerator/Freezer

A. Shall have a net capacity of 11.9 cu. ft. [0.34 cu. m.] and a net shelf area of 14.0 cu. ft. [1.30 cu. m.]. Freezer section shall have 100-pound frozen food storage capacity.
B. Features
1. Refrigerator shall be frost-free.
2. The liner shall be one-piece seamless construction.
3. Refrigerator shall have two (2) adjustable-height shelves, full-width crisper, two (2) door shelves, egg storage and butter keeper.

4. Optional icemaker kit.
5. Refrigerator doors shall be textured steel available in White.

C. U.L. listed. Plug-in appliance. Wired for 120 volt A.C., 60 Hz. Requires 15 Amp. grounded circuit.

2.14 Surface Electric Cooking Units

A. Dwyer Two-Element Ceran Cooktop
   1. Dwyer's 2-burner Ceran cooktop features two 1200-watt radiant elements (six & eight inch) under black Ceran glass top.
   2. Electrical requirements: 240 volts A.C., 60 Hz. 2.4 Kw 10 Amp. Hard-wired appliance requires 15 Amp. breaker on grounded circuit.
B. Dwyer Three-Element Ceran Cooktop
   1. Dwyer's 3-burner Ceran cooktop features two 1200-watt six inch radiant elements and one 1200 watt eight inch element under black Ceran glass top.
   2. Electrical requirements: 240 volts A.C., 60 Hz. 3.6 Kw 15 Amp. Hard-wired appliance requires 20 Amp. breaker on grounded circuit.

2.15 Surface Gas Cooking Units

A. Two- (2) burner drop-in gas cooktop shall be finished in White or Black and shall offer solid-state pilotless ignition, lift out burner bowls, cast iron grates and porcelain burner box.
B. Electrical requirements: Plug-in appliance requires 120 volts A.C., 60Hz on 15 Amp. grounded, polarized circuit.

2.16 Electric Range / Oven

A. E21 (21" [533mm]) range shall have 3 integral coil burner elements. Two 6" [152mm] and one 8" [203mm]. Oven on all electric ranges shall be constructed using a one-piece porcelain liner with rounded-corner interior. Oven door shall have broiler stop. Oven shall have two (2) tubular heat elements for either bake or broil operation. Oven cabinet shall have a built-in utensil drawer. Available in White, Almond, Tropic Grey, Black, and Stainless Steel finish. Available for 208 volts A.C. or 240 volts A.C. operation.
B. E21 range electrical requirements: 208 volts A.C., 60Hz 4.5Kw 21.6 Amp. **Hard-wired appliance** on 30 Amp. grounded circuit. 240 volts A.C., 60Hz 6.3Kw 26.3 Amp. **Hard-wired appliance** on 30 Amp. grounded circuit.
C. E18 (18" [457mm]) range shall have 2 integral 6" [152mm] coil burner elements. Oven on all electric ranges shall be constructed using a one-piece porcelain liner with rounded-corner interior. Oven door shall have broiler stop. Oven shall have two (2) tubular heat elements for either bake or broil operation. Oven cabinet shall have a built-in utensil drawer. Available in White, Almond, Tropic Grey, Black, and Stainless Steel finish. Available for 208 volts A.C. or 240 volts A.C. operation.
D. E18 range electrical requirements: 208 volts A.C., 60Hz 3.0Kw 14.4 Amp. **Hard-wired appliance** on 20 Amp. grounded circuit. 240 volts A.C., 60Hz 4.0Kw 16.7 Amp. **Hard-wired appliance** on 20 Amp. grounded circuit.
E. E21 (21" [533mm]) electric oven for use as stand-alone oven only or for use with Dwyer brand Ceran 2-burner & 3-burner surface mount cooktops. Oven shall be constructed using a one-piece porcelain liner with rounded-corner interior. Oven door shall have broiler stop. Oven shall have two (2) tubular heat elements for either bake or broil operation. Oven cabinet shall have a built-in utensil drawer. Available in White, Bisque, Tropic Grey, Black, and Stainless Steel finish. Available for 208 volts A.C. or 240 volts A.C. operation.
F. E21 Oven electrical requirements: 208 volts A.C., 60Hz 1.3Kw 6.2 Amp. **Hard-wired appliance** on 10 Amp. grounded circuit. 240 volts A.C., 60Hz 1.65Kw 6.9 Amp. **Hard-wired appliance** on 10 Amp. grounded circuit. (Cooktop requirements listed separately.)
G. E18 (18" [457mm]) electric oven for use as stand-alone oven only or for use with Dwyer brand Ceran 2-burner surface mount cooktops. Oven shall be constructed using a one-piece porcelain liner with rounded-corner interior. Oven door shall have broiler stop. Oven shall have two (2) tubular heat elements for either bake or broil operation. Oven cabinet shall have a built-in utensil drawer. Available in White, Bisque, Tropic Grey, Black, and Stainless Steel finish. Available for 208 volts A.C. or 240 volts A.C. operation.
H. E18 Oven electrical requirements: 208 volts A.C., 60Hz 1.3Kw 6.2 Amp. **Hard-wired appliance** on 10 Amp. grounded circuit. 240 volts A.C., 60Hz 1.65Kw 6.9 Amp. **Hard-wired appliance** on 10 Amp. grounded circuit. (Cooktop requirements listed separately.)

2.17 Range Hood

A. All models with burners shall have 24" [610 mm] (30" [762 mm] on 30" kitchens) ductless exhaust hood with light (ducted hood optional). The hood shall be wired for 120 volts A.C., 60Hz. **Hard wired** to 15 Amp. gounded circuit.

2.18 Colors and/or Finishes

A. Steel cabinets with textured steel fronts shall be available in Almond, White, Tropic Grey and Black as standard colors. Optional custom colors shall be available upon request.
B. Steel cabinets with thermofoil fronts shall be available in a variety of standard colors.
C. Steel cabinets with high-pressure laminate fronts shall be available in Almond, White, Tropic Grey and Black as standard colors. Optional custom colors are available upon request.
    1. High Pressure laminate doors shall be available in Wilsonart, Pionite and Formica standard post forming grade decorative laminates.
D. Steel cabinets with stainless steel fronts shall be available in Almond, White, Tropic Grey and Black as standard colors. Optional custom colors are available upon request.
E. Wood cabinets shall be available in Light Oak, Medium Oak, Natural Oak, Bleached Maple, Carmel Maple, Natural Maple, Cherry Burgundy, Cherry Spice and Natural Cherry.
F. Laminated Melamine Cabinets shall be available in White.
G. Porcelain countertops shall be available in Bisque, White, Silver, Black, Hunter Green and Midnight Blue. Optional custom colors are available upon request.
H. Laminate countertops shall be available in any standard post-forming grade finish of Formica, Wilsonart or Pionite color. Offset countertops for accessible kitchens shall be self-edged.
I. 16 ga. stainless steel countertops with No. 4 brushed satin finish shall have an integral sink bowl and embossed drain board.

PART THREE-EXECUTION
3.01 Installation

A. Dwyer kitchen units shall be installed in accordance with Dwyer furnished drawings and installation instructions. Dwyer kitchen units shall be shipped as separate components.

OPTIONS
16 ga. Stainless Steel Countertop with Integral Sink Bowl

A. Shall be constructed of one-piece seamless 16-gauge (type 304) chrome nickel stainless steel throughout with a No. 4 satin polish. Back wall shield shall be textured steel as standard.
B. Integral Stainless Steel Sink Bowl
    1. The countertop shall have an embossed drain board. Integral sink bowl shall be 14 gauge, type 304 stainless steel and shall be 12-1/2" x 17-3/4" x 6-1/2" [318 mm x 451 mm x 165 mm] (5-1/4" [133 mm] deep on HC sinks). The drain shall be 3-1/2" [89 mm].
C. Drop In Stainless Steel Sink Bowl
    1. Standard Drop In Stainless Steel Sink Bowl is 20 gauge stainless steel undercoated, overall size 14" x 22", bowl size 11-½" x 17" and bowl depth 6".
    2. Large Drop In Stainless Steel Sink Bowl is 22 gauge stainless steel, overall size 17" x 21-1/2", bowl size 14" x 15-3/4" and bowl depth 6-1/2".

Laminate Countertop

A. Countertop shall be standard post-forming (self-edge for H.C. units) grade finish Formica®, Pionite® or Wilsonart® high-pressure laminate meeting or surpassing N.E.M.A. standards and Federal specifications. Particle board shall be grade ANSI 1-M-3 with density of 45 pfc, internal bond 100 psi, screw holding of 250 pounds (face), and screw holding of 225 pounds (edge).
B. Drop-in sink bowl shall be available in Almond, White, Black or Silver porcelain enamel or in Stainless Steel. Specify finish when ordering.

DuPont Corian® Countertop

A. Solid polymer countertop shall be cast, filled acrylic. Shall be a solid, non-porous surface. Shall be available in all standard Corian colors with either integral or under mount sink bowl. Back wall shield shall coordinate with cabinet finish.

24" Dishwasher

A. Dishwasher shall have 2-level wash with soil-free filter system.
B. 5 Cycles shall include normal wash, light wash/low, rinse only and pots and pans, plate warmer.
C. Dishwasher shall be wired for 120 volt, 60 cycle, single-phase, A.C. 11 amp rated load, 15-amp circuit required. Hard wired.

18" Dishwasher

A. Dishwasher shall have a water usage using the normal cycle is 5.2 gallons.
B. Dishwasher shall have a soft food disposer, 3-sided sound insulation, 2-wash levels, 4 cycles, rinse-aid dispenser and detergent dispenser.
C. Cycles shall include pots and pans, heavy wash, normal wash, light wash and rinse hold.
D. Dishwasher shall be wired for 120 volt, 60 cycle, single phase, A.C. 10 amp rated load, 15-amp circuit required. Hard wired.

24" Freestanding Gas Range with Standard Oven

A. Ranges shall have standard ovens, electronic pilotless ignition, porcelain-enameled oven door, recessed, lift-up cooktop and round burner grates.

24" Freestanding Electric Range

A. Range shall have one 8" and three 6" plug-in heating elements with chrome drip bowls, lift-up cooktop with porcelain-enameled subtop and two heating element "ON" indicator lights. Plug-in appliance.

20" Countertop Microwave Oven

A. Shall be a .07 cu. ft. microwave oven.
B. Microwave shall have electronic touch controls with 99-minute, 99-second timer, a removable glass turntable, auto weight defrost cycle and 700 watt output.
C. Microwave shall be wired for 120 volts A.C., 60Hz 1.36 KW and 15 amps. Plug-in appliance.

30" Over-the-Range (OTR) Microwave Oven

A. Shall be a 1.6 cu. ft. microwave oven.
B. Microwave shall have a built-in no-duct exhaust hood with sensor for heat build-up over cooktop to automatically turn on exhaust hood. Shall also have a filter and light, electronic digital display with clock, time defrost, minute/second timer, 10 power levels and 1000 watt output.
C. Microwave shall be wired for 120 volts A.C., 60Hz, 1.48 KW, 15 amps. Plug-in appliance.

24" Microwave Oven with under cabinet Mounting Kit

A. Shall be a 1.0 cu. ft. microwave oven.

B. Microwave shall have an electronic digital display with clock, minute/second timer, time defrost, 10 power levels and 800-watt output.
C. Microwave shall be wired for 120 volts A.C., 60Hz 1.3 KW, 15 amps. Plug-in appliance.

30" Over-the-Range (OTR) Combination Convection/Microwave Oven

A. Shall be a 1.4 cu. ft. combination convection/microwave oven.
B. Microwave shall have a built-in no duct exhaust hood, filter and light, electronic digital display/clock, convection cook, convection broil, combination cook, microwave power level, minute/second timer, program review, vent fan and light and 900-watt output. Bilingual display (English/Spanish). Plug-in appliance.
C. Microwave shall be wired for 120 volts A.C., 60Hz 1.58 KW, 15 amps. Plug-in appliance.

15" Automatic Undercounter Icemaker

A. Shall produce up to 50 lbs. of clear, hard ice in a 24-hour period.
B. The icemaker shall have a cube thickness control to adjust ice thickness from 3/8" to 5/8". Shall have easy access to storage bin with ice scoop. Shall have clean touch controls, electronic clean cycle, and door activated ice compartment spill-guard.
C. Installation of the icemaker requires a cold water supply of 1/4" O.D. soft copper tubing with a shut-off valve and either a gravity-drain system or condensate pump to carry the water to an existing drain.

Garbage Disposer

A. Shall be continuous feed and feature hardened stainless steel grinding elements. Shall have 1/2 HP permanently lubricated motor with overload protector and manual reset. 120 volt, 6.7 amps. Hard wired. Requires separate 120 volts A.C., 60Hz. Requires 20-amp. electric control switch to be supplied by contractor.

Instant Hot Water Dispenser

A. Shall have 60-8 oz. Cup per hour capacity. Water temperature shall be adjustable from 150(F to 190(F. (Requires special faucet). 115 volts A.C. 60Hz, 750 W, 6.5 amps. Plug-in appliance.

Cutlery Drawer/Cutting Board

A. Shall mount in under sink cabinet of steel under sink cabinet only. Shall include a pull-out divided tray on nylon rollers and a slide-out cutting board.

Automatic Coffeemaker

A. Shall be a three-pot coffeemaker constructed of stainless steel. Can be used with a dedicated 1/4" water connection or can be used with the built-in pour over feature. 120 volts A.C., 60Hz, 1800 W, 15 amps. Plug-in appliance.

Side Wall Shields

A. For kitchens with porcelain or stainless steel sink tops, sidewall shields shall be finished in textured steel baked enamel with stainless steel trim that shall conform to sink top and can be installed after kitchen is installed. Color of sidewall shield shall be coordinated with color of back

wall shield. For kitchens with laminate countertops, sidewall shield shall be furnished in laminate. Shall be color coordinated with color of back wall shield.

Gooseneck Faucet (Bar Type)

A. Shall be polished chrome finished with dual handles. High tubular swivel spout with high arching reach. 4" center installation.

Faucet with Wrist Blade Handles

A. Shall be polished chrome finished with dual wrist-blade handles. ADA approved.

European Style Faucet

A. Shall be a faucet with pull-out spray. Available in white/white, black/black, bone/bone.

Removable Undersink Cabinet

A. Back of steel cabinet shall be open for access to plumbing and electrical connections and shall be constructed to allow removal without disconnecting plumbing. Back of wood and laminate cabinets shall require modification in field by contractor for access to plumbing and electrical connections and to allow for removal without disconnecting plumbing.

Fluorescent Light Fixture

A. 18" long and shall be provided with a grounded convenience outlet and on-off switch. Requires a 15 watt fluorescent light bulb (bulb not included). 120 volt, 60 cycle, 1.5 amps. Hard wired.

SECTION 16500

LIGHTS AND SWITCH

PART 1 – GENERAL

1.01 SUMMARY

A. Scope: Provide, install and test all switches, dimmers and related devices as specified herein for the areas indicated on the drawings, specifications, and load schedules.

B. Related Sections: Section 16580 (Ballasts), Section 16570 (Dimming Systems).

1.02 REFERENCES

A. UL 20, UL 1472, CSA, NOM, ISO 9001

1.03 SYSTEM DESCRIPTION AND OPERATION

A. Permanently installed, wallbox mounted switches and dimmers

B. Permanently installed, wallbox mounted fan-speed controls

C. Permanently installed, wallbox mounted receptacles

D. Permanently installed, wallbox mounted data, voice and cable jacks

E. Screwless, seamless wallplates

1.04 SUBMITTALS

A. Submit manufacturer's standard catalog data giving all application, wiring, and installation information on basic components and wallplate kits. Provide test data and/or samples as required to demonstrate conformance with PART 2 of this specification.

1.05 QUALITY ASSURANCE

A. Manufacturer shall have a minimum of 10 years continuous experience in manufacturing wallbox dimming products.

B. Dimmers, switches and Fan-speed controls shall be UL listed, CSA and NOM approved specifically for each required load (i.e., tungsten, electronic low voltage transformer, magnetic low voltage transformer, and fluorescent). Manufacturer shall provide file card or certificate upon request. Universal load-type dimmers shall not be acceptable.

C. Manufacturer shall maintain ISO 9001 certification and provide a copy of the certificate upon request.

1.06 WARRANTY

A. All devices shall be covered by a minimum one-year warranty.

PART 2 – EQUIPMENT

2.01 ACCEPTABLE MANUFACTURERS

A. Lutron Electronics Co., Inc.

B. Unless otherwise noted, all basic components (dimmer, fan-speed control, switch, receptacle, telephone jack and cable TV jack) and wallplate kits shall be provided by one manufacturer.

2.02 EQUIPMENT

A. Controls Lutron Nova Ta Style

1. Performance

a. Dimmers shall provide full-range, continuously variable control of light intensity.

b. Controls shall fit a 1 inch wide, 1.5 inch tall wallplate opening with a vertical linear-slide. Controls shall be thin profile with no exposed heatsink/yoke. Unless otherwise specified, controls shall have a matte finish.

c. Controls shall provide a vertical slider allowing the light level or fan speed to be set by the user. "Slide-to-off" controls shall use the vertical slider to turn the control on and off. "Preset" dimmers shall provide the on/off function independent of the dimmer slider position. This preset function shall be provided as a push on/push off switch integral to the slider knob and visibly distinct from the slider. For preset dimmers, when the lights are on, the slider shall change the light level and when the lights are off, the slider shall preselect the light level the lights will turn on to.

d. Control on/off function must be accomplished utilizing a mechanical air-gap switch to totally disconnect power from the load during "off" condition, no leakage current shall be present at the fixture(s).

e. Slider shall be captured behind wallplate.

f. Preset dimmers shall be capable of multi-location on and mechanical air-gap off using standard 3-way and 4-way switches. Multi-location switches shall be Nova Ta style.

g. Controls shall be able to have their visible plastic parts replaced, for color changes in the field, without removing the body of the control from the wall and without requiring special tools.

h. Within rated capacity, dimmers shall be available for direct control of incandescent, electronic low voltage, magnetic low voltage, and fluorescent. Matching fan-speed controls and switches shall also be available.

i. Controls shall be capable of operating at the rated capacity; this includes modified capacities for ganging configurations which equire the removal of fins. Operation at rated capacity shall be possible across the full ambient temperature range, without shortening design lifetime.

j. To ensure a precise color match between all plastic parts, color variation of any matte finish control shall not exceed a delta E of 1, CIE L*a*b* color units, as defined in ASTM E 308-99.

k. Dimmer shall provide smooth and continuous Square Law dimming curve, for the full slider travel, on their rated load per The IESNA Lighting Handbook, 9th edition, p. 27-4. l. Controls shall meet the applicable requirements of UL 20 and UL 1472 referring to the inclusion of a visible, accessible air-gap off switch and the limited short circuit test.

m. Controls shall meet ANSI/IEEE Std. C62.41-1980, tested to withstand voltage surges of up to 6000V and current surges of up to 200A without damage.

n. Dimmers shall be designed to reduce interference with radio, audio, and video equipment.

o. Controls shall incorporate power-failure memory. Should power be interrupted and subsequently returned, the lights or fans will come back on to the same levels set prior to the power interruption. Restoration to some other default level is not acceptable.

p. Controls shall not be susceptible to damage or loss of memory due to static discharge.

q. Dimmer shall include voltage compensation to compensate light output for variation in the AC line-voltage. Dimmers in which the light output is not held constant with varying AC line-voltage shall not be acceptable.

r. Controls shall operate in an ambient temperature range of 0°C (32°F) to 40°C (104°F).

s. 3-Way controls shall wire using conventional 3-way and 4-way wire runs.

t. Contractors shall install all backboxes with a minimum wallbox depth of 2.5 inches.

2. Incandescent Dimmers

a. Provide incandescent dimmers for direct control of up to a full 20A lighting circuit, which is derated by 20% to 16 Amps per the NEC.

b. Dimmers shall have a high-end of no less than 95% of line voltage.

c. Dimmer shall be capable of operating in either 3-way switch location.

3. Electronic (Solid-State) Low Voltage (ELV) Transformer Dimmers

a. Dimmers shall contain circuitry specifically designed to control the input of electronic (solid state) low voltage transformers. Dimmers using standard phase control shall not be acceptable.

b. Provide ELV dimmers for direct control of up to 600 watts of electronic low voltage load.

c. Dimmers shall have a resettable overload protection that automatically shuts off when dimmer capacity is exceeded. Protection methods that are non-resettable or require the device to be removed from the wall to reset shall not be acceptable.

d. Dimmers shall be designed to withstand a short, per UL 1472 section 5.10, between load hot and either neutral or ground without damage to the dimmer.

e. Dimmers shall have a high-end of no less than 90% of line voltage.

4. Magnetic Low Voltage (MLV) Transformer Dimmers

a. Provide MLV dimmers for direct control of up to 1500VA of 120 volt magnetic low voltage load.

b. Provide MLV dimmers for direct control of up to 1000VA of 277 volt magnetic low voltage load.

c. Dimmers shall contain circuitry specifically designed to control and provide a symmetrical AC waveform to the input of magnetic low voltage transformers per UL1472 section 5.11.

d. Dimmers shall not cause a magnetic low voltage transformer to operate above the transformers rated operating current or temperature.

e. Dimmers shall have a high-end of no less than 95% of line voltage.

f. Dimmer shall be capable of operating in either 3-way switch location.

5. Fluorescent Dimming Ballast Dimmers

a. Provide Fluorescent dimmers for direct control of fluorescent dimming ballasts up to the manufacturers specified rating.

b. Dimmers shall be designed to operate the following ballasts. Dimmers and ballasts shall be produced by the same manufacturer to ensure proper ballast/control compatibility:

1) Hi-lume® Architectural Dimming Ballasts (1% 3-wire)

2) Hi-lume® CompactTM Lamp Dimming Ballasts (5% 3-wire)

3) Eco-10TM Lighting Management Dimming Ballasts (10% 3-wire)

4) Eco-10TM Lighting Management Dimming Ballasts (10% 0-10VDC)

5) Tu-WireTM High Performance Dimming Ballasts (5% 2-wire)

c. Dimmers shall be designed to provide full ballast output at high-end.

6. Remote dimming modules for high power loads

a. Where lighting loads exceed the full rated capacity of single dimmers, provide a Nova Ta incandescent dimmer driving high power modules. High power module and dimmer shall be from the same manufacturer to ensure compatibility.

b. High power modules shall be remotely mounted.

c. High power module shall be rated and UL listed for control of

incandescent, magnetic low voltage, electronic low voltage, fluorescent, and neon/cold cathode loads in increments of 2,000 Watts up to 30,000 Watts.

7. Fan-Speed Controls:

a. Fan-speed controls shall be UL Listed, CSA and NOM approved, Lutron Nova Ta style.

b. Quiet fan-speed model shall provide three speed settings with slide-to-off function.

c. Quiet fan-speed control shall provide single-pole control of one paddle fan (1.5A max.).

d. Fully variable model shall provide fully variable fan-speed control with slide-to-off function.

e. Fully variable model shall provide single pole control of multiple paddle fans, ventilation or exhaust fans (12A max.).

8. Switches:

a. Switches shall provide on/off control of any 120/277 VAC load up to 20A. Switches shall be UL Listed as general-use AC switches, Lutron Nova Ta style.

b. Switches shall be available in single-pole, 3-way and 4-way configurations.

B. Accessories Lutron Nova Ta Style

1. Receptacle Components Lutron Nova Ta Style

a. All receptacles shall be UL Listed, CSA and NOM approved.

b. Receptacles shall be two pole, three wire ground and rated for 15A or 20A as specified at 125 VAC. All receptacles shall be NEMA configuration type 5-15R or 5-20R.

c. Isolated Ground Receptacles shall be Lutron Nova Ta style with two pole, three-wire ground and rated 15A or 20A as specified at 125VAC. Configuration shall be of the duplex type with rectangular NEMA WD-6 design. Receptacle face shall be orange with black isolated ground triangle or standard Nova Ta colors with orange isolated ground triangle.

d. Ground-fault interrupter receptacles shall be Lutron Nova Ta style with two-pole, three-wire ground and rated 15A or 20A at 125VAC. Configuration shall be of the duplex type with rectangular NEMA WD-6 design. Receptacles shall have a 5 milliampere ground-fault trip level with "test" and "reset" buttons.

2. Telephone Jack and Cable TV Jack Components Lutron Nova Ta Style

a. Contractor shall provide an appropriate barrier (partition) to isolate jack from high-voltage wiring when ganged with a dimmer, fan-speed control, switch, or receptacle. This complies with NEC Articles 800-3 and 820-13.

b. Telephone jacks shall be designed to mate with standard 4- or 6-conductor modular jacks, and be compatible with 2, 4 or 6

conductor lines. Telephone jacks shall meet FCC Part 68, paragraph F standards to ensure compatibility with U.S. telephone systems.
c. Eight-conductor telephone jacks shall be Category 5 Voice and Data rated. They shall be FCC Part 68, Sub-part F compliant.
d. Cable TV jacks shall be the coaxial type, designed for use with standard 75-Ohm cables.
e. Category 5 voice, data, or cable configurations shall be available in single gang, up to three functions per gang.

C. Wallplates Lutron Nova Ta Style

1. Wallplates shall be manufactured from durable polycarbonate plastic with matte finish, and shall attach to the basic components without using exposed hardware or screws.
2. Multigang wallplates shall provide a continuous, seamless cover for control and/or accessory combinations with no exposed hardware or screws. Custom wallplate configurations shall be available.
3. Multigang wallplates shall include snap in auto-align adapter plate for proper device alignment and wallplate attachment.
4. Control, accessory and wallplate profiles shall not exceed .30 inches from wall surface to faceplate front surface.
5. To ensure a precise color match between all plastic parts, color variation of any gloss finish control or wallplate shall not exceed delta E of 1, CIE L*a*b* color units, as defined in ASTM E 308-99.
6. Visible parts of dimmers, switches, standard receptacles, cable jacks or any wallplate shall exhibit ultraviolet stability when tested with multiple actinic light sources as defined in ASTM D4674-89.

2.03 SOURCE QUALITY CONTROL

A. All dimming controls shall be 100% function tested at the time of manufacture. Statistical sampling plan shall not be acceptable.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Contractor shall furnish all devices (dimmers, accessories, & wallplate kits), labor and other services necessary for the proper installation of the devices as indicated on the drawings and specified herein.
B. Contractor shall be responsible for derating dimmer capacity if side sections are removed.
C. Contractor shall run separate neutral wires in 120/208 VAC installations.
D. Devices shall be installed utilizing manufacturer's recommended application, wiring and installation instructions.
E. Contractor to provide seamless wallplate covers per specification

2.02 for all devices ganged in a common box. Contractor shall provide barriers within the box where required by code.

3.02 FIELD QUALITY CONTROL

A. Twenty-four hours a day, seven days a week, global customer service and technical hotline available.

B. Supplemental information shall be provided by manufacturers Internet site.

END OF SECTION