STAFF REPORT: 05-12-2021 MEETING PREPARED BY: A. DYE

APPLICATION NUMBER: 21-7210

ADDRESS: 66 ADELAIDE

HISTORIC DISTRICT: BRUSH PARK

APPLICANT: TOM CARLSON, E & L CONSTRUCTION GROUP

PROPERTY OWNER: AMO APARTMENTS

DATE OF PROVISIONALLY COMPLETE APPLICATION: 04-19-21

DATE OF STAFF SITE VISIT: 04-30-21

SCOPE: DEMOLISH ELEVATOR PENTHOUSE; ERECT NEW PENTHOUSE

EXISTING CONDITIONS

The six-story apartment building at 66 Adelaide was constructed in 1913. The structure fills the depth of the lot and is positioned against the west property line, leaving a greenspace to the east. The building retains much of its historic architectural detail including the entrance colonnade, decorative brick work and limestone veneer on the first floor and limestone banding on the upper floors. The existing cornice matches the design and dimension of the cornice in place at the time of historic district designation, and may likely be original.



The applicant is seeking the Commission's approval for the demolition of an existing elevator penthouse and the construction of a new penthouse to accommodate new, larger elevator equipment.

Demolition

Size: 10'deep x 10' wide (finished height is 8' from lower roof/5' from upper roof) masonry structure with metal roof and access door.

Construction

Size: 12'-10" deep x 11'-7" wide x 11'-1" high (finished height)

Frame: structural steel

Metal wall panels

MCBI CF Mesa, insulated metal panels,

42" wide x 2-1/2" deep 24-gaufe face and 26-gauge liner. Stucco embossed texture, color: polar white (two coat Kynar finish)

Roof panels

MCBI, CFR insulated metal standing seam panels, 42" wide x 4" deep, 24-gauge face and 26-gauge liner. Stucco embossed texture, color: polar white (two coat Kynar finish)

Trim

To be fabricated from brake trim metal. Color and texture to match panels.

Door

Republic metal solid flush panel door (DP Series)

Color: painted white

Railing/Stairs

1-1/2" diameter galvanized steel pipe handrail

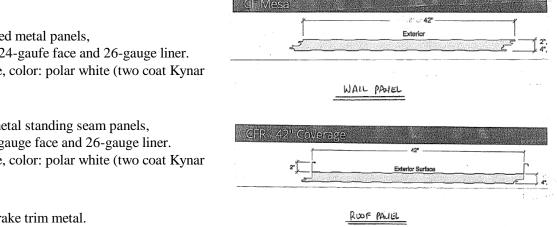
Galvanized steel bar grate landing/ treads and galvanized steel stringer

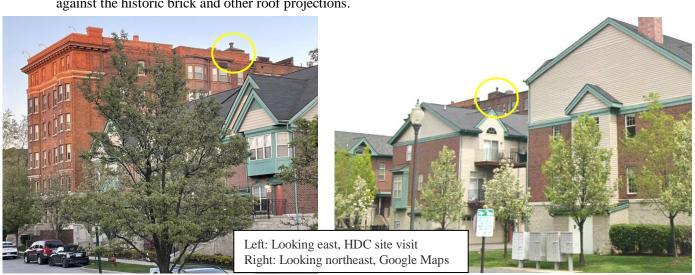
STAFF OBSERVATIONS AND RESEARCH

- The Brush Park Historic District was established in 1980.
- The metal panels and shed roof create a minimally detailed enclosure for the new, larger equipment and easily identifies the structure as contemporary construction.
- Due to the height of the building and the fact that most of the block is filled with attached townhouse developments, the existing penthouse is minimally visible. Penthouses are common elements projecting from roofs and are generally not character-defining features.

ISSUES

When looking east towards 66 Adelaide from the west end of Adelaide near Woodward, or to the northeast from Winder, the penthouse is slightly visible and its height will increase marginally with this proposal. Staff's concern is with the selected color, "polar white", and its reflectivity and stark contrast to the historic dark brick. The color "Brownstone" is an option within the standard color palette and would allow the new penthouse to be neutral against the historic brick and other roof projections.





RECOMMENDATION

Section 21-2-78, Determination of Historic District Commission

It is staff's opinion the demolition of the existing penthouse for the installation of larger elevator equipment, and the construction of a new penthouse as proposed will not alter the features and spaces that characterize the property. Staff therefore recommends the Commission issue a Certificate of Appropriateness for the work as proposed because it meets the Secretary of the Interior Standards for Rehabilitation and the Elements of Design for the district.

Staff recommends the Certificate of Appropriateness be issued with the following condition:

• The color of the metal wall and roof panels will be "Brownstone" and the metal door and trim will be painted to match the panel color.

HISTORIC DISTRICT COMMISSION PROJECT REVIEW REQUEST

CITY OF DETROIT
PLANNING & DEVELOPMENT DEPARTMENT
2 WOODWARD AVENUE, ROOM 808, DETROIT, MI 48226

2 WOODWARD AVENUE, ROOM 808	3, DETROIT, MI 48226	DATE:
PROPERTY INFORMATION		
ADDRESS:	AKA:	
HISTORIC DISTRICT:		
SCOPE OF WORK: Windows/ (Check ALL that apply) Windows/	Roof/Gutters/ Porch/ Chimney Deck	Landscape/Fence/ General Rehab
New Construction	Demolition Addition	Other:
APPLICANT IDENTIFICATIO	N	
Property Owner/ Con	tractor Tenant or Business Occu	Architect/Engineer/ Consultant
NAME:	COMPANY NAME:	
ADDRESS:	CITY:	STATE: ZIP:
PHONE: MOE	BILE: I	EMAIL:
PROJECT REVIEW REQUEST	CHECKLIST	
Please attach the following documer	ntation to your request:	
*PLEASE KEEP FILE SIZE OF ENTIRE		NOTE:
Completed Building Permit A	pplication (highlighted portions o	Dnly) Based on the scope of work, additional documentation may
ePLANS Permit Number (only for permits through ePLANS)	applicable if you've already appli	ed be required.
Photographs of ALL sides of ex	kisting building or site	See www.detroitmi.gov/hdc for scope-specific requirements.
Detailed photographs of locat (photographs to show existing co	ion of proposed work ondition(s), design, color, & materia	al)
Description of existing condit	tions (including materials and des	sign)
	acing any existing material(s), incl rof existing and/or construction	
Detailed scope of work (formation)	atted as bulleted list)	
Brochure/cut sheets for propo	osed replacement material(s) and	l/or product(s), as applicable

Upon receipt of this documentation, staff will review and inform you of the next steps toward obtaining your building permit from the Buildings, Safety Engineering and Environmental Department (BSEED) to perform the work.

SUBMIT COMPLETED REQUESTS TO HDC@DETROITMI.GOV

Historic District Commission Project Review Request

Permit Application: See Attached **ePLANS - Record ID:** BLD2021-00477

Exterior Building Photos



West Elevation



East Elevation



North Elevation



North Elevation



South Elevation

Detailed Photographs



East Elevation of Structure to be Replaced



North Elevation of Structure to be Replaced



South Elevation of Structure to be Replaced



West Elevation of Structure to be Replaced

Description of Existing Conditions

Brick structure about 10'x10' square and 5' high off upper roof section and 8' high off lower roof section. Structure has a metal roof and access door.

Description of Project

Removing the existing elevator penthouse to about 5' down from the metal roof covering the penthouse. This will allow for us to not desturb the building roof. We will then use the existing brick wall to support a new structural steel and insulated metal panel penthouse with proper access door, ladder and clear work room around the equipment. All equipment for the elevator will now be located in this room and removed from the basement. The current elevator penthouse will not accomidate all the new elevator equipment being installed as it is currently only used for the top elevator pulleys. No other equipment is located in this room. According to the owner the city has requested that before any more inspection can occur that the elevator must be replaced and elevator equipment removed from the basement and installed on the roof. This change requires a larger penthouse to accomidate the new equipment.

Detailed Scope of Work

Remove elevator equipment in room

Remove metal roof

Remove brick to about 5' down from the existing penthouse roof

Remove door and Misc.

Crane lift down demo materials and crane lift up new materials

Set new structural steel base beams atop of existing brick shaft walls to accomidate new penthouse

Set new structural steel frame to accept metal wall panels

Set new grating, stairs and access door

Install new insulated metal wall panels

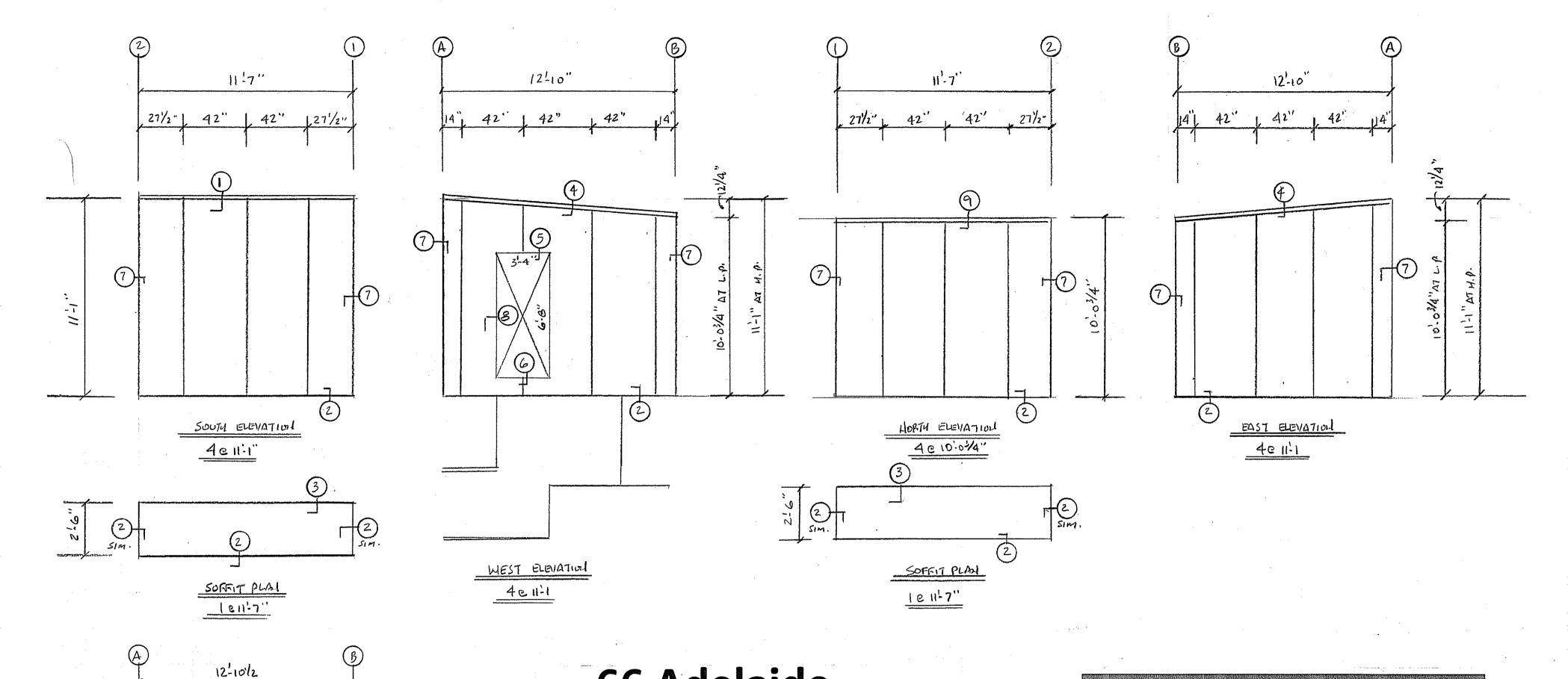
Install new insulated metal roof panels

Install new elevator equipment

Install required electrial to room

Brochure / Cut Sheets

See Attached



66 Adelaide

Detroit, Michigan

General Notes:

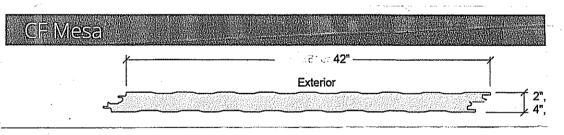
1/12 SLOPE

40 13-0

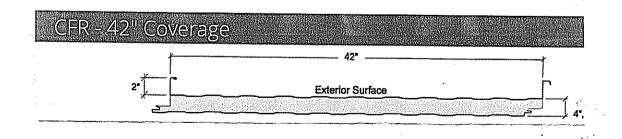
42"

4

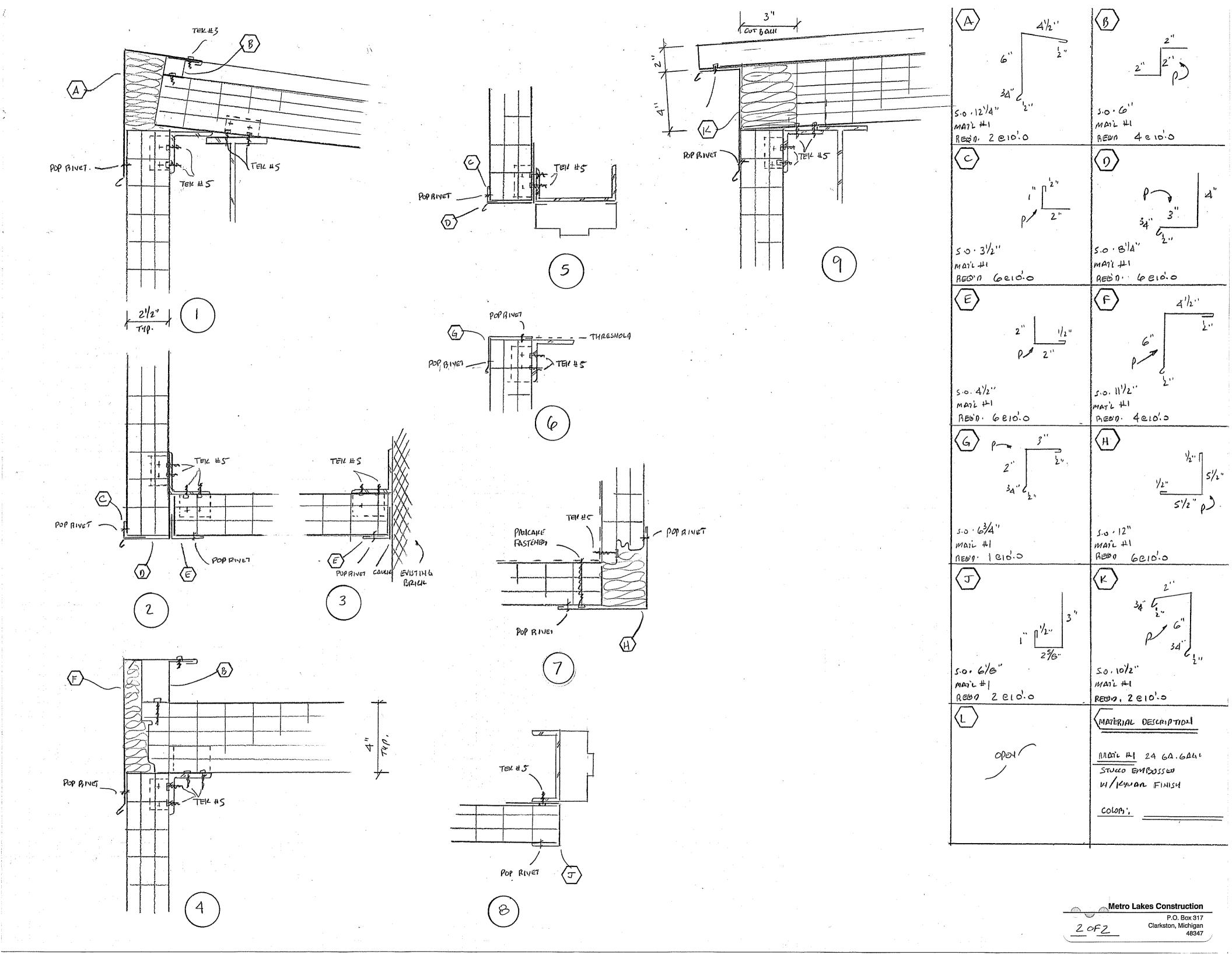
- 1. Insulated metal wall and roof panels to be manufactured by M.B.C.I.
- 2. Wall panel profile to be CF-42F, 42" wide x 2 ½" deep. 24-gauge Face and 26-gauge liner. Stucco Embossed texture.
- 3. Roof panel profile to be CFR-42, 42" wide x 4" deep. 24-gauge face and 26-gauge liner. Stucco Embossed texture.
- 4. All trim to be fabricated from brake metal trim. Color and texture to match panels.
- 5. Wall and roof panels to have a standard color two coat Kynar finish. Color to be selected from manufacturer's standard stock color chart.
- 6. All related sealants are included.



WALL PAHEL



ROOF PAULEL



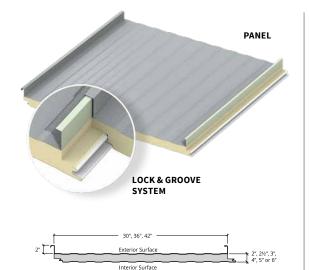




INSULATED METAL PANELS

CFR

CFR is an insulated metal roof standing seam roof panel and is the newest innovation in all-in-one composite roof panel design, combining durable interior and exterior faces with an unmatched polyurethane core. The CFR insulated metal standing seam roof panel is a truly unique answer to many deficiencies common with more traditional roofing materials of the past.



Features and Benefits:

- The CFR roof panel is ideal for architectural, commercial, industrial and institutional applications.
- Due to their careful design features, this roof system requires very little field reworking and can be easily and quickly installed.

Product Specifications

- Applications: Roof
- Length: 9'-6" to 53'-0"
- Coverage Widths: 42" (standard); 30"**, 36" (optional)
- Thicknesses: $2", 2\frac{1}{2}", 3", 4", 5", 6"$
- Panel Attachment: Concealed fastening system
- Gauges Exterior: 24, 22; Interior: 26, 24, 22
- Finishes Exterior: Galvalume Plus®, Stucco-
- embossed; Interior: Stucco-embossed
- Coatings Exterior: Signature® 200, Signature® 300; Interior: Igloo White (standard)

U-Factors and R-Values*

U-factor (BTU·/h·ft2·° F)		R-Value (h·ft2·° F/BTU)		
PANEL WIDTH: 42"		PANEL WIDTH: 42"		
	75°		75°	
2"	0.0600	2"	16.67	
21/2"	0.0490	21/2"	20.41	
3"	0.0414	3"	24.15	
4"	0.0318	4"	31.45	
5"	0.0257	5"	38.91	
6"	0.0217	6"	46.08	

^{*} Based on ASTM C518, ASTM C1363 and thermal modeling, 75° F core mean temp.

^{**} Available only from Metl-Span's Texas plant



INSULATED METAL PANELS

TEST/APPROVAL	TEST METHOD	TEST TITLE RESULTS	
	ASTM E84	Surface Burning Characteristics of Building Materials	Flame spread <25, smoke developed <450
FIDE US	ASTM E108	Standard Test Methods for Fire Tests of Roof Coverings	Passed Class A
FIRE US	FM 4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels	Product approved Exterior roof requires FM 4471 approval
	NFPA 286	Fire Tests for Evaluating Contribution of Wall and Ceiling Finish to Roof Fire Growth	Test specimen met the criteria of the IBC Section 803.1.2.1
	CAN/ULC S102	Surface Burning Characteristics of Building Materials and Assemblies	Meets the National Building Code of Canada requirements
FIRE CANADA	CAN/ULC S107	Methods of Fire Tests of Roof Coverings	Passed Class A
	CAN/ULC S126	Fire Spread Under Roof-Deck Assemblies	Met the criteria of the standard
	ASTM E72	Strength Tests of Panels for Building Construction	See Load Chart
	ASTM E1592	Structural Performance of Metal Roof and Siding Systems by Uniform Static Air Pressure Differences	See Load Chart
STRUCTURAL	FM 4471	Class 1 Exterior Roof Structural Performance	See FM Roof Load Chart
	UL 580	Uplift Resistance of Roof Assemblies	UL Class 90 Uplift at 5' and 7'
	UL 1897	Uplift Tests for Roof Covering Systems	Uplift Resistance of 166 psf at 5' Uplift Resistance of 140 psf at 7'
THERMAL	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat-Flow Meter Apparatus	K-Factor of 0.126 BTU.in/hr.ft ² .°F at 40° F mean core K-Factor of 0.14 BTU.in/hr.ft ² .°F at 75° F mean core
PERFORMANCE	ASTM C1363	Thermal Performance of Building Materials and Envelope Assemblies	See Thermal Performance Guide
AIR INFILTRATION	ASTM E1680	Rate of Air Leakage Through Exterior Metal Roof Panel Systems	<0.023 cfm/ft² at 12 psf
WATER INFILTRATION	ASTM E1646	Water Penetration of Exterior Metal Roof Panel Systems by Static Air Pressure Differences	No uncontrolled leakage when tested to a static pressure of 12 psf
ILIWIIVII			Vertical or horizontal installation
SPECIAL APPROVAL	Miami-Dade NOA	Product Approval for City of Miami and Dade County	Product has City of Miami and Dade County Notice of Acceptance
J. LONE, W. I NOVIL	State of Florida	Product Approval for the State of Florida	Product has State of Florida approval

Descriptions and specifications contained herein were in effect at the time this publication was approved for printing. In a continuing effort to refine and improve products, MBCI reserves the right to discontinue products at any time or change specifications and/or designs without incurring obligation. To ensure you have the latest information available, please inquire or visit our website at www.mbci.com. Application details are for illustration purposes only and may not be appropriate for all environmental conditions, building designs or panel profiles. Projects should be designed to conform to applicable building and accepted industry practices. If there is a conflict between this manual and project erection drawings, the erection drawings will take precedence. MBCI's insulated metal panel product line is manufactured by Metl-Span*.

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SIGNATURE® 300 PAINT COLORS

STANDARD COLORS

Polyvinylidene Flouride (PVDF) Low Gloss

Standard I













PREMIUM I COLORS

Polyvinylidene Flouride (PVDF) Low Gloss

Minimum quantities and/or extended lead times may be required. Please inquire.



HARBOR BLUE *



PACIFIC BLUE *



AEGEAN BLUE



SPRUCE *



NATURAL PATINA *



CLASSIC GREEN *



HUNTER GREEN *



MEDIUM BRONZE *



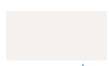
SLATE GRAY *



TUNDRA *



SMOKE GRAY



SNOW WHITE ★



TERRA COTTA



BRITE RED ★



COLONIAL RED ★

PREMIUM II METALLIC COLORS

NOTE: Metallic coatings are directional. Panels and trim must be installed oriented in the same direction to prevent perceived shade variances.



CHAMPAGNE



COPPER METALLIC ★



SILVER METALLIC *



WEATHERED ZINC



DARK GRAY METALLIC



SIGNATURE® 200 PAINT COLORS

STANDARD WEATHER XL COLORS

Siliconized Polyester Standard Gloss

*Igloo White is a Straight Polyester.







PREMIUM WEATHER XL COLORS

Siliconized Polyester

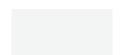
**Polar White is a Straight Polyester. Minimum quantities and/or extended lead times may be required. Please inquire.



FERN GREEN *



BURNISHED SLATE ★



SOLAR WHITE



CHARCOAL GRAY ★



CRIMSON RED *



KOKO BROWN ★



RUSTIC RED ★



DESERT SAND *



HAWAIIAN BLUE *



SADDLE TAN *

STANDARD INTERIOR COLORS

*Igloo White is a Straight Polyester.



Final color selection should be made from metal color chips.

- See product selection chart for gauge and color availability.
- Heavier gauges, narrower widths and embossing minimize "oil canning."
- Review the sample warranty for complete performance attributes and terms and conditions.
- For locations outside the continental USA and Canada, please inquire.



APPLIED FINISHES

TUFF COTE® FIBER-REINFORCED POLYMER COATING

FOR TUFF-WALL™ OR TUFF CAST® PANELS ONLY

Standard Options

Optional finishes for CF Architectural, CF Mesa, Striated, Santa Fe, 7.2 Insul-Rib™ and LS-36™ (wall only) panels.

NOTE: These finishes require the exterior skin of the panel to be manufactured from coil with a matta matte finish of the same color as the applied finish.

* Light Stone Tuff Cote® does not match Light Stone siliconized polyester color offerings.









TEXTURED WHITE

LIGHT STONE

MEDIUM BEIGE

LIGHT GRAY

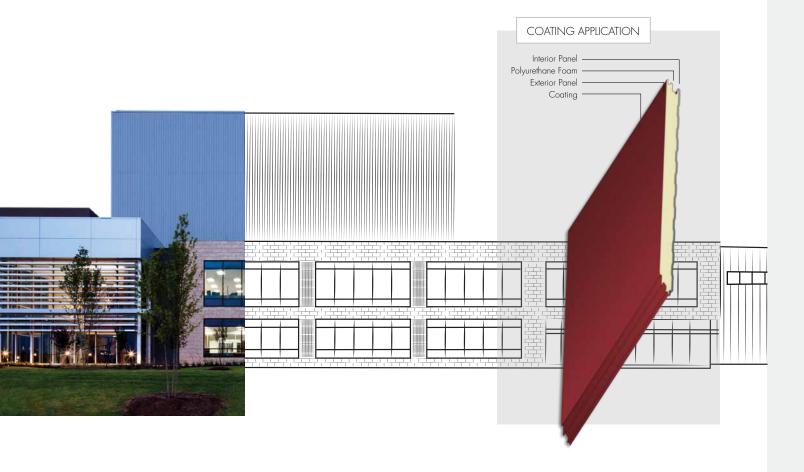






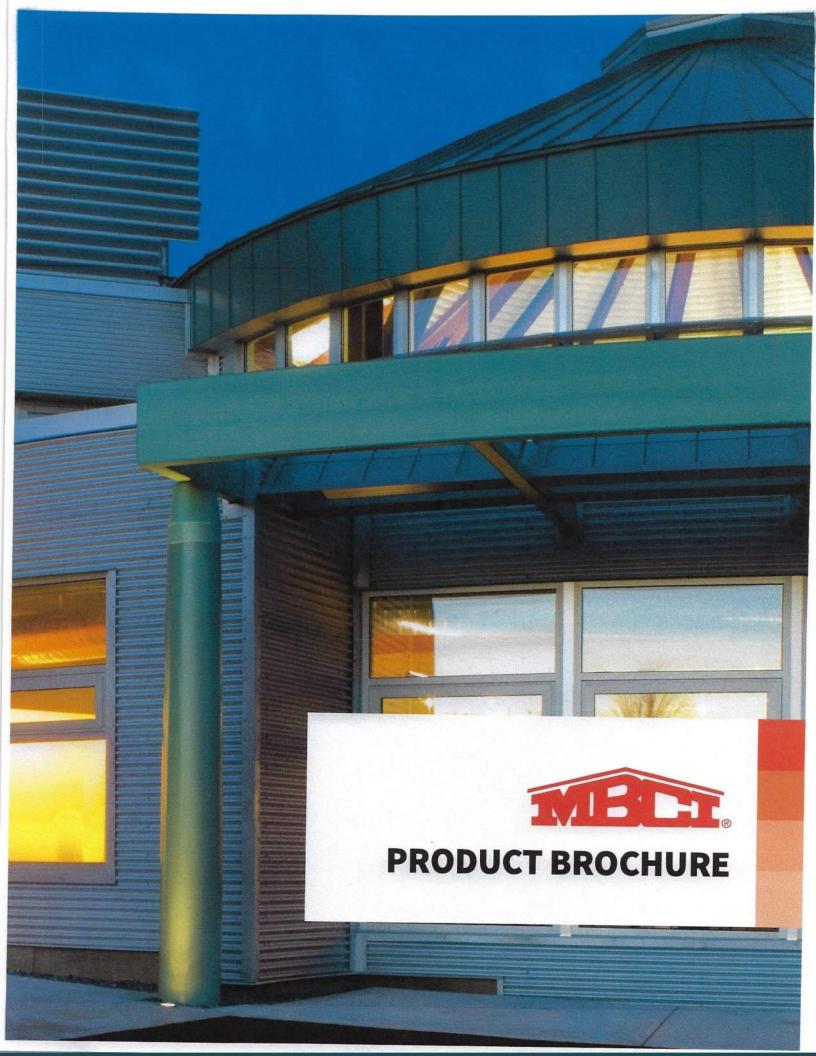
SURREY BEIGE ANTIQUE BRONZE

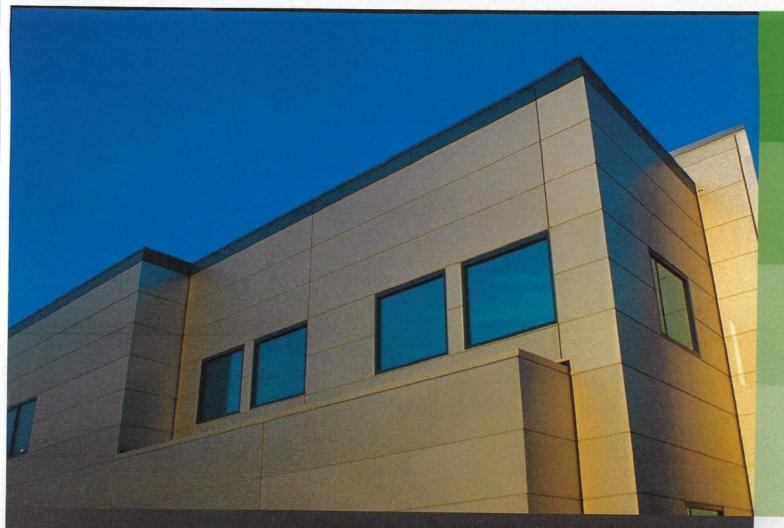
WARM LIMESTONE





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INSULATED METAL PANELS

MBCI's insulated metal panels, manufactured by Metl-Span, deliver both attractiveness and energy-efficiency to a building's design. As building and energy codes become increasingly more stringent, insulated panels are particularly advantageous in achieving sustainable design and code compliance.

Insulated metal panels (IMPs) present many advantages for building owners, designers and contractors, including improved thermal performance, excellent insulating capabilities, reduced building operational expenses, accelerated construction schedules, earlier business starts and much more. Available in a wide variety of panel profiles, colors and applied finishes, IMPs are ideal for architectural, commercial, industrial and institutional applications.

Above Photo

PROJECT: Fujisawa Healthcare Inc. LOCATION: Grand Island, NY PANEL PROFILE: CF Architectural/Horizontal COLOR: Silver Metallic



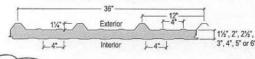
LS-36TM

The versatility of the LS-36™ panel offers a multitude of design options and can be utilized for roof or wall applications. The standard exterior skin is smooth but can be embossed if requested, while the interior skin is roll-formed with our standard stucco-embossed Mesa profile.

Product Specifications

- · Applications: Roof and Wall
- Gauges: Exterior: 26, 24, 22 | Interior: 26, 24, 22
- Width: 36"
- Thicknesses: 11/2", 2", 21/2", 3", 4", 5", 6"
- Length: 8'-0" to 50'-0"

- Panel Attachment: Exposed Fastening System
- Standard Coatings: Galvalume Plus®,
 Signature® 200, Signature® 300, Signature® 300
 Metallic, Applied Finishes (wall application only)



ROUF PAUEL CFR

CFR is an insulated metal standing seam roof panel and is the newest innovation in all-in-one composite roof panel design, combining durable interior and exterior faces with an unmatched polyurethane core. The CFR panel is a truly unique answer to many deficiencies common with more traditional roofing materials of the past.



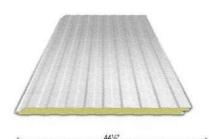
Product Specifications

- Applications: Roof
- Gauges: Exterior: 24, 22 | Interior: 26, 24, 22
- Width: 42" (standard); 30", 36" (optional)
- Thicknesses: 2", 21/2", 3", 4", 5", 6"
- Length: 9'-6" to 53'-0"
- · Panel Attachment: Concealed Fastening System
- Standard Coatings: Galvalume Plus®, Signature® 200, Signature® 300



CF45 PARTITION WALL

The CF45 Partition Wall panel is the optimal choice for interior partitions. The interior and exterior panel faces are identical images with the same profile for each. This panel is available in a width of $44\frac{1}{2}$ ", and the profiles have $\frac{1}{8}$ " ribs that are four inches on center.



Exterior

Interior

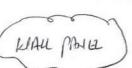
Product Specifications

- · Applications: Wall (interior only)
- Gauge: 26, 24, 22 (both surfaces)
- · Width: 441/2"

2", 2½", 3", 4", 5" or 6"

- Thicknesses: 2", 21/2", 2 3/4"*, 3", 4", 5", 6"
- Length: 8'-0" to 52'-0" for vertical embossed
 8'-0" to 40'-0" for vertical unembossed
- Panel Attachment: Tongue-and-Groove with Exposed Fasteners
- · Standard Coating: Igloo White

*Available only from Metl-Span's Nevada Plant



CF MESA

The CF Mesa panel is designed for exterior wall applications, interior wall partitions and interior ceilings. The lightly corrugated profile on both faces of the panel carries symmetry from the building's exterior through its interior, and from room to room in partition installations. This panel is most commonly used for commercial applications.



Product Specifications

- · Application: Wall (vertical)
- Gauges: Exterior: 26, 24, 22 | Interior: 26 (standard); 24, 22 (optional)
- · Widths: 30", 36", 42"
- Thicknesses: 2", 21/2", 3", 4", 5", 6"



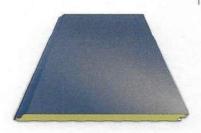
· Length:

8'-0" to 32'-0" for horizontal embossed 8'-0" to 16'-0" for horizontal unembossed 8'-0" to 52'-0" for vertical embossed 8'-0" to 40'-0" for vertical unembossed

- Panel Attachment: Concealed Fastening System
- Standard Coatings: Signature® 200, Signature® 300, Signature® 300 Metallic, Applied Finishes, Igloo White

CF ARCHITECTURAL & CF ARCHITECTURAL/ HORIZONTAL

The CF Architectural (vertical) and CF Architectural/Horizontal wall panel employs a flat appearance providing a monolithic look that is great for high-profile architectural applications. The panel allows designers to mix multiple panel widths and colors on the same wall. It also allows flexibility for continuous corners along with a complete line of aluminum extrusions and accessories to complete the wall system. When desired, these panels can also be mixed with vertical or horizontal panels to achieve almost any look a design requires, and can be used in vertical or horizontal applications.



24", 30" or 36" Exterior

1/4", 1/4", 1/4", 1", 11/4", 2", 21/4", 3" Reveals

Product Specifications

- Application: Wall (vertical and horizontal)
- Gauges: Exterior: 22 | Interior: 26 (standard);
 24, 22 (optional)
- · Widths: 24", 30", 36"
- Thicknesses: 2", 21/2", 3" (4" available for vertical)
- Length: 8'-0" to 32'-0" for embossed
 8'-0" to 16'-0" for unembossed
- 2", 2½" or 3"

- Panel Attachment: Concealed Fastening System
- Standard Coatings: Signature® 300, Signature® 300 Metallic
- Reveal: Up to 1" reveal options in ¼" increments or up to 3" reveal options in ½" increments



CF FLUTE

The traditional styling and distinct vertical lines of the CF Flute panel are ideal for customdesigned or conventional building construction, especially commercial and industrial $applications, as well as cold storage. The interior skin employs a stucco-embossed \, Mesa \, profile.$



Exterior

3/2

Product Specifications

- · Application: Wall (vertical)
- Gauges: Exterior: 26, 24, 22 | Interior: 26 (standard); 24, 22 (optional)
- · Width: 42"

2", 21/2", 3", 4", 5" or 6

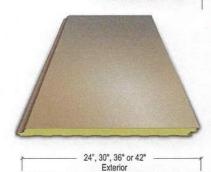
- Thicknesses: 2", 2½", 2¾"*, 3", 4", 5", 6"
- · Length: 8'-0" to 32'-0" for horizontal 8'-0" to 52'-0" for vertical
- · Panel Attachment: Concealed Fastening System
- · Standard Coatings: Signature® 200, Signature® 300, Signature® 300 Metallic

*Available only from Metl-Span's Nevada Plant

SANTA FE®

-4.2" + 4.2" -

The Santa Fe® exterior skin has a flat exterior profile with an Aztec-embossed pattern resembling old-world hand plaster. The interior skin employs a stucco-embossed light Mesa profile.



Product Specifications

- Application: Wall (vertical or horizontal)
- Gauges: Exterior: 24, 22 | Interior: 26 (standard); 24, 22 (optional)
- · Widths: 24", 30", 36", 42"
- Thicknesses: 2", 2½", 2¾"*, 3", 4"

· Length:

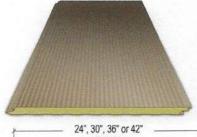
8'-0" to 32'-0" Santa Fe horizontal unembossed 8'-0" to 40'-0" Santa Fe vertical embossed

- · Panel Attachment: Concealed Fastening System
- · Standard Coatings: Signature® 200, Signature® 300, Signature® 300 Metallic, Applied Finishes
- Reveal: Up to 3" reveal options in ¼", ½", ¾" and 1" increments

*Available only from Metl-Span's Nevada Plant

STRIATED

The exterior skin of the Striated panel is profiled with minor striations, giving it a flat look and providing a linear appearance while blending with the panel side joints. This panel is an excellent alternative to typical flat wall panels. The interior skin has a stucco-embossed light Mesa profile.



Product Specifications

2", 21/2" 3" or 4"

- · Application: Wall (vertical or horizontal)
- Gauges: Exterior: 24, 22 | Interior: 26 (standard); 24, 22 (optional)
- · Widths: 24", 30", 36", 42"
- Thicknesses: 2", 2½", 2¾"*, 3", 4"

Exterior 2", 21/2", Interior 3" or 4"

· Length:

8'-0" to 32'-0" horizontal embossed 8'-0" to 16'-0" horizontal unembossed 8'-0" to 40'-0" for 24", 30" and 36" vertical embossed 8'-0" to 32'-0" for 42" vertical embossed 8'-0" to 16'-0" vertical unembossed

- Panel Attachment: Concealed Fastening System
- Standard Coatings: Signature® 200, Signature® 300, Signature® 300 Metallic, Applied Finishes
- · Reveal: Up to 1" reveal in 1/4" increments

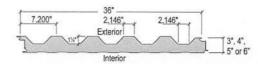
7.2 INSUL-RIB™



same design flexibility that is available with our single skin 7.2 Panel (page 24).

Product Specifications

- · Application: Wall (vertical or horizontal)
- Gauges: Exterior: 26, 24, 22 | Interior: 26, 24, 22
- Width: 36"
- Thicknesses: 3", 4", 5", 6"
- Length: 8'-0" to 32'-0" for horizontal 8'-0" to 40'-0" for vertical
- Panel Attachment: Offset double tongue-andgroove with extended metal shelf for positive concealed face fastening
- Standard Coatings: Signature® 200, Signature® 300, Signature® 300 Metallic



TUFF WALL® / TUFF-CAST™

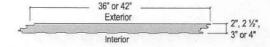
The Tuff Wall® and Tuff-Cast™ panels are designed for exterior applications where an aggregate look is preferred. The exterior skin of the panel is embossed flat, while the interior skin has the embossed light Mesa profile. Tuff Wall® has a finish similar to stucco, providing the masonry look many designers and communities desire. The Tuff-Cast™ exterior is finished with look of precast concrete.



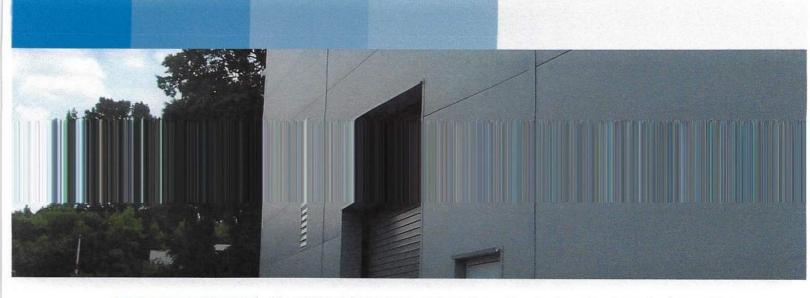
Product Specifications

- Application: Wall (vertical and horizontal)
- Gauges: Exterior: 24, 22 | Interior: 26, 24, 22
- Widths: 36", 42"
- Thicknesses: 2", 21/2", 3", 4", 5"*, 6"*
- Length: 8'-0" to 32'-0" for horizontal textured 8'-0" to 40'-0" for vertical textured
- Panel Attachment: Concealed Fastening System
- · Standard Coatings: Applied Finishes only

"5" and 6" CF Tuff-Cast and Tuff Wall available with Mesa, nominal %" deep profile only







HPCI BARRIER™



The HPCI Barrier™ insulated metal panel is an air, water, thermal and vapor barrier panel that can be used behind any type of façade. This back-up panel may be installed in a horizontal or vertical orientation completely outside the structural supports. There are no thermal bridges to reduce the energy efficiency of the wall. HPCI Barrier™ is quick and easy to install and provides an economical solution to conventional air, water, thermal and vapor control without sacrificing thermal efficiency. This panel must be separated from the interior of the building by an approved thermal barrier of .5" (12.7 mm) gypsum wallboard to meet IBC requirements.

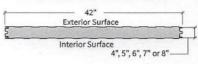
Product Specifications

- · Application: Wall (vertical or horizontal)
- Exterior and Interior Gauges: 26
- · Width: 42"
- Thicknesses: 2", 21/2", 3", 4", 5" and 6"
- Length: 8'-0" to 32'-0" horizontal 8'-0" to 52'-0" vertical
- Insulation Material: Zero ozone depleting polyurethane
- Panel Attachment: Tongue-and-Groove, Concealed Fastener
- Standard Coating: Signature® 200 Igloo White (straight polyester)



THERMALSAFE®





The ThermalSafe® panel consists of metal facings bonded to a structural mineral wool core to create a composite panel that achieves fire resistance ratings under the most demanding conditions. Unlike traditional wall materials, ThermalSafe® offers a level of flexibility architects, contractors and building owners won't find in any other product in the U.S. The mineral wool panel is rated for its one-, two- and three-hour fire resistance qualities and provides satisfactory thermal performance and protection from the elements. The R-value of this panel is 3.61 per inch of insulation.

Fire Resistant Data

- The finished panel in four-inch thickness for one-hour, seven-inch thickness for two-hour and eight-inch thickness for three-hour Fire Resistant ratings for nonbearing walls in accordance with UL 263 Fire Endurance tests and ASTM E119 tests
- For more complete Fire Resistant rating data, including Fire Resistant ratings for pipe penetrations both metallic and non-metallic, ducts and fire door and window assembly design installed in an ThermalSafe® wall, go to www. mbci.com or shop.mbci.com and follow links to Fire Resistant approvals data.
- Wall-framing support members and adjacent construction may require fire protection as specified by applicable building code. The customer is responsible for specifying the appropriate fire protection of these areas.

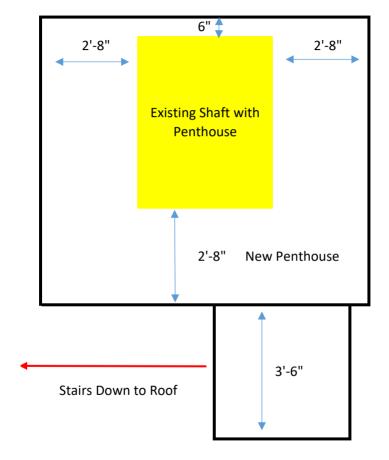
Features & Benefits

- Resists high temperatures and will not burn because of mineral wool core
- Can be disassembled, moved and reinstalled rather than having to be demolished, waste materials disposed of and the walls completely rebuilt
- Our exclusive integral spline design eliminates labor to install a separate cement board spline at side joint of panels to maintain the fire rating
- Good sound reduction acoustic properties because of mineral wool
- Dimensionally stable, water repellent and will not expand
- Can be combined with other MBCI panels for an aesthetically consistent profile facing, texture and color

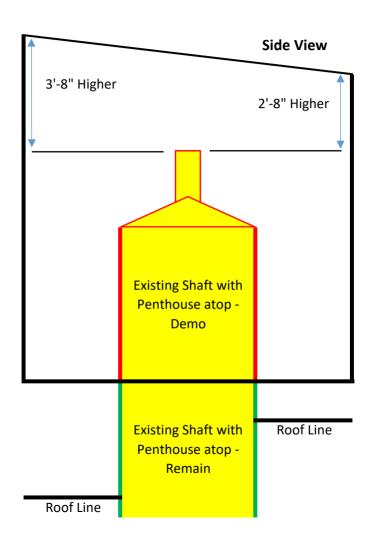
Product Specifications

- · Application: Wall (vertical or horizontal)
- Gauges: Exterior: 26, 24 | Interior: 26, 24
- Width: 42"
- Width: 42
 Thicknesses: 3", 4", 5", 6", 7" and 8"
- Length: 8'-0" to 40'-0", variable by thickness
- Panel Attachment: Exposed Fastening System
- Standard Coatings: Signature® 200, Signature® 300, Signature® 300 Metallic

Top View



Stair Platform to Door



ELEVATOR PENTHOUSE RENOVATION

66 ADELAIDE

DETROIT,

MICHIGAN

OWNER:

AMO APARTMENTS LLC 114 GROSSE POINTE BLVD. GROSSE POINTE FARMS, MI 48236 **ARCHITECTS & PLANNERS:**

WAH YEE ASSOCIATES 42400 GRAND RIVER AVENUE SUITE 200 NOVI, MI 48375

STRUCTURAL ENGINEERS:

SHYMANSKI & ASSOCIATES 33426 FIVE MILE ROAD LIVONIA, MI 48154

CONTRACTOR:

E&L CONSTRUCTION GROUP 3040 AIRPARK DRIVE SOUTH FLINT, MI 48507

INDEX OF DRAWINGS

ARCHITECTURAL

AO. I	TITLE SHEET
A2.1	PLANS, ELEVATIONS AND DETAILS
A2.2	SECTION AND DETAILS
SPI.O	SPECIFICATIONS
SP2.0	SPECIFICATIONS
SP3.0	SPECIFICATIONS

STRUCTURAL

THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VISIT THE SITE PRIOR TO SUBMITTING THEIR PROPOSAL TO BECOME

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES TO

DEMOLITION WORK SHALL NOT INTERFERE WITH ACCESS TO INDIVIDUAL TENANT SPACES. DEMOLITION CONTRACTOR SHALL PROVIDE ALL

WHILE EVERY ATTEMPT HAS BEEN MADE TO SHOW ALL ITEMS TO BE REMOVED, IT IS THE RESPONSIBILITY OF THE VARIOUS CONTRACTORS TO CONDUCT ON-SITE EXAMINATIONS AND FAMILIARIZE THEMSELVES WITH ACTUAL SITE CONDITIONS. ADDITIONAL ITEMS, NOT SHOWN TO

CARE SHALL BE EXERCISED IN THE REMOVAL OF WORK TO PREVENT THE RELEASE OF TOXIC SUBSTANCES. SHOULD TOXIC SUBSTANCES, SUCH AS ASBESTOS BE ENCOUNTERED, THE OWNER SHALL BE NOTIFIED AND UPON AUTHORIZATION THE DISPOSAL OF SAME SHALL CONFORM TO ALL GOVERNING CODES AND REGULATIONS. DISPOSAL SHALL BE DONE ONLY BY CONTRACTORS LICENSED FOR THIS WORK.

 S_{c} DEMOLITION CONTRACTOR SHALL NOT USE ANY CONSTRUCTION METHODS THAT WILL CAUSE DAMAGE TO WORK TO BE LEFT IN PLACE.

BE REMOVED, INTERFERING WITH NEW CONSTRUCTION WORK, SHALL BE REMOVED WITHOUT ADDITIONAL COST TO THE OWNER.

). DURING DEMOLITION AND CONSTRUCTION OPERATIONS PROVIDE ALL NECESSARY PROTECTION AND SAFE PASSAGE FOR THE PUBLIC. SUCH AS, BUT NOT LIMITED TO, BARRICADES, TEMPORARY PARTITIONS, DUST BARRIERS, SIGNS, ETC. ERECT AND MAINTAIN THESE

IF ANY EXISTING CONSTRUCTION THAT IS TO BE LEFT IN PLACE OR NOT SPECIFICALLY NOTED FOR REMOVAL IS DAMAGED DURING

I 2. COORDINATE CONSTRUCTION TIMING, MOVEMENT OF CONSTRUCTION MATERIALS AND STORAGE OF REFUSE CONTAINERS WITH THE

I 3. COORDINATE ARCHITECTURAL DEMOLITION WORK WITH THAT OF THE MECHANICAL, ELECTRICAL TRADES AND DRAWINGS. VERIFY ALL

EXISTING CONDITIONS IN THE FIELD AND NOTIFY ARCHITECT OF ANY DISCREPANCY PRIOR TO COMMENCING WORK.

DEMOLITION OR NEW CONSTRUCTION WORK, IT SHALL BE REPAIRED OR REPLACED TO MATCH EXISTING CONDITIONS AT NO ADDITIONAL

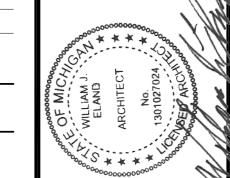
4.~ IT IS THE INTENT THAT ALL EXISTING WORK INTERFERING WITH THE INSTALLATION OF NEW WORK BE REMOVED AS REQUIRED.

NECESSARY PROTECTION MEASURES TO SAFEGUARD THE PUBLIC DURING CONSTRUCTION ACTIVITIES

BARRIERS TO THE SATISFACTION OF THE OWNER AND ALL APPLICABLE RULES AND REGULATIONS.

'. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS TO THE EXTENT OF DEMOLITION WORK TO BE PERFORMED.

ROOF FRAMING PLAN GENERAL NOTES



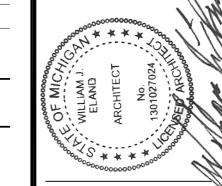
RENC **PENTHOUSE**

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Date Issued Bids & Permit 12/23/2020

BULLETIN #1 03/26/2021

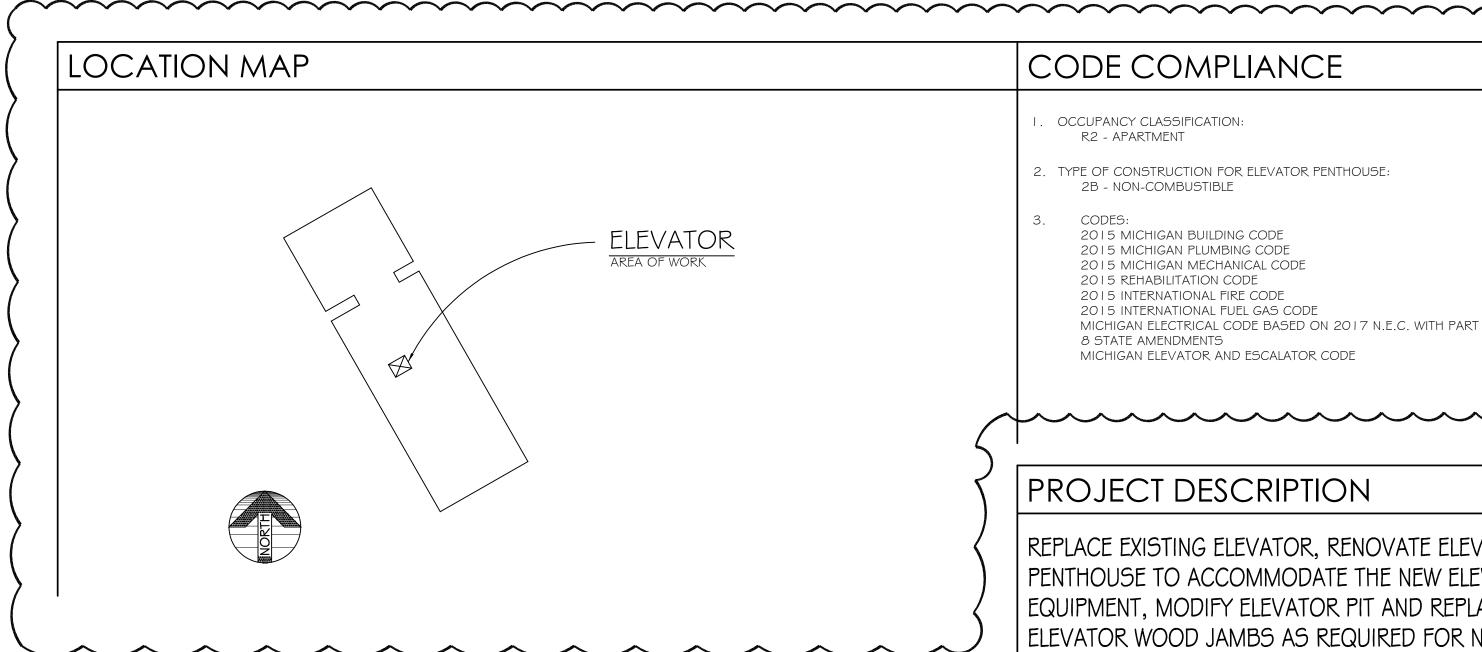
Wah Yee Associates Architects & Planner: 42400 GRAND RIVER AVENUE, S NOVI. MICHICAN 4027



Job Number

5122 SHEET TITLE TITLE SHEET

Sheet Number



REPLACE EXISTING ELEVATOR, RENOVATE ELEVATOR PENTHOUSE TO ACCOMMODATE THE NEW ELEVATOR EQUIPMENT, MODIFY ELEVATOR PIT AND REPLACE ELEVATOR WOOD JAMBS AS REQUIRED FOR NEW ELEVATOR CALL BUTTONS AND INDICATORS.

- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS PROPOSAL TO BECOME FAMILIAR WITH
- EQUIPMENT FROM METAL OR WOOD DECK IS STRICTLY PROHIBITED. ITEMS NOT ALLOWED TO BE ATTACHED TO OR SUSPENDED FROM THE METAL OR WOOD DECK INCLUDE BUT ARE NOT LIMITED TO MECHANICAL OR ELECTRICAL EQUIPMENT, DUCTS, PIPING, LIGHT FIXTURES, OR OTHER DECORATIVE STRUCTURES.
- THE FOLLOWING SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIALS. . STRUCTURAL STEEL SHOP DRAWINGS. 2. SPECIAL INSPECTION REPORTS.

ABBREVIATIONS

E.G. - EXTERIOR GRADE

E.J. - EXPANSION JOINT

EL. - ELEVATION

ELEC. - ELECTRICAL

ELEV. - ELEVATION

EQUIP. - EQUIPMENT

EXPAN. - EXPANSION

AIR CONDITIONING

H.M. - HOLLOW METAL

HORIZ. - HORIZONTAL

EQ. - EQUAL

EXH. - EXHAUST

EXIST. - EXISTING

EXT. - EXTERIOR

FIN. - FINISH

ADJ. - ADJUSTABLE A.F.F. - ABOVE FINISH FLOOR AGG. - AGGREGATE ALT. - ALTERNATE ALUM. - ALUMINUM ANOD. - ANODIZED

B.O.S. - BOTTOM OF STEEL BOTT. - BOTTOM BRG. - BEARING BTWN. - BETWEEN CLG. - CEILING C.O. - CLEAN-OUT COL. - COLUMN CONC. - CONCRETE

F.F. - FINISH FLOOR F.E. - FIRE EXTINGUISHER FR. - FRAME CONSTR. - CONSTRUCTION FRT. - FIRE-RETARDANT CONT. - CONTINUOUS FLR. - FLOOR CONTR. - CONTRACTOR F.D. - FLOOR DRAIN .J. - CONTROL JOINT FURN. - FURNISHED CORR. - CORRIDOR CTSK. - COUNTERSUNK SCREW DET. - DETAIL DIA. - DIAMETER DIM. - DIMENSION

GA. - GAUGE GALV. - GALVANIZED GEN. - GENERAL GL. - GLASS GYP. - GYPSUM DR. - DOOR H.B. - HOSE BIBB D.S. - DOWNSPOUT HDW. - HARDWARE D.F. - DRINKING FOUNTAIN H.P. - HIGH POINT HVAC - HEATING /VENTILATING/ DWG. - DRAWING DWL. - DOWEL

I.D. - INSIDE DIAMETER INSUL. - INSULATION INT. - INTERIOR JT. - JOINT EWC. - ELECTRIC WATER COOLER LAM. - LAMINATE LAV. - LAVATORY LG. - LONG L.P. - LOW POINT MANUF. - MANUFACTURER MAS. - MASONRY

M.O. - MASONRY OPENING MAT. - MATERIAL MAX. - MAXIMUM M.C.J. - MASONRY CONTROL JOINT MECH. - MECHANICAL MET. - METAL M.I.C. - MISCELLANEOUS IRON CONTRACTOR

MTD.- MOUNTED NOM. - NOMINAL

MISC.- MISCELLANEOUS N.I.C. - NOT IN CONTRACT N.T.S. - NOT TO SCALE O.C. - ON CENTER O.H. - OPPOSITE HAND OPNG. - OPENING OPP. - OPPOSITE O.D. - OUTSIDE DIAMETER PL. - PLATE W. - WIDE PR. - PAIR WD. - WOOD

PREFAB - PREFABRICATED PREFIN. - PREFINISHED RAD. - RADIUS REINF. - REINFORCE RM. - ROOM R.O. - ROUGH OPENING R.S. - ROOF SUMP SHT. - SHEET

SIM. - SIMILAR SPEC. - SPECIFICATION SQ. - SQUARE STL. - STEEL STRUCT. - STRUCTURAL SUSP. - SUSPENDED SYM. - SYMMETRICAL SYN. - SYNTHETIC SYS. - SYSTEM THK. - THICKNESS T & G - TONGUE & GROOVE T.O.P. - TOP OF PARAPET T.O.S. - TOP OF STEEL (UNDERSIDE METAL DECK)

TYP. - TYPICAL EXISTING U.N.O. - UNLESS NOTED OTHERWISE UR. - URINAL VERT. - VERTICAL **ROOM NAME AND NUMBER** V.I.F. - VERIFY IN FIELD W/ - WITH OI ROOM NO. W.C. - WATER CLOSET WWF - WELDED WIRE FABRIC

SYMBOL LEGEND

DETAIL TITLE ELEVATION SYMBOL DETAIL IDENTIFICATION -ELEVATION IDENTIFICATION — DRAWING WHERE DETAIL DRAWING WHERE -ELEVATION IS DRAWN IS REFERENCED OR CUT **BUILDING SECTION LOCATOR DETAIL CUT** BUILDING SECTION — DETAIL IDENTIFICATION — IDENTIFICATION ---DRAWING WHERE -DRAWING WHERE DETAIL-SECTION IS DRAWN IS DRAWN PLAN OR DETAIL ENLARGEMENT **COLUMN OR CENTERLINE** PLAN OR DETAIL IDENTIFICATION (A)—— — DRAWING WHERE PLAN OR DETAIL IS

DOOR NUMBER

LOCATED

GENERAL NOTES

ALL EXISTING FIELD CONDITIONS, AND REPORT ANY DISCREPANCIES TO THE ARCHITECT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES TO SAFEGUARD AGAINST THE INTERRUPTION OF SERVICES TO THE OWNER OR

ALL WOOD MEMBERS, PLYWOOD, STUDS, BLOCKING, ETC. TO BE FIRE RETARDANT TREATED WITH U.L. LABEL -

PROHIBITED SUSPENSION OF MATERIALS FROM METAL OR WOOD DECK: SUSPENSION OF ANY MATERIAL OR

PROVIDE PORTABLE FIRE EXTINGUISHERS DURING CONSTRUCTION IN ACCORDANCE OF LOCAL AUTHORITIES.

DEFERRED SUBMITTAL ITEMS:

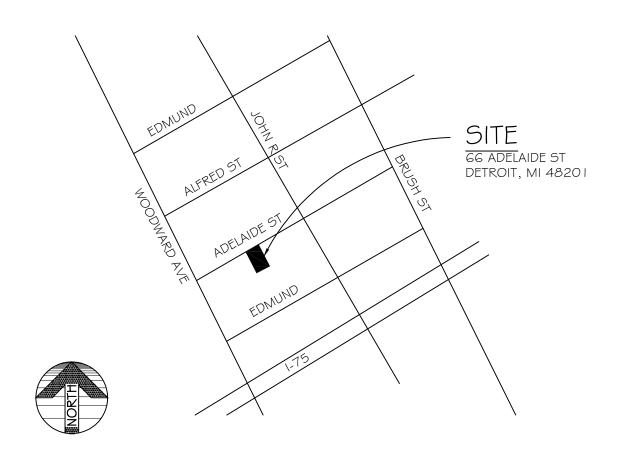
VICINITY MAP

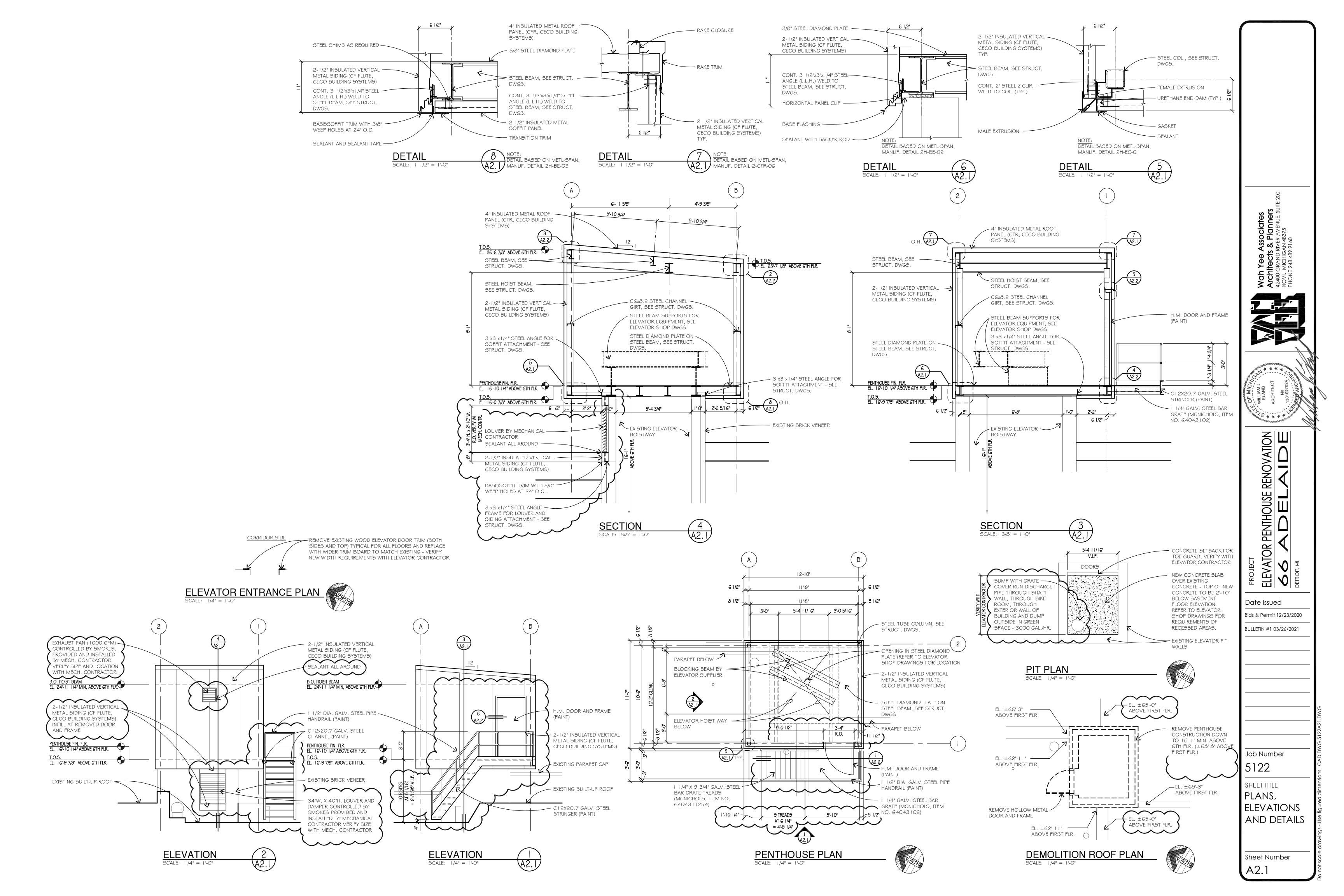
COST TO THE OWNER.

GENERAL DEMOLITION NOTES

SAFEGUARD AGAINST THE INTERRUPTION OF SERVICES TO THE OWNER OR TENANTS

. REMOVE ALL UNUSED ELECTRICAL WIRING. CONDUITS. WATER PIPING. VENTS. ETC.





SCALE: 3/4" = 1'-0"

Wah Yee Associate Architects & Planne 42400 GRAND RIVER AVENUE NOVI, MICHIGAN 48375 PHONE 248,489,9160



ATION DE RENOV, PENTHOUSE | ELEVATOR F

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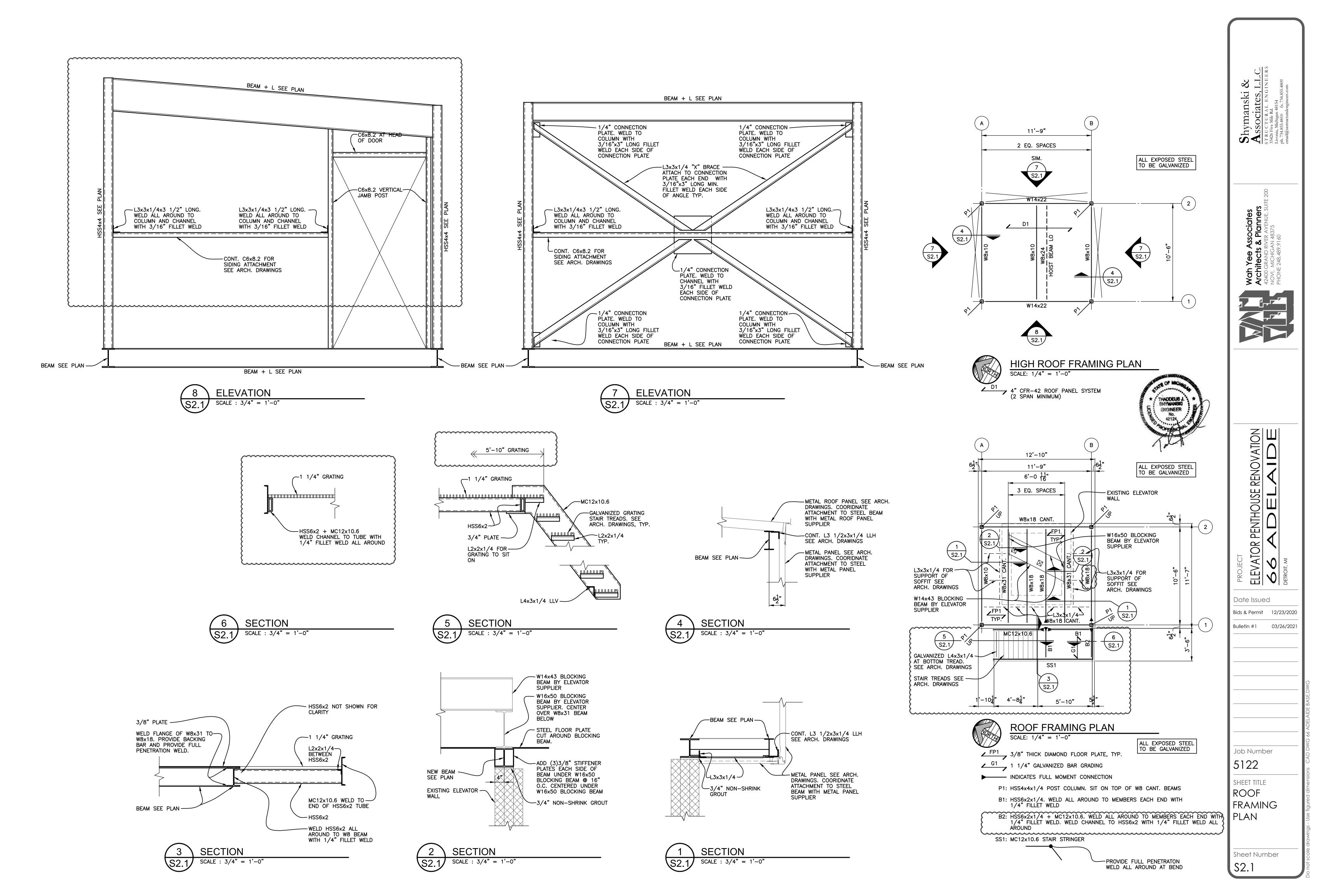
Date Issued

Bids & Permit 12/23/2020 BULLETIN #1 03/26/2021

Job Number 5122

SHEET TITLE SECTION & DETAILS

Sheet Number



SECTION 00 72 00 - GENERAL CONDITIONS NOTICE

- A. THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AMERICAN INSTITUTE OF ARCHITECTS A.I.A. DOCUMENT A201, FOURTEENTH EDITION, 1987, AND THE SUPPLEMENTARY CONDITIONS ON FILE IN THE OFFICES OF THE ARCHITECT AND THE OWNER'S REPRESENTATIVE, ARE HEREBY A PART OF THE SPECIFICATIONS, AND SHALL APPLY AND BE BINDING TO ALL CONTRACTORS AS THOUGH WRITTEN IN FULL HEREIN.
- B. CONTRACTORS SHALL EXAMINE AND BECOME FAMILIAR WITH ALL PROVISIONS OF THE ABOVE SPECIFIED DOCUMENTS.

END OF SECTION

SECTION 01 01 00 - GENERAL SCOPE OF WORK

- A. WORK INCLUDED: THE PROJECT GENERALLY CONSISTS OF, BUT IS NOT NECESSARILY LIMITED TO, THE RENOVATION AND COMPLETION OF AN ELEVATOR PENTHOUSE AS INDICATED ON THE DRAWINGS.
- 1. GENERAL: ALL WORK SHALL BE DONE IN A FIRST CLASS MANNER WITH NEW MATERIALS.
- 2. <u>INSPECTIONS AND MEASUREMENTS</u>: INSPECT, OBTAIN AND VERIFY FIELD MEASUREMENTS OF ADJOINING WORK AS REQUIRED TO LOCATE AND FIT WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURATE FITTING OF MATERIALS TOGETHER AND TO THE BUILDING. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR UNSUITABLE CONDITIONS PRIOR TO PROCEEDING WITH ANY
- B. SCOPE OF WORK: PRODUCTS AND MATERIALS SPECIFIED UNDER EACH SPECIFICATION SECTION SHALL BE CONSIDERED TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED OR DIRECTED BY THE ARCHITECT TO BE FURNISHED TO OTHERS FOR INSTALLATION, OR FURNISHED BY OTHERS FOR INSTALLATION BY THE CONTRACTOR.
- 1. WORK SHALL INCLUDE, BUT NOT NECESSARILY BE LIMITED TO, PROVIDING ALL LABOR, MATERIALS, EQUIPMENT, APPARATUS, TOOLS, TRANSPORTATION, PROTECTION, AND SERVICES NECESSARY FOR, AND REASONABLY INCIDENTAL TO, THE PROPER EXECUTION AND COMPLETION OF ALL WORK INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
- C. MANDATORY SITE VISIT: PRIOR TO SUBMITTING BID PROPOSAL, ALL CONTRACTORS SHALL VISIT THE PROJECT SITE AND COMPARE EXISTING FIELD CONDITIONS WITH DRAWINGS AND SPECIFICATIONS. NO ALLOWANCE WILL BE MADE TO THE CONTRACT BY REASON OF FAILURE OF NOT HAVING MADE AN EXAMINATION. OR FOR ANY ERROR DUE TO INADEQUATE INVESTIGATION.
- D. <u>MATCHING EXISTING MATERIALS</u>: WHERE INDICATED ON THE DRAWINGS OR REQUIRED BY FIELD CONDITIONS, CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD INSPECTION, IDENTIFICATION AND VERIFICATION OF MATERIALS SPECIFIED OR NOTED ON THE DRAWINGS TO MATCH EXISTING. REPORT TO ARCHITECT ANY DISCREPANCIES BETWEEN CONTRACT DOCUMENTS AND ACTUAL FIELD CONDITIONS.
- E. REQUIREMENTS: ALL WORK SHALL BE EXECUTED IN STRICT ACCORDANCE WITH THE FOLLOWING:
- CONTRACT

DRAWINGS

APPROVED SHOP DRAWINGS.

- 4. GENERAL CONDITIONS (AND SUPPLEMENTARY CONDITIONS)
- SPECIFICATIONS, ADDENDA AND BULLETINS.
- 6. CHANGE ORDERS AND DIRECTIVES RECEIVED FROM THE OWNER AND/OR ARCHITECT.
- 7. WARRANTIES AND GUARANTEES IN ACCORDANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS. WITH PERIOD OF WARRANTY OR GUARANTY AS STATED THEREIN. IF CONTRACTOR NEGLECTS TO CORRECT OR COMPLETE WORK IN PUNCH LISTS DURING PERIOD OF WARRANTY OF GUARANTY, CONTRACTOR IS STILL RESPONSIBLE AND REQUIRED TO DO SO AFTER EXPIRATION DATES OF WARRANTY OR GUARANTY UNTIL THE CORRECTIVE WORK IS COMPLETED AND ACCEPTED
- 8. THE GOVERNING LOCAL, STATE AND NATIONAL BUILDING CODES, LAWS, ORDINANCES, RULES, PERMITS, REGULATIONS AND DIRECTIVES FROM AUTHORITIES HAVING JURISDICTION.
- 9. THE APPROVED (DEMOLITION AND) CONSTRUCTION TIME AND SEQUENCE SCHEDULE.
- 10. COOPERATE WITH OTHER CONTRACTORS EMPLOYED BY THE OWNER UNDER SEPARATE CONTRACTS. COOPERATION SHALL INCLUDE. BUT NOT BE LIMITED TO. WRITTEN NOTICES TO OTHERS WHEN REQUIRED TO IMPLEMENT PROPER COORDINATION OF THE WORK, AND TO MAINTAIN THE (DEMOLITION AND) CONSTRUCTION TIME SCHEDULE SEQUENCE.
- F. QUALITY ASSURANCE: ALL MATERIALS, ARTICLES AND ACCESSORIES SHALL BE NEW MATERIALS OF TYPE AND QUALITY SPECIFIED AND SHALL BE SUBJECT TO REVIEW BY THE ARCHITECT AND THE OWNER. METHODS OF PREPARATION, APPLICATION, CONSTRUCTION AND INSTALLATION OF MATERIALS SHALL BE IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICES, MANUFACTURER'S PRINTED SPECIFICATIONS, AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
- G. SUBSTITUTIONS: WHERE SPECIFICATIONS MAY ALLOW THE USE OF A COMPARABLE MANUFACTURER'S PRODUCT, ACCEPTANCE SHALL BE SUBJECT TO CONFORMANCE WITH THE SPECIFICATIONS, THE REQUIREMENTS OF THE DRAWINGS, AND REVIEW BY THE ARCHITECT.
- H. <u>REQUIREMENTS OF REGULATORY AGENCIES</u>: FURNISH AND INSTALL ALL MATERIALS OR COMPONENTS INACCORDANCE WITH THE LAWS, CODES, ORDINANCES AND REGULATIONS OF THE PUBLIC AUTHORITIES HAVING JURISDICTION, INCLUDING ICC/ANSI-A117.1 AND TITLE III OF THE AMERICANS WITH DISABILITIES
- I. <u>INTENT_OF_CONTRACT_DOCUMENTS</u>: WORK NOT PARTICULARLY DETAILED, MARKED, OR SPECIFIED SHALL BE THE SAME AS SIMILAR PARTS THAT ARE DETAILED, MARKED, OR SPECIFIED. SHOULD AN ERROR OCCUR IN THE SPECIFICATIONS OR DRAWINGS. OR IN WORK BY OTHERS AFFECTING THIS WORK THE CONTRACTOR SHALL AT ONCE NOTIFY THE ARCHITECT WHO WILL ISSUE INSTRUCTIONS AS TO PROCEDURE. IF THE CONTRACTOR PROCEEDS WITH THE WORK BASED ON SUCH AN ERROR WITHOUT INSTRUCTIONS FROM THE OWNER, THE CONTRACTOR SHALL MAKE GOOD ANY RESULTING DAMAGE OR DEFECTS. THIS INCLUDES SPECIFICATION TYPOGRAPHICAL ERRORS AND DRAWING NOTATIONAL ERRORS WHERE THE INTENT IS DOUBTFUL.
- J. CONFLICTS: IN THE EVENT OF A CONFLICT OR NEED FOR INTERPRETATION BETWEEN THE WORKING DRAWINGS AND SPECIFICATIONS. THE ARCHITECT SHALL BE THE SOLE INTERPRETER OF THE DRAWINGS AND SPECIFICATIONS, TO DETERMINE WHICH, IF ANY WILL TAKE PRECEDENCE.
- K. PROHIBITED SUSPENSION OF MATERIALS FROM METAL DECK: SUSPENSION OF ANY MATERIAL OR EQUIPMENT FROM METAL DECK IS STRICTLY PROHIBITED. ITEMS NOT ALLOWED TO BE ATTACHED TO OR SUSPENDED FROM THE METAL DECK SHALL NOT BE LIMITED TO PRODUCTS SUCH AS MECHANICAL OR ELECTRICAL EQUIPMENT, DUCTS, PIPING, LIGHT FIXTURES, OR OTHER DECORATIVE STRUCTURES.
- L. <u>ASBESTOS</u> <u>FREE</u> <u>MATERIALS</u>: NO ASBESTOS, OR PRODUCTS CONTAINING ASBESTOS, SHALL BE INSTALLED IN THIS PROJECT. GENERAL CONTRACTOR SHALL PROVIDE TO THE OWNER AN AFFIDAVIT CERTIFYING SAME AT COMPLETION OF CONSTRUCTION.

M. PRODUCT DELIVERY AND STORAGE:

- 1. PROTECT ALL MATERIALS FROM THE WEATHER DURING TRANSIT AND STORAGE. DELIVER ONLY ACCEPTABLE MATERIALS TO THE SITE IN ORIGINAL BOXES, PROTECTIVE WRAPPINGS, CLEARLY LABELED WITH ALL PERTINENT INFORMATION (I.E., MANUFACTURER, MATERIAL TYPE, AND LOCATION), TO FACILITATE CHECKING. UNLOAD IN AREAS OR ASSIGNED ROOMS FOR STORAGE DESIGNATED BY THE GENERAL CONTRACTOR OR THE OWNER'S REPRESENTATIVE.
- 2. STORE MATERIALS AT PROTECTED TEMPORARY WEATHERTIGHT STORAGE LOCATIONS AND/OR INTERIOR SECURE LOCATIONS. DO NOT DELIVER MATERIALS TO THE JOB SITE UNTIL REQUIRED FOR
- a. WOOD: TAKE ALL PRECAUTIONS TO AVOID MOISTURE ABSORPTION.
- b. <u>INSULATION</u>: WET, DAMP OR DAMAGED MATERIALS SHALL NOT BE USED.
- c. HOLLOW METAL DOOR FRAMES (PRESSED STEEL FRAMES): DOOR FRAMES SHALL BE SHIPPED WITH TEMPORARY SPREADERS ACROSS BOTTOMS TO MAINTAIN SHAPE.
- N. <u>SCAFFOLDING</u>: PROVIDE, ERECT, AND MAINTAIN ALL SCAFFOLDING, COMPLYING WITH GOVERNING CODE EQUIREMENTS. ERECT APPARATUS AT TIMES AND LOCATIONS SO AS NOT TO DELAY ANY WORK. WHEN WORK HAS BEEN COMPLETED, PROMPTLY DISMANTLE SCAFFOLDING AND REMOVE FROM SITE.
- O. <u>VEHICLES</u>: ALL VEHICLES WHERE REQUIRED FOR USE ON FINISHED FLOOR SURFACES SHALL BE EQUIPPED WITH NON-MARKING RUBBER WHEELS. VEHICLES SHALL NOT PARK ON SIDEWALKS OR COMMON AREAS. USE DESIGNATED LOT AREAS.
- P. <u>CERTIFICATION OF WELDERS</u>: PRIOR TO START OF WORK, SUBMIT WELDER CERTIFICATION BY RECOGNIZED, INDEPENDENT LABORATORY TO ARCHITECT. ALL WELDING SHALL BE PERFORMED BY WELDERS WHO HAVE QUALIFIED BY TESTS PRESCRIBED IN STANDARD QUALIFICATION PROCEDURE OF THE AMERICAN WELDING SOCIETY (AWS).
- Q. <u>DAMAGE TO MATERIALS:</u> USE CARE IN STORING, HANDLING AND ERECTING ALL MATERIALS AND SUPPORT PROPERLY AT ALL TIMES TO INSURE MATERIALS WILL NOT BE DAMAGED. MATERIALS DAMAGED DUE TO THE CARELESSNESS OF THE CONTRACTOR SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR TO THE APPROVAL OF THE OWNER.
- R. WARRANTIES AND GUARANTEES: EXECUTE A WARRANTY AND/OR GUARANTY IN THE ARCHITECT/OWNER APPROVED WRITTEN FORM, WARRANTING AND GUARANTYING ALL MATERIALS AND WORKMANSHIP TO REMAIN IN SERVICEABLE AND SATISFACTORY CONDITION, AND TO MAKE GOOD AT OWN EXPENSE, WITHOUT COST TO THE OWNER. ANY IMPERFECTIONS WHICH MAY DEVELOP DURING THE WARRANTY AND/OR GUARANTY PERIOD AND DAMAGE TO OTHER WORK CAUSED BY IMPERFECTIONS OR BY REPAIRING IMPERFECTIONS. UNLESS OTHERWISE SPECIFIED, THE WARRANTY AND GUARANTY PERIOD SHALL BE NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE OF THE WORK BY THE OWNER.
- S. <u>DAMAGED WORK</u>: ALL DAMAGED OR DEFECTIVE WORK SHALL BE REPLACED BY NEW WORK TO THE SATISFACTION OF THE OWNER. ALL WORK WHICH BECOMES DAMAGED IN THE COURSE OF REPAIR WORK SHALL BE REPAIRED OR REPLACED BY THE INSTALLING CONTRACTOR AT NO COST TO THE OWNER, TO THE SATISFACTION OF THE OWNER.

T. <u>FIRE PREVENTION</u>:

- WHEN WELDING OR CUTTING WITH BURNING TORCHES IS REQUIRED, TAKE ALL PRECAUTIONS TO PREVENT DAMAGE TO THE BUILDING FROM FIRE, WELD SPLATTER, DRIPPING MOLTEN METAL, SMOKE AND FUMES, OR OTHER CAUSES ARISING FROM THE OPERATIONS. PROVIDE FIREPROOF TARPAULINS OR ENCLOSURES AROUND THE AREAS OF WELDING OR BURNING.
- TRAINED PERSONNEL AND EQUIPMENT: FURNISH A WORKER TRAINED AND EXPERIENCED IN FIRE-FIGHTING, WHOSE SOLE DUTY SHALL BE TO PREVENT DAMAGE AND FIRE AT EACH LOCATION WHERE WELDING OR BURNING IS TO BE DONE. FURNISH ADEQUATE AND SUFFICIENT FIRE-FIGHTING EQUIPMENT AND EXTINGUISHERS AT EACH LOCATION.

U. <u>CLEAN-UP</u>:

- 1. CLEAN-UP AND REPAIR ADJACENT FINISHED WORK SOILED, MARRED, OR DAMAGED IN THE PERFORMANCE OF WORK, SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
- 2. DURING PROGRESS OF WORK, THE PREMISES SHALL BE KEPT FREE OF ALL DEBRIS AND WASTE MATERIALS RESULTING FROM THE WORK. ALL DEBRIS AND RUBBISH SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED. UPON COMPLETION OF WORK AND BEFORE FINAL ACCEPTANCE OF THE WORK, ALL DEBRIS, RUBBISH, UNUSED MATERIALS, TOOLS, AND EQUIPMENT SHALL BE REMOVED
- 3. AT COMPLETION OF THE PROJECT, CONSTRUCTION SITE DISTURBED OR DISRUPTED BY CONSTRUCTION ACTIVITIES SHALL BE IN NOT LESS THAN BROOM CLEAN CONDITION, SUBJECT TO APPROVAL BY THE OWNER.

END OF SECTION

SECTION 01 15 00 - CONTRACT STANDARDS AND PROCEDURES

- 1. <u>LAYOUT</u>: LOCATE AND LAYOUT THE WORK, AND ESTABLISH LINES AND LEVELS ACCURATELY. REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY UPON DISCOVERY.

A. WORK INCLUDED: THIS SECTION CONSISTS OF ESTABLISHING STANDARDS AND PROCEDURES.

- 2. <u>USE OF PREMISES</u>: CONFINE APPARATUS, STORAGE OF MATERIALS, AND OPERATIONS OF WORKMEN TO LIMITS INDICATED BY LAW, ORDINANCE, PERMIT, OR ARRANGEMENT WITH THE OWNER. DO NOT UNREASONABLY ENCUMBER THE PREMISES WITH MATERIALS.
- PROGRESS MEETINGS: ARRANGE FOR REGULAR PERIODIC PROGRESS MEETINGS. ALL KEY PERSONNEL OF CONTRACTORS AND SUBCONTRACTORS SHALL ATTEND. NOTIFY OTHER PARTIES AS THE OWNER'S REPRESENTATIVE OR ARCHITECT MIGHT DESIGNATE, AS JOB CONDITIONS AND
- C. <u>RECORD DRAWINGS</u>: MAINTAIN ON SITE A COMPLETE SET OF CONSTRUCTION DOCUMENTS AND SHOP DRAWINGS AS REQUIRED BY SECTION 01 70 00 PROJECT CLOSEOUT.

- SUBCONTRACTOR LIST: SUBMIT LIST OF SUBCONTRACTORS WITH ADDRESSES AND PHONE NUMBERS FOR APPROVAL WITHIN TWENTY-FOUR (24) HOURS AFTER NOTIFICATION OF INTENT TO ENTER INTO CONTRACT. PREPARE LIST ON THE FORM OF A SWORN STATEMENT ATTESTING TO THE VALIDITY OF SUCH. DO NOT CHANGE THE NAME OF SUBCONTRACTORS OR VENDORS ON THE APPROVED LIST WITHOUT THE SPECIFIC WRITTEN FORM STATING SUFFICIENT REASON TO WARRANT SUCH A CHANGE.
- 2. <u>SCHEDULE OF VALUES</u>: PREPARE DETAILED ACCOUNTING OF CONTRACT SUM ON THE BASIS OF "TRADES" SPECIFICATIONS SECTIONS INDICATED ON DRAWING. SUBMIT AND OBTAIN APPROVAL BEFORE FIRST APPLICATION FOR PAYMENT. USE ONLY APPROVED BREAKDOWN FOR PAYMENT
- 3. PAYMENT SCHEDULE: SUBMIT TO THE ARCHITECT AT LEAST TWENTY (20) DAYS PRIOR TO THE SUBMISSION OF THE FIRST REQUEST FOR PAYMENT, A SCHEDULE DETAILING PROJECTED MONTHLY REQUESTS FOR PAYMENT FOR THE DURATION OF THE PROJECT.
- 4. SHOP DRAWINGS AND SAMPLES:
- a. REFER TO SECTION 01 33 23 SHOP DRAWINGS AND SAMPLES.
- b. IN ADDITION TO SECTION 01 33 23, THE CONTRACTOR SHALL FURNISH THE OWNER WITH ONE (1) COPY OF ALL APPROVED SHOP DRAWINGS AND MANUFACTURERS PRODUCT DATA BOUND IN LOOSE LEAF FORM, FOR THE OWNER'S RECORDS, PRIOR TO OWNER ISSUING THE CERTIFICATE OF SUBSTANTIAL COMPLETION.
- 5. <u>TEST REPORTS</u>: SUBMIT COPIES AS REQUIRED HEREIN, WITH DISTRIBUTION AS DIRECTED BY THE ARCHITECT.

- 1. PERFORMANCE AND LABOR AND MATERIAL PAYMENT BONDS:
- a. IF REQUIRED, DELIVER TO THE OWNER WITHIN TEN (10) DAYS OF THE DATE OF THE NOTIFICATION OF INTENT TO ENTER INTO CONTRACT.
- b. CONDITION BONDS FOR THE FAITHFUL PERFORMANCES OF THE CONTRACT AND FOR TI PAYMENT OF LABOR AND MATERIAL, EACH IN THE SUM OF 100% OF THE AMOUNT OF THE CONTRACT AS SET FORTH IN NOTIFICATION OF INTENT TO ENTER INTO CONTRACT.
- c. THE OWNER, AT THE OWNER'S DISCRETION, RESERVES THE RIGHT TO ACCEPT OR REJECT THE COMPANY UNDERWRITING THE BONDS ON THE BASIS OF THEIR PREVIOUS PERFORMANCE.
- 2. AGREEMENT: USE AIA FORM A111.
- 3. APPLICATION FOR PAYMENT: USE AIA FORM G702 AND G703.
- 4. <u>SWORN STATEMENTS</u>: USE UNIFORM COMMERCIAL FORMAT DESIGNATED BY THE OWNER.
- INSURANCE CERTIFICATE: USE FORM SELECTED BY OWNER. OWNER MAY, AT THE OWNER'S OPTION, REQUIRE A CERTIFIED COPY OF CONTRACTOR'S INSURANCE POLICIES IN ADDITION TO INSURANCE

F. QUALITY CONTROL

- STANDARDS: ESTABLISH A QUALITY CONTROL SYSTEM TO PERFORM SUFFICIENT INSPECTION AND TESTS OF ALL WORK, INCLUDING SUBCONTRACTORS, TO ENSURE CONFORMANCE TO APPLICABLE SPECIFICATIONS AND DRAWINGS, WITH RESPECT TO MATERIALS, WORKMANSHIP, CONSTRUCTION, FINISH, FUNCTIONAL PERFORMANCE, AND IDENTIFICATION. CONTROL SYSTEM SHALL SPECIFICALLY INCLUDE OBSERVATION, SUPERVISION, AND TESTS REQUIRED IN THE SPECIFICATIONS.
- 2. TESTING: PROVIDE TESTING IN ACCORDANCE WITH SECTION 01 45 23 TESTING.

G. SCHEDULE:

1. <u>DATES</u>: WORK SHALL COMMENCE AND BE SUBSTANTIALLY COMPLETED AS SPECIFIED IN THE CONTRACT AGREEMENT.

- a. PREPARE A "PLAN OF OPERATIONS AND PROGRESS SCHEDULE" TO INDICATE THE MANNER IN WHICH DIFFERENT PHASES OF THE WORK ARE TO BE STARTED, WHEN SHOP DRAWINGS ARE TO BE SUBMITTED, COLORS SELECTED, METHODS AND SPEED FOR PROGRESSING DIFFERENT PHASES. AND DATES UPON WHICH SUBCONTRACTORS ARE DEPENDENT UPON OTHER SUB-CONTRACTS. SCHEDULE SHALL INDICATE MAJOR ITEMS OF WORK. INCLUDING STEEL MISCELLANEOUS METAL ERECTION, CONCRETE WORK AND DATE OF FINAL COMPLETION.
- b. PLAN OF OPERATIONS AND PROGRESS SCHEDULE SHALL BE "WEIGHTED" TO SCHEDULE EACH TRADE IN PROPORTION TO THE ENTIRE PROJECT, PHYSICALLY AND FINANCIALLY.
- c. REVISE SCHEDULE MONTHLY TO INDICATE ACTUAL PROGRESS COMPARED TO THE ESTIMATED
- d. POST SCHEDULE IN THE CONTRACTOR'S FIELD OFFICE AND DISTRIBUTE COPIES TO THE OWNER, ARCHITECT, PROJECT REPRESENTATIVE, AND ALL PRIME SUBCONTRACTORS.

H. <u>PAYMENT</u>:

REQUESTS:

- a. ON OR BEFORE THE TENTH (10TH) DAY OF EACH MONTH, THE CONTRACTOR SHALL MAKE APPLICATION FOR PAYMENT IN QUADRUPLICATE BASED ON PERCENTAGE OF COMPLETION OF ITEMS OF COST BREAKDOWN.
- b. EACH APPLICATION AFTER THE FIRST ONE SHALL BE ACCOMPANIED BY WAIVERS OF LIEN AND SWORN STATEMENTS THAT ALL LABOR. MATERIALS. AND SERVICES INCLUDED IN THE PREVIOUS AND PRIOR STATEMENTS HAVE BEEN PAID, LESS ONLY THE RETAINED PERCENTAGE STATED HEREIN, AND ANY DISPUTED AMOUNTS WHICH SHALL BE STATED. IN ADDITION, THE CONTRACTOR SHALL REQUEST AND FILE WITH THE REQUEST FOR PAYMENT A SWORN STATEMENT FROM EACH SUBCONTRACTOR THAT THE CONTRACTOR HAS DIRECT CONTRACTUAL RELATIONS WITH.
- 2. PAYMENT: THE OWNER SHALL MAKE PAYMENTS ON ACCOUNT OF EACH CONTRACT AS PROVIDED HEREIN. WITHIN THIRTY (30) DAYS AFTER SUBMISSION AND APPROVAL OF THE APPLICATION FOR PAYMENT THE OWNER WILL PAY NINETY (90) PERCENT OF THE VALUE EXCEPT AS MAY BE MODIFIED AS FOLLOWS, BASED ON THE CONTRACT PRICES, INCLUDING EXECUTED CHANGE ORDERS AMENDING THE CONTRACT, ON LABOR AND MATERIALS INCORPORATED IN THE WORK, AND MATERIAL SUITABLY STORED AT THE SITE UP TO THE FIRST DAY OF THAT MONTH AS CERTIFIED BY THE ARCHITECT, LESS THE AGGREGATE OF THE PREVIOUS PAYMENTS.
- a. TEN (10) PERCENT OF THE ESTIMATED AMOUNTS SHALL BE RETAINED UNTIL THE FINAL COMPLETION AND ACCEPTANCE OF ALL WORK COVERED BY THE CONTRACT.
- b. THE RETAINED PERCENTAGE SHALL BE PAID THIRTY (30) DAYS AFTER OWNER'S ACCEPTANCE OF THE RENOVATION WORK, PROVIDING THAT ALL REQUIREMENTS OF THE CONTRACT ARE MET. REFER TO CLOSING PROCEDURE.

4. <u>SUBSTANTIAL</u> <u>COMPLETION</u> <u>PAYMENT</u>: UPON ISSUANCE OF CERTIFICATE OF SUBSTANTIAL COMPLETION, A SUM SHALL BE PAID SUFFICIENT TO INCREASE THE PAYMENTS TO THE TOTAL OF THE CONTRACT, LESS THE RETAINED PERCENTAGE.

FINAL CERTIFICATE:

- a. AFTER THE CONTRACTOR HAS COMPLIED WITH THE CLOSING REQUIREMENTS SPECIFIED HEREIN, AND PROVIDED THE ARCHITECT WITH APPROPRIATE DOCUMENTATION, THE ARCHITECT SHALL CERTIFY SUCH, ISSUING A FINAL CERTIFICATE.
- b. ISSUANCE OF SUCH CERTIFICATE DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITIES RELATED TO GUARANTEEING THE PERFORMANCE OF THE FACILITY, AS SPECIFIED HEREIN OR OTHERWISE PROVIDED.

- 1. KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY WORK OPERATIONS AT ALL TIMES. AT THE COMPLETION OF THE WORK REMOVE ALL WASTE MATERIALS AND RUBBISH FROM AND ABOUT THE PROJECT, AS WELL AS ALL TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY, AND SURPLUS MATERIALS.
- 2. ESTABLISH AND ENFORCE A DAILY SYSTEM FOR COLLECTING AND DISPOSING WASTE MATERIALS FROM CONSTRUCTION AREAS AND ELSEWHERE AT PROJECT SITE. DO NOT HOLD COLLECTED MATERIALS AT SITE FOR MORE THAN THREE (3) DAYS. HANDLE HAZARDOUS, DANGEROUS, UNSANITARY, CONTAMINATING, POLLUTION, AND SIMILAR HARMFUL WASTES SEPARATELY FROM INERT MATERIALS BY CONTAINERIZING IN AN APPROPRIATE MANNER. DISPOSE OF EACH CATEGORY OF WASTE MATERIAL IN A LAWFUL MANNER. DO NOT BURY OR BURN WASTE MATERIALS ON OWNER'S

J. CLOSING PROCEDURES

- a. FURNISH AMPLE EVIDENCE TO ARCHITECT AND OWNER THAT ALL FINANCIAL OBLIGATIONS HAVE BEEN MET, INCLUDING SWORN STATEMENTS AND FINAL WAIVERS OF LIEN.
- b. OBTAIN A WRITTEN STATEMENT RELEASING THE OWNER AND THE ARCHITECT FROM ANY AND ALL OBLIGATIONS WHICH MIGHT ARISE OUT OF ANY UNPAID, DEFAULTED, OR OTHERWISE UNSATISFIED

- a. COMPLETE AND CORRECT ALL ITEMS ON THE PUNCH LIST AS ORIGINALLY ISSUED, AND AMENDED.
- b. IF CONTEMPLATING APPLICATION FOR FINAL PAYMENT, SCHEDULE A JOINT INSPECTION VISIT TO THE PROJECT WITH THE ARCHITECT ONE (1) WEEK IN ADVANCE TO DETERMINE IF THE CONTRACTS
- 3. RECORD DRAWINGS: DELIVER NOT LESS THAN THREE (3) SETS OF DOCUMENTS TO THE OFFICE OF THE ARCHITECT.

WARRANTIES AND GUARANTEES:

- a. SUBMIT ALL WRITTEN WARRANTIES AND GUARANTEES.
- b. SUBMIT AS APPLICABLE, LIST OF CONTACTS, INCLUDING COMPANY NAME, PERSONAL CONTACT, ADDRESS, TELEPHONE NUMBER, AND E-MAIL ADDRESS FOR BUILDING EQUIPMENT AND COMPONENTS WHICH MAY REQUIRE PERIODIC SERVICE, INCLUDING ROOFING, MECHANICAL EQUIPMENT, FIRE PROTECTION, PLUMBING, POWER ACTUATED DOORS, AND ELECTRICAL

- a. FURNISH REPORTS OF ALL TESTS AND THE PERFORMANCE OF COMPLETED SYSTEMS, AS REQUIRED IN THE SPECIFICATIONS, AND ALL CERTIFICATES OF APPROVAL.
- b. FURNISH ALL SCHEDULES, INSTRUCTIONS, AND EQUIPMENT OPERATION AND SERVICE MANUALS AS NECESSARY TO ENSURE SAFE AND PROPER OPERATION AND MAINTENANCE OF NEW PRODUCTS INSTALLED IN THE BUILDING.
- 6. <u>FINAL CERTIFICATE</u>: ISSUANCE OF FINAL CERTIFICATE DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITIES RELATED TO WARRANTING AND GUARANTYING THE PERFORMANCE OF THE WORK.

END OF SECTION

SECTION 01 33 23 - SHOP DRAWINGS AND SAMPLES

- SUMMARY LISTING AND SCHEDULE: GENERAL CONTRACTOR SHALL PREPARE A SUMMARY LIST AND SCHEDULE OF SHOP DRAWINGS, SAMPLES, AND BROCHURES FOR EACH ITEM OF WORK, AND SUBMIT TO THE ARCHITECT FOR REVIEW. SCHEDULE SHALL ALLOW APPROXIMATELY TWO (2) WEEKS FOR REVIEW BY THE ARCHITECT: HOWEVER, THIS MAY VARY DEPENDING UPON THE QUANTITY OF THE MATERIAL SUBMITTED. SCHEDULE SHALL ALSO ALLOW TIME FOR SUBMISSION OF SHOP DRAWINGS SAMPLES, AND BROCHURES WHICH MAY BE DISAPPROVED.
- 2. REQUIREMENTS: SHOP DRAWINGS ARE REQUIRED FOR THE VARIOUS ITEMS INDICATED ON THE
- 3. SUBMITTALS: EACH CONTRACTOR SHALL SUBMIT THROUGH THE GENERAL CONTRACTOR, TO THE ARCHITECT, AT PROPER TIMES, ALL SHOP DRAWINGS, PRODUCT DATA, AND DRAWING SETTING DIAGRAMS WHICH THE ARCHITECT MAY DEEM NECESSARY TO MAKE CLEAR THE WORK INTENDED OR SHOW ITS RELATION TO WORK OF OTHER TRADES. SHOP DRAWINGS AND PRODUCT DATA SHALL CONTAIN MANUFACTURER'S NAME, MATERIAL DESCRIPTION, SIZES AND DIMENSIONS, AND OTHER PERTINENT INFORMATION. PRODUCT DATA SHALL IDENTIFY MATERIALS TO BE SUPPLIED BY INDICATING THE INTENDED MATERIALS ON THE PRODUCT DATA SHEETS. CONTRACTORS SHALL NOT DUPLICATE DESIGN/WORKING DRAWINGS OR CRITERIA DRAWINGS FOR USE AS SHOP DRAWINGS DUPLICATED DRAWINGS OF THIS NATURE SHALL BE REJECTED.
- a. MANUFACTURERS LITERATURE: IMMEDIATELY AFTER AWARD OF THE CONTRACT, SUBMIT TO THE ARCHITECT FOR APPROVAL COPIES OF MANUFACTURER'S SPECIFICATIONS FOR ALL PRODUCTS TO BE USED, INCLUDING BUT NOT LIMITED TO INFORMATION REQUESTED BY THE ARCHITECT AND

b. <u>STRUCTURAL STEEL/MISCELLANEOUS METAL</u>:

REQUESTED BY THE ARCHITECT AND OWNER.

- 1. PROVIDE COMPLETE SHOP DRAWINGS SHOWING ALL ITEMS TO BE PROVIDED.
- 2. PREPARE COMPLETELY DETAILED SHOP DRAWINGS SHOWING DETAILS FOR CUTTING,
- FABRICATING, AND CONNECTING ALL PIECES. 3. WHERE CONNECTIONS ARE NOT SHOWN ON THE DRAWINGS, CONNECTIONS SHALL BE DESIGNED AND DETAILED ON THE SHOP DRAWINGS, AND SEALED BY A REGISTERED PROFESSIONAL STRUCTURAL ENGINEER IN THE STATE OF THE PROPOSED PROJECT, RETAINED
- AND PAID BY THE STEEL FABRICATOR. 4. PROVIDE SEPARATE SHOP DRAWINGS FOR ERECTION.
- 5. PREPARE SHOP DRAWINGS IN ACCORDANCE WITH AISC DETAILING FOR STRUCTURAL STEEL LATEST EDITION, USING A MARKING SYSTEM COMPATIBLE WITH, AND REFERENCED TO, THE MARKING SYSTEM USED ON THE DESIGN DRAWINGS.
- 6. INDICATE WELDING BY USING AWS SYMBOLS, SHOWING TYPE, SIZE AND LOCATION OF ALL WELDS. PROVIDE AUXILIARY VIEWS OF WELDS AS REQUIRED TO CLARIFY THE WELDING CONNECTIONS.
- 7. FORMALLY CHECK ALL SHOP DRAWINGS BEFORE FORWARDING TO ARCHITECT.
- c. PAINTING AND FINISHING COLORS, SAMPLES, AND MANUFACTURERS LITERATURE: IMMEDIATELY AFTER AWARD OF THE CONTRACT, SUBMIT TO THE ARCHITECT FOR APPROVAL SAMPLES OF WORK SHOWING COLORS, AND COPIES OF MANUFACTURER'S SPECIFICATIONS FOR ALL PRODUCTS TO BE USED INCLUDING BUT NOT LIMITED TO INFORMATION ON RECOMMENDED TEMPERATURE FOR APPLICATION, SPREADING RATES, AND DRY FILM THICKNESS OBTAINED OVER VARIOUS SURFACES AT THE MANUFACTURER'S RECOMMENDED SPREADING RATES, AND ADDITIONAL INFORMATION
- 4. <u>IDENTIFICATION</u>: SHOP DRAWING SUBMITTALS AND TRANSMITTAL LETTERS SHALL BE IDENTIFIED WITH THE TITLE AND LOCATION OF PROJECT, NAMES OF THE ARCHITECT, CONTRACTOR, AND
- 5. SHOP DRAWING SUBMITTALS: GENERAL CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW, ONE (1) REPRODUCIBLE AND THREE (3) PRINTS OF EACH DRAWING.

REVIEW OF SHOP DRAWINGS:

- a. IT SHALL BE DISTINCTLY UNDERSTOOD THAT THE REVIEW OF SHOP DRAWINGS SHALL BE FOR GENERAL SCHEME ONLY. REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM THE NECESSITY OF CORRECTING, WITHOUT CHARGE, DETAILS ON THE DRAWINGS AND COMPLETED WORK FOUND DEFICIENT IN STRENGTH OR OTHERWISE FAULTY.
- b. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR "FIGURED DIMENSIONS" OF SHOP DRAWINGS.
- c. THE REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE OR MODIFY THE RESPONSIBILITY FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS OR DIMENSIONS OR ERRORS CONTAINED IN THE SUBMITTAL OR QUANTITY COUNT. IT IS CLEARLY UNDERSTOOD THAT IN THE REVIEW PROCESS. NOTING OF SOME DISCREPANCIES, BUT OVERLOOKING OTHERS, DOES NOT GRANT THE CONTRACTOR PERMISSION TO PROCEED IN ERROR. REGARDLESS OF ANY INFORMATION CONTAINED IN THE SHOP DRAWINGS LAYOUT DRAWINGS CATALOG DATA AND BROCHURES THE CONTRACT DOCUMENTS GOVERN THE WORK, AND ARE NEITHER WAIVED NOR SUSPENDED IN ANY

WAY BY THE REVIEW OF SHOP DRAWINGS, LAYOUT DRAWINGS, CATALOG DATA AND BROCHURES.

- d. UPON COMPLETION OF THE PROJECT THE OWNER SHALL BE GIVEN ONE (1) SET OF REVIEWED SHOP DRAWINGS.
- AUTHORIZATION: UNLESS SPECIFICALLY REQUIRED BY THE ARCHITECT AND THE OWNER, NO MATERIALS SHALL BE ORDERED, DELIVERED, FABRICATED OR ERECTED UNTIL THE PROPER WRITTEN REVIEW BY THE ARCHITECT HAS BEEN RETURNED TO THE GENERAL CONTRACTOR.

B. SAMPLES AND LETTERS OF INTENT:

- GENERAL CONTRACTOR SHALL PREPARE A SUMMARY LIST OF THE SAMPLES AND LETTERS OF INTENT SUBMITTAL REQUIREMENTS FOR REVIEW BY THE ARCHITECT AND THE OWNER'S REPRESENTATIVE.
- 2. SUBMITTALS OF MATERIAL SAMPLES AND LETTERS OF INTENT ARE NOT LIMITED TO ITEMS SPECIFIED BY THE VARIOUS SECTIONS OF THE SPECIFICATIONS. LETTERS OF INTENT SHALL INDICATE MATERIALS, SPECIFICATIONS, AND INSTALLATION PROCEDURES. MATERIAL SAMPLES LETTERS OF INTENT SHALL BE SUBMITTED FOR APPROVAL PRIOR TO PURCHASE OR INSTALLATION OF MATERIALS. ALL MATERIAL SAMPLES SHALL BE REVIEWED BY THE ARCHITECT AND/OR OWNER, PRIOR TO ERECTION OR FABRICATION OF MATERIAL.
- 3. SECURE AND DELIVER, AS REQUESTED BY THE OWNER, SAMPLES OF ALL MATERIALS TO BE USED IN THE WORK. ALL SAMPLES SHALL HAVE THE SAME FINISH AS THAT TO BE USED IN THE COMPLETED
- WORK AND, UNLESS OTHERWISE SPECIFIED HEREIN, FOUR (4) REPRESENTATIVE SAMPLES OF PROPOSED MATERIALS SHALL BE SUBMITTED FOR REVIEW. 4. SAMPLES SHALL BE ACCOMPANIED BY A LETTER REQUESTING APPROVAL, AND PRESENTING ALL
- REQUIRED DATA ON SUCH SAMPLES.
- 5. ALL MATERIALS FURNISHED SHALL BE EQUAL TO THE REVIEWED SAMPLES.
- 6. ALL CASES WHERE THE CHOICE OF MORE THAN ONE (1) MAKE OR STYLE OF ARTICLE OR MATERIAL IS SPECIFIED, THE FINAL SELECTION OF THE ARTICLE OR MATERIAL RESTS WITH THE OWNER.

END OF SECTION

A. WORK INCLUDED:

- 1. OWNER WILL OBTAIN THE SERVICES OF AN INDEPENDENT TESTING LABORATORY TO PERFORM TESTING SERVICES FOR CONCRETE, STEEL AND OTHER MATERIALS AS REQUIRED, SPECIFIED OR
- 2. REQUIREMENTS FOR TESTING ARE DESCRIBED IN VARIOUS SECTIONS OF THE SPECIFICATIONS WHERE NO TESTING REQUIREMENTS ARE DESCRIBED, BUT THE OWNER DETERMINES THAT TESTING IS REQUIRED, THE OWNER MAY REQUIRE TESTING TO BE PERFORMED UNDER CURRENTLY RECOGNIZED STANDARDS FOR TESTING.

- SELECTION OF TESTING LABORATORY: THE OWNER WILL SELECT AND APPROVE A QUALIFIED, NBIASED, AND RECOGNIZED INDEPENDENT COMMERCIAL TESTING AGENCY. 2. PAYMENT FOR INITIAL TESTING SERVICES: THE OWNER WILL PAY FOR ALL INITIAL SERVICES OF THE
- C. CODES AND STANDARDS: TESTING, WHEN REQUIRED, SHALL BE IN ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS, AND WITH SELECTED ASTM INTERNATIONAL STANDARD SPECIFICATIONS. TEST REPORTS AND RELATED INSTRUCTIONS: PROMPTLY PROCESS AND DISTRIBUTE ALL REQUIRED COPIES OF TEST REPORTS AND RELATED INSTRUCTIONS TO ENSURE ALL NECESSARY RETESTING

AND/OR REPLACEMENT OF MATERIALS WITH THE LEAST POSSIBLE DELAY TO PROGRESS OF THE WORK.

E. PAYMENT FOR TESTING SERVICES:

TESTING AGENCY AS SPECIFIED HEREIN.

- . <u>INITIAL SERVICES</u>: OWNER WILL PAY FOR ALL INITIAL TESTING SERVICES. WHEN THE INITIAL TESTS INDICATE NON-COMPLIANCE WITH THE CONTRACT DOCUMENTS, THE COSTS OF ALL INITIAL TESTS ASSOCIATED WITH THAT NON-COMPLIANCE WILL BE DEDUCTED BY THE OWNER FROM THE CONTRACT
- 2. RETESTING: WHEN THE INITIAL TESTS INDICATE NON-COMPLIANCE WITH CONTRACT DOCUMENTS, ALL SUBSEQUENT RETESTING OCCASIONED BY THE NON-COMPLIANCE SHALL BE PERFORMED BY THE SAME AGENCY, AND THE COSTS THEREOF WILL BE DEDUCTED BY THE OWNER FROM THE CONTRACT

CODE COMPLIANCE TESTING: INSPECTION AND TESTING REQUIRED BY LAWS, ORDINANCES, RULES,

REGULATIONS, ORDERS OR APPROVALS OF PUBLIC AUTHORITIES OR A LEGALLY CONSTITUTED

AUTHORITY, SHALL BE THE RESPONSIBILITY OF, AND SHALL BE PAID FOR BY THE CONTRACTOR, UNLESS OTHERWISE PROVIDED IN THE CONTRACT DOCUMENTS.

- I. COOPERATION: COOPERATE WITH ARCHITECT/ENGINEER AND CONTRACTOR; PROVIDE QUALIFIED
- 2. <u>PERFORM SPECIFIED INSPECTIONS, SAMPLING AND TESTING OF MATERIALS AND METHODS OF CONSTRUCTION:</u>
- a. TAKE ALL SPECIMENS AND SAMPLES.
- b. PROVIDE ALL SAMPLING EQUIPMENT AND PERSONNEL
- c. MAKE ALL DELIVERIES OF SPECIMENS AND SAMPLES TO THE TESTING LABORATORY.
- e. ASCERTAIN COMPLIANCE OF MATERIALS, AND WORK, WITH REQUIREMENTS OF CONTRACT
- 3. <u>IRREGULARITIES AND DEFICIENCIES</u>: IMMEDIATELY NOTIFY ARCHITECT/ENGINEER, OWNER'S SUPERVISING ENGINEER, AND CONTRACTOR OF OBSERVED IRREGULARITIES OR DEFICIENCIES OF WORK OR PRODUCTS IN THE FIELD OR LABORATORY AS A RESULT OF TESTING. ALL IRREGULARITIES AND DEFICIENCIES ENCOUNTERED SHALL NOT GO UNRESOLVED. TESTING REPORTS SUBMITTED TO ARCHITECT/ENGINEER SHALL BE FOR FILE PURPOSES ONLY AND SHALL INCLUDE THE RESOLUTION OF THESE IRREGULARITIES AND/OR DEFICIENCIES.
- 4. REPORTS OF TESTS AND INSPECTIONS: PROMPTLY SUBMIT WRITTEN REPORT OF EACH TEST AND INSPECTION; ONE (1) COPY EACH TO OWNER'S SUPERVISING ENGINEER, OWNER, AND CONTRACTOR, AND THREE (3) COPIES TO ARCHITECT/ENGINEER. EACH REPORT SHALL INCLUDE:
- a. DATE ISSUED.
- b. DETAILED LISTING.
- c. PROJECT TITLE AND NUMBER.

d. TESTING LABORATORY NAME, ADDRESS AND TELEPHONE NUMBER.

- e. NAME AND SIGNATURE OF LABORATORY INSPECTOR
- f. DATE AND TIME OF SAMPLING OR INSPECTION.
- g. RECORD OF TEMPERATURE AND WEATHER CONDITIONS
- i. IDENTIFICATION OF PRODUCT AND SPECIFICATION SECTION.
- j. LOCATION OF SAMPLE OR TEST IN THE PROJECT. k. NAME OF PERSON TAKING SAMPLE OR MAKING TEST.
- TYPE OF INSPECTION OR TEST.

m. RESULTS OF TESTS AND COMPLIANCE WITH CONTRACT DOCUMENTS.

- n. INTERPRETATION OF TEST RESULTS, WHEN REQUESTED BY ARCHITECT/ENGINEER. 5. <u>ADDITIONAL TESTS</u>: PERFORM ADDITIONAL TESTS AS REQUIRED BY ARCHITECT/ENGINEER, OWNER'S UPERVISING ENGINEER, OR OWNER.
- 6. SPECIAL INSPECTIONS: SUBMIT WRITTEN "STATEMENT OF SPECIAL INSPECTIONS" AND A CERTIFIED WRITTEN REPORT OF EACH SPECIAL INSPECTION, TEST OR SIMILAR SERVICE; ONE (1) COPY EACH TO OWNER'S SUPERVISING ENGINEER, OWNER, AND CONTRACTOR, AND THREE (3) COPIES TO ARCHITECT/ENGINEER. SUBMIT ADDITIONAL COPIES OF EACH REPORT TO GOVERNING AUTHORITY, WHEN THE AUTHORITY SO DIRECTS.
- SHALL NOT NECESSARILY BE LIMITED TO APPLICABLE SPECIAL INSPECTIONS INCLUDING INSPECTIONS PER BUILDING CODE SECTION 1704.

a. REPORT DATA: WRITTEN INSPECTION OR TEST REPORTS FOR THE PROJECT SHALL INCLUDE, BUT

- H. <u>LIMITATIONS OF AUTHORITY OF TESTING LABORATORY</u>: LABORATORY IS NOT AUTHORIZED TO DO THE 1. RELEASE, REVOKE, ALTER OR ENLARGE ON REQUIREMENTS OF CONTRACT DOCUMENTS.
- APPROVE OR ACCEPT ANY PORTION OF THE WORK

3. PERFORM ANY DUTIES OF THE CONTRACTOR. I. CONTRACTOR'S RESPONSIBILITIES:

1. GENERAL: COOPERATE WITH LABORATORY PERSONNEL, PROVIDE ACCESS TO WORK, TO MATERIAL MANUFACTURER'S OPERATIONS.

3. PRELIMINARY DESIGN MIXES: WHERE APPLICABLE; PROVIDE TO THE LABORATORY THE PRELIMINARY

DESIGN MIX PROPOSED TO BE USED FOR MATERIALS MIXES WHICH REQUIRE CONTROL BY THE

- 2. SAMPLES: SECURE AND DELIVER TO THE LABORATORY ADEQUATE QUANTITIES OF REPRESENTATIONAL SAMPLES OF MATERIALS PROPOSED TO BE USED AND WHICH REQUIRE TESTING.
- TESTING LABORATORY. 4. TEST REPORTS: FURNISH COPIES OF PRODUCTS TEST REPORTS AS REQUIRED.

- 5. FURNISH INCIDENTAL LABOR AND FACILITIES:
- a. TO PROVIDE ACCESS TO WORK TO BE TESTED.
- b. TO OBTAIN AND HANDLE SAMPLES AT THE SOURCE OF THE PRODUCT TO BE TESTED.
- c. TO FACILITATE INSPECTIONS AND TESTS.

QUALIFIED INDEPENDENT TESTING LABORATORY.

- d. FOR STORAGE AND CURING OF TEST SAMPLES. 6. NOTIFICATION TO LABORATORY: NOTIFY LABORATORY SUFFICIENTLY IN ADVANCE OF OPERATIONS TO ALLOW FOR LABORATORY ASSIGNMENT OF PERSONNEL AND SCHEDULING OF TESTS.
- a. WHEN TESTS OR INSPECTIONS CANNOT BE PERFORMED AFTER SUCH NOTICE, REIMBURSE OWNER FOR LABORATORY PERSONNEL AND TRAVEL EXPENSES INCURRED DUE TO CONTRACTOR'S
- <u>CONTRACTOR'S</u> <u>CONVENIENCE</u> <u>TESTING</u>: FOR TESTING PERFORMED EXCLUSIVELY FOR CONTRACTOR'S CONVENIENCE, EMPLOY AND PAY FOR THE SERVICES OF A SEPARATE, EQUALLY
- 8. PAYMENT FOR TESTING SERVICES: PAY FOR SERVICES OF OWNER SELECTED TESTING LABORATORY O EXTENT PREVIOUSLY SPECIFIED HERE IN ARTICLE E. - PAYMENT FOR TESTING SERVICES.
- J. SCHEDULES FOR TESTING: 1. <u>TIME REQUIRED FOR TESTING</u>: BY ADVANCE DISCUSSION WITH THE TESTING AGENCY SELECTED BY THE OWNER, DETERMINE THE TIME REQUIRED FOR THE TESTING AGENCY TO PERFORM ITS TESTS
- 2. <u>CHANGE IN CONSTRUCTION SCHEDULES</u>: WHEN CHANGES OF CONSTRUCTION SCHEDULES ARE NECESSARY DURING CONSTRUCTION, COORDINATE ALL SUCH CHANGES OF SCHEDULES WITH THE

AND TO ISSUE EACH OF ITS FINDINGS. PROVIDE ALL REQUIRED TIME WITHIN THE CONSTRUCTION

TESTING AGENCY AS REQUIRED.

- SECTION 01 70 00 PROJECT CLOSEOUT A. <u>WORK_INCLUDED</u>: CLOSEOUT WORK SHALL INCLUDE PREPARATION FOR FINAL ACCEPTANCE OCCUPANCY, AND SIMILAR ACTIONS EVIDENCING COMPLETION OF THE WORK. THE TIME OF CLOSEOUT IS RECOGNIZED TO BE DIRECTLY RELATED TO "SUBSTANTIAL COMPLETION", AND THEREFORE MAY B EITHER A SINGLE TIME PERIOD FOR THE ENTIRE WORK OR A SERIES OF TIME PERIODS FOR INDIVIDUAL PARTS OF THE WORK WHICH HAVE BEEN CERTIFIED AS SUBSTANTIALLY COMPLETE AT DIFFERENT DATES. THAT TIME VARIATION (IF ANY) SHALL BE APPLICABLE TO OTHER PROVISIONS OF THIS SECTION REGARDLESS OF WHETHER RESULTING FROM "PHASED COMPLETION" ORIGINALLY SPECIFIED BY THE

CONTRACT DOCUMENTS OR SUBSEQUENTLY AGREED UPON.

- B. PREREQUISITES FOR SUBSTANTIAL COMPLETION: GENERAL: PRIOR TO CERTIFICATION OF SUBSTANTIAL COMPLETION, SUBMIT ONE (1) SETS OF THE
 - FOLLOWING DOCUMENTS TO THE ARCHITECT, AND LIST KNOWN EXCEPTIONS: a. SUBMIT STATEMENT SHOWING FINAL ACCOUNTING OF CHANGES TO THE CONTRACT SUM.
 - b. ADVISE OF PENDING INSURANCE CHANGE-OVER REQUIREMENTS.
- c. SUBMIT GUARANTEES, WARRANTIES, WORKMANSHIP BONDS, MAINTENANCE AGREEMENTS, FINA CERTIFICATIONS AND SIMILAR DOCUMENTS. SUBMIT LIST OF CONTACTS, INCLUDING COMPAN NAME, PERSONAL CONTACT, ADDRESS AND PHONE NUMBER FOR BUILDING EQUIPMENT ANI COMPONENTS WHICH MAY REQUIRE PERIODIC SERVICE, INCLUDING ROOFING, ELEVATOR EQUIPMENT, MECHANICAL AND ELECTRICAL EQUIPMENT, AND FIRE PROTECTION SYSTEM.
- d. OBTAIN AND SUBMIT OCCUPANCY PERMITS, OPERATING CERTIFICATES, FINAL INSPECTION/TES' CERTIFICATES, AND SIMILAR RELEASES ENABLING FULL AND UNRESTRICTED USE OF THE WORL AND ACCESS TO SERVICES AND UTILITIES.

e. SUBMIT RECORD (AS-BUILT) DRAWINGS, OPERATION AND MAINTENANCE MANUALS,

- 2. DELIVER TOOLS, SPARE PARTS, EXTRA STOCKS OF MATERIALS, AND SIMILAR PHYSICAL ITEMS.
- 3. MAKE FINAL CHANGE-OVER OF LOCKS AND TRANSMIT KEYS TO OWNER, AND ADVISE TO CHANGE-OVER IN SECURITY PROVISION.

4. COMPLETE START-UP TESTING OF SYSTEMS, AND INSTRUCTION OF OPERATING/MAINTENANCE

AND SERVICES, ALONG WITH CONSTRUCTION TOOLS AND FACILITIES, MOCK-UPS, AND SIMILAR

- 5. DISCONTINUE (OR CHANGE OVER) AND REMOVE FROM THE PROJECT SITE TEMPORARY FACILITIES
- 6. COMPLETE THE FINAL CLEANING.

7. TOUCH-UP, REPAIR, AND RESTORE MARRED EXPOSED FINISHES.

AND SIMILAR DATA AS OF THE TIME OF SUBSTANTIAL COMPLETION OR WHEN OWNER TOOK POSSESSION OF, AND RESPONSIBILITY FOR, CORRESPONDING ELEMENTS OF THE WORK. C. RECORD DOCUMENT SUBMITTALS: GENERAL: SPECIFIC REQUIREMENTS FOR RECORD DOCUMENTS ARE INDICATED IN INDIVIDUA SECTIONS OF THE SPECIFICATIONS. THE GENERAL REQUIREMENTS ARE INDICATED IN THE GENERAL

8. SUBMIT FINAL METER READINGS FOR TEMPORARY UTILITIES, MEASURED RECORD OF STORED FUEL

- WORK, AND SPECIFICATION DIVISIONS AS REQUIRED FOR MECHANICAL AND ELECTRICAL WORK RESPECTIVELY. DO NOT USE RECORD DOCUMENTS FOR CONSTRUCTION PURPOSES; PROTECT FROM
- DETERIORATION AND LOSS IN A SECURE FIRE-RESISTIVE LOCATION. 2. RECORD DRAWINGS:

a. CONTRACTORS SHALL KEEP AN ACCURATE RECORD OF "AS-BUILT" CONDITIONS AS THE WORK

CONDITIONS, WITH ADDITIONAL PROVISIONS INDICATED IN SECTION 01 01 00 - GENERAL SCOPE OF

PROGRESSES. MARK-UP DRAWINGS TO INDICATE VARIANCE, AT THE TIME THE VARIANCE OCCURS b. MAINTAIN A WHITE PRINT SET (BLUE LINE OR BLACK LINE) OF COMPLETE CONSTRUCTION DOCUMENTS AND SHOP DRAWINGS, IN CLEAN UNDAMAGED CONDITION, FOR THE PURPOSE OF CHECKING AND RECORDING ALL INSTALLATIONS WHICH VARY SUBSTANTIALLY FROM THE WORK

AS ORIGINALLY SHOWN. THE RECORDS SHALL INCLUDE CHANGES IN SIZES, LOCATIONS, AND

DIMENSIONS, AS WELL AS ANY RESULTING FROM BULLETINS, CHANGE ORDERS, OR FIELD ORDERS

c. MARK WHICHEVER DRAWING IS MOST CAPABLE OF SHOWING THE "AS-BUILT" CONDITION FULL AND ACCURATELY: HOWEVER, WHERE SHOP DRAWINGS ARE USED FOR MARK-UP, RECORD CROSS-REFERENCE AT THE CORRESPONDING LOCATION ON THE CONTRACT DRAWINGS.

BETWEEN VARIATIONS OF SEPARATE CATEGORIES OF WORK.

d. MARK WITH RED ERASABLE PENCIL AND, WHERE FEASIBLE, USE OTHER COLORS TO DISTINGUISH

e. MECHANICAL AND ELECTRICAL CONTRACTORS SHALL GIVE PARTICULAR ATTENTION T

CONCEALED WORK, AND RECORD ALL CONCEALED MECHANICAL AND ELECTRICAL SERVICES B'

COLOR CODE. RECORD SHALL INCLUDE EXACT LOCATIONS OF PIPE. CONDUIT. WIRE AND CABL

VALVES AND ALL UNDERGROUND OR OTHERWISE CONCEALED MECHANICAL AND ELECTRICAL WORK, PROPERLY DIMENSIONED FROM ADJACENT BUILDING WALLS AND WITH INVER ELEVATIONS NOTED. RECORD SHALL INCLUDE ALL PRINCIPAL DIMENSIONS OF CONCEALED WORK AND ANY SPECIAL NOTATIONS SUCH AS VALVE NUMBERS. f. OBTAIN A COMPLETE SET OF REPRODUCIBLES USING THE ARCHITECT'S ORIGINAL TRACINGS AND ANY SHOP DRAWINGS USED FOR RECORD DRAWINGS. TRANSFER ALL CORRECTIONS, CHANGE

AND REVISIONS FROM THE JOB RECORD SET TO THE REPRODUCIBLES AND ADD TO THE LEGENI

"RECORD DRAWINGS" AND THE DATE OF PRINTING TO EACH REPRODUCIBLE. WITHIN THIRTY (30

DAYS OF COMPLETION OF JOB, PRINT ONE (1) COMPLETE SETS OF BLACKLINES OR BLUEPRINTS.

- THE REPRODUCIBLES AND BLACKLINES OR BLUEPRINTS SHALL BECOME THE PROPERTY OF THE g. ORGANIZE RECORD DRAWING SHEETS INTO MANAGEABLE SETS, BIND WITH DURABLE PAPER
- COVER SHEETS, AND PRINT SUITABLE TITLES, DATES AND OTHER IDENTIFICATION ON THE COVER

FOR HIS RECORDS AND USE.

3. MAINTENANCE MANUALS: a. ORGANIZE MAINTENANCE AND OPERATING MANUAL INFORMATION INTO INDIVIDUAL BINDERS PROPERLY IDENTIFIED, INDEXED, AND THUMB TABBED; SUCH AS BUILDING [[TILE]] MAINTENANCE ROOF MAINTENANCE. INCLUDE NAMES, ADDRESSES, TELEPHONE NUMBERS AND E-MAIL ADDRESSES OF EQUIPMENT VENDORS AND SUBCONTRACTORS. SUBMIT ONE (1) COPY TO THE OWNER WITHIN THIRTY (30) DAYS OF SUBSTANTIAL COMPLETION TO BE RETAINED BY THE OWNER

b. INCLUDE INFORMATION SUCH AS EMERGENCY INSTRUCTIONS, SPARE PARTS LISTING,

WARRANTIES AND GUARANTEES WITH NAME AND TELEPHONE NUMBER AND E-MAIL ADDRESS OF

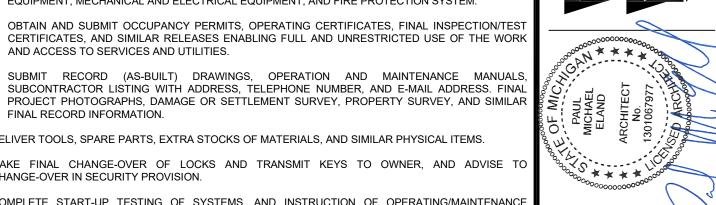
CONTACT PERSON, WIRING DIAGRAMS, RECOMMENDED "TURN-AROUND" CYCLES, INSPECTION

PROCEDURES, SHOP DRAWINGS, PRODUCT DATA, NAMES AND ADDRESSES OF EACH SUPPLIER

NAMES AND ADDRESSES OF CONTRACTOR AND SUB-CONTRACTORS WITH CONTACT PERSON TELEPHONE NUMBER, E-MAIL ADDRESS, AND SIMILAR APPLICABLE INFORMATION. c. BIND EACH MANUAL OF EACH SET IN A HEAVY-DUTY, 3-RING, VINYL-COVERED BINDER (NOT LESS

THAN 2" CAPACITY), AND INCLUDE POCKET FOLDERS FOR FOLDED SHEET INFORMATION. MARK IDENTIFICATION ON THE FRONT AND SPINE OF EACH BINDER.

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Date Issued

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Job Number

SHEET TITLE

Sheet Number

SPECIFICATIONS

- GENERAL OPERATING/MAINTENANCE INSTRUCTIONS: ARRANGE FOR EACH INSTALLER OF WORK REQUIRING CONTINUING MAINTENANCE OR OPERATION, TO MEET WITH PERSONNEL AT THE PROJECT SITE TO PROVIDE INSTRUCTIONS NEEDED FOR PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT OR COMPONENTS.
- a. INCLUDE INSTRUCTIONS BY MANUFACTURER'S REPRESENTATIVES WHERE INSTALLERS ARE NOT EXPERT IN THE REQUIRED PROCEDURES.
- b. REVIEW MAINTENANCE MANUALS, RECORD DOCUMENTATION, TOOLS, SPARE PARTS AND MATERIALS, LUBRICANTS, FUELS, IDENTIFICATION SYSTEM, CONTROL SEQUENCES, HAZARDS, CLEANING AND SIMILAR PROCEDURES AND FACILITIES.
- c. FOR OPERATIONAL EQUIPMENT, DEMONSTRATE START-UP, SHUT-DOWN, EMERGENCY OPERATIONS, NOISE AND VIBRATION ADJUSTMENTS, SAFETY, ECONOMY/EFFICIENCY ADJUSTMENTS, AND SIMILAR OPERATIONS.
- d. REVIEW MAINTENANCE AND OPERATIONS IN RELATION WITH APPLICABLE GUARANTEES, WARRANTIES, AGREEMENTS TO MAINTAIN, BONDS, AND SIMILAR CONTINUING COMMITMENTS.

E. FINAL CLEANING:

- GENERAL: PROVIDE CLEANING FOR SPECIFIC UNITS OF WORK AS SPECIFIED WITHIN EACH SPECIFICATION SECTION. PROVIDE FINAL CLEANING OF THE WORK, AT THE TIME INDICATED, CONSISTING OF CLEANING EACH SURFACE OR UNIT OF WORK TO THE NORMAL "CLEAN" CONDITION EXPECTED FOR A FIRST-CLASS BUILDING CLEANING AND MAINTENANCE PROGRAM. COMPLY WITH MANUFACTURERS' INSTRUCTIONS FOR CLEANING OPERATIONS.
- 2. <u>CLEANING REQUIREMENTS</u>: THE FOLLOWING ARE EXAMPLES, BUT NOT BY WAY OF LIMITATION, OF THE CLEANING LEVELS REQUIRED.
- a. REMOVE MANUFACTURER'S OR CONTRACTOR'S LABELS WHICH ARE NOT REQUIRED AS PERMANENT. REMOVE PROTECTIVE COVERINGS AND TAGS, EXCEPT FOR THOSE REQUIRED TO DEMONSTRATE COMPLIANCE WITH BUILDING CODES, FIRE-RATINGS AND TESTING. ALSO REMOVE ALL RESIDUE AND GLUE REMAINING ON THE SURFACE.
- b. CLEAN EXPOSED EXTERIOR AND INTERIOR HARD-SURFACE FINISHES, INCLUDING METALS, MASONRY, CONCRETE, PAINTED SURFACES, SPECIAL COATINGS, AND SIMILAR SURFACES, TO DIRT-FREE CONDITION, FREE OF DUST, STAINS, FILMS AND SIMILAR NOTICEABLE DISTRACTING SUBSTANCES. EXCEPT AS OTHERWISE INDICATED; AVOID THE DISTURBANCE OF NATURAL WEATHERING OF EXTERIOR SURFACES. RESTORE REFLECTIVE SURFACES TO ORIGINAL
- c. WIPE SURFACES OF MECHANICAL AND ELECTRICAL EQUIPMENT CLEAN, AND REMOVE EXCESS LUBRICATION AND OTHER SUBSTANCES. CHANGE FILTERS WITHIN HVAC EQUIPMENT.
- d. REMOVE DEBRIS AND SURFACE DUST FROM LIMITED-ACCESS SPACES INCLUDING ROOFS, PLENUMS, SHAFTS, TRENCHES, EQUIPMENT VAULTS, MANHOLES, ATTICS AND SIMILAR SPACES.
- e. CLEAN CONCRETE FLOORS IN NON-OCCUPIED SPACES BROOM CLEAN.
- f. VACUUM CLEAN SOFT MATERIAL SURFACES, SUCH AS CARPETED AND SIMILAR SURFACES.
- g. CLEAN PLUMBING FIXTURES TO A SANITARY CONDITION, FREE OF STAINS INCLUDING THOSE
- h. DAMP WIPE AND CLEAN ALL FIXTURES, INCLUDING LIGHT FIXTURES AND LAMPS SO AS TO FUNCTION WITH FULL EFFICIENCY. REPLACE BURNED-OUT OR BROKEN LAMPS.
- WASH, CLEAN AND POLISH ALL CERAMIC TILE SURFACES.
- REMOVE AND DISPOSE OF ALL TRASH, SCRAPS, PACKING, AND ALL OTHER CONSTRUCTION
- k. CLEAN PROJECT SITE (YARD AND GROUNDS), INCLUDING LANDSCAPE, DEVELOPMENT AREAS, OF LITTER AND FOREIGN SUBSTANCES. SWEEP PAVED AREAS TO A BROOM-CLEAN CONDITION; REMOVE STAINS, PETRO-CHEMICAL SPILLS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS WHICH ARE NEITHER PLANTED NOR PAVED, TO A SMOOTH, EVEN-TEXTURED SURFACE.
- 3. <u>DAMAGES</u>: ANY DAMAGE CAUSED BY CONTRACTORS WITH CLEANING EQUIPMENT SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR RESPONSIBLE FOR THE DAMAGE.
- 4. <u>TIME OF FINAL CLEANING</u>: FOLLOWING CERTIFICATION OF "SUBSTANTIAL COMPLETION".
- F. <u>PEST_CONTROL</u>: ENGAGE AN EXPERIENCED EXTERMINATOR TO MAKE A FINAL INSPECTION OF THE PROJECT, AND TO ELIMINATE THE PROJECT OF RODENTS, INSECTS, AND OTHER PESTS. COMPLY WITH GOVERNING REGULATIONS AND APPLICABLE HEALTH AND SAFETY STANDARDS.
- G. REMOVAL OF PROTECTION: EXCEPT AS OTHERWISE INDICATED OR REQUESTED, REMOVE TEMPORARY PROTECTION DEVICES AND FACILITIES WHICH WERE INSTALLED DURING THE COURSE OF THE WORK TO PROTECT PREVIOUSLY COMPLETED WORK DURING THE REMAINDER OF THE CONSTRUCTION PERIOD.
- H. <u>COMPLIANCES</u>: COMPLY WITH SAFETY STANDARDS AND GOVERNING REGULATIONS FOR CLEANING OPERATIONS. DO NOT BURN WASTE MATERIALS AT THE SITE, OR BURY DEBRIS OR EXCESS MATERIALS ON THE OWNER'S PROPERTY. OR DISCHARGE VOLATILE OR OTHER HARMFUL OR DANGEROUS MATERIALS INTO DRAINAGE SYSTEMS; REMOVE WASTE MATERIALS FROM THE SITE AND DISPOSE OF IN LAWFUL MANNER. AT NO TIME DURING OR AT COMPLETION OF CONSTRUCTION, PLACE ANY EXCESS MATERIAL, INTO OWNER'S COMPACTOR OR CONTAINER.

END OF SECTION

SECTION 02 41 19 - SELECTIVE DEMOLITION

- PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, APPARATUS, TOOLS, TRANSPORTATION, PROTECTION, AND SERVICES NECESSARY FOR SELECTIVE DEMOLITION WORK AS INDICATED ON THE DRAWINGS. WORK SHALL INCLUDE, BUT NOT NECESSARILY BE LIMITED TO ANY DEMOLITION REQUIRED TO PREPARE THE BUILDING FOR NEW CONSTRUCTION, INCLUDING DEMOLITION OF EXISTING ELEVATOR PENTHOUSE.
- 1. GENERAL CONTRACTOR: ASSUME FULL RESPONSIBILITY FOR DEMOLITION WORK INDICATED ON THE DRAWINGS OR REQUIRED BY FIELD CONDITIONS FOR NEW CONSTRUCTION.
- 2. <u>DEMOLITION WORK LIST</u>: GENERAL CONTRACTOR SHALL PREPARE A DEMOLITION WORK LIST OF ITEMS NOTED OR REQUIRED TO BE REMOVED, AND SUBMIT THE LIST TO THE ARCHITECT AND OWNER FOR REVIEW PRIOR TO EXECUTION OF THE WORK.

B. MANDATORY REQUIREMENTS:

SITE EXAMINATION: PRIOR TO SUBMITTING PROPOSAL, VISIT THE PREMISES AND COMPARE EXISTING CONDITIONS WITH WORK INDICATED ON THE DRAWINGS AND SPECIFICATIONS. NO ALLOWANCE WILL BE MADE FOR FAILURE TO PERFORM AN EXAMINATION, OR FOR ANY ERROR DUE TO INADEQUATE INVESTIGATION. C. JOB CONDITIONS

1. OCCUPANCY: TENANTS AND/OR OWNER WILL OCCUPY THE BUILDING TENANT SPACES IMMEDIATELY ADJACENT TO THE AREAS OF DEMOLITION. CONDUCT DEMOLITION WORK IN A MANNER TO MINIMIZE

DISRUPTION OF NORMAL OPERATIONS OF THE TENANTS AND/OR OWNER. PROVIDE A MINIMUM OF 72 HOURS ADVANCED NOTICE TO THE TENANTS AND THE OWNER, OF DEMOLITION ACTIVITIES THAT WILL AFFECT OPERATIONS. COORDINATE EFFORTS WITH BUILDING MANAGERS AND THE OWNER.

D. RESPONSIBILITY

- 1. QUALIFICATIONS OF SUBCONTRACTORS: GENERAL CONTRACTOR SHALL ENGAGE SUBCONTRACTORS WHO CAN DEMONSTRATE NOT LESS THAN FIVE (5) YEARS SUCCESSFUL EXPERIENCE IN WORK OF SIMILAR CHARACTER.
- 2. <u>DEMOLITION</u> <u>WORK</u>: GENERAL CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL DEMOLITION WORK AND SHALL ASSIGN THE VARIOUS PHASES OF DEMOLITION WORK TO THE APPROPRIATE SKILLED TRADES, AND SHALL BE RESPONSIBLE FOR THE FOLLOWING:
- a. ADEQUATE COORDINATION AND SUPERVISION.
- b. SCHEDULE DEMOLITION WORK TO COORDINATE ACTIVITIES WITH THE PROPOSED NEW WORK.
- c. PROVIDE WORK SITE PROTECTION, INCLUDING TEMPORARY BUILDING ENCLOSURES AS REQUIRED, PER ALL GOVERNING CODE REQUIREMENTS.
- d. REMOVE RUBBLE, DEBRIS, AND UNSALVAGEABLE MATERIALS FROM THE SITE AND LEGALLY DISPOSE

E. QUALITY ASSURANCE

PERFORMANCE CRITERIA

- a. OPERATIONAL AND SAFETY LIMITATIONS: DO NOT CUT-AND-PATCH IN A MANNER RESULTING IN A REDUCTION OF CAPACITIES TO PERFORM IN THE MANNER INTENDED, DECREASED OPERATIONAL LIFE, INCREASED MAINTENANCE, OR DECREASED SAFETY.
- b. <u>VISUAL REQUIREMENTS</u>: DO NOT CUT-AND-PATCH EXPOSED WORK IN A MANNER RESULTING IN REDUCTION OF VISUAL QUALITY, AS JUDGED BY THE ARCHITECT. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE VISUALLY UNSATISFACTORY, AT NO ADDITIONAL COST TO THE
- c. <u>LOADING</u>: DO NOT SUPERIMPOSE LOADS AT ANY POINT UPON EXISTING STRUCTURE BEYOND DESIGN CAPACITY, INCLUDING LOADS ATTRIBUTED TO MATERIALS, CONSTRUCTION EQUIPMENT, DEMOLITION OPERATIONS, SHORING AND BRACING.
- d. VIBRATION: DO NOT USE MEANS, METHODS, TECHNIQUES OR PROCEDURES WHICH WOULD INDUCE VIBRATION INTO ANY ELEMENT OF THE STRUCTURE.
- e. <u>FIRE</u>: DO NOT USE MEANS, METHODS, TECHNIQUES OR PROCEDURES WHICH WOULD PRODUCE FIRE HAZARD.
- f. WATER: DO NOT USE MEANS, METHODS, TECHNIQUES OR PROCEDURES WHICH WOULD PERMIT UNCONTROLLED WATER OR HUMIDITY.
- g. AIR POLLUTION: DO NOT USE MEANS, METHODS, TECHNIQUES OR PROCEDURES WHICH WOULD PRODUCE UNCONTROLLED DUST, FUMES OR OTHER DAMAGING AIR POLLUTION.

- g. <u>AIR POLLUTION</u>: DO NOT USE MEANS, METHODS, TECHNIQUES OR PROCEDURES WHICH WOULD PRODUCE UNCONTROLLED DUST, FUMES OR OTHER DAMAGING AIR POLLUTION.
- h. TOXIC SUBSTANCES: CARE SHALL BE EXERCISED IN THE REMOVAL WORK TO PREVENT THE RELEASE OF TOXIC SUBSTANCES. SHOULD TOXIC SUBSTANCES SUCH AS PCB, ASBESTOS, OR LEAD PAINT BE ENCOUNTERED, STOP WORK AND IMMEDIATELY NOTIFY THE OWNER. REMOVAL

AND DISPOSAL OF HAZARDOUS MATERIALS SHALL BE PERFORMED BY LICENSED ABATEMENT

2. <u>PROTECTION OF THE PUBLIC:</u> DURING DEMOLITION OPERATIONS, PROVIDE ALL NECESSARY PROTECTION AND SAFE PASSAGE FOR THE PUBLIC, INCLUDING, BUT NOT LIMITED TO, BARRICADES, TEMPORARY PARTITIONS, DUST BARRIERS, AND SIGNS. ERECT AND MAINTAIN BARRIERS TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

CONTRACTORS UNDER SEPARATE CONTRACT EXERCISED BY THE OWNER.

F. <u>SALVAGED MATERIALS</u>:

GENERAL: MATERIALS FOR REUSE SHALL BE INCORPORATED INTO NEW WORK AS INDICATED EXCEPT FOR ITEMS INDICATED TO BE RETAINED AS PROPERTY OF THE OWNER, OTHER REMOVED AND SALVAGED MATERIALS NOT INDICATED FOR REUSE SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM SITE WITH FURTHER DISPOSITION AT OPTION OF THE CONTRACTOR. REMOVE SALVAGEABLE MATERIALS CAREFULLY TO AVOID EXCESSIVE DAMAGE.

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

A. WORK INCLUDED:

- FIELD CHECK OF EXISTING CONDITIONS.
- NEW CONCRETE FOOTINGS AND FLOOR SLABS.
- 3. SAW CUTTING AND REMOVING EXISTING CONCRETE FLOORS AS NECESSARY FOR NEW WORK.
- 4. PATCH AND REPAIR EXISTING CONCRETE SLAB AS REQUIRED AND FINISH ALL FLOOR CRACKS.
- 5. INSTALLATION OF STEEL PIPE GUARD POSTS AS SPECIFIED IN SECTION 05500.

B. <u>REFERENCE SPECIFICATIONS</u>:

- 1. EXCEPT AS OTHERWISE SPECIFIED, DESIGN, MATERIALS, AND WORKMANSHIP SHALL CONFORM TO THE FOLLOWING CURRENT SPECIFICATIONS.
- 2. AMERICAN CONCRETE INSTITUTE (ACI) PUBLICATIONS, AND RELATED ASTM STANDARD SPECIFICATIONS REFERENCED THEREIN.
- a. SP-15 ACI FIELD REFERENCE MANUAL: INCLUDING STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE ACI 301 W/ SELECTED ACI REFERENCE.
- b. SP-66 ACI DETAILING MANUAL (FORMERLY ACI 315).
- c. ACI 302.1R GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION.
- d. ACI 304R GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE.
- e. ACI 305R GUIDE TO HOT WEATHER CONCRETING.
- f. ACI 306 GUIDE TO COLD WEATHER CONCRETING.
- g. ACI 308R GUIDE TO CURING CONCRETE.
- ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (CHAPTERS 3-7).
- ACI 347 GUIDE TO FORMWORK FOR CONCRETE.
- 3. ASTM INTERNATIONAL STANDARD SPECIFICATIONS, AS REFERRED TO HEREIN BY NUMBER.

1. <u>GENERAL</u>: ALL CONCRETE SHALL CONSIST OF PORTLAND CEMENT, COARSE AGGREGATE, FINE AGGREGATE AND POTABLE WATER.

TYPES OF CONCRETE:

8 DAY	7 DAY	MIN. CEMENT	MAX. WATER	MAX
TRENGTH	STRENGTH	PER CU. YD.	PER SK. CEMENT	SLU
000 P.S.I.	2100 P.S.I.	5.5 SK.	6.5 GAL.	

LOCATIONS:

a. 3000 P.S.I.: INTERIOR CONCRETE TOPPING

- CEMENT: STANDARD BRAND OF PORTLAND CEMENT CONFORMING TO ASTM STANDARD C150. CEMENT SHALL BE KEPT DRY AT ALL TIMES, AND ONLY ONE BRAND SHALL BE USED FOR CONCRETE
- 2. <u>AGGREGATE</u>: FINE AGGREGATE CONFORMING TO ASTM STARDARD C33 REQUIREMENTS FOR HARDNESS, DURABILITY, PURITY, GRADATIONS.
- a. FINE AGGREGATE: CLEAN, HARD, DURABLE, UNCOATED GRAINS OF NATURAL SAND, FREE FROM SILT, LOAM, AND CLAY. RANGE IN THE FOLLOWING SIZES BY PERCENTAGE OF WEIGHT:

F	PASSING	3/8"	SIEVE:	100%	
F	PASSING NO	D. 4	SIEVE:	95% - 1	009
F	PASSING NO	D. 8	SIEVE:	65% -	959
F	PASSING NO	D. 16	SIEVE:	35% -	759
F	PASSING NO	D. 30	SIEVE:	20% -	559
F	PASSING NO	D. 50	SIEVE:	15% -	30
F	PASSING NO	D. 100	SIEVE:	0% -	109

- 3. MIXING WATER: CLEAN POTABLE WATER, FREE FROM OILS, ALKALIES, ACIDS, ORGANIC WATER, OR OTHER DELETERIOUS MATERIALS.
- a. DO NOT USE CALCIUM CHLORIDE OR OTHER SIMILAR ADDITIVES.
- b. ALL OTHER ADMIXTURES. TO RETARD OR ACCELERATE SETTING. TO REDUCE WATER RATIO. OR TO PREVENT FREEZING SHALL CONFORM TO ASTM STANDARD C494. ADMIXTURE SHALL HAVE LONG TERM TEST DATA PROVING ITS NON-CORROSIVE EFFECT ON REINFORCING STEEL. ADMIXTURE SHALL NOT BE USED WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT.
- G. REINFORCING STEEL: PROVIDE ALL STIRRUPS, HOOKS, DOWELS, TIES, TIE WIRES, CHAINS, SPACERS AND OTHER ACCESSORIES NECESSARY OR REQUIRED TO FULLY COMPLETE THE WORK.
- 1. GENERAL: ALL REINFORCEMENTS SHALL BE CLEANED OF MILL OR RUST SCALE, AND SHALL BE FREE
- OF ALL COATINGS WHICH WOULD REDUCE OR DESTROY BOND. 2. COLD DRAWN WIRE: CONFORMING TO ASTM STANDARD A82.
- 3. <u>WELDED WIRE REINFORCING</u>: CONFORMING TO ASTM STANDARD A185.
- 4. <u>REINFORCING STEEL BARS</u>: RODS 3/8" AND LARGER SHALL BE DEFORMED BARS CONFORMING TO ASTM STANDARD A615. EPOXY-COATED REINFORCING BARS SHALL CONFORM TO ASTM STANDARD

H. FORMS:

- DESIGN: PROVIDE FORMWORK DESIGNED FOR THE LOADS, LATERAL PRESSURE, AND ALLOWABLE STRESSES SPECIFIED IN CHAPTER 2 - DESIGN, OF ACI 347, AND TO SUIT REQUIREMENTS OF
- ANCHORING CEMENT: SUPER POR-ROK® ANCHORING CEMENT, QUALITY CONTROLLED HYDRAULIC CEMENT, QUICK-SETTING, POURABLE, NON-METALLIC, NON-SHRINK GROUT IN ACCORDANCE WITH ASTM STANDARDS C109 AND C900, AS MANUFACTURED BY CGM, INCORPORATED, BENSALEM, PA, (800)523-6570 OR (215)638-4400.

J. MISCELLANEOUS ITEMS:

- EXPANSION JOINT FILLER: FIBER CONFORMING WITH ASTM STANDARD D1751, TYPE I, 1/2" THICK FULL DEPTH OF SLAB FOR INTERIOR SLABS, 1" LESS THAN FULL SLAB DEPTH AT EXTERIOR LOCATIONS.
- JOINT SEALANT: HORIZONTAL CONCRETE MOVING JOINTS SHALL BE SEALED WITH VULKEM® 45 SSL ONE-PART, POURABLE GRADE SELF-LEVELING, POLYURETHANE JOINT SEALANT, CONFORMING TO ASTM STANDARD C920, TYPE S, GRADE P, CLASS 35, AS MANUFACTURED BY TREMCO INCORPORATED, SEALANTS & WATERPROOFING DIVISION, BEACHWOOD, OH, (216)292-5000 OR (800)321-7906.
- <u>CURING AND SEALING COMPOUND:</u> AREAS NOT SUBSEQUENTLY COVERED BY OTHER FINISH MATERIALS SHALL HAVE TWO (2) COATS OF LIQUID TYPE MEMBRANE FORMING CURING/SEALING COMPOUND COMPLYING WITH ANSI/ASTM C309, TYPE I, CLASS A. MANUFACTURER AND PRODUCT SHALL BE ONE OF THE FOLLOWING:
- a. THE EUCLID CHEMICAL COMPANY EUCOCURE VOX.
- b. BASF CONSTRUCTION CHEMICALS BUILDING SYSTEMS SONNEBORN® KURE-N-SEAL™.
- 5. BONDING COMPOUND: EUCO-WELD, BY THE EUCLID CHEMICAL COMPANY, CLEVELAND, OH,

K. TRANSIT MIXED CONCRETE:

1. READY-MIXED CONCRETE SHALL BE BATCHED, MIXED, AND TRANSPORTED IN ACCORDANCE WITH ASTM STANDARD C94, SPECIFICATIONS FOR READY-MIXED CONCRETE, AND AGGREGATE FOR THE CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM STANDARD C33.

- OWNER'S REPRESENTATIVE WITH A COPY OF THE DELIVERY TICKET, GIVING INFORMATION PERTAINING TO EACH BATCH AS THE ARCHITECT MAY REQUIRE. THE DECISION OF THE OWNER'S REPRESENTATIVE AS TO THE QUALITY OF THE CONCRETE OR THE METHODS OF MIXING SHALL BE
- CONCRETE TESTING: OWNER WILL ENGAGE THE SERVICES OF AN APPROVED, INDEPENDENT, UNBIASED TESTING LABORATORY TO MAKE TEST CYLINDERS AND TO DETERMINE THE QUALITY OF ALL CONCRETE, AND WILL PAY ALL COSTS INCURRED.
- M. PLACING CONCRETE:
- 1. SET AND BUILD-IN ALL MATERIALS, ANCHOR BOLTS, SLEEVES, ANGLES, FURNISHED BY OTHER CONTRACTORS.

N. CONCRETE FLOOR SLABS ON GROUND:

- . <u>FLOOR TOLERANCE FLATNESS AND LEVELNESS</u>: FLOOR SHALL COMPLY WITH ASTM E1155 STANDARD TEST METHOD FOR DETERMINING FLOOR FLATNESS AND LEVELNESS USING THE
- a. FLOOR SLABS SHALL BE CONSTRUCTED TO HAVE A MINIMUM FACE FLOOR FLATNESS OF FF=20 AND A MINIMUM FACE FLOOR LEVELNESS OF FL=17.
- O. <u>CONCRETE FINISH</u>: MONOLITHIC SLAB SURFACES SHALL RECEIVE TROWEL FINISH UNLESS OTHERWISE INDICATED.
- P. <u>MISCELLANEOUS CONCRETE WORK</u>: FURNISH AND INSTALL ALL MISCELLANEOUS CONCRETE WORK NECESSARY TO COMPLETE THE WORK SHOWN OR REQUIRED BY FIELD CONDITIONS.

END OF SECTION

A. WORK INCLUDED:

1. PRODUCTS AND MATERIALS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.

B. QUALITY ASSURANCE 1. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE FOLLOWING CURRENT STANDARD

- SPECIFICATIONS. a. NATIONAL CONCRETE MASONRY ASSOCIATION SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF LOAD-BEARING CONCRETE MASONRY.
- b. ASTM INTERNATIONAL STANDARD SPECIFICATIONS AS APPLICABLE AND AS SPECIFIED HEREIN BY

C. MATERIALS:

- 1. <u>CONCRETE MASONRY UNITS</u>: ALL CONCRETE BLOCK SHALL BE APPROVED BY ARCHITECT AND THE LOCAL BUILDING DEPARTMENT. STANDARD (UNCOLORED, PLAIN FACE) MASONRY UNITS SHALL HAVE A UNIFORM, MEDIUM TEXTURE.
- a. <u>ALL_UNITS_SHALL_MATCH_EXISTING, BE_LOAD-BEARING, AND_SHALL_CONFORM_WITH_THE_FOLLOWING REQUIREMENTS:</u>

1. STANDARD (UNCOLORED), HOLLOW, LOAD-BEARING UNITS, ASTM STANDARD C90.

- 2. STANDARD (UNCOLORED), SOLID, LOAD-BEARING UNITS, ASTM STANDARD C90.
- b. <u>FIRE_RATED_CONCRETE_BLOCK</u>: COMPLY WITH UNDERWRITERS LABORATORIES DESIGN U904 (3 HOUR RATING). CLASS RATINGS SHALL BE AS NOTED ON THE DRAWINGS. c. <u>WEIGHT TYPE</u>: ONE (1) WEIGHT TYPE OF BLOCK IS REQUIRED, NORMAL WEIGHT TWO OR THREE CORE BLOCK MADE WITH STONE OR GRAVEL AGGREGATE CONFORMING WITH ASTM STANDARD

C33 WEIGHING NOT LESS THAN 125 P.C.F., OVEN DRY. CINDER AGGREGATE WILL NOT BE

- d. <u>DRYING SHRINKAGE</u>: CONCRETE BLOCK SHALL COMPLY WITH CHANGES IN LINEAR DIMENSION FROM A SATURATED CONDITION TO AN EQUILIBRIUM WEIGHT AND LENGTH UNDER ACCELERATED
- e. <u>FACE SIZE AND THICKNESS</u>: BLOCK UNITS SHALL HAVE AN 8" X 16" FACE SIZE IN GENERAL, AND OTHER BLOCK UNITS OF THICKNESS AS REQUIRED.

DRYING CONDITIONS AS SPECIFIED WITHIN ASTM STANDARD C426.

- f. QUALITY OF MASONRY UNITS: ALL MASONRY UNITS SHALL BE SOUND, AND FREE FROM CRACKS AND STRUCTURAL DEFECTS. ALL UNITS EXPOSED IN THE FINISH WORK SHALL BE FREE FROM BROKEN CORNERS OR EDGES, CHIPS, POPS, STAINS, AND OTHER BLEMISHES.
- 2. <u>FACE BRICK</u>: SIZE, TYPE, TEXTURE, COLOR, AND MANUFACTURER SHALL MATCH EXISTING AND BE SUBJECT TO REVIEW BY ARCHITECT. PRICK SHALL BE CHARMED TO THE STATE OF THE SHALL BE CHARMED. TO REVIEW BY ARCHITECT. BRICK SHALL BE GUARANTEED TO BE FREE FROM EFFLUORESCENCE, AND CONFORM TO ASTM C216, GRADE SW. PROVIDE SPECIAL SHAPES, INCLUDING SOLID BRICKS FOR SOLDIER COURSING, AS INDICATED ON DRAWINGS, OR REQUIRED BY FIELD

3. MORTAR MATERIALS: a. <u>CEMENT</u>: AN APPROVED BRAND OF TYPE I PORTLAND CEMENT CONFORMING TO ASTM STANDARD

- b. LIME: AN APPROVED BRAND OF HYDRATED LIME CONFORMING WITH ASTM STANDARD C207. RESCREENED, CLEAN, SHARP, WASHED MATERIALS, FREE FROM DELETERIOUS
- SUBSTANCES, CONFORMING WITH ASTM STANDARD C144. d. MIXING WATER: POTABLE WATER SHALL BE CLEAN, FREE FROM OILS, AKALIES, ACIDS, ORGANIC
- NATER, OR OTHER DELETERIOUS MATERIALS. NO AIR-ENTRAINED ADMIXTURES OR MATERIAL CONTAINING AIR-ENTRAINED

ADMIXTURES, ANTI-FREEZE COMPOUNDS, OR OTHER SUBSTANCES SHALL BE ADDED TO MORTAR.

- 4. PROPORTIONS AND USE OF MORTAR: a. MORTAR TYPE: PROVIDE TYPE S MORTAR CONFORMING TO ASTM STANDARD C270. MINIMUM
- STRENGTH SHALL BE 1800 P.S.I. AT 28 DAYS. TYPE N MORTAR IS PROHIBITED. b. <u>CEMENT LIME MORTAR FOR BELOW GRADE MASONRY WORK</u>: CEMENT LIME MORTAR SHALL BE
- PROPORTIONED ONE PART CEMENT; 1/4 PART LIME; 3 PARTS DAMP, LOOSE SAND, BY VOLUME. c. <u>CEMENT LIME MORTAR FOR ALL OTHER MASONRY WORK</u>: CEMENT LIME MORTAR SHALL BE PROPORTIONED ONE PART CEMENT; ONE PART LIME; 6 PARTS DAMP, LOOSE SAND, BY VOLUME.
- d. MASONRY CEMENT: MASONRY CEMENT PER ASTM STANDARD C91 WITH A PREFERRED AIR ENTRAINMENT OF 10% WILL BE ACCEPTABLE ONLY FOR USE WITHIN NON-LOAD BEARING INTERIOR PARTITIONS. USE OF MASONRY CEMENT FOR EXTERIOR WORK IS PROHIBITED. e. PRE-BLENDED MORTAR MIXES: IN LIEU OF FIELD MIXED CEMENT LIME MORTAR SPECIFIED ABOVE. HE CONTRACTOR MAY USE A PREPARED MORTAR, PROVIDING HE HAS SECURED THE

(888) 773-2649; www.specmix.com.

ARCHITECT

a. <u>FINE GROUT</u>: PER ASTM STANDARD C476, FOR FILLING SPACES LESS THAN 4" IN ONE OR BOTH

ARCHITECT'S APPROVAL BEFORE INSTALLATION. PREPARED MORTAR PRODUCTS AND SYSTEM

SHALL BE SUCH AS SPEC MIX® / QUIKRETE® AS MANUFACTURED BY SPEC MIX®, INC., EAGAN, MN,

b. COARSE GROUT: PER ASTM STANDARD C476, FOR FILLING 4" SPACES OR LARGER IN BOTH

HORIZONTAL DIRECTIONS. WALL REINFORCING:

- STEEL BAR REINFORCING: REINFORCING SHALL BE NOT LESS THAN SIZES INDICATED ON THE DRAWINGS, AND SHALL CONFORM WITH THE REQUIREMENTS OF ASTM STANDARD A615, GRADE 60, OR ASTM STANDARD A996. GRADE 60.
- WIRE REINFORCING: NO. 9 GAUGE HOT-DIPPED GALVANIZED STEEL WIRE, ZINC COATED ASTM STANDARD A153 CLASS B2, NOT LESS THAN 1.50 OZ. PER SQ. FT. (AFTER FABRICATION), AND APPROXIMATELY 1-1/2" LESS THAN WALL THICKNESS, BY ONE OF THE FOLLOWING MANUFACTURERS:
- 1.HOHMANN & BARNARD, INC., HAUPPAUGE, NY, (800)645-0616 OR (631)234-0600, LOXALL® REINFORCEMENT, LADDER TYPE #220 LADDER-MESH, FOR SINGLE WYTHE BLOCK MASONRY
- c. <u>MECHANICAL BAR SPLICING:</u> DAYTON SUPERIOR CORPORATION, MIAMISBURG, OH, (888) 977-9600 OR (937) 866-0701; www.daytonsuperior.com PROVIDE MECHANICAL BAR SPLICING SYSTEM AS SHOWN AND/OR NOTED ON THE DRAWINGS.
- . BRICK VENEER ANCHORS AND TIES: MASONRY WIRE TIES, HOT-DIP GALVANIZED, COLD DRAWN STEEL WIRE, VENEER ANCHOR DW-10® SERIES ADJUSTABLE VENEER ANCHORS CONFORMING WITH THE REQUIREMENTS OF ASTM STANDARD A153, CLASS B2, FOR MASONRY/VENEER METAL STUD CONSTRUCTION. MANUFACTURER: HOHMANN & BARNARD, INC., HAUPPAUGE, NY, (800)645-0616 OR

D. MISCELLANEOUS ITEMS:

COMPRESSIVE STRENGTH AT 28 DAYS 2. WALL FLASHING: 40 MIL MEMBRANE CONSISTING OF 32 MIL RUBBERIZED ASPHALT COMPOUND INTEGRALLY BONDED TO 8 MIL HIGH DENSITY CROSS-LAMINATED POLYETHYLENE FILM, PERM-A-BARRIER® AS MANUFACTURED BY GRACE CONSTRUCTION PRODUCTS, CAMBRIDGE, MA

(866)333-3726, (617)876-1400, OR COMPARABLE EQUIVALENT PRODUCT SUBJECT TO REVIEW BY THE

I. <u>BLOCK MASONRY</u> <u>FILL</u>: GROUT FILL FOR BLOCK CORES SHALL BE NOT LESS THAN 2000 P.S.I.

- 3. <u>JOINT FILLER</u>: POLYETHYLENE, CLOSED CELL COMPRESSIBLE FOAM EXPANSION JOINT FILLER SUCH AS SONOLASTIC® EXPANSION-JOINT FILLER, AS MANUFACTURED BY BASE CONSTRUCTION CHEMICALS, LLC - BUILDING SYSTEMS, SHAKOPEE, MN, (800)433-9517, (800)243-6739 OR COMPARABLE EQUIVALENT PRODUCT SUBJECT TO REVIEW BY THE ARCHITECT.
- 4. <u>CAVITY MESH</u>: MORTAR NET AND MORTAR NET WEEP VENTS. MANUFACTURER: MORTAR NET USA, LTD, HIGHLAND, IN, (800)664-6638, OR OTHER COMPARABLE EQUIVALENT PRODUCT SUBJECT TO
- 5. WEEP HOLES: #341 PLASTIC WEEP HOLES, ROUND MEDIUM DENSITY POLYETHYLENE. 3/8" O.D.. 4" LONG WITH COTTON WICK, TESTED IN CONFORMANCE WITH ASTM STANDARDS D2244, D638 AND D746, AS MANUFACTURED BY HOHMANN & BARNARD, INC., OR OTHER COMPARABLE EQUIVALENT PRODUCT SUBJECT TO REVIEW BY ARCHITECT.

E. CLEANING AND POINTING:

WHERE NECESSARY

- 1. <u>GENERAL</u>: THOROUGHLY CLEAN ALL CONCRETE MASONRY BLOCK UNITS AND FACE BRICK. REMOVE ALL MORTAR, DIRT OR PAINT SPOTS; AND POINT UP ALL JOINTS FULL AND EVEN. IN GENERAL, USE ONLY WOOD PADDLES AND FIBER BRUSHES WITH CLEAN WATER AND SOAP FOR CLEANING. THOROUGHLY FLUSH THE SURFACE WITH CLEAN WATER AFTER CLEANING. USE OF ACIDS OR ALKALI
- $\hbox{$2$.$ $\underline{\sf EXPOSED}$ $\underline{\sf MASONRY}$: ALL $\underline{\sf EXPOSED}$ $\underline{\sf MASONRY}$ SHALL $\underline{\sf BE}$ $\underline{\sf DRY}$ $\underline{\sf BRUSHED}$ $CLEAN $\underline{\sf AS}$ $\underline{\sf THE}$ $\underline{\sf WORK}$ $\underline{\sf PROGRESSES}$ $\underline{\sf AND}$ $\underline{\sf AT}$ $\underline{\sf COMPLETION}$, $\underline{\sf ALL}$ $\underline{\sf SPOTS}$ $\underline{\sf AND}$ $\underline{\sf DIRT}$ $\underline{\sf SHALL}$ $\underline{\sf BE}$ $\underline{\sf REMOVED}$ $\underline{\sf AND}$ $\underline{\sf JOINTS}$ $\underline{\sf POINTED}$ $\underline{\sf NOSMED}$ $\underline{\sf NOSMED$
- 3. PROHIBITED METHODS: THE USE OF PRESSURE WASHING, WIRE BRUSHES, OR OTHER ABRASIVES IS PROHIBITED.

END OF SECTION

- A. WORK INCLUDED: FURNISH, FORM, FABRICATE, AND ERECT ALL NEW STRUCTURAL STEEL BUILDING FRAMING, COMPLETE WITH ANCHORAGE DEVICES, FASTENERS, CONNECTIONS, ACCESSORIES AND
- B. <u>CODES_AND_REFERENCE_SPECIFICATIONS</u>: EXCEPT AS OTHERWISE SPECIFIED, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE FOLLOWING CURRENT CODES AND SPECIFICATIONS.
- ALL APPLICABLE LOCAL BUILDING CODES.
- 2. AMERICAN WELDING SOCIETY (AWS), D1.1, STRUCTURAL WELDING CODE STEEL.
- 3. CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC. (AISC), SEPTEMBER 1, 1986, EXCEPT SECTIONS 7.9.2, 7.9.3,
- 4. SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS, AND COMMENTARY THEREON, AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC., (AISC), MARCH 9, 2005. 5. SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM STANDARDS A325 OR A490 BOLTS,

APPROVED BY RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS, JUNE 30, 2004, INCLUDING

COMMENTARY BY AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC., (AISC). 6. SPECIFICATIONS FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) OF THE AISC, AS AMENDED TO DATE.

C. QUALITY CONTROL

- . TESTING AGENCY SERVICES: CONTRACTOR MAY ENGAGE AT HIS EXPENSE, A SEPARATE TESTING AGENCY FOR INFORMATION AND GUIDANCE, TO ASCERTAIN THAT ALL NEW MATERIALS ARE FURNISHED, FABRICATED, INSTALLED, OR ERECTED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE TESTING AGENCY SHALL SEND REPORTS OF ALL INSPECTIONS TO THE ARCHITECT, OWNER, AND GENERAL CONTRACTOR.
- 2. FABRICATOR EXPERIENCE: FABRICATOR SHALL BE CAPABLE OF DEMONSTRATING FIVE (5) YEARS SUCCESSFUL EXPERIENCE IN STEEL PRODUCTION.

- . <u>STRUCTURAL</u> <u>SHAPES, BARS AND PLATES:</u> ROLLED FROM NEW BILLETS ONLY, MADE BY OPEN-HEARTH PROCESS CONFORMING TO ASTM STANDARD A36 OR ASTM A572, GRADE 50; SUBMIT MILL CERTIFICATES.
- 2. <u>STEEL BOLTS, NUTS AND WASHERS:</u> HIGH STRENGTH STEEL BOLTS, NUTS AND WASHERS, CONFORMING TO ASTM STANDARD A325. BOLTS SHALL CARRY THE IDENTIFYING MARK OF THREE (3)
- 3. EXPANSION BOLTS OR SLEEVES: HILTI® KWIK BOLT 3 EXPANSION ANCHOR BY HILTI, INC., TULSA, OK, (800)879-8000, (918)252-6000, OF SIZES TO SUIT BOLTS. 4. SLIDING JOINT PLATES: BEARING PADS SHALL BE FABREEKA® BEARING PAD CONSISTING OF MULTIPLE LAYERS OF COTTON-POLYESTER DUCK IMPREGNATED WITH HIGH QUALITY RUBBER. THE POLYTETRAFLUORETHYLENE (PTFE) SELF-LUBRICATING SURFACE BEARING ELEMENT SHALL BE COMPRISED OF 100 PERCENT VIRGIN (UNFILLED) POLYTETRAFLUORETHYLENE POLYMER AND BE BONDED TO A RIGID CONFINING SUBSTRATE. THE SUBSTRATE SHALL LIMIT THE FLOW (ELONGATION) OF THE CONFINED PTFE TO NOT MORE THAN .009" UNDER LOAD OF 2000 PSI FOR 15 MINUTES AT 78°F FOR A 2" X 3" TEST SAMPLE. THE VIRGIN (UNFILLED) PTFE SHALL HAVE A THICKNESS OF NOT LESS THAN 1/32" AND BE OF SIZES AS REQUIRED BY THE DRAWINGS. MANUFACTURER: FABREEKA
- INTERNATIONAL, INC., STOUGHTON, MA, (800)322-7352, (781)341-3655, OR COMPARABLE PRODUCTS SUBJECT TO REVIEW BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. 5. <u>ARC WELDING ELECTRODES</u>: E-70 SERIES CONFORMING TO THE REQUIREMENTS OF THE AWS A5.1 OR
- A5.5 AND AISC SPECIFICATIONS. 6. PRIMING PAINT: PROVIDE ONE (1) OF THE FOLLOWING MANUFACTURERS PRODUCT, LEAD AND ZINC CHROMATE FREE, IRON OXIDE, ALKYD RESIN VEHICLE PRIMING PAINT, SUBJECT TO REVIEW BY THE
- a. ICI DEVOE® HIGH PERFORMANCE COATINGS, DEVSHIELD $^{\mathrm{TM}}$ 4130 RUST PENETRATING METAL

RUST INHIBITIVE STEEL PRIMER 6-208 RED. c. TNEMEC, INC., TNEMEC PRIMER SERIES 10, 99 RED.

1. FABRICATE BEAMS FROM ROLLED SECTIONS OF THE SIZE INDICATED, WITH NATURAL CAMBER UP. MEMBERS SHALL BE STRAIGHT AND WITHOUT CAMBER OF MORE THAN 1/8" FOR EVERY 10 FEET OF

TRANSFERRED TO THE MASONRY TO 200 PSI. PROVIDE SUITABLE ANCHORAGE DEVICES FOR

b. PPG ARCHITECTURAL FINISHES, INC., PPG HIGH PERFORMANCE COATINGS, SPEEDHIDE® INT/EXT

SPAN. EXCEPT WHERE SPECIAL CAMBER IS INDICATED ON THE DRAWINGS. CONNECTIONS SHALL BE SUFFICIENT TO DEVELOP FULL STRENGTH OF THE MEMBER. 2. PLATES, ANGLES AND OTHER SHAPES SHOWN ATTACHED TO STRUCTURAL MEMBERS SHALL BE

3. PROVIDE SLOTTED CONNECTIONS WHERE DETAILED. 4. FURNISH BEAMS BEARING ON MASONRY WITH BEARING PLATES AS REQUIRED TO LIMIT THE STRESS

INCLUDED AS PART OF WORK.

SECURING MEMBERS TO SUPPORTING MASONRY. H. PAINTING (SHOP AND FIELD):

STRUCTURE, UNTIL THE PERMANENT CONNECTIONS ARE MADE.

WHERE SURFACES ARE EXPOSED IN THE FINISH WORK.

ARCHITECT. SUBSTITUTIONS WILL NOT BE PERMITTED.

6. SHOP PRIME PAINT AND FIELD TOUCH-UP ALL STRUCTURAL STEEL.

7. FURNISH THE GENERAL CONTRACTOR WITH COPIES OF INVOICE FOR PURCHASE OF PAINT.

- 8. BEFORE SHOP PAINTING, THOROUGHLY CLEAN ALL SURFACES OF DIRT, GREASE, SCALE, AND RUST.
- g. ON ALL SURFACES NOT IN CONTACT BUT INACCESSIBLE AFTER ASSEMBLING, PROVIDE ONE (1) PAINT COAT BEFORE ASSEMBLING.
- h. PROVIDE ONE (1) PAINT COAT ON ALL FINISHED SHOP FABRICATED PIECES. 4. AFTER ERECTION, CLEAN-OFF ALL FOREIGN MATERIAL FROM THE STEEL, AND, IF ANY PAINT IS REMOVED. REPAINT SUCH AREAS.
- HORIZONTAL MEMBERS LEVEL, AND ALL INTERSECTIONS OF MEMBERS AT RIGHT ANGLES. 2. CONNECT ALL MEMBERS TEMPORARILY WITH SUFFICIENT BOLTS TO INSURE THE SAFETY OF THE

1. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, ERECT ALL VERTICAL MEMBERS PLUMB, ALL

4. DO NOT WELD CONNECTIONS UNTIL THE MEMBERS HAVE BEEN ALIGNED PROPERLY. REMOVE ALL TEMPORARY BOLTS, AND CLOSE ALL OPEN HOLES BY PLUG WELDING AND GRINDING SMOOTH,

5. WHERE FRAMING MEMBERS ARE SECURED TO EXISTING CONCRETE CONSTRUCTION, PROVIDE HOLES

FOR EXPANSION SLEEVES BY DRILLING WITH A ROTARY DRILL AND BIT, NOT BY ANY METHOD THAT

3. PROVIDE TEMPORARY BRACING AND SHORING AS REQUIRED; REMOVE WHEN FINAL CONNECTIONS

OPERATES ON AN IMPACT PROCESS. 6. WHERE FRAMING MEMBERS ARE SECURED TO EXISTING FRAMING, DRILL HOLES IN THE EXISTING FRAMING FOR BOLTED CONNECTIONS. DO NOT WELD TO EXISTING STEEL FRAMING UNLESS SO INDICATED ON THE DRAWINGS OR UNLESS WRITTEN PERMISSION IS OBTAINED FROM THE ARCHITECT, FOR EACH LOCATION.

7. ASSUME FULL RESPONSIBILITY FOR THE CORRECT PLUMBNESS AND ALIGNMENT, AND FOR SETTING OF ALL STRUCTURAL STEEL MEMBERS. PROVIDE ALL GUYS AND BRACES NECESSARY TO MAINTAIN THE STRUCTURE PLUMB AND IN PROPER ALIGNMENT UNTIL SUCH TIME AS SUCCEEDING WORK IS IN PLACE AND, IN THE OPINION OF THE GENERAL CONTRACTOR, THE GUY AND BRACING ARE NO LONGER NECESSARY. AT COMPLETION, REMOVE AND DISPOSE OF ALL TEMPORARY WORK AND FACILITIES,

A. WORK INCLUDED: PRODUCTS AND MATERIALS INDICATED ON THE DRAWINGS, AND AS SPECIFIED

B. <u>REFERENCE SPECIFICATIONS</u>: EXCEPT AS OTHERWISE SPECIFIED HEREIN, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE FOLLOWING CURRENT SPECIFICATIONS.

- 1. SPECIFICATIONS FOR STRUCTURAL STEEL FOR BUILDINGS, AND COMMENTARY THEREON, AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MARCH 9, 2005.
- 2. AMERICAN WELDING SOCIETY (AWS), D1.1, STRUCTURAL WELDING CODE STEEL.
- 3. STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS AS ADOPTED BY THE STEEL JOIST INSTITUTE (SJI) AND THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC. (AISC), ANNUAL
- 4. WHERE EXPOSED TO VIEW, MATERIALS SHALL CONFORM TO AISC SPECIFICATIONS FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS), MINIMUM, AS AMENDED TO DATE.

. <u>TESTING AGENCY SERVICES</u>: CONTRACTOR MAY ENGAGE, AT HIS EXPENSE, A SEPARATE TESTING AGENCY FOR INFORMATION AND GUIDANCE, TO ASCERTAIN THAT ALL NEW MATERIALS ARE

FURNISHED, FABRICATED, INSTALLED, OR ERECTED IN ACCORDANCE WITH REQUIREMENTS OF THI

CONTRACT DOCUMENTS. THE TESTING AGENCY SHALL SEND INSPECTION REPORTS TO THE

- ROLLED PLATES AND SHAPES: FABRICATED FROM NEW OPEN HEARTH STEEL CONFORMING TO ASTM
- 2. STANDARD BOLTS AND ANCHOR BOLTS: UNFINISHED BOLTS CONFORMING TO ASTM STANDARD A307 GRADE A, WITH HEXAGON HEADS AND NUTS WHERE EXPOSED IN THE FINISH WORK. 3. <u>STEEL PIPE RAILINGS</u>: ASTM STANDARD A53, TYPE S - SEAMLESS, GRADE A, SCHEDULE 40, UNLESS OTHERWISE NOTED.

- a. HILTI® KWIK BOLT 3 EXPANSION ANCHOR AS MANUFACTURED BY HILTI, INC., TULSA, OK,
- (800)879-8000 OR (918)252-6000; WWW.US.HILTI.COM b. POWER-STUD™ AS MANUFACTURED BY POWERS FASTENERS, INC., BREWSTER, NY, (800)524-3244 OR (914)235-6300; WWW.POWERS.COM

CHROMATE FREE PRIMING PAINT, SUBJECT TO REVIEW BY THE ARCHITECT. SUBSTITUTIONS WILL NO

5. <u>WELDING ELECTRODES</u>: SERIES E-60 OR E-70, AWS A5.1 OR A5.5. PRIMING PAINT: PROVIDE ONE (1) OF THE FOLLOWING MANUFACTURERS PRODUCT, LEAD AND ZIN

a. FERROUS METAL PAINT PRODUCT:

b. GALVANIZED STEEL PAINT PRODUCT:

ARCHITECT, OWNER, AND GENERAL CONTRACTOR.

www.devoecoatings.com. PRODUCT: DEVSHIELD 4130 RUST PENETRATING METAL PRIMER, LIGHT 6.b. PPG ARCHITECTURAL FINISHES, LOUISVILLE, KY, (800)441-9695; www.ppghpc.com. PRODUCT:

PPG HIGH PERFORMANCE COATINGS (HPC), SPEEDHIDE® INT/EXT RUST INHIBITIVE STEEL

6.a. ICI PAINTS DEVOE® HIGH PERFORMANCE COATINGS, STRONGSVILLE. OH, (800)654-2616;

- 6.c. TNEMEC, INC., KANSAS CITY, MO, (800)863-6321; www.tnemec.com. PRODUCT: TNEMEC PRIMER
- 6.a. ICI DEVOE® HIGH PERFORMANCE COATINGS, STRONGSVILLE. OH, (800)654-2616; www.devoecoatings.com. PRODUCT: DEVGUARD™ 4160 MULTI-PURPOSE TANK & STRUCTURAL
- 6.b. PPG ARCHITECTURAL FINISHES, PPG HIGH PERFORMANCE COATINGS, PRODUCT: SPEEDHIDE® INT/EXT GALVANIZED STEEL PRIMER 6-209, WHITE. 6.c. TNEMEC, INC., PRODUCT: HI-BUILD EPOXOLINE SERIES 66, WHITE.

USE CONNECTIONS OF TYPE AND DESIGN REQUIRED BY FORCES TO BE RESISTED, AND TO PROVIDE SECURE FASTENING.

CONCRETE AND SETTING.

B. WOOD FOR FINISH CARPENTRY:

- G. INSTALLATIONS BY OTHERS 1. FURNISH LOOSE STEEL ANGLE LINTELS TO MASONRY CONTRACTOR.
- 2. FURNISH ALL PIPE GUARD POSTS AND DELIVER TO THE CONCRETE CONTRACTOR FOR FILLING WITH

- SECTION 06 20 00 FINISH CARPENTRY A. WORK INCLUDED: PRODUCTS AND MATERIALS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
- MILLWORK AND TRIM: CUSTOM GRADE AS DEFINED IN THE ARCHITECTURAL WOODWORK QUALITY STANDARDS GUIDE SPECIFICATIONS, AND QUALITY CERTIFICATION STANDARDS OF THE

ARCHITECTURAL WOODWORK INSTITUTE.

2. HARDWOOD: TRIM SHALL MATCH EXISTING.

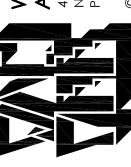
END OF SECTION

- B. BLANKET/BATT INSULATION: MANUFACTURER AND INSULATION: OPEN-FACED WITH VAPOR BARRIER (FOIL-FACED), UNLESS OTHERWISE NOTED ON THE DRAWINGS, FLAME-RESISTANT, MINERAL FIBER INSULATION.
- a. <u>BLANKET/BATT_WIDTHS:</u> PROVIDE AS REQUIRED BY FRAMING MEMBER SPACINGS INDICATED ON
- WITH VAPOR BARRIER: THERMAFIBER® FS-25 (WITH FOIL-FACED VAPOR RETARDER ATTACHED),
- 2. WITHOUT VAPOR BARRIER: THERMAFIBER® FS-15 (UNFACED), TYPE I, FLAME SPREAD 0 AND

YPE III, FLAME SPREAD MAXIMUM 25 AND SMOKE DEVELOPED 0.

d. <u>THERMAL RESISTANCE R-VALUES</u>: PROVIDE AT LOCATIONS NOTED AND SPECIFIED ON DRAWINGS. THICKNESS SHALL BE AS DETERMINED BY MANUFACTURER FOR R-VALUE SPECIFIED. MORE THAN ONE LAYER OF INSULATION MAY BE USED TO ACHIEVE THE R-VALUE.

e. <u>Exposed insulation</u>: where exposed in Walls or Ceiling Space, insulation shall mee⁻



" * * * * * * "

F. GENERAL CONNECTIONS AND WORKMANSHIP: WELD ALL SHOP CONNECTIONS, BOLT OR WELD ALL FIELD ONNECTIONS UNLESS OTHERWISE NOTED OR SPECIFIED. PROVIDE ALL CLIPS. LUGS. BRACKETS. STRAPS, PLATES, BOLTS, NUTS, WASHERS, AS REQUIRED FOR COMPLETE FABRICATION AND ERECTION

Date Issued 3ids & Permit 12/23/2020

MANUFACTURER: THERMAFIBER, INC., WABASH, IN, (888)834-2371, (260)563-2111, OR COMPARABLE PRODUCT SUBJECT TO ARCHITECT REVIEW.

b. <u>SURFACE BURNING CHARACTERISTICS</u>: NON-COMBUSTIBLE WITH CLASS A FIRE HAZARD CLASSIFICATION PER ASTM STANDARD E84.

c. TYPE AND QUALITY: RESISTANT TO DECAY AND CORROSION.

THE REQUIREMENTS OF FACTORY MUTUAL. . ACCESSORIES: PROVIDE ALL SUPPLEMENTARY MATERIALS AS REQUIRED BY DRAWINGS AND/OR FIELD

A. WORK INCLUDED: PRODUCTS AND MATERIALS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.

SPECIFICATIONS

Job Number

Sheet Number

SECTION 07 41 13 - PREFORMED INSULATED METAL ROOFING

- A. WORK INCLUDED: PRODUCTS AND MATERIALS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
- 1. REMOVAL OF PROTECTIVE STRIPPABLE PLASTIC COATING FROM PREFINISHED ITEMS AS WORK PROGRESSES AND IS COMPLETED IN EACH AREA
- 2. AT COMPLETION OF ERECTION, WASH OR CLEAN ALL EXPOSED SURFACES AND TOUCH-UP ALL AREAS OF MARRED PAINT, AND ALL SCREW AND BOLT HEADS, ON EXTERIOR, WITH PAINT OF TYPE AND

B. INSPECTION, PREPARATION, AND COORDINATION:

- 1. INSPECT ALL SURFACES UPON WHICH METAL ROOFING WORK IS TO BE APPLIED. INSTALLATION OF ANY MATERIALS WILL BE CONSIDERED ACCEPTABLE BY THE CONTRACTOR OF THE SURFACE COVERED. IF ANY DEFECTIVE WORK IS COVERED IN, THE REMOVAL AND REPLACING OF METAL ROOFING WORK SHALL BE DONE BY THE CONTRACTOR, WITHOUT COST TO THE OWNER.
- 2. ALL SURFACES TO BE COVERED SHALL BE SMOOTH, DRY AND FREE FROM DIRT, DEBRIS AND FOREIGN MATERIAL BEFORE ROOFING IS INSTALLED.
- 3. COORDINATE WORK OF THIS SECTION WITH THE RELATED WORK OF OTHER CONTRACTORS.

1. FLUOROCARBON COATING: PROVIDE FROM THE ROOFING MANUFACTURER, A 20 YEAR WRITTEN VARRANTY COVERING COLOR FADE, CRACKING, PEELING, CHALK AND FILM INTEGRITY, AT NO CHARGE TO THE OWNER.

D. PREFORMED METAL ROOFING AND ACCESSORIES:

MANUFACTURER: PREFINISHED METAL ITEMS AS MANUFACTURED BY CECO BUILDING SYSTEMS DIVISION OF NCI GROUP, INC.; ROCKY MOUNT, NC. TEL: (800)474-CECO; WEB WWW.CECOBUILDINGS.COM. COMPARABLE PRODUCTS OF OTHER MANUFACTURERS MAY BE ACCEPTABLE, SUBJECT TO CONFORMANCE WITH THE SPECIFICATIONS, THE REQUIREMENTS OF THE

DRAWINGS, AND REVIEW BY THE ARCHITECT. ITEMS SHALL INCLUDE, BUT ARE NOT LIMITED TO:

a. ROOFING PANELS.

- b. METAL DRIP EDGES.
- c. CLOSURE PANELS AND TRIM.
- d. ALL ASSOCIATED FLASHING, INCLUDING CAP FLASHING AND STEP FLASHING
- f. METAL ZEE CLIPS
- 2. ROOF SYSTEM: AS NOTED ON PLANS, PROVIDED IN CONTINUOUS LENGTHS.
- 1. <u>SEALANT</u>: MANUFACTURER STANDARD FIELD APPLIED.
- 2. TRIM: BRAKE-FORMED TRIM, INCLUDING BASE AND CORNER TRIM, OF SAME BASE MATERIAL AND GAUGE AS ROOFING PANELS. FINISH AND COLOR SHALL MATCH ROOFING PANELS.

a. SELF-TAPPING SCREWS AND OTHER ACCEPTABLE FASTENERS RECOMMENDED BY METAL PANE MANUFACTURER. PROVIDE CORROSION-RESISTANT FASTENERS WITH HEADS MATCHING COLOR OF METAL PANELS BY MEANS OF FACTORY-APPLIED COATING, WITH WEATHERTIGHT RESILIENT

NEOPRENE FLASHING: 1/8" THICK, N-3S NEOPRENE SHEET (BLACK), AS MANUFACTURED BY GATES ENGINEERING COMPANY, INC., WILMINGTON, DE, (302)656-9951, OR COMPARABLE PRODUCT SUBJECT TO REVIEW BY THE ARCHITECT.

2. <u>NEOPRENE WASHERS</u>: REQUIRED FOR INSTALLATION.

SECTION 07 42 13 - PREFORMED INSULATED METAL SIDING

A. WORK INCLUDED: PRODUCTS AND MATERIALS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN

1. AT COMPLETION OF ERECTION, WASH OR CLEAN ALL EXPOSED SURFACES AND TOUCH-UP ALL AREAS OF MARRED PAINT, AND ALL SCREW AND BOLT HEADS, ON EXTERIOR, WITH PAINT OF TYPE AND COLOR TO MATCH SHOP FINISH.

B. <u>INSPECTION</u>, PREPARATION, AND COORDINATION:

- 1 INSPECT ALL SURFACES UPON WHICH METAL SIDING WORK IS TO BE APPLIED. INSTALLATION OF ANY MATERIALS WILL BE CONSIDERED ACCEPTABLE BY THE CONTRACTOR OF THE SURFACE COVERED. IF ANY DEFECTIVE WORK IS COVERED IN, THE REMOVAL AND REPLACING OF METAL SIDING WORK SHALL BE DONE BY THE CONTRACTOR, WITHOUT COST TO THE OWNER.
- 2. ALL SURFACES TO BE COVERED SHALL BE SMOOTH, DRY AND FREE FROM DIRT, DEBRIS AND FOREIGN MATERIAL BEFORE SIDING IS INSTALLED.
- 3. COORDINATE WORK OF THIS SECTION WITH THE RELATED WORK OF OTHER CONTRACTORS.

1. FLUOROPOLYMER COATING: PROVIDE FROM THE SIDING MANUFACTURER, A 10 YEAR WRITTEN WARRANTY COVERING COLOR FADE, CRACKING, PEELING, CHALK AND FILM INTEGRITY, AT NO CHARGE TO THE OWNER.

D. PREFORMED METAL SIDING AND ACCESSORIES:

- MANUFACTURER: PREFINISHED METAL ITEMS AS MANUFACTURED BY CECO BUILDING SYSTEMS DIVISION OF NCI GROUP, INC.; ROCKY MOUNT, NC. TEL: (800)474-CECO; WEB: WWW.CECOBUILDINGS.COM. COMPARABLE PRODUCTS OF OTHER MANUFACTURERS MAY BE ACCEPTABLE SUBJECT TO CONFORMANCE WITH THE SPECIFICATIONS. THE REQUIREMENTS OF THE DRAWINGS, AND REVIEW BY THE ARCHITECT. ITEMS SHALL INCLUDE, BUT ARE NOT LIMITED TO:
- a. SIDING PANELS.
- b. METAL DRIP EDGES.
- c. CLOSURE PANELS AND TRIM.
- d. ALL ASSOCIATED FLASHING, INCLUDING CAP FLASHING AND NEOPRENE PROFILE CLOSURES.
- 2. INSULATED METAL SIDING: CECO, CF FLUTE, PROVIDED IN CONTINUOUS LENGTHS.
- a. PANEL WIDTH: 42 INCHES
- b. <u>SEALANT</u>: MANUFACTURER STANDARD, FIELD APPLIED.
- c. <u>TRIM</u>: BRAKE-FORMED TRIM, INCLUDING BASE AND CORNER TRIM, OF SAME BASE MATERIAL AND GAUGE AS SIDING PANELS. FINISH AND COLOR SHALL MATCH SIDING PANELS.

E. FASTENERS:

- 1. ATTACH PANELS TO METAL FRAMING USING SCREWS, FASTENERS, SEALANTS, AND ADHESIVES RECOMMENDED FOR APPLICATION BY METAL PANEL MANUFACTURER. a. FASTEN METAL PANELS TO SUPPORTS WITH FASTENERS AT EACH LOCATION INDICATED ON APPROVED SHOP DRAWINGS, AT SPACING AND WITH FASTENERS RECOMMENDED BY
- b. CUT PANELS IN FIELD WHERE REQUIRED USING MANUFACTURER'S RECOMMENDED METHODS. PROVIDE WEATHERPROOF JACKS FOR PIPE AND CONDUIT PENETRATING METAL PANELS.
- d. DISSIMILAR MATERIALS: WHERE ELEMENTS OF METAL PANEL SYSTEM WILL COME INTO CONTACT WITH DISSIMILAR MATERIALS, TREAT FACES AND EDGES IN CONTACT WITH DISSIMILAR MATERIALS
- AS RECOMMENDED BY METAL PANEL MANUFACTURER 2. ATTACH PANEL FLASHING TRIM PIECES TO SUPPORTS USING RECOMMENDED FASTENERS AND JOINT
- 3. JOINT SEALERS: INSTALL SEALANTS WHERE INDICATED AND WHERE REQUIRED FOR WEATHERPROOF PERFORMANCE OF METAL PANEL ASSEMBLIES
- a. SEAL PANEL BASE ASSEMBLY, OPENINGS, PANEL HEAD JOINTS, AND PERIMETER JOINTS USING SEALANTS INDICATED IN MANUFACTURER'S INSTRUCTIONS SPECIFIER: RETAIN OPTIONAL WALL PANEL VAPOR SEAL BEAD BELOW WHEN RECOMMENDED BASED UPON ARCHITECT'S WATER VAPOR TRANSMISSION ANALYSIS.
- b. SEAL WALL PANEL JOINTS; APPLY CONTINUOUSLY WITHOUT GAPS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, APPROVED SHOP DRAWINGS, AND PROJECT
- c. PREPARE JOINTS AND APPLY SEALANTS PER REQUIREMENTS OF DIVISION 07 SECTION.

F. MISCELLANEOUS:

END OF SECTION

- 1. <u>NEOPRENE WASHERS</u>: REQUIRED FOR INSTALLATION.
- 2. <u>FELT_UNDERLAYMENT</u>: TYPE II, NO. 30, UNPERFORATED ROOFING FELT CONFORMING TO ASTM STANDARD D226.

SECTION 07 60 00 - SHEET METAL WORK

1. PRODUCTS AND MATERIALS INDICATED ON THE DRAWINGS AND/OR REQUIRED BY FIELD CONDITIONS, AND AS SPECIFIED HEREIN.

2. TOUCH-UP PREFINISHED ITEMS DAMAGED DURING INSTALLATION.

- B. <u>APPLICABLE STANDARDS</u>: WORK AND MATERIALS SHALL CONFORM WITH THE REQUIREMENTS OF THE "ARCHITECTURAL SHEET METAL MANUAL", FIFTH EDITION, PUBLISHED IN 1993, HEREINAFTER REFERRED TO AS "SMACNA MANUAL", AS ISSUED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS
- C. QUALIFICATIONS: SHEET METAL CONTRACTOR SHALL BE A QUALIFIED CONTRACTING FIRM, WITH MINIMUM OF FIVE (5) YEARS EXPERIENCE, CAPABLE OF COMPLYING WITH THE SPECIFICATIONS.

- 1. GENERAL: PROVIDE ALL SHEET METAL WORK, EXCEPT WHERE NOTED ON THE DRAWINGS OR SPECIFIED, TO BE PROVIDED BY OTHER TRADES.
- 2. GALVANIZED SHEET METAL: COMMERCIAL QUALITY, COATED BEARING SHEET STEEL OF NOT LESS THAN THE US STANDARD GAUGES SPECIFIED. SHEET METAL SHALL HAVE A UNIFORM COATING DESIGNATION G90 ZINC COATING APPLIED BY THE CONTINUOUS HOT-DIP PROCESS (ASTM STANDARD A924) TO BOTH SIDES OF THE BASE METAL. MATERIALS SHALL COMPLY WITH ASTM STANDARD A653 FOR COMMERCIAL AND LOCK-FORMING QUALITY SHEET METAL. ACCEPTABLE PRODUCTS AND MANUFACTURER SHALL BE ZINCGRIP® GALVANIZED SHEET STEEL WITH PAINTGRIP® ZINC-PHOSPHATE COATING AS MANUFACTURED BY AK STEEL CORPORATION, MIDDLETOWN, OH, (513)425-5000 OR (800)331-2826, OR OTHER COMPARABLE MANUFACTURER AND PRODUCTS SUBJECT TO REVIEW BY THE ARCHITECT.
- a. <u>FLASHING AND COUNTER FLASHING</u>: 24 GAUGE, OR HEAVIER WHERE REQUIRED TO MEET SERVICE CONDITIONS.
- 3. <u>FASTENERS</u>: #10 X 1-1/4" MINIMUM HEX HEAD SCREWS, HEAVY CADMIUM PLATED STEEL, OR STAINLESS STEEL, AND NEOPRENE SEALING WASHERS NOT LESS THAN 3/4" O.D.

a. <u>FOR USE ON METAL JOINTS</u>: MONO 555®, ONE-PART ACRYLIC TERPOLYMER SEALANT, MEETING U.S. FEDERAL SPECIFICATION TT-S-230 AS MANUFACTURED BY TREMCO, INCORPORATED, COMMERICAL SEALANTS & WATERPROOFING DIVISION, BEACHWOOD, OH, (800)321-7906, (216)292-5000, www.tremcosealants.com; OR OTHER EQUIVALENT PRODUCT SUBJECT TO REVIEW BY THE ARCHITECT

1. <u>FIELD PAINTED METALS</u>: GALVANIZED METAL PRODUCTS SHALL BE MILL PHOSPHATIZED (ON BOTH SIDES) AFTER ZINC COATING AND MADE SUITABLE TO RECEIVE FIELD PAINTING BY OTHERS.

2. PREFINISHED METALS: FACTORY-APPLIED, PRIMED, AND OVEN-BAKED FINISH BASED ON KYNAR 500® RESIN - POLYVINYLIDENE FLUORIDE (PVDF) COATING SYSTEM BY ATOFINA CHEMICALS, INC., PHILADELPHIA, PA, (215)419-7520 OR (800)596-2750. FINISH SHALL BE BASED ON A MINIMUM OF 70% KYNAR 500® RESIN (BY WEIGHT) COMBINED WITH PROPRIETARY PIGMENTS FOR COIL OR SPRAY SYSTEMS AS PRODUCED BY A LICENSED COATING FORMULATOR. THIS FINISH SHALL BE IN STRICT ACCORDANCE WITH THE LICENSED FORMULATOR'S SPECIFICATION AND APPLIED BY AN APPLICATOR APPROVED BY THE LICENSED MANUFACTURER SUPPLYING THE COATING. PRIMER SHALL HAVE A DRY FILM THICKNESS OF 0.2 TO 0.4 MILS. TOPCOAT DRY FILM THICKNESS SHALL BE NOT LESS THAN 1.0 TO 1.3 MIL THICKNESS ON THE EXPOSED FINISHED SURFACE OF THE METAL PRODUCT

a. <u>COLORS</u>: AS SELECTED BY THE ARCHITECT.

CTION 07 70 00 - ROOF SPECIALTIES AND ACCESSORIES

A. <u>WORK INCLUDED</u>: PRODUCTS AND MATERIALS INDICATED ON THE DRAWINGS AND/OR REQUIRED BY FIELD CONDITIONS, AND AS SPECIFIED HEREIN.

B. ROOF HATCH MANUFACTURERS

- 1. THE BILCO COMPANY, NEW HAVEN, CT, (800)366-6530 OR (203)934-6363; www.bilco.com.
- 2. BABCOCK-DAVIS, BROOKLYN PARK, MN, (888)412-3726 OR (763)488-9247; www.babcockdavis.com.
- 3. MILCOR, COMMERCIAL PRODUCTS GROUP OF HART & COOLEY, INC., CAROL STREAM, IL, (800)624-8642;
- a. ROOF HATCH TYPE: FACTORY ASSEMBLED METAL ROOF HATCHES, READY FOR FIELD INSTALLATION ON BASE FRAME, BILCO TYPE S-20, 2'-6" X 3'-0", SINGLE LEAF HATCH FOR LADDER
- b. COVER: 14 GAUGE PAINT BOND G-90 GALVANIZED STEEL, WITH 3" BEADED FLANGE NEATLY WELDED. INSULATION SHALL BE 1" THICK FIBERGLASS INSULATION, FULLY COVERED AND
- : 12" HIGH, 14 GAUGE PAINT BOND G-90 GALVANIZED STEEL. CURB SHALL BE FORMED WITH 3-1/2" FLANGES WITH HOLES FOR SECURING TO THE ROOF DECK. CURB SHALL HAVE INTEGRAL METAL CAPFLASHING OF SAME GAUGE AND MATERIAL AS THE CURB, FULLY WELDED AT CORNERS FOR WEATHERTIGHTNESS. INSULATION ON EXTERIOR SIDE SHALL BE RIGID FIBERBOARD, 1"
- d. FACTORY FINISH: RED OXIDE PRIME PAINT BOND ON GALVANIZED STEEL.

PROTECTED BY A 22 GAUGE PAINT BOND G-90 GALVANIZED STEEL METAL LINER.

- e. CONSTRUCTION AND HARDWARE: FACTORY ASSEMBLED WITH HEAVY PINTLE HINGES, COMPRESSION SPRING OPERATORS ENCLOSED IN TELESCOPIC TUBES, POSITIVE SPRING LATCH WITH TURN HANDLES AND PADLOCK HASPS INSIDE AND OUTSIDE, AND RUBBER GASKET. COVER SHALL BE EQUIPPED WITH AN AUTOMATIC HOLD-OPEN ARM, COMPLETE WITH RED VINYL GRIP HANDLE FOR ONE HAND RELEASE. ALL HARDWARE SHALL BE ZINC PLATED AND CHROMATE SEALED. SPRINGS SHALL HAVE AN ELECTROCOATED ACRYLIC FINISH.
- f. ANCHORING DEVICES: FURNISH ANCHORING DEVICES OF SAME MANUFACTURER AS ROOF HATCH, COMPATIBLE WITH BASE FRAME.
- g. <u>DESIGN</u>: STRUCTURALLY SOUND, CAPABLE OF WITHSTANDING ALL WEATHER CONDITIONS DMMON TO THE BUILDING SITE, INCLUDING SNOW LOADING OF NOT LESS THAN 40 P.S.I., ACTING VERTICALLY, AND 100 M.P.H. WINDS, ACTING HORIZONTALLY, WITHOUT DAMAGE, DISPLACEMENT, DISTORTION, OR LEAKING.
- C. <u>PIPE SUPPORTS</u>: PROVIDE ROOFING CONTRACTOR WITH MODELS 3-R 2 AND/OR 3-R-4 PILLOW BLOCK PIPESTANDS AND PIPE STRAPS AS MANUFACTURED BY MIRO INDUSTRIES, INC., SALT LAKE CITY, UT, (801)975-9993 OR (800)768-6978; WWW.MIROIND.COM.
- 1. <u>PIPE_SUPPORT_PRODUCT_VERIFICATION:</u> CONTRACTOR SHALL VERIFY [THE NEED AND/OR USE OF] PIPE_SUPPORT_PRODUCTS_AS_INDICATED_ON_THE_DRAWINGS_AND/OR_SPECIFIED_HEREIN_FOR_ COORDINATED SIZE REQUIREMENTS IN ORDER TO PROVIDE ACTUAL PHYSICAL CONTACT AND SUPPORT OF PIPES AS REQUIRED. REPORT TO THE ARCHITECT IN WRITING, ANY DISCREPANCIES FROM SPECIFICATIONS AND DRAWINGS, AND ACTUAL CONDITIONS AT THE SITE.

D. PIPE FLASHINGS

- MANUFACTURER: PORTALS PLUS, COMMERCIAL PRODUCTS GROUP OF HART & COOLEY, INC., CAROL STREAM, IL, (800) 624-8642; WWW.COMMERCIALPRODUCTSGROUP.COM
- a. <u>FLASHING SYSTEM SINGLE OR MULTIPLE PIPE PENETRATIONS</u>: FACTORY FABRICATED FLASHING SYSTEM FOR SINGLE OR MULTIPLE PIPE PENETRATIONS OF SINGLE PLY ROOFING SYSTEMS SHALL BE PORTALS PLUS, "QUADRASEALS AND PIPE BOOTS". FLASHING SHALL BE MOLDED OF 60 MIL (0.060") THICK FPDM NEOPRENE OR HYPALON AND SHALL BE OZONE AND ULTRAVIOLET RESISTANT, WITH A SERVICEABLE TEMPERATURE RANGE OF -60F° TO +270°F MINIMUM. BASE FLANGE SHALL BE FEATHER EDGED, AND UNIT SHALL INCLUDE CONICALLY SHAPED STEPS WITH MOLDED RIBS AND STAINLESS STEEL CLAMPS.
- b. CURB MOUNTED PIPE FLASHING SYSTEM: FACTORY FABRICATED, CURB MOUNTED PIPE FLASHING SYSTEM FOR SINGLE OR MULTIPLE PIPE PENETRATIONS THROUGH SINGLE PLY ROOFING. PIPE FLASHING SYSTEM SHALL BE PORTALS PLUS, "PIPE PORTAL® SYSTEMS". SYSTEM SHALL INCLUDE PREFABRICATED ROOF CURB, LAMINATED ACRYLIC COATED ABS PLASTIC CURB COVER WITH PREPUNCHED MOUNTING HOLES AND MOLDED SEALING RINGS ON THE COLLAR OPENING, AND AN EPDM COMPRESSION MOLDED RUBBER CAP, AND STAINLESS STEEL CLAMPS.

E. <u>INSTALLATION</u>:

GENERAL: WHERE REQUIRED BY DRAWINGS AND/OR FIELD CONDITIONS. FURNISH TO THE ROOFING CONTRACTORS ALL ROOF SPECIALTIES AND ACCESSORIES, COMPLETE WITH ALL REQUIRED SEALANTS, ANCHORING DEVICES, AND MISCELLANEOUS ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. UNLESS OTHERWISE NOTED ON THE DRAWINGS, FURNISH ALL SHIMMING ACCESSORIES OF MATERIALS COMPATIBLE WITH ROOF CONSTRUCTION.

END OF SECTION

SECTION 07 90 00 - JOINT PROTECTION

A. WORK INCLUDED:

- 1. REMOVAL OF EXISTING CAULKING MATERIALS AS REQUIRED BY DRAWINGS AND/OR FIELD
- CONDITIONS AND PROVIDING SURFACES SUITABLE FOR NEW CAULKING MATERIALS. PREPARATION OF SURFACES.
- SELECTED INTERIOR LOCATIONS NOTED ON DRAWINGS OR SPECIFIED HEREIN WILL REQUIRE SEALANT IN LIEU OF CAULKING COMPOUND. a. BETWEEN DISSIMILAR MATERIALS, INCLUDING CONCRETE OR MASONRY TO METAL (ALUMINUM,

BE WITH SEALANTS, AND INTERIOR CAULKING SHALL BE WITH CAULKING COMPOUNDS, HOWEVER,

3. EXTERIOR AND INTERIOR CAULKING OF THE FOLLOWING JOINT TYPES. EXTERIOR CAULKING SHALL

- STEEL, STAINLESS STEEL), AND STEEL TO ALUMINUM (AT NON-METALLIC SHIMS). b. BETWEEN SIMILAR MATERIALS AS DETAILED, UNLESS SPECIFICALLY EXCLUDED.
- c. BETWEEN THRESHOLDS AND ADJOINING MATERIALS.
- d. EXTERIOR JOINTS WHERE MECHANICAL AND ELECTRICAL WORK PENETRATES CONCRETE,
- e. WHEREVER INDICATED ON THE DRAWINGS BY THE WORDS, SEAL, SEALER, SEALANT, CAULK, OR
- COMPRESSIBLE BACK-UP MATERIAL AS REQUIRED.
- FIRESTOPPING SYSTEMS.
- 6. CLEANING AND REMOVING EXCESS MATERIALS.
- B. NOTE: INTERIOR CAULKING FOR CERTAIN LOCATIONS MAY REQUIRE SEALANT IN LIEU OF CAULKING COMPOUNDS, AS RECOMMENDED BY THE SEALANT MANUFACTURER, SUBJECT TO REVIEW BY THE ARCHITECT. SEALANTS AND CAULKING COMPOUNDS FOR USE IN ANY ONE AREA SHALL BE OF ONE BRAND THROUGHOUT, MIXING OF BRANDS ON A SINGLE WALL OR IN A SINGLE ROOM IS PROHIBITED
- C. <u>COMPARABLE MANUFACTURERS AND PRODUCTS</u>: PROVIDE PRODUCTS OF MANUFACTURERS AS SPECIFIED HEREIN OR COMPARABLE EQUIVALENT PRODUCTS OF OTHER MANUFACTURERS, SUBJECT TO CONFORMANCE WITH THE SPECIFICATIONS AND REVIEW BY THE ARCHITECT.
- D. GRADE AND CONSISTENCY: PROVIDE CORRECT GRADE AND CONSISTENCY IN COLORS TO MATCH ADJACENT FINISH SURFACES. SET SEALANTS AND CAULKING COMPOUNDS SHALL BE WATERPROOF ELASTIC, NON-STAINING AND NON-CORROSIVE. SEALANTS AND CAULKING COMPOUNDS SHALL BE FIRM BUT NOT BRITTLE HARD, REMAIN PLASTIC WITHOUT CRACKING AT LOW TEMPERATURES, AND SHALL BE NON-SAGGING AT TEMPERATURES UP TO 120 DEGREES F. FOR 24 HOURS.
- E. PRIMERS: TYPES RECOMMENDED BY THE MANUFACTURER, TO PROVIDE ADEQUATE ADHESION AND PREVENT STAINING OF ADJACENT SURFACES.

- GENERAL USE: MULTIPLE-COMPONENT POLYURETHANE SEALANT, NON-SAG TYPE, CONFORMING TO ASTM STANDARD C920, TYPE M, GRADE NS, AND FED. SPEC. TT-S-00227E, TYPE II, CLASS A, SUCH AS DYNATROL® II, AS MANUFACTURED BY PECORA CORPORATION, HARLEYSVILLE, PA, (215)723-6051 OR
- SANITARY SEALANTS: NON-FOOD CONTACT SEALANT APPLICATIONS SHALL BE A ONE COMPONENT. ACETOXY CURE. SILICONE WITH FUNGICIDE, CONFORMING TO ASTM STANDARD C920, TYPE S, GRADE NS, CLASS 25, SUCH AS CONSTRUCTION SEALANTS, SPECIALTY PRODUCT LINE, SANITARY SCS 1900

TM SILICONE SEALANT, AS MANUFACTURED BY MOMENTIVE PERFORMANCE MATERIALS, WILTON, CT,

(800)295-2392; www.siliconeforbuilding.com. G. <u>CAULKING COMPOUND</u>: ONE-PART ACRYLIC LATEX SEALANT, NON-SAG TYPE, CONFORMING TO ASTM STANDARD C834, SUCH AS AC-20® + SILICONE AS MANUFACTURED BY PECORA CORPORATION,

HARLEYSVILLE, PA, (215)723-6051 OR (800)523-6688; WWW.PECORA.COM.

H. <u>BACK-UP MATERIAL</u>: ROUND, FOAM ROD, CYLINDRICAL, FLEXIBLE, EXTRUDED, COMPRESSIBLE CLOSED CELL, POLYETHYLENE FOAM BACKER ROD, TYPE C - PER ASTM STANDARD C1330, SUCH AS CLOSED-CELL BACKER ROD NOMACO® HBR®, MANUFACTURED BY CONSTRUCTION FOAM PRODUCTS, DIVISION OF NOMACO ENGINEERED FOAM SOLUTIONS, TARBORO, NC. (877) 291-1157; www.nomacoefs.com, PROVIDE

BACKER RODS IN DIAMETERS 1/2 LARGER THAN WIDTH OF JOINTS IN WHICH RODS ARE INSTALLED.

END OF SECTION

- 1. PRODUCTS AND MATERIALS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN
- 2. PROVIDE HOLLOW METAL DOORS AND FRAMES AS INDICATED AND/OR REQUIRED BY FIELD CONDITIONS.

B. REFERENCE STANDARDS AND SPECIFICATIONS:

AND FRAMES - ANSI A250.8-2003 (SDI-100).

- . EXCEPT AS OTHERWISE SPECIFIED HEREIN. DESIGN. MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE FOLLOWING CURRENT REFERENCE STANDARDS AND SPECIFICATIONS:
- b. NATIONAL FIRE PROTECTION ASSOCIATION, NFPA 80 STANDARD FOR FIRE DOORS AND OTHER

c. ASTM INTERNATIONAL STANDARD SPECIFICATIONS REFERRED TO HEREIN BY ASTM NUMBERS.

- C. MANUFACTURERS: 1. CECO DOOR PRODUCTS, MILAN, TN, (888)232-6366 OR (731)686-8345; www.cecodoor.com.
- 2. CURRIES COMPANY, MASON CITY, IA, (641)423-1334 OR (800)377-3948; www.curries.com.
- 3. STEELCRAFT, CINCINNATI, OH, (513)745-6400 OR (800)243-9780; www.steelcraft.com.

D. QUALITY OF WORK:

- FABRICATION: ALL ITEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STEEL DOOR INSTITUTE (SDI) "RECOMMENDED SPECIFICATIONS FOR STANDARD STEEL DOORS AND FRAMES ANSI A250.8-2003", THE DETAILS AND DIMENSIONS SHOWN ON THE DRAWINGS, APPROVED SHOP DRAWINGS, AND AS SPECIFIED HEREIN.
- . HOLLOW METAL DOORS: FULL FLUSH TYPE WITHOUT VISIBLE FACE JOINTS OR FACE SEAMS. TOP AND BOTTOM EDGES SHALL BE CLOSED FLUSH TO THE DOOR FACE SHEETS. NO INVERTED CHANNELS WILL BE ALLOWED. FABRICATION SHALL BE BY WELDING WHEREVER POSSIBLE.
- 3. THICKNESS OF STEEL: SUFFICIENT TO PROVIDE STRONG AND RIGID CONSTRUCTION WITH SMOOTH AND LEVEL FINISHED SURFACES THAT WILL REMAIN SO, AND SHALL NOT BE LIGHTER THAN THE U.S. STANDARD GAUGES SPECIFIED HEREIN.

E. PRESSED STEEL FRAMES:

- FABRICATION: WELDED UNIT TYPE COMBINING BUCKS AND JAMBS, OF DIMENSIONS AND PROFILES SHOWN ON THE DRAWINGS. FRAMES SHALL FORM TRUE RECTANGULAR OPENINGS. AND SHALL HAVE ALL CORNERS MITERED WELDED AND GROUND SMOOTH FRAMES SHALL BE FABRICATED OF COMMERCIAL GRADE COLD ROLLED STEEL CONFORMING TO ASTM STANDARD A1008. FRAMES FOR EXTERIOR DOOR OPENINGS SHALL BE FABRICATED OF GALVANIZED STEEL SHEETS, ASTM STANDARD A653 WITH ASTM STANDARD A924, A60 OR G60 ZINC COATING, MILL PHOSPHATIZED. MINIMUM GAUGE THICKNESS: 14 GAUGE FOR INTERIOR DOOR OPENINGS OVER 4'-0" IN WIDTH, 16 GAUGE FOR INTERIOR DOOR OPENINGS 4'-0" OR LESS IN WIDTH, AND 14 GAUGE FOR EXTERIOR DOOR OPENINGS.
- 2. EXTERIOR FRAMES: EXTERIOR FRAME ASSEMBLIES SHALL BE INSULATED AND COMPLY WITH ASTM

JAMB ANCHORS:

- a. METAL STUD PARTITION INSTALLATIONS: STANDARD #18 GAUGE (MINIMUM) STEEL ANCHORS, CURELY WELDED INSIDE EACH JAMB. FRAMES UP TO 7'-6" HIGH, PROVIDE 4 ANCHORS. FRAMES 7'-6" TO 8'-0" HIGH, PROVIDE 5 ANCHORS.
- I. <u>RUBBER BUMPERS</u>: PROVIDE A MINIMUM OF THREE (3) SOLID RUBBER BUMPERS OF APPROVED TYPE ON FACE OF STOP AT STRIKE JAMBS OF SINGLE DOOR FRAMES, AND NOT LESS THAN TWO (2) SOLID RUBBER BUMPERS ON HEADS OF DOUBLE DOOR FRAMES.

F. HOLLOW METAL DOORS:

- DOOR TYPE: FLUSH SLAB TYPE AND OF SIZES INDICATED ON THE DRAWINGS. DOORS SHALL BE ABRICATED OF COMMERCIAL QUALITY, LEVEL, COLD ROLLED STEEL CONFORMING TO ASTM STANDARD A1008, FREE OF SCALE, PITTING OR OTHER SURFACE DEFECTS. FACE SHEETS FOR EXTERIOR DOORS SHALL BE FABRICATED OF GALVANIZED STEEL SHEETS PER ASTM STANDARD A653 WITH ASTM STANDARD A924, A60 OR G60 ZINC COATING, MILL PHOSPHATIZED. EXTERIOR DOORS SHALL CONTAIN NON-COMBUSTIBLE FOAMED-IN-PLACE POLYURETHANE CORE WITH AN R-FACTOR OF NOT LESS THAN 11.01, AND SHALL COMPLY WITH ASTM STANDARD C1363.
- 2. <u>FACE SHEET GAUGE THICKNESSES</u>: MINIMUM 16 GAUGE FOR EXTERIOR DOORS.
- 3. <u>DOOR FACES AND EDGES</u>: SINGLE SHEETS, TURNED OVER REINFORCING CHANNELS AT PERIMETER AND AT OPENINGS, AND INTERNALLY REINFORCED. ALL FOUR EDGES OF THE DOORS SHALL BE CLOSED AND FLUSH. SURFACES SHALL BE FLAT, TRUE AND RIGID, WITHOUT VISIBLE SEAMS OR

- 1. CLEANING AND SHOP PAINTING: CLEAN STEEL SURFACES OF MILL SCALE, RUST, OIL, GREASE, DIRT, AND OTHER FOREIGN MATERIALS, AND PROVIDE BONDERIZING PROCESS BY USING A BONDERITE® SOLUTION TO PHOSPHATIZE ALL METAL SURFACES PRIOR TO FINISHING. PRIME INACCESSIBLE SURFACES SUCH AS INSIDE SURFACES OF FRAMES AND DOORS WITH RUST-INHIBITIVE PAINT BEFORE
- 2. PRIME PAINTING: APPLY SHOP COAT OF RUST-INHIBITIVE PRIMER TO ALL EXPOSED SURFACES OF METAL WORK, MAKE ALL SURFACES FLUSH AND SMOOTH, AND FILL ALL IRREGULARITIES WITH ONE OR MORE COATS OF MINERAL FILLER. APPLY ANOTHER COAT OF SUITABLE PRIMER, SAND SMOOTH BETWEEN COATS AND SEPARATELY BAKE-ON EACH COAT

1. GENERAL: CUT-OUT, DRILL, TAP, COUNTERSINK, REINFORCE AND PREPARE DOORS AND DOOR FRAMES AS REQUIRED TO RECEIVE ALL FINISH HARDWARE. COUNTERSINK ALL BUTTS, STRIKES AND LOCKSET FRONTS INTO THE SURFACE, TO BE FLUSH. CLOSE COUNTERSINK AREAS WITH REINFORCING FOR ITEMS SUCH AS BUTTS AND STRIKES. UNLESS OTHERWISE SPECIFIED. REINFORCING SHALL BE 3/16" STEEL PLATE FOR BUTTS. #16 GAUGE FOR LOCK AND LATCH SETS. AND #12 GAUGE (MINIMUM) FOR CLOSERS. WELD ALL REINFORCING PLATES TO THE INTERIOR OF THE

- 1. <u>EXTERIOR PRESSED STEEL FRAMES</u>: FURNISH PRESSED STEEL FRAMES TO MASONRY CONTRACTOR AS REQUIRED BY DRAWINGS AND/OR FIELD CONDITIONS.
- 2. DOORS: EXTERIOR DOORS SHALL BE HUNG TO FIT IN THE FRAMES WITH MINIMUM TOLERANCE, TO SWING EASILY AND QUIETLY WITHOUT TOUCHING THE FLOOR, AND IN FULL CONTACT WITH FRAME

END OF SECTION

SECTION 08 70 00 - FINISH HARDWARE

- A. $\underline{\text{WORK INCLUDED}}$: PRODUCTS AND MATERIALS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
- 1. <u>REQUIREMENTS OF REGULATORY AGENCIES</u>: FURNISH ALL FINISH HARDWARE IN ACCORDANCE WITH LAWS, CODES, ORDINANCES AND REGULATIONS OF THE PUBLIC AUTHORITIES HAVING JURISDICTION. AFTER AWARD OF THE FINISH HARDWARE SUBCONTRACT, NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL HARDWARE, OR CHANGES IN THE SPECIFIED HARDWARE, REQUIRED TO COMPLY WITH THE ABOVE REQUIREMENTS. ALL DOOR CLOSERS SHALL MEET ADA REQUIREMENTS FOR
- 2. FIRE-RATED OPENINGS: PROVIDE DOOR HARDWARE FOR FIRE-RATED OPENINGS THAT COMPLIES WITH NFPA 80 STANDARD AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. PROVIDE DOOR HARDWARE THAT IS LISTED AND ARE IDENTICAL TO PRODUCTS TESTED BY UL. WARNOCK HERSEY, FM, OR OTHER TESTING AND INSPECTING ORGANIZATION ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, FOR USE ON TYPES AND SIZES OF DOORS INDICATED.

3. SUBSTITUTIONS: FURNISH ALL HARDWARE IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS,

AND SCHEDULES, WITHOUT SUBSTITUTIONS. BEFORE ORDERING HARDWARE, CHECK ALL DRAWINGS

AND CODES TO INSURE THE PROPOSED HARDWARE WILL SUIT THE INTENDED SERVICE. C. <u>PRE-INSTALLATION CONFERENCE</u>: CONTRACTOR SHALL REQUIRE A HARDWARE INSTALLATION MEETING FOR THE INSTALLATION OF ALL HARDWARE, INCLUDING LOCKS, CLOSERS, EXIT DEVICES, HINGES, ETC., TO BE CONDUCTED BY THE MANUFACTURING REPRESENTATIVES TO BE HELD AT THE JOBSITE AND ATTENDED BY ALL INSTALLERS OF FINISH HARDWARE. MEETING WILL ADDRESS PROPER COORDINATION AND INSTALLATION OF FINISH HARDWARE AS DETAILED IN THE HARDWARE SCHEDULE FOR THE PROJECT WITH THE USE OF INSTALLATION MANUALS, TEMPLATES, HARDWARE SCHEDULES AND PHYSICAL

- 1. <u>KEYS AND KEYING</u>: KEY AND MASTER KEY ALL LOCKS IN ACCORDANCE WITH THE EXISTING MASTER-KEY SYSTEM ACCEPTED MASTER-KEY SCHEDULE. FURNISH TWO (2) CHANGE KEYS FOR
- EACH LOCK AND THREE (3) MASTER KEYS. DELIVER MASTER KEYS DIRECTLY TO THE OWNER. E. HARDWARE FINISH: HARDWARE SHALL MATCH EXISTING SURROUNDING PERMANENT FINISHES, UNLESS
- F. FINISH HARDWARE SCHEDULE:

PENTHOUSE DOOR SHALL INCLUDE:

- 3 HINGES, McKINNEY, T4A 3386, 4-1/2 x 4-1/2, NRP, USP LOCKSET, SARGENT, 8243, LNJ, US26D

1 DOOR SWEEP, NAT. GUARD, 100V-36, ALUM.

CLOSER, SARGENT, 1430-RUO, EN THRESHOLD, NATIONAL GUARD, 513 x REQ'D. SET WEATHERSTRIPPING, NAT. GUARD, #5050 SELF-ADHESIVE GASKETING

SPECIFICALLY INDICATED OTHERWISE. VERIFY EXISTING FINISHES IN FIELD.

1 RAIN DRIP, NAT. GUARD, 16A, ANODIZED ALUM. DRIP STRIP #16A

a. STEEL DOOR INSTITUTE (SDI), RECOMMENDED SPECIFICATIONS FOR STANDARD STEEL DOORS

- 1. ALL FINISH HARDWARE FOR HOLLOW METAL DOORS WILL BE PROVIDED BY THE FINISH HARDWARE CONTRACTOR INSTALL AND ADJUST ALL HARDWARE PROPERLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ATTACH AND SECURE THE HARDWARE SO THAT NO PARTS ARE DAMAGED OR INJURED. INSTALL WEATHERSTRIPPING, DOOR SWEEPS, AND OVERHEAD RAIN DRIPS
- 2. HARDWARE SHALL BE COMPLETELY FITTED BEFORE THE FINAL COAT OF PAINT OR OTHER FINISH IS APPLIED, AND THEN REMOVED FOR THE FINAL COAT. MORTISE AND CUTTING SHALL BE DONE NEATLY AND EVIDENCE OF CUTTING SHALL BE CONCEALED IN THE FINISHED WORK. HARDWARE SHALL BE PERMANENTLY INSTALLED AFTER FINISHING OPERATIONS ARE COMPLETE AND DRY. PROTECT KNOBS/LEVERS FROM SCRATCHING OR OTHER DAMAGE, ADJUST HARDWARE, AND TURN OVER TO THE OWNER, IN PERFECT OPERATING CONDITION. TAG KEYS AND TURN OVER TO THE OWNER AT THE

TIME OF ACCEPTANCE OF THE PROJECT.

- H. FINAL ADJUSTMENT: 1. FURNISH THE SERVICES OF A COMPETENT HARDWARE SPECIALIST TO INSPECT THE INSTALLATION OF ALL EXISTING AND NEW HARDWARE FURNISHED, AND REPORT ANY INSTALLATION ADJUSTMENTS
- NECESSARY TO HAVE ALL HARDWARE IN PERFECT WORKING ORDER, BEFORE FINAL PAYMENT.
- 2. REPLACE UNITS WHICH CANNOT BE ADJUSTED FOR PROPER OPERATION.
- 3. FINAL ADJUSTMENT MUST OCCUR WITHIN ONE (1) WEEK OF OCCUPANCY BY THE OWNER. 4. UPON COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL AS A CONDITION OF ITS ACCEPTANCE, DELIVER TO THE ARCHITECT, A REPORT STATING THAT THE CONTRACTOR'S INSPECTION WAS MADE, THAT ALL RECOMMENDED ADJUSTMENTS HAVE BEEN COMPLETED, AND THAT ALL FINISH HARDWARE FURNISHED UNDER THIS SECTION HAS BEEN INSTALLED AND IS IN

OPTIMUM WORKING CONDITION. END OF SECTION

A. WORK INCLUDED:

GRADE PRODUCT, WILL NOT BE ACCEPTABLE.

1. PREPARATION OF SURFACES FOR PAINTING AND FINISHING.

2. APPLICATION OF PAINT ON EXPOSED SURFACES AS INDICATED ON THE DRAWINGS.

3. PAINTING OF EXPOSED NEW EXTERIOR METAL AS INDICATED ON THE DRAWINGS, INCLUDING SUCH ITEMS AS GAS LINES OR CONDUITS.

B. WORK NOT INCLUDED: UNLESS OTHERWISE INDICATED, DO NOT INCLUDE PAINTING WHEN FACTORY-FINISHING, TENANT/OWNER FINISHING, OR INSTALLER-FINISHING IS SPECIFIED.

C. JOB CONDITIONS:

- PROTECTION: PROTECT FINISH WORK FROM DAMAGE. CLEAN SPLATTER FROM FINISHED SURFACES MMEDIATELY. PAY THE COSTS FOR REMEDIAL WORK REQUIRED TO CORRECT ANY DAMAGE. PROVIDE PROTECTIVE COVERINGS AS REQUIRED TO PROTECT FINISHED SURFACES. AND POST WET PAINT SIGNS TO PROTECT NEWLY PAINTED SURFACES. AT COMPLETION OF PROJECT, TOUCH-UP ALL AREAS OF MARRED, MISSING OR DAMAGED FINISH. EVERY PRECAUTION MUST BE TAKEN TO AVOID SPONTANEOUS COMBUSTION OF PAINT PRODUCTS OR WASTE MATERIAL.
- 2. <u>ENVIRONMENTAL CONDITIONS</u>: APPLY MATERIALS IN TEMPERATURE RANGES SUITABLE FOR THE FORMATION OF GOOD DURABLE FILMS. DO NOT APPLY PAINT WHEN THE RELATIVE HUMIDITY EXCEEDS 85%. APPLY PAINTS ONLY TO SURFACES COMPLETELY FREE OF SURFACE MOISTURE.
- SURROUNDING ATMOSPHERE IS BELOW 50°F FOR WATER THINNED COATINGS AND BELOW 45°F FOR OTHER COATINGS. WHEN THE PAINT MANUFACTURERS SPECIFICATIONS OR INSTRUCTIONS DIFFER FROM THESE SPECIFICATIONS, APPLY BY THE MORE STRINGENT REQUIREMENTS. D. PAINT COLORS: EXTERIOR COLORS SHALL MATCH EXISTING PAINTED SURFACES AS APPROVED BY

a. DO NOT APPLY PAINT WHEN THE TEMPERATURE OF THE SURFACES TO BE PAINTED, AND OF THE

OWNER AND/OR ARCHITECT OR AS INDICATED ON THE DRAWING. E. MATERIALS:

MANUFACTURERS: BENJAMIN MOORE® & CO. (BM), ICI PAINTS (DEVOE®, DULUX®, GLIDDEN, ICI), PITTSBURGH® PAINTS (PPG), PRATT & LAMBERT PAINTS, DIV. SHERWIN-WILLIAMS® COMPANY (P&L), OR SHERWIN-WILLIAMS® COMPANY (S-W).

2. PAINT GRADE: PROVIDE LEAD AND ZINC CHROMATE FREE, COMMERCIAL QUALITY GRADE COATINGS. MATERIALS NOT DISPLAYING IDENTIFICATION OF MANUFACTURER AS A STANDARD, COMMERCIAL

- 3. <u>SUBSTITUTIONS OF MANUFACTURERS AND PRODUCTS</u>: IF CONTRACTOR DESIRES TO USE MATERIALS OF A MANUFACTURER OTHER THAN SPECIFIED HEREIN, THE REQUEST SHALL BE MADE IN WRITING TO THE ARCHITECT, GIVING THE NAME OF THE MANUFACTURER AND THE SPECIFIC NAME OF EACH PRODUCT OFFERED AS A SUBSTITUTE, AND SHALL STATE THE AMOUNT, IF ANY, TO BE ADDED TO OR
- 4. <u>COLOR IDENTIFICATION AND SELECTION</u>: PREPARE TWO (2) 8" X 10" SAMPLES OF EACH COLOR REQUIRED UNTIL COLORS AND TEXTURES ARE SATISFACTORY TO THE ARCHITECT AND/OR OWNER.
- 5. CLAIMS: NO CLAIM AS TO THE UNSUITABILITY OF MATERIALS SPECIFIED, OR TO PRODUCE FIRST CLASS WORK WITH THE MATERIALS WILL BE CONSIDERED, UNLESS CLAIM IS MADE IN WRITING AT THE TIME OF SUBMITTING PROPOSAL

F. EXISTING METAL SURFACE PRETREATMENT:

- 1. THOROUGHLY CLEAN ALL PREVIOUSLY PAINTED STEEL SURFACES NOTED ON THE DRAWINGS TO BE PAINTED, AND/OR AS REQUIRED BY FIELD CONDITIONS.
- 2. AFTER CLEANING, PROVIDE COLD PHOSPHATIZING OF THE EXISTING STEEL SURFACES BY PROVIDING A FIELD APPLIED WASH PRIMER OR OTHER COMPARABLE METHOD RECOMMENDED BY THE PAINT MANUFACTURER TO PROVIDE AN EFFECTIVE TREATMENT FOR PROMOTING PAINT ADHESION TO THE STEEL SURFACES.
- 3. COMPARABLE TREATMENTS SHALL BE SUBJECT TO REVIEW BY THE ARCHITECT.

- DEFECTIVE SURFACES: IF DEFECTIVE SURFACES ARE PAINTED, THE REFINISHING OF SUC SURFACES, AFTER REMEDIAL WORK REQUIRED BY THE DEFECTIVE SURFACES, SHALL BE DONE AT THE EXPENSE OF THE PAINTING CONTRACTOR. START OF WORK WILL BE CONSTRUED AS THE PAINTING CONTRACTOR'S ACCEPTANCE OF THE SURFACE.
- 2. DETRIMENTAL CONDITIONS: DO NOT PAINT OVER DIRT, RUST, SCALE, GREASE, MOISTURE, SCUFFEI SURFACES, OR CONDITIONS DETRIMENTAL TO FORMATION OF A DURABLE PAINT FILM FINISH.

ITEMS UPON COMPLETION.

1. EXTERIOR -FERROUS METALS:

- . <u>GENERAL</u> <u>PROCEDURES</u>: BEFORE PAINTING, USE ONLY SKILLED MECHANICS TO REMOVE ACCESSORIES, PLATES, LIGHTING FIXTURES, AND SIMILAR ITEMS AS REQUIRED, AND PROVIDE AMPLE PROTECTION. UPON COMPLETION OF EACH AREA, REPLACE ABOVE ITEMS. WHEN NECESSARY DISCONNECT ITEMS SUCH AS FIXTURES, TO PERMIT PAINTING. REINSTALL AND RECONNECT
- 2. PROTECTION: PROPERLY PROTECT FLOORS, AND OTHER PREFINISHED MATERIALS FROM DAMAGE DUE TO PAINT SPOTS. REPAIR DAMAGE TO ITEMS THROUGH NEGLECT OR CARELESSNESS FROM PAINTERS OR FROM FAILURE TO PROPERLY PROTECT, TO THE SATISFACTION OF THE OWNER AND/OR

3. PAINT REMOVAL WORK: REMOVE ALL PAINT FROM WORK NOT DESIGNATED TO BE PAINTED.

4. TOUCH-UP WORK: DO ALL NECESSARY TOUCHING-UP AFTER OTHER MECHANICS HAVE COMPLETED THEIR WORK, AND LEAVE THE ENTIRE WORK IN A NEAT AND CLEAN CONDITION TO THE SATISFACTION OF THE OWNER AND ARCHITECT.

. <u>TYPE OF FINISH AND NUMBER OF COATS:</u> ACCORDING TO THE SPECIFIED PAINT MANUFACTURERS. THE TYPE OF FINISH AND NUMBER OF COATS SPECIFIED ARE ADEQUATE TO PROVIDE COLOR AND COVERAGE, WHEN PROPERLY APPLIED. IF, AFTER THE SPECIFIED NUMBER OF COATS ARE APPLIED ADEQUATE COLOR, AND COVERAGE HAVE NOT BEEN ACHIEVED, IT SHALL BE THE RESPONSIBILITY OF THE PAINTING CONTRACTOR TO APPLY ADDITIONAL COATS, AT NO EXTRA COST TO THE OWNER, UNTIL

. <u>Painting</u> <u>Schedule</u>: Provide the following paint systems specified herein, or other OMPARABLE SPECIFIED MANUFACTURERS AND THEIR EQUIVALENT PRODUCTS, SUBJECT TO REVIEW BY

a. <u>SEMI-GLOSS FINISH</u>: EXPOSED NEW CONSTRUCTION SURFACES SHALL RECEIVE THE FOLLOWING

1.a. ONE (1) PRIME COAT: (S-W) DTM ACRYLIC PRIMER/FINISH, B66W1

ARCHITECT STATES ACCEPTABLE PERFORMANCE AND FINISH IS OBTAINED.

1.b. <u>TWO (2) FINISH COATS</u>: (S-W) METALATEX® SEMI-GLOSS COATING, B42 SERIES. 2. EXTERIOR - GALVANIZED FERROUS METALS:

a. <u>SEMI-GLOSS FINISH</u>: EXPOSED NEW CONSTRUCTION SURFACES SHALL RECEIVE THE FOLLOWING SYSTEM: 1.a. ONE (1) PRIME COAT: (S-W) DTM ACRYLIC PRIMER/FINISH, B66W1

1.b. TWO (2) FINISH COATS: (S-W) A-100® EXTERIOR LATEX SATIN, A82 SERIES. 2. EXTERIOR-HOLLOW METAL DOORS AND PRESSED STEEL DOOR FRAMES:

a. <u>SEMI-GLOSS FINISH</u>: EXPOSED SURFACES AS NOTED ON THE DRAWINGS (INCLUDING ALL EDGES

1.b. TWO (2) FINISH COATS: (S-W) A-100® EXTERIOR LATEX SATIN, A82 SERIES, FOR EXTERIOR

1.a. ONE (1) PRIME COAT: (S-W) DTM ACRYLIC PRIMER/FINISH, B66W1, FOR EXTERIOR AND

AND EXTERIOR FACE OF DOORS) SHALL RECEIVE THE FOLLOWING SYSTEM:

). <u>Rain Drips:</u> Aluminum rain drips at Pressed Steel (Hollow Metal) door frames shall

RECEIVE THE FOLLOWING SYSTEM:

1.a. ONE (1) PRIME COAT: (S-W) DTM BONDING PRIMER, B66A50.

1.b. TWO (2) FINISH COATS: (S-W) A-100® EXTERIOR LATEX SATIN, A82 SERIES.

END OF SECTION

SECTION 10 44 00 - FIRE PROTECTION SPECIALTIES A. WORK INCLUDED: PRODUCTS AND MATERIALS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.

B. FIRE EXTINGUISHERS: 1. PROVIDE SIZE, TYPE, AND QUANTITIES AS REQUIRED BY FIRE MARSHAL. FOR "BIDDING PURPOSES" EXTINGUISHERS AS SPECIFIED HEREIN SHALL BE PORTABLE, HAND-CARRIED TYPE, PRESSURIZEI DRY CHEMICAL FIRE EXTINGUISHERS. 10 POUND NOMINAL CAPACITY. WITH SELF-CLOSING HAND VALVE, DISCHARGE HOSE, PRESSURE GAUGE, AND RED ENAMEL FINISH. UL RATING 4A-80B:C FOR

CLASS A, B, AND C FIRES. UNITS SHALL CONTAIN SPECIALLY FLUIDIZED AND SILICONIZED MONO

1. MISCELLANEOUS ACCESSORIES SHALL BE FURNISHED TO THE CARPENTRY CONTRACTOR FOR

2. PROTECTIVE COVERS INSTALLED BY MANUFACTURER TO PROTECT FINISHES SHALL NOT BE

AMMONILIM PHOSPHATE POWDER MANUFACTURER: LARSEN'S® MANUFACTURING COMPANY MINNEAPOLIS, MN, (763)571-1181 OR (800)527-7367, MODEL NUMBER MP10.

2. PROVIDE MANUFACTURER'S STANDARD MOUNTING BRACKETS AND ANCHORS. C. <u>INSTALLATION OF ACCESSORIES</u>:

INSTALLATION.

END OF SECTION

REMOVED UNTIL FINAL CLEANING.

SHEET TITLE

Job Number

Sheet Number

 $|\mathcal{Z}|$ \bigcirc

Date Issued 3ids & Permit 12/23/2020

SPECIFICATIONS

Jason Kocembo Century Architectural Hardware 248-348-6500 29220 Lyon Oaks Dr. Wixom, MI 48393 2/24/2021

Tom Carlson
Elevator Penthouse
E & L Construction
66 Adelaide Ave
Detroit, MI

Dear Tom

We have enclosed (1) electronic copy of our hollow metal, wood door and door hardware schedule for your approval. We have also included (1) copy of our hardware cut sheets/ shop drawings prepared from drawings dated 12/23/2020. Please return (1) approved shop drawing. Please provide accurate material need dates so we can plan accordingly.

<u>Leadtimes after approval and answers to all questions.</u>

Century lead times

GC NEED DATES

Hollow Metal Frames 4-5 Weeks Hollow Metal Doors 5-6 Weeks Hardware 4-5 Weeks

Sincerely,

Jason Kocembo Century Architectural Hardware 248-348-6500



Commercial Doors, Frames & Hardware, Toilet Partitions & Accessories

Attention: Architect, Designer, Specification Writer, Contractor and Installer

The purpose of this door, frame and hardware submittal is to detail the manufacturers and products that we plan to include in the contract or purchase order. The detail that is scheduled for each opening is Century Architectural Hardware's interpretation of the designers intended use for that opening. We base our interpretations on the architectural specifications and plans.

Century Architectural Hardware strives for perfection when detailing, errors and or omission can and will occur. Century Architectural Hardware will take responsibility for clear errors and or omissions from the architectural plans and specification. If errors are created by others or errors caused by incomplete or missing information in the architectural plans and specification will be the responsibility of the architect or specifier. If additional cost occurs it is to be paid by the architect, designer or contractor.

If items are added, deleted or changed during or after the submittal process may result in a change in value from the purchase order or contract amount. We must receive written permission to process these changes.

Century Architectural Hardware will deliver material F.O.B tailgate only. Additional delivery charges may occur if return trips are required because of lack of labor to unload the material or if it is not done in a timely manner.

No back-charges for work done or material furnished by others will be accepted with out prior written approval from Century Architectural Hardware.

Approval to proceed with ordering material has been given when returned stamped by the architect. Frames and doors require preparation for hardware. doors and frames are unable to be ordered until hardware is reviewed and approved.

DOOR FRAME & HARDWARE

February 24, 2021 PROJECT

Name: ELEVATOR PENTHOUSE

Address: 66 ADELAIDE

DETROIT MI 48201

Phone:

Superintendent: TOM CARLSON Engineer:

810-845-4854 TOM.CARLSON@EANDLGROUP.COM

CONTRACTOR

Name: E & L CONSTRUCTION GROUP

Address: P.O. BOX 418

FLINT MI 48501

Phone: 810-744-4300

Contact: TODD FINLEY

Project Manager:

---- ARCHITECT

Name: WAH YEE ASSOCIATES & PLANNERS

Address: 42400 GRAND RIVER AVE STE #200

NOVI MI 48375

Phone: 248-489-9160

Project Number: 5122

Date Schedule Submitted:

February 23, 2021

Date H/W Schedule Approved:

Date D/F Schedule Approved: Plans Dated December 23, 2020

Addendums Noted: 0



CENTURY ARCHITECTURAL HARDWARE

ELEVATOR PENTHOUSE

Control No.1145 1145

29220 LYON OAKS DR.

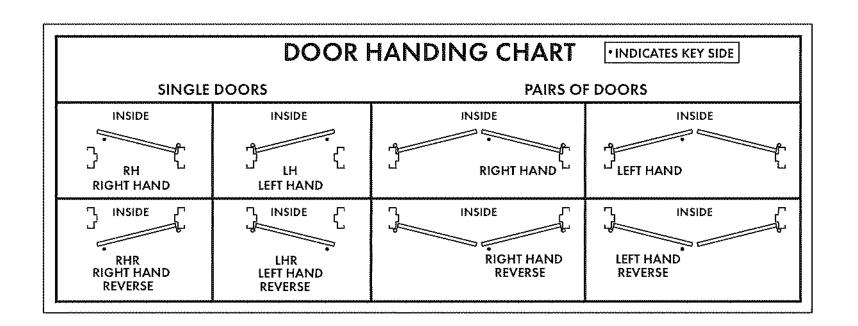
Tel: 248-348-6500

WIXOM MI 48393

Fax:

Submitted By: JASON KOCEMBO

February 24, 2021 Page 1 of 43





CENTURY ARCHITECTURAL HARDWARE

ELEVATOR PENTHOUSE

29220 LYON OAKS DR.

Tel: 248-348-6500

Control No.1145

1145

WIXOM MI 48393

Submitted By: JASON KOCEMBO

February 24, 2021

Manufacturers

Abbreviation	Name
NAT	NATIONAL GUARD
REP	REPUBLIC
SAR	SARGENT
STA	STANLEY



CENTURY ARCHITECTURAL HARDWARE

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29220 LYON OAKS DR.

WIXOM MI 48393

Control No.1145 1145

Tel: 248-348-6500

Submitted By: JASON KOCEMBO

Hardware Finishes

Finish	Description
26D	CHROMIUM PLATED, SATIN
Α	MILL FINISH ALUMINUM
В	BROWN
EN	ALUMINUM ENAMEL
MILL	MILL FINISH ALUMINUM
US26D	SATIN CHROMIUM PLATED



CENTURY ARCHITECTURAL HARDWARE

ELEVATOR PENTHOUSE

29220 LYON OAKS DR.

Control No.1145 WIXOM MI 48393 1145

Tel: 248-348-6500 Submitted By: JASON KOCEMBO

February 24, 2021

DOOR INDEX

Mark Heading # Mark Heading # Mark Heading #

Architectural Hardware

1

CENTURY ARCHITECTURAL HARDWARE

ELEVATOR PENTHOUSE

29220 LYON OAKS DR.

Tel: 248-348-6500

WIXOM MI 48393

Submitted By: JASON KOCEMBO

Control No.1145

1145

Door and Frame Schedule

Mark # /					Opng	Opnq			Frame Information						Do	or Infor	mation			UC/	Hw			
Arch Mk	Location	Qty	Opng	Hand	Width	Heiaht	Rating	Constr	Series	Ga	Anchor	Depth	Туре	Mat'l	Fin	Size	Series	Style	Core	Mat'l	Fin	Туре	Edge Thk	Hdg
1/	PENTHOUSE	1	SGL	LHR	3 - 0	7 - 0		STDWE	ME	16	WM	5 3/4	HMF	A60	PRI	3 - 0	DP	F	PS		PRI	HMD	3 / 4 1 3/4	1
1	FROM							LD					F1							18		F		
'	ELEVATOR							Fr Note:				7-0	Dr Note:											



CENTURY ARCHITECTURAL HARDWARE

ELEVATOR PENTHOUSE

29220 LYON OAKS DR.

Control No.1145

WIXOM MI 48393

1145

Tel: 248-348-6500

Fax:

Submitted By: JASON KOCEMBO

Abbreviations Used

Abb	Description						
A60	GALVANNEALED, HOT DIPPED, HEAT TREATED, 6OZ ZINC COATED STEEL						
DP	HONEYCOMB CORE						
F	FLUSH						
HMD	HOLLOW METAL DOOR						
HMF	HOLLOW METAL FRAME						
ME	MASONRY FRAME (MITERED CORNER), 3 SIDED						
PRI	PRIME						
PS	POLYSTYRENE CORE						
REP	REPUBLIC						
SGL	SINGLE DOOR						
STDWELD	WELDED, STANDARD						
WM	WIRE MASONRY ANCHOR						



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WIXOM MI 48393

Fax:

Submitted By: JASON KOCEMBO

February 24, 2021

Headings

Headings: 1

1 Marks:

Each Opening To Have:

3	HINGE, 4 1/2, HVY WT	FBB168 4-1/2 X 4-1/2 X NRP	26D	STA
1	MORTISE LOCK	8243 X LNJ X KD	US26D	SAR
1	CLOSER, PARALLEL ARM	1431-RUO	EN	SAR
1	SEAL	5050B X 17'	В	NAT
1	DOOR SWEEP	100V X 36	MILL	NAT
1	THRESHOLD	513 X 36	MILL	NAT
1	DRIP CAP	16A X 40	Α	NAT

Total # Marks: 1



CENTURY ARCHITECTURAL HARDWARE

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29220 LYON OAKS DR.

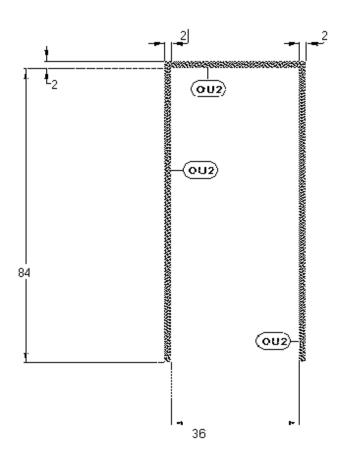
WIXOM MI 48393

1145

Control No.1145

Tel: 248-348-6500 Fax: Submitted By: JASON KOCEMBO

February 24, 2021 Page 1 of 1



Arch Fr Type:
Fr Template: F1
Qty: 1
ALL DIMENSIONS EXPRESSED IN INCHES
1(1-LHR)

Centroly

Anchitectural

Hardware

CENTURY ARCHITECTURAL HARDWARE

ELEVATOR PENTHOUSE

29220 LYON OAKS DR.

Tel: 248-348-6500

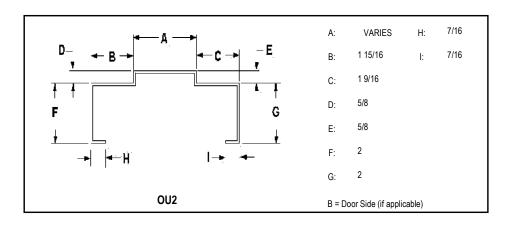
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Fax:

1145
Submitted By: JASON KOCEMBO

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CENTURY ARCHITECTURAL HARDWARE

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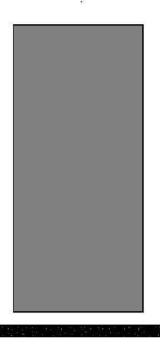
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U/C: 3/4

F Arch Dr Type

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CENTURY ARCHITECTURAL HARDWARE

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1145

29220 LYON OAKS DR.

WIXOM MI 48393

Submitted By: JASON KOCEMBO

Tel: 248-348-6500

Fax:

February 24, 2021 Page 11 of 43

Schedule Of Doors and Frames

N/A/N/A

February 24, 2021

PROJECT

Name: ELEVATOR PENTHOUSE

Address: 66 ADELAIDE

DETROIT MI 48201

Phone:

Superintendent: TOM CARLSON Engineer:

810-845-4854 TOM.CARLSON@EANDLGROUP.COM

CONTRACTOR

Name: E & L CONSTRUCTION GROUP

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FLINT MI 48501

Phone: 810-744-4300

Contact: TODD FINLEY

Project Manager:

ARCHITECT

Name:

WAH YEE ASSOCIATES & PLANNERS

Address: 42400 GRAND RIVER AVE STE #200

NOVI MI 48375

Phone: 248-489-9160

Project Number: 5122



CENTURY ARCHITECTURAL HARDWARE

ELEVATOR PENTHOUSE

29220 LYON OAKS DR.

WIXOM MI 48393

Submitted By: JASON KOCEMBO

Tel: 248-348-6500

Fax:

Control No.1145

1145



DOORS - DP SERIES

TECHNICAL DATA SHEET No. 101

DP Series Doors as manufactured or furnished by Republic Doors and Frames, McKenzie, Tennessee 38201.

Thickness - 1-3/4"

Actual Door Size - Door undersized from nominal by 7/32" in width and 7/8" in height. Standard undercut is 3/4".

Hinge Rail & Reinforcement - Hinge edge is non-beveled with 1/4" standard hinge backset. 7 gage Universal standard / heavy weight reinforcements.

Lock Rail - Lock edge is beveled. 14 gage reinforcement for mortise lock, 16 gage for cylindrical locks are of an integral type in accordance with ANSI A115 Standards. (Beveled lock edge 1/8" in 2" standard.)

Edge Seams - Visible seam

Top Channel - Flush, 16 gage channel, projection welded at a maximum 2-1/2" on center. (Optional - Inverted)

Bottom Channel - Inverted 16 gage channel, projection welded at a maximum 2-1/2" on center.

Cores Available - Honeycomb or Polystyrene.

Face Skins - 20 gage or 18 gage, cold rolled or galvannealed steel.

Closer Reinforcement (Option) - 14 gage standard / 12 gage optional. (18" x 6")

Size Availability - Minimum 2'6" x 6'8", Maximum 4'0" x 8'0"

SDI 100 Level/Model - Level 1 Model 1 (Standard Duty, minimum 20 gage, hollow steel composite) Level 2 Model 1 or 2 (Heavy Duty, minimum 18 gage, hollow steel composite)

Handing Design - Handed







Republic

DP SERIES - SPECIFICATIONS

TECHNICAL DATA SHEET No. 101a

- I. DP Series Doors as manufactured by Republic Doors and Frames, McKenzie, TN 38201 have been tested or adhere to the criteria set forth by the following published standards:
 - A. ANSI A250.8-1998 (SDI 100) Recommended Specifications -Standard Steel Doors & Frames; Steel Door Institute.
 - B. ANSI A250.4 Test Procedure & Acceptance Criteria for Physical Endurance for Steel Doors & Hardware Reinforcings.
 - C. SDI 111 Recommended Standard Details Steel Doors & Frames. D. SDI 112 Zinc Coated Standard Steel Doors and Frames.
 - E. SDI 113 Test Procedure and Acceptance Criteria for Acoustical Performance for Steel Door and Frame Assemblies.
 - F. ASTM A366/A366M Standard Specification for Steel, Sheet, Carbon, and High Strength, Low Alloy, Hot Rolled and Cold Rolled, General Requirements.
 - G. ASTM A568/A568M Standard Specification for Steel, Sheet, Carbon and High Strength, Low-Alloy, Hot Rolled and Cold Rolled, General Requirements For.
 - H. ASTM A569/A569M Standard Steel Specification for Steel, Carbon (0.15 Maximum Percent), Hot Rolled Sheet and Strip Commercial Quality.
 - I. ASTM A591/A591M Standard Steel Specification for Steel Sheet, Electrolytic Zinc-Coated, for Light Coating Mass Applications.
 - J. ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvanized) by Hot Dipped Process.
 - K. ANSI A151.1 Performance Test for Steel Doors, Hinge, Lock and Exit Device Reinforcing.

II. Door Construction

- A. Doors are either 20 or 18 gage steel. Door design is a pan and lid construction. The lid has a flattened hemmed edge that is projection welded to the pan.
- B. Top Channel will be 16 gage, flush with the top of the door and will be projection welded on maximum 2-1/2" centers to each face sheet.
- C. Bottom Channel will be 16 gage, inverted and will be projection welded on maximum 2-1/2" centers to each face sheet.
- D. Hinge Side Square edge design with cutouts in pan. 7 gage hinge reinforcements welded in at each cutout
- E. Lock Side Beveled edge design. Mortise lock reinforcements are 14 gage. Cylindrical lock reinforcements are 16 gage.
- F. Cores: (Per ASTM C1363)
 - 1. Standard 3/4" cell honeycomb with a "U" factor of .59.
 - 2. Optional Cores- 1 lb. density expanded Polystyrene per with a "U" factor of .41.

III. Door Finish

Doors will be cleaned and phosphatized with one coat of force-cured grey primer applied in accordance with ANSI A224.1-1990 or ASTM specification B117 for finishes capable of passing 120 hour salt spray test and a 240 hour humidity test in compliance with ASTM D1735.

SDI Classifications:

Level 1 Model 1 (Standard Duty, minimum 20 gage, hollow steel composite) Level 2 Model 1 or 2 (Heavy Duty, minimum 18 gage, hollow steel composite)



Revised 7/15

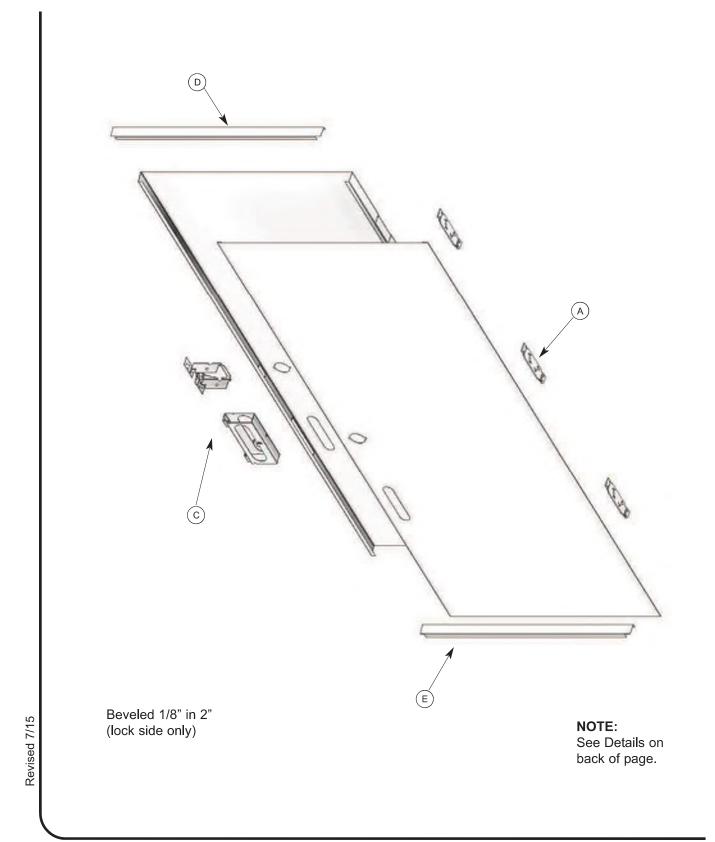




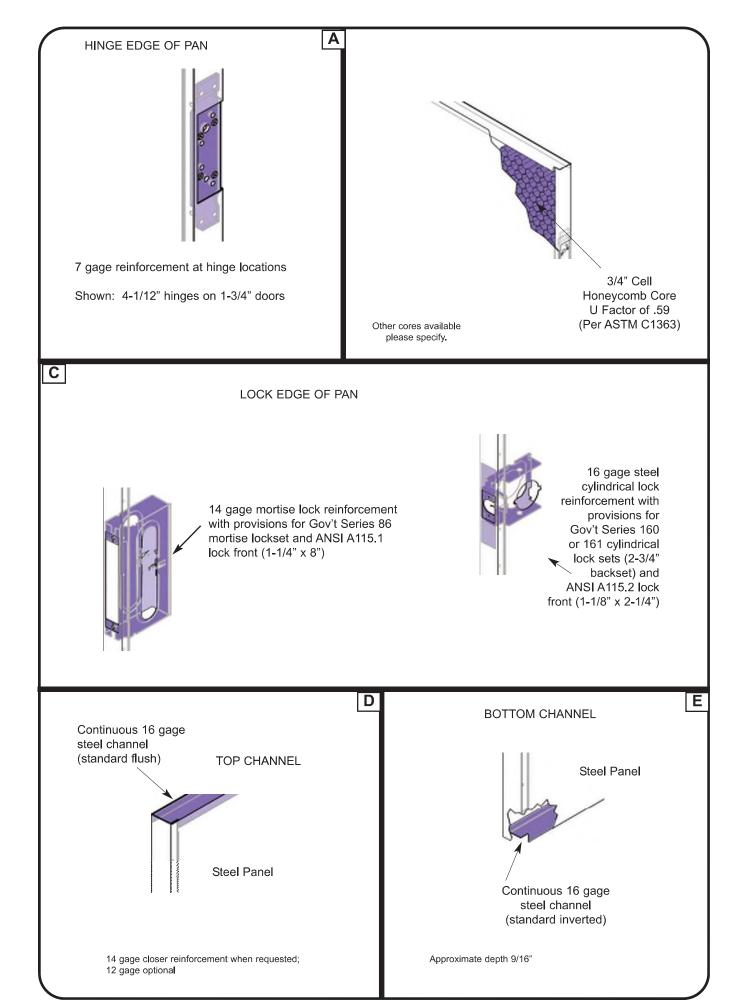


DP SERIES - DOOR CONSTRUCTION DETAILS

TECHNICAL DATA SHEET No. 101b









TECHNICAL DATA SHEET No. 201

UNIVERSAL FRAMES - ME SERIES/MITERED

ME Series Mitered Frames shall be as manufactured or furnished by Republic Doors and Frames, McKenzie, Tennessee 38201.

Thickness - Made for two basic door thicknesses: 1-3/8" or 1-3/4"

Gages - 16 or 14 (12 gage available with coped bolted corner connections)

Faces - 1" to 4"

Standard Rabbets - 1-3/8" (actual dimension 1-9/16"); 1-3/4" (actual dimension 1-15/16"). Rabbet dimension is 3/16" greater than the door thickness.

Stop - 5/8" standard - (3/4" available)

Closer Reinforcement (Optional) - 1-3/8" x 14" x 12 gage plate; 12 gage Snap-In, or 12" long x 12 gage sleeve.

Size Availability - Maximum Size 5'0" x 10'0" Single; Maximum Size 10'0" x 10'0" Double.

Label Range - Consult Label Section. (Embossed UL Listing Marks shall be provided on all stock frames.)

Universal Standard/Heavy Weight Hinge - Frames for 1-3/4" doors shall have a 9 gage steel hinge reinforcement plate, projection welded with provisions for 4-1/2" x 4-1/2" template hinges. Hinge plate is designed to be modified to accept a heavy weight hinge by removing four projections. Frames for 1-3/8" doors shall have a 11 gage steel hinge reinforcement plate, projection welded with provisions for 3-1/2" x 3-1/2" standard weight template hinges. (Optional - 8" or 10", 7 gage reinforcement)

Strike Prep - Frames for 1-3/4" doors shall have a 14 gage steel strike reinforcement plate, extruded and formed to the equivalent of 10 gage, projection welded with provisions for Universal ANSI A115.1 or ANSI A115.2 strike (4-7/8"). Frames for 1-3/8" doors shall have a 14 gage steel strike reinforcement plate, extruded and formed to the equivalent of 10 gage projection welded with provision for Universal ANSI A115.3 strike (2-3/4".)

Hinge Backset - 5/16"

Backbend - 7/16"

Anchors - Sill anchors are included with all ME frames (either integral or welded on sill anchor). All other anchors must be ordered separately.

Silencer Prep - 9/32" dia. holes shall be provided as standard on strike jambs and double headers, (3 per strike jamb and 2 per double head). <u>Mutes are not supplied</u> and must be ordered separately.

Double Heads - Double heads are undersized 1/16" (except for cased open heads, which are nominal).

Mortar Guards - Mortar guards of 26 gage steel shall be welded to each hinge and strike reinforcement plate.

Profiles - Equal Rabbet, Unequal Rabbet, Single Rabbet, Double Egress, Cased Opening.

Shipping - Frames are shipped as components, bundled as one pair of jambs (hinge & strike for single openings or 2 hinge jambs for double openings). Heads ar packaged separately.

Handing - Frames are handed.







TECHNICAL DATA SHEET No. 201a

ME SERIES - SPECIFICATIONS

- ME Series Mitered Frames as manufactured by Republic Doors and Frames, McKenzie, TN 38201 have been tested or adhere to the criteria set forth by the following published standards:
 - A. ANSI A250.8-1998 (SDI 100) Recommended Specifications -Standard Steel Doors & Frames; Steel Door Institute.
 - B. SDI 111 Recommended Standard Details Steel Doors & Frames.
 - C. SDI 112-97 Zinc Coated Standard Steel Doors and Frames.
 - D. SDI 113-79 Test Procedure and Acceptance Criteria for Acoustical Performance for Steel Door and Frame Assemblies.
 - E. ASTMA 366/A 366M Standard Specification for Steel, Sheet, Carbon, and High Strength, Low Alloy, Hot Rolled and Cold Rolled, General Requirements.
 - F. ASTM A 568/A 568M Standard Specification for Steel, Sheet, Carbon and High Strength, Low-Alloy, Hot Rolled and Cold Rolled, General Requirements.
 - G. ASTM A 569/A 569M Standard Steel Specification for Steel, Carbon (0.15 Maximum Percent), Hot Rolled Sheet and Strip Commercial Quality.
 - H. ASTMA 591/A 591M Standard Steel Specification for Steel Sheet, Electrolytic Zinc-Coated, for Light Coating Mass Applications.
 - I. ASTMA 653/A 653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvanized) by Hot Dipped Process.
 - J. NFPA 80 Standard for Fire Doors and Windows.
 - K. A250.4 1994 Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcings.

II. Frame Construction

- A. Frames shall be formed from 18,16,14 or 12 gage cold-rolled, hot-rolled or galvanized steel. (A60 galvanealed standard)
- B. Frames shall be either knocked-down or have corners welded and ground smooth. Corners shall have aligning tabs and slots for secure and easy interlocking of jambs to head. (12 gage frames shall have coped bolted corner connections.)
- C. Frames shall be provided with 9/32" silencer preparation, (3) per strike jamb and (2) per head for double openings, for field application after finish painting.
- D. Frames for 1-3/4" doors shall have 9 gage steel universal hinge tap plate, projection welded, with provisions for 4-1/2" x 4-1/2" template hinges, and 14 gage steel strike reinforcement plate, extruded and formed to the equivalent of 10 gage, projection welded, with provision for Universal ANSI A115.1 or ANSI A115.2 strike. Mortar guards of 26 gage steel shall be welded to each hinge or strike reinforcing plate.
- E. Frames for 1-3/8" doors shall have 11 gage steel hinge reinforcement plates, projection welded, with provisions for 3-1/2" x 3-1/2" template hinges, and 14 gage steel strike reinforcement plate, projection welded, with provision for cylindrical ANSI A115.3 strike.
- F. Reinforcement for surface closer shall be 12 gage steel. Proper reinforcement shall be provided for other hardware when required.

III. Frame Finish

Frames will be cleaned and phosphatized with one coat of force-cured grey primer, that meets or exceeds ANSI A224.1-1990 and ASTM specification B117 for finishes. (Capable of passing 120 hour salt spray test and a 240 hour humidity test in compliance with ASTM D1735.)

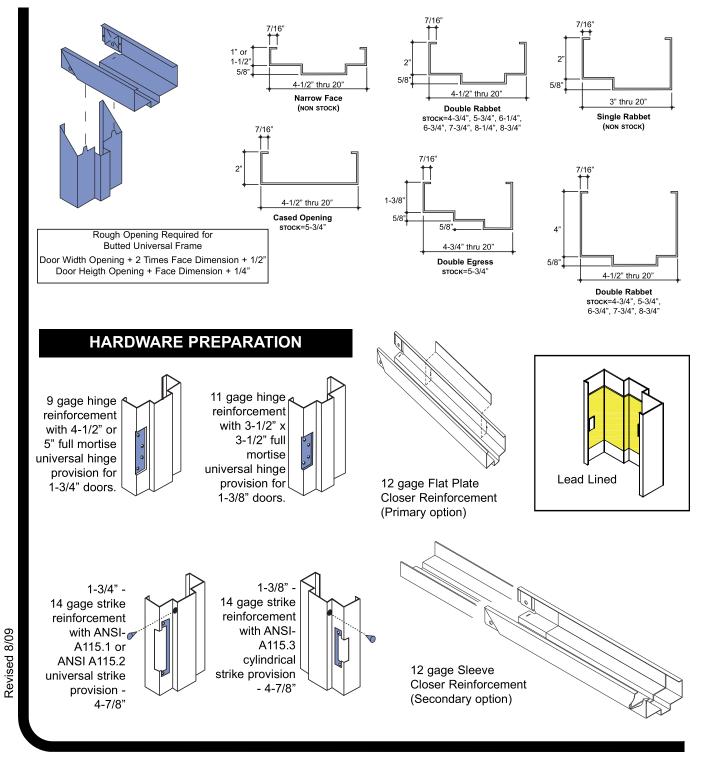






TECHNICAL DATA SHEET No. 201b

ME SERIES - FRAME CONSTRUCTION







TECHNICAL DATA SHEET No. 201c

ME SERIES - BULLET RESISTANT FRAME - LEVELS 1 THRU 8

ME Series Bullet Resistant Mitered Frames shall be as manufactured or furnished by Republic Doors and Frames, McKenzie, Tennessee 38201.

Thickness - Made for standard door thickness 1-3/4"

Gages - 14 gage only

Faces - 1" to 4"

Standard Rabbets - 1-3/8" (actual dimension 1-9/16"); 1-3/4" (actual dimension 1-15/16"). Rabbet dimension is 3/16" greater than the door thickness.

Stop - 5/8" standard

Closer Reinforcement (Optional)- 1-3/8" x 14" x 12 gage plate; 12 gage Snap-In, or 12" long x 12 gage sleeve.

Size Availability - Maximum Size 5'0" x 10'0" Single; Maximum Size 10'0" x 10'0" Double.

Universal Standard/Heavy Weight Hinge - Frames shall have 9 gage steel hinge reinforcement plate, projection welded for provisions for 4-1/2" x 4-1/2" and 5" template hinges or reinforced for continuous hinges.

Strike Prep - Frames shall have a 14 gage steel strike reinforcement plate, extruded and formed to the equivalent of 10 gage, projection welded with provisions for Universal ANSI A115.1 or ANSI A115.2 strike (4-7/8").

Hinge Backset - 5/16"

Backbend - 7/16"

Anchors - Masonry wire, tee and existing opening punch and dimple. Sill anchors are included with all ME frames (either integral or welded on sill anchor).

Silencer Prep - 9/32" dia. holes shall be provided as standard on strike jambs and double headers, (3 per strike jamb and 2 per double head). Mutes are not supplied and must be ordered separately.

Double Heads - Double heads are undersized 1/16".

Mortar Guards - Mortar guards of 26 gage steel shall be welded to each hinge and strike reinforcement plate.

Profiles - Equal Rabbet, Unequal Rabbet, Single Rabbet.

Handing - Frames are handed.

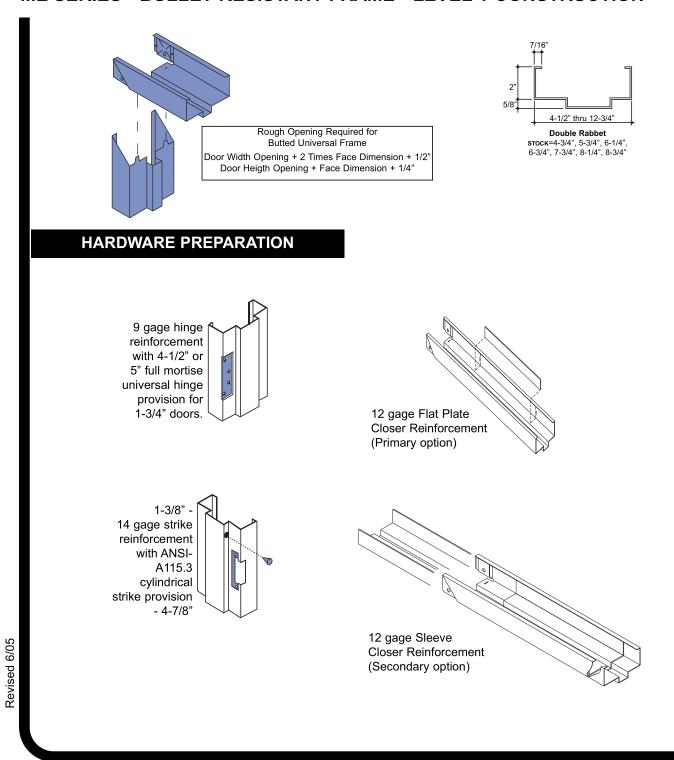
Special Requirements - Frames must be welded - Masonry frames fully grouted do not require armor plating.





TECHNICAL DATA SHEET No. 201d

ME SERIES - BULLET RESISTANT FRAME - LEVEL 1 CONSTRUCTION

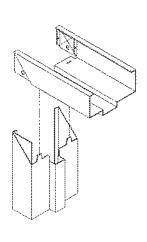






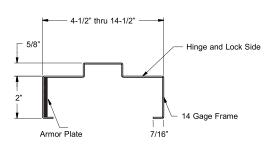
TECHNICAL DATA SHEET No. 201e

ME SERIES - BULLET RESISTANT FRAME - LEVEL 2 & 3 CONSTRUCTION



Rough Opening Required for Butted Universal Frame

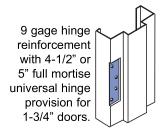
Door Width Opening + 2 Times Face Dimension + 1/2" Door Heigth Opening + Face Dimension + 1/4"

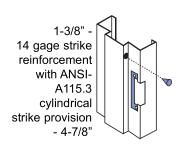


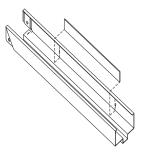
Double Rabbet

Note: Masonry frames fully grouted do not require armor plating.

HARDWARE PREPARATION







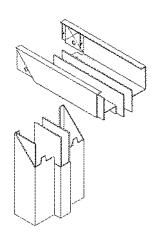
12 gage Flat Plate Closer Reinforcement (Optional)



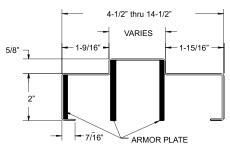


TECHNICAL DATA SHEET No. 201f

ME SERIES - BULLET RESISTANT FRAME - LEVEL 4 THRU 8 CONSTRUCTION



Rough Opening Required for Butted Universal Frame Door Width Opening + 2 Times Face Dimension + 1/2" Door Heigth Opening + Face Dimension + 1/4"



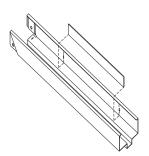
Double Rabbet

NOTE: Masonry frames fully grouted do not require armor plating.

HARDWARE PREPARATION

9 gage hinge reinforcement with 4-1/2" or 5" full mortise universal hinge provision for 1-3/4" doors.

1-3/4" 14 gage strike
reinforcement
with ANSIA115.1 or
ANSI A115.2
universal strike
provision 4-7/8"



12 gage Flat Plate Closer Reinforcement (Optional)

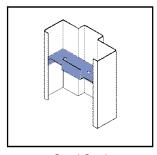




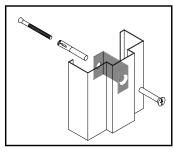


TECHNICAL DATA SHEET No. 201g

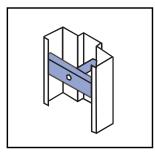
ME SERIES - ANCHOR DETAILS



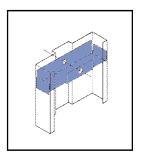
Steel Stud Anchor



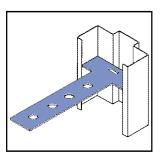
Prepared Opening Anchor



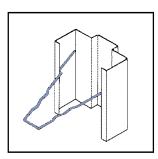
Twist in Prepared Opening Anchor



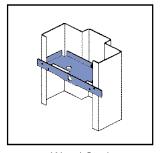
Snap-in Prepared Opening Anchor



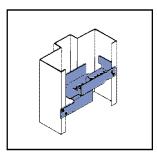
Tee Masonry Anchor



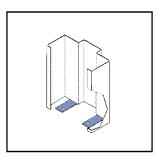
Wire Masonry Anchor



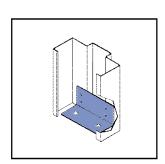
Wood Stud Anchor



Adjustable Wood/Steel Stud Anchor (Assembled)



Integral Sill Anchor (5-3/4 Stock Only)



One Piece Sill Anchor Welded On





Manufacturer's Installation Instructions for Correct Location and Attachment of Anchors







Masonry Wire



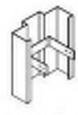
Steel Stud



Existing Wall



Multi-purpose (CSA)



Wood Stud

A slip-in anchor must be used for each 30 inches of jamb height or fraction thereof. On the hinge jamb, each anchor must be located immediately above or below each hinge reinforcement. On the strike jamb, anchors must be located directly opposite the anchors on the hinge jamb.

Base anchors are not required on frames provided with expansion shell (existing wall) anchors. All other frame-anchor combinations must have a welded-in base anchor.

An additional jamb anchor must be added to frames using expansion shell anchors.

Anchor attachment methods may be slip-in force fit, spot welded, or arc welded to frame in proper locations.



CENTURY ARCHITECTURAL HARDWARE

29220 LYON OAKS DR.

Tel: 248-348-6500

WIXOM MI 48393

ELEVATOR PENTHOUSE

Control No.1145

1145

Submitted By: JASON KOCEMBO

Finish Hardware Catalog Cuts Section 087100

February 24, 2021

PROJECT

Name: ELEVATOR PENTHOUSE

Address: 66 ADELAIDE

DETROIT MI 48201

Phone:

Superintendent: TOM CARLSON Engineer:

810-845-4854 TOM.CARLSON@EANDLGROUP.COM

CONTRACTOR

Name: E & L CONSTRUCTION GROUP

Address: P.O. BOX 418

FLINT MI 48501

Phone: 810-744-4300 Contact: TODD FINLEY

ARCHITECT

Name: WAH YEE ASSOCIATES & PLANNERS
Address: 42400 GRAND RIVER AVE STE #200

NOVI MI 48375

Phone: 248-489-9160

Project Number: 5122

HARDWARE SUPPLIER

Project Manager: JASON KOCEMBO

ELEVATOR PENTHOUSE



CENTURY ARCHITECTURAL HARDWARE 29220 LYON OAKS DR.

WIXOM MI 48393 Control No.1145

248-348-6500 Fax:

Submitted By: JASON KOCEMBO

February 24, 2021

5 Knuckle Full Mortise Hinges

Heavy Weight Ball Bearing

FBB168 - (ANSI A8111) Steel - polished and plated or phosphated and prime coated for painting

FBB199 - (ANSI A2111) Brass or bronze - polished and plated or painted

FBB199 (32) - (ANSI A5111) Stainless steel - highly polished

#BB199 (32D) - (ANSI AS311) Stainless steel - satin finish



- For use on heavy doors or doors where high frequency is expected such as entrance doors to office buildings, stores, public buildings and corridor entrance doors to offices
- · All hinges have temptate screw hole location for use on either wood or hollow metal doors and frames
- · Equipped with four Stanley permanently Jubricated non-detachable ball bearings
- · Pins in non-ferrous hinges are stainless steel
- · Hole in bottom tip for easy pin removal
- · Reversible flush tips and pins
- · Hinges can be furnished as follows:
 - -- with raised barrel (RB)
 - with electric wires and/or switches (CE and/or CS)
 - ~ with hospital tips (Hff)
 - with decorative tips
 - with security studs
 - -- with non-removable pins (NRP)



Size Open		Gauge of Metal		Flat Head Per F	September 2	Quantity Per Box	Quantity Per Case	Case Weight			
	(mm)							8	ronze	13	Steel
								ths		ths.	
4 1/2 x 4 1/2	(114×114)	.180	(4.6)	8-12-24 x 1/2	8-12 x 1 1/4	3 ea	30 ea	45	(21)	42	(19)
5 x 4 1/2	(127 x 114)	.190	(4.8)	8-12-24 x 1/2	8-12 x 11/2	3 ea.	24 ea.	46	(21)	40	(18)
5x5	(127×127)	.190	(4.8)	8-12-24 x 1/2	8-12×11/2	3 ca.	24 ca.	50	(23)	46	(21)
6×4 1/2	(152 x 114)	.203	(5.2)	10 - 1/4 -20 × 1/2	10+14 x 11/2	3 ea.	24 ea.	63	(29)	53	(24)
6x5	(152 x 127)	.203	(5.2)	10-1/4-20 x 1/2	10-14 x 11/2	3 ea.	24 ea.	65	(30)	55	(25)
5×6	(152 x 152)	.203	(5.2)	10- 1/4-20 x 1/2	30-14 x 11/2	3 ea.	24 ea.	76	(35)	61	(28)
8×6"	(203 × 152)	.203	(5.2)	16 - 1/4 -20 x 1/2	16-14x11/2	3 ea.	12 ea.	57	(26)	51	(23)
8×8,	(203 x 203)	.203	(5.2)	16 - 1/4 - 20 × 1/2	16-14×11/2	3 evi.	12 ea.	68	(31)	61	(28)

^{*} Available in Steel only

Consult factory for other sizes not listed

SARGENT

ASSA ABLOY

Specifications & Certifications

8200/R8200/7800 Mortise Locks

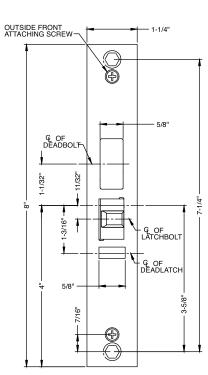
Certification Compliance

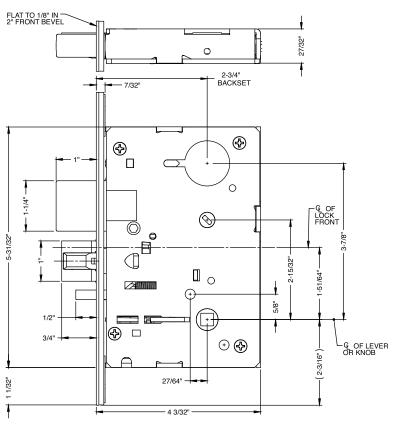
ANSI/BHMA	Certified to ANSI/BHMA A156.13 Series 1000 Operational Grade 1 and Security Grade 1 with all standard trims. ANSI/ASTM F476-84 Grade 40 with concealed mortise cylinder. Note: LFIC (Removable) Cylinders and SFIC Cylinders do not meet Security Grade 1 requirements.					
ADA &	Meets A117.1 Accessibility Code. Meets BOMA International 4.13.8 Complies with American Disability Act; Consult local authorities					
UL-cUL	UL and cUL Listed to US and Canadian safety standards for A label 4 x 10 single and 8 x 10 double (3 hour fire door) and lesser class doors, stamped letter F and UL symbol on armored front indicate listing					
Positive Pressure	Meets ANSI/UL 10C, Positive Pressure Fire Test of Door Assemblies					
California	California State Reference Code (Formerly Title 19, California State Fire Marshal Standard) All levers with returns comply; levers return to within 1/2" (13mm) of door face					
Tornado and Hurricane Codes	See page 4					

Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and Sargent Manufacturing Company makes no representations or warranties concerning what such impact may be in any specific situation. When retrofitting any portion of an existing fire rated opening, or specifying and installing a new fire-rated opening, please consult with a code specialist or local code official (Authority Having Jurisdiction) to ensure compliance with all applicable codes and ratings.

8200 & 7800 Lockbody Dimensions

(R8200 Lockbody not shown)





Note: R8200 and 8200 lockbodies are dimensionally the same except for the through-bolt locations

Explanation of the 8200/7800 Lockbody types:

Lockbody Type¹	Trim Available x Lockbody type	Standard 8200 Door Prep	Through Bolted Trim	Multi-function lockbody available	How to order lockbody only
8200	Lever x Rose/Escutcheon	Yes	Yes	Yes	82 x Function x Finish ³
7800	Knob x Rose/Escutcheon	Yes	Yes	Yes	78 x Function x Finish ³
R8200	Simplí™ roseless trim	No	Yes ²	Yes	R82 x Function x Finish ³
8200 for ALP	8200 for ALP ALP Push/Pull Trim		Yes	Yes	Six Digit Part # determined by function*
7800 PT	PT Push/Pull Trim	Yes	Yes	Yes	Six Digit Part # determined by function*

¹ Lockbodies can only be used with the specified trim

² Through Bolt locations are different from standard trim, special door prep required

³ **Note:** Cylinder and trim not included. Outside front, strike and screw pack are included

^{*} See Price book; Note: Outside Fronts, Strikes, Cylinders and Trim are NOT included

8200/R8200/7800 Mortise Locks

SARGENT ASSA ABLOY

The patented SARGENT Mortise Locks are designed and constructed with high quality components to provide maximum security, performance and durability. These locks represent over a century of innovation and experience in manufacturing hardware and are the industry's benchmark for mortise locks: strong, durable, flexible, innovative and secure.

Specifications

- For Doors 1-3/4" (44mm) thick standard
- Backset 2-3/4" (70mm) only
- Outside Front Plate Brass, bronze or stainless steel. 8" (203mm) x 1-1/4" (31mm), ANSI/BHMA Standard A156.115
- Front adjustable at any angle from flat to beveled 1/8" (3mm) in 2" (51mm)
- Hubs for Knobs/Levers
 - 7800: sintered iron copper infiltrated
 - 8200: cold forged steel
 - R8200: investment cast steel
- · Auxiliary Deadlatch is stainless steel and non-handed
- Specify hand on order; easily field reversible (if no hand is specified RH will be provided)
- Strike: Brass, bronze or stainless steel; ANSI Standard; curved lip, non-handed (strike box optional)
- Keys: Two, nickel silver (control key or emergency key must be ordered when required)
- Cylinder: Brass, size #41 (1-1/8") standard (except for Freewheeling, size #46 (1-3/4"))
- Can be masterkeyed or grand masterkeyed.
 Construction keying available. LA standard keyway
- Stile: 4-1/2" (114mm) minimum stile for 7800/8200/R8200, 4-3/4" (121mm) minimum stile for electrical function locks
- Door Prep: ANSI/BHMA A156.115 or A156.115W modified per template (see template)
- Warranty: 10 year limited warranty, 2 year limited warranty on electrified locks. Warranty limited to replacement of lockbody and/or components

Maximum Strength & Durability

- Certified to and exceeds ANSI/BHMA A156.13, Series 1000, Operational Grade 1 and Security Grade 1 with all standard trims
- Exceeds cycle testing requirements by 14 times the ANSI/BHMA A156.13 Grade 1 standard
- Case: 12 gauge heavy duty wrought steel, zinc dichromate plated. Thickness 7/64" (3mm) (.109")
- 1/8" (.125") cold-rolled steel inside front holds lock securely in door
- Heavy duty wrought steel hubs and high carbon steel spring cartridge provide superior strength and cycle life for 8200 locks
- Latchbolt is stainless steel with 3/4" (19mm) projection one-piece, anti-friction reversible latch
- Deadbolt is one-piece hardened stainless steel with 1" (25mm) projection
- Optional 8200 stainless steel hubs for Institutional setting (specify 3- option)
- Patent pending and/or patent www.assaabloydss.com/patents



- Aesthetic design. Many escutcheon and lever styles available to match a wide range of styles
- Many standard architectural grade finishes, including Polished Nickel (US14) & Satin Nickel (US15) finishes
- 53 functions including 4 electrical functions. The most in the industry for a broad range of applications
- Versatile. Offered for door thicknesses ranging from 1-3/8" (35mm) to 6" (152mm)
- Available with vandalism deterrent trim and/or secure fastener options Torx® and spanner screws for high abuse conditions
- Available with push/pull trim, perfect for hospital applications

Innovation

- First in the industry to offer a multi-functional lockbody that embodies 8 functions in 1 lockbody
- Easy operation. Only 30° of lever rotation required to retract latchbolt
- Lever springs contained inside of the lock case for easier installation
- SARGENT's revolutionary MicroShield® available. This antimicrobial silver-based finish coating permanently suppresses the growth of bacteria, algae, fungus, mold and mildew. EPA and NSF approved and FDA listed
- Broad offering of electro-mechanical configurations offer higher security for the most demanding access/egress control applications featuring ElectroLynx® quick connectors

Security

- Multiple security trim options available: free-wheeling, security escutcheon and anti-vandal pull trim (patent pending)
- Security key systems available (Degree, Signature, Keso, Keso F1, & XC)

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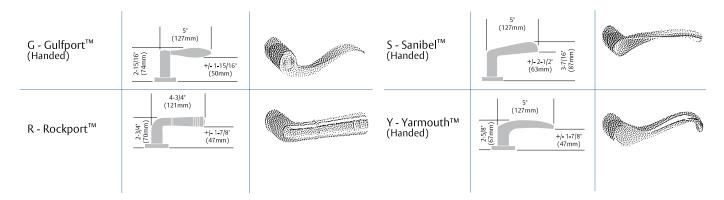
Maximum Flexibility

8200 Mortise Locks

Coastal Series (8200 & R8200 Series)

Features

- All levers meet ADA compliance for national codes
- Not available with CO and TO roses
- Levers are solid cast brass
- Finishes available 3, 4, 9, 10, 10B, 10BE, 10BL, 14, 15, 20D, 26, 26D, BSP
- All lever height (+/- 1/16") measurements represent total distance from door face



Standard Levers

(8200 Series Only)

Features

- All levers meet ADA compliance for national codes
- Solid forged or cast
- Lever designs J, L and P have lever returns within 1/2" (13mm) or less of door face and meet California State Reference Fire Code

All lever height (+	/- 1/16") measurements repr	resent total distance from door fac	e		
A (Handed)	5' (127mm) -91/51-7 -91/51-7 +/-1-15/16' (49mm)		J	5-1/4" (133mm) ++-5/16" (8mm)	
В	(127mm) (127mm) (127mm) (127mm) (41mm) (41mm)		L	5' (127mm) & (127mm) +/-5/16' (8mm)	
E	4-1/2° (114mm) -2/1-2° (51mm) -2/1-2° (51mm)		Р	5-1/2' (140mm) +/-5/16' (8mm)	
F	+/-1-15/16* (49mm)		W	4-1/2" (114mm) 1-7 (114mm) +/-2-1/16" (52mm)	

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Coastal Series[™] & Standard Trim

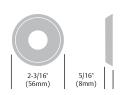
8200/R8200/7800 Mortise Locks

Coastal Series Roses & Escutcheons

TR Traditional Rose

• Dual radii edge





CR Contemporary Rose

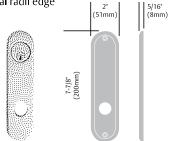
Beveled edge





TE Traditional Escutcheon

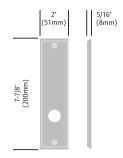
• Dual radii edge



CE Contemporary Escutcheon

• Beveled edge





Standard Roses

L Rose



O Rose





E Rose



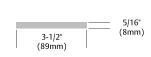
LN Rose





SL Rose





BH Rose



Functions & Descriptions

8200/R8200/7800 Mortise Locks



Single Cylinder with Deadbolt

**±24 Room Door

8200, R8200 & 7800



- Key outside or thumbturn inside retracts and projects deadbolt
- Trim either side retracts latchbolt
- Latchbolt & deadbolt operate independently of each other
- ANSI F21

30 Dummy Trim Deadlock 8200, R8200 & 7800



- Deadbolt operation only
- Key outside retracts and projects deadbolt
- Trim inside always retracts deadbolt
- Trim outside is always locked
- Same as 28 Function without a thumbturn

*25 Dormitory or Exit

8200, R8200 & 7800



- Key outside or thumbturn inside retracts and projects deadbolt
- Trim from either side retracts latchbolt, when the deadbolt is in the retracted position
- Trim outside is locked, when the deadbolt is projected
- When deadbolt is projected, Trim inside retracts latchbolt and deadbolt simultaneously, unlocking outside trim
- ANSI F13

→*35 Storeroom 8200, R8200 & 7800



- Key outside retracts and projects deadbolt
- Trim outside retracts latchbolt, except when deadbolt is projected
- No inside trim or cylinder

+27 Closet or Storeroom

8200, R8200 & 7800



- Key outside retracts and projects deadbolt
- Trim from either side retracts latchbolt
- Same as 24 function without thumbturn
- Latchbolt & deadbolt operate independently of each other

‡43 Apartment Corridor Door

8200, R8200 & 7800



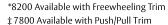
- Key and thumbturn both retract & project the deadbolt
- Trim outside is locked by toggle or projecting deadbolt
- Trim outside is unlocked by toggle only
- Key retracts both latchbolt and deadbolt, trim outside remains locked
- Trim inside always retracts latchbolt (and deadbolt simultaneously), trim outside remains locked
- Auxiliary deadlatch
- ANSI F20

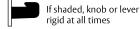
28 Dummy Trim Deadlock

8200, R8200 & 7800



- Deadbolt operation only
- Key outside retracts and projects deadbolt
- Trim inside always retracts deadbolt
- Trim outside is always locked
- Thumbturn inside retracts and projects





◆CAUTION: Not recommended for use on any door used for Life Safety egress

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How To Order, Finishes, Packaging & Security Screw Chart

8200/R8200/7800 Mortise Locks



How to Order 8200, R8200 & 7800 Mortise Locks

10-	82	71	12VDC	TR	МЈ	15	RHR	
Options*	Series	Function	Voltage	Roses/ Escutcheons	Trim	Finish	Hand	
For all			12VDC 24VDC Pages 9-14 (With R8200, FW Trim — Page 15,	12VDC		Levers — Pages 7-8, 10		RHR
available	82 R82	 Pages 21-27		D 41	RH			
options see Pages	78 Mortise Lock	for Details	Must be specified	specify "R" for roseless design)	Push/Pull Trim — Page 16-17,	Page 41	LHR	
36-38			for Functions 70, 71, 72 & 73		Knobs — Page 20		LH	

^{*} Multiple options can be selected

Finishes

Standard Levers & Knobs	BHW Trim	BHL Trim	BHD Trim	Studio Collection Lever Trim	8200 Coastal Series™ Trim and 8200 Freewheeling Trim	7800 Push/Pull Trim	Description	ANSI/BHMA
03				03	03	03	Polished brass, clear coated	605
04				04	04	04	Satin brass, clear coated	606
09				09	09	09	Polished bronze, clear coated	611
10				10	10	10	Satin bronze, clear coated	612
10B				10B	10B	10B	Oxidized bronze, oil rubbed	613
10BE				10BE	10BE		Dark oxidized satin bronze, equivalent	(613E)
10BL				10BL	10BL		Oxidized satin, bronze, clear coated	614
14				14	14		Polished nickel, clear coated	618
15 *				15 *	15 *		Satin nickel, clear coated	619
20D				20D	20D		Statuary dark bronze, clear coated	624
26				26	26		Polished chrome	625
26D *				26D *	26D *		Satin chrome	626
32	32	32	32	32		32	Polished stainless steel	629
32D *	32D *	32D *	32D *	32D *		32D *	Satin stainless steel	630
BSP				BSP	BSP		Black Suede Powder Coat	_

^{*} MicroShield® — optional designate SG- option (Available on 15, 26D, and 32D Finishes only) Split Finishes — specify outside finish first, then inside finish example: US26D (outside) / US04 (inside)

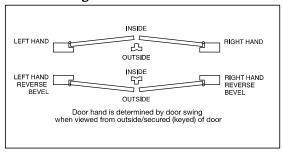
6 Lobe & Spanner Bit packs

	Part Number	Descriptions			
82-3855 6 Lobe Bit Pack 6 bits					
	82-3856	(sizes- T8, T9, T10, T15, T20, T25, T27) 9/32" Driver Spanner Bit Pack 5 bits (sizes- 6, 8, 10, 12, 14) 1/4" Driver			

Packaging

8205 x LNL	approx. 6.1 lbs. (2.7kg)/box	6 boxes/case
8205 x WTL	approx. 7.2 lbs. (3.1kg)/box	6 boxes/case

Door Handing



^{*} Multiple options available Wrought Box Strike optional — must order with lockset as WBS- option

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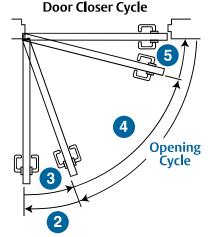
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General Information

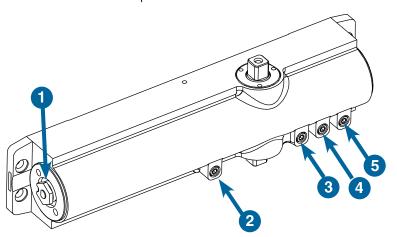
1431 Series Powerglide®

- 1 Closer Spring Adjustment (not shown)
- Effects the entire cycle of the door closer movement
- Used to size closer for application requirements
- Determines the amount of force with which the door closes and the amount of force required to open the door
- Adjustable to compensate for door size and draft conditions
- 2 Backcheck valve
 - At approximately 70° of the open cycle, the Backcheck Valve begins to slow the door's motion
 - Prevents the door from slamming into the door's stop
 - Valve is used to control the intensity of the Backcheck
 - **Note:** A Positive stop is required, Backcheck cannot be used as a stop



3 Delayed action valve (Optional)

- Holds the door in the open position momentarily
- 20 second minimum hold open delay
- The feature is available for all applications and arms
- Beneficial when moving carts or objects thru door opening and ADA applications
- 4 Closing speed valve
 - Controls how fast the door closes to approximately 8" from the closed position
- **5** Latching speed valve
 - Controls the speed of the door during the final 8" of door swing
 - The force the door closes with is controlled by the Closer spring
 - **Note:** This adjustment is critical for door latching



ANSI Standards

ARM	TYPE	ARM	TYPE
0	CO2011	PF9	CO2101
Р9	CO2021	P10	CO2021
Н	CO2051	PS/CPS	CO2021
PH9	CO2061	CPSH/PSH	CO2061

All are certified ANSI types including options PT4 A, B, D, E, F, G, H

Arm Leverage Adjustment

Closers using "O" arms have the provision to increase closing power by 15% by adjusting foot pivot



How to Select the Proper Closer

Things to Consider

1. Size and Weight of Door

The 1431 Door Closer is non-sized so that closing force can be adjusted in the field to accommodate various door sizes and weights.

2. Interior Application

The standard application is the most efficient in terms of power and control.

3. Exterior Application

The top jamb, parallel arm application should be used. Exterior doors require greater closing forces because of draft conditions. Always place the closers out of the weather.

4. Degree of Opening

Proper arm and position on the door is most important to permit the door to open far enough to allow adequate traffic flow.

5. Function

Closers are available with hold-open or positive stop arms.

6. Special Condition

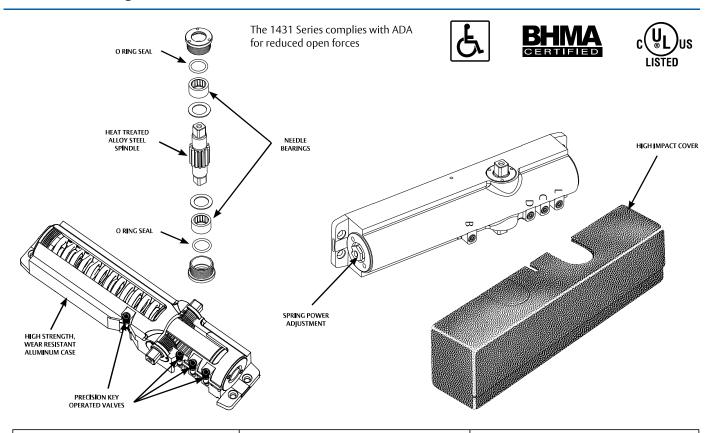
Consult factory when special hinges, overhead holders or other specialized hardware is used.

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Features and Benefits

1431 Series Powerglide®





Features

- Exceeds 15 Million cycles
- Certified ANSI/BHMA A156.4 Grade 1
- UL 10C listed for positive pressure fire test
- UL / cUL listed for use on fire rated doors
- 25 year limited warranty
- User friendly versatile mounting applications permit standard, top jamb, parallel and track installations
- Self sticking templates supplied for most applications
- Adjustable spring power allows 1431 closers a size range of 1 through 6. They are adjusted to size 3 before leaving the factory
- One door closer body for all applications. All 1431 are non-handed
- Meets ADA requirements in all applications, except Push Side Track application (except track)
- High impact non-corrosive plastic covers with two machine screws standard, metal covers and lead lined are optional
- All weather fluid allows closer to operate effectively in extreme temperatures without readjustment
- 1-1/2" diameter piston for superior door control
- Standard pressure relief valves for both opening and closing cycles protect the door and frame from damage caused by abuse
- Retrofits existing SARGENT 1230/1231 Series Closer installations

Heavy Duty Construction

- Heat treated full rack and pinion for high strength and wear resistance
- Heavy duty one piece high silicon content aluminum alloy body provides corrosion resistance, superior strength and wear resistance
- 1/2" arm engagement over a 7/16 square spindle ensures a wear-resistant tight joint

Fasteners

- Machine Screws and self tapping screws provided for closer and arm
- In addition, wood screws supplied when installed on wood doors with through bolts

Valves

- Separate brass low sensitivity control valves offer ability to separately regulate door speed, latching, backcheck and optional delayed action
- All valves are captured to prevent accidental removal, adjustable with an 1/8" Allen wrench
- Adjustable backcheck protects the door and hardware from damage during the opening cycle
- Adjustable delayed action (optional) permits easy access for physically impaired individuals

Full Complement of Arm Types

- Standard and parallel arms
- Push and pull track arms
- Heavy duty forged steel arms are finely finished and interchangeable between SARGENT 281 and 1431, and 351 Series. The cold formed arms (RO/RP9) are unique to the 1431 series and not interchangeable with other SARGENT closers

Regular Duty Parallel Arms

1431 Series Powerglide®

Hold Open Arms

PH4 - Flush frame, Friction Hold **Open Arm**

- · Forged Steel Arm 11-1/4" (286mm) long
- Holds open from 75° – 180°
- Easily adjusted by wrench
- Non-handed
- Use on frames where stop or soffit is too narrow to mount the standard hold open foot bracket

For arm only, order as 25-PH4 x finish Includes: 63-2229 - Main arm and link assembly 61-2303 - Foot assembly 64-0050 - Foot bracket 64-2407 & 63-2391 - Screw packs

PH9 - Friction Hold Open Arm

- Forged Steel Arm 11-1/4" (286mm) long
- Holds open from 75° - 180°
- Easily adjusted by wrench
- · Non-handed

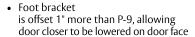
For arm only, order as 25-PH9 x finish Includes: 63-2229 - Main arm and link assembly 61-2303 - Foot assembly 64-0039 - Foot bracket (125 PH9) 64-2407 & 63-2391 - Screw packs



Offset Bracket Arms

P3 - 1" Offset Bracket for use with Auxiliary Holder/Stop

- Forged Steel Arm 11-1/4" (286mm) long
- For use with auxiliary surface overhead stops and holders



Non-handed

For arm only, order as 25-P3 x finish Includes: 63-2607 - Main arm and link assembly 63-2270 - Foot assembly 64-2407 & 63-2391 - Screw packs

P3A - 1-3/4" Offset Bracket for use with Auxiliary Holder/Stop

- Forged Steel Arm 11-1/4" (286mm) long
- For use with auxiliary surface overhead stops and holders and door coordinators
- Foot bracket lowers door closer an additional 3/4" below P3 bracket
 - Non-handed

For arm only, order as 25-P3A x finish Includes: 63-2607 - Main arm and link assembly 63-2274 - Foot assembly 64-2407 & 63-2391- Screw packs

P4 - Parallel Flush frame Arm

- Forged Steel Arm 11-1/4" (286mm) long
- · Foot bracket is attached to frame or transom face



- For use where stop or soffit is too narrow for the standard P9
- Permits 120° opening with standard mounting
- Permits 180° opening with alternate mounting
- Non-handed

For arm only, order as 25-P4 x finish Includes: 63-2607 - Main arm and link assembly 63-2295 - Foot assembly 64-2407 & 63-2391 - Screw pack

P4A - Flush Frame Arm for use with Auxiliary Holder/Stop

- Forged Steel Arm 11-1/4" (286mm) long
- surface overhead stops and holders



- Foot bracket is attached to frame or transom face
- Foot bracket lowers door closer an additional 3/4" below P4 bracket
- Non-handed

For arm only, order as 25-P4A x finish Includes: 63-2607 - Main arm and link assembly 63-2272 - Foot assembly 64-2407 & 63-2391 - Screw packs

RP9 Regular Arm

- Cold Formed Steel Arm 11-1/4" (286mm) long
- · Arm is not handed
- Permits 120° opening with standard mounting
- Permits 180° opening with alternate mounting

For arm only, order Includes: 63-3396 - Main arm and link assembly 63-2271 - Foot assembly 64-2407 & 63-2391 Screw Packs

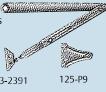
P9 - Standard Parallel Arm

- · Forged Steel Arm 11-1/4" (286mm) long
- Non-handed

For arm only, order as 25-P9 x finish Includes: 63-2607 - Main arm and link assembly 63-3405 - Foot assembly 64-2407 & 63-2391 - Screw packs

UO/RUO Packages

• Universal arm package provides arms and brackets to install closer in standard top jamb or parallel application Screw packs 64-2407 & 63-2391



UH Package

• Universal hold open arm package provides brackets and arms to install closer in top jamb, standard or parallel applications 125-PH9 Screw packs 64-2407 & 63-2391

How to Order

1431 Series Powerglide®

Packing

All closer assemblies are packaged 4 per carton. On request, door closers will be packed 2 per carton.

How To Order

CPC-DA	1431	P4H	26	LH
Options	Series	Closer Arm	Finish	Hand
31- 36- 74- CPC DA- MC- SG- SRI- TB-	1431	Standard Page 6 Top Jamb Page 8 Parallel Pages 10 & 11 Track Type Page 13	EB ED EN EP EAB 03* 04* 09* 10* 10BE 10BL* 14* 15* 20D* 26* 26D* BSP	LH RH

^{*} These finishes are automatically provided with a metal cover

SeriesNumber per CartonApprox. wt per Carton14314-Standard (2 upon request)19 lbs. per 4

Options Available

Specify	Detailed Description
31-	For doors 1-7/8" – 2-1/4" thick, specify door thickness, doors over 2-1/4" thick contact factory
36-	Security Torx Screws supplied for all exposed fasteners
74-	Lead lined cover
CPC-	Clear Powder Coat (available on 26 & 26D)
DA-	Delayed Action
MC-	Handed Metal Cover
SRI-	Special Rust Inhibitor finish for powder coated finishes only (arm)
TB-	Through Bolt (1-3/4" Std) For others, specify 31-TB- & door thickness

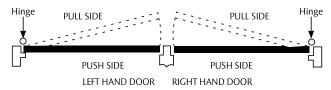
Note:

- The MC- option is used when a metal cover is desired on a powder coated finish
- When MC- is added to a plated finish, the MC- option indicates that only the cover is to be plated, the arms will be powder coated to match
- Do not specify the MC option if both the cover and arms are to be plated

How To Order

Accessories	Example	
Arm only	Specify 25-, arm required and finish	25-PSH EN
Body only	Specify CB-1431 (Option DA- available)	CB-1431
Arm conversion Units	Specify unit and finish	125-P9 EB
Cover Only (Standard)	1431-C x finish	1431-C x EN
Cover Only (Metal)	1431-CMC x finish and hand & arm type	1431-CMC x 26D x LH X P-10
Accessories	Specify accessory and finish See applicable catalog section	1431-D EB

When complete closer assembly is ordered with an accessory, order accessory as a separate item



Finishes

Finishes	ANSI/BHMA	Description		
EB	695	Bronze powder coated to match finish 10B		
EN	689	Aluminum powder coated		
ED	693	Black powder coated to match finish 20D		
EAB	696	Brass powder coated		
EP	691	Bronze powder coated to match finish 10		
03	605	Bright brass, clear coated		
04	606	Satin brass, clear coated		
09	611	Bright bronze, clear coated		
10	612	Satin bronze, clear coated		
10B	613	Dark oxidized satin bronze, oil rubbed		
10BE	613E	Dark oxidized satin bronze - equivalent		
10BL	614	Oxidized satin, bronze, clear coated		
14	618	Bright nickel plated, clear coated		
15	619	Satin nickel, clear coated		
20D	624	Statuary dark bronze, clear coated		
26	625	Bright chromium plated		
26D	626	Satin chromium plated		
BSP	_	Black Suede Powder Coat		

Special Rust Inhibitor Process (SRI)

Additional process available for bracket and arms provides an extra layer of protection for extreme corrosive environments. Available with powder coated finishes only, specify SRI- as an option when ordering.

Materials

Metal retainers for gasketing are Aluminum Alloy 6063, T5 temper, unless noted.

Architectural Bronze gasketing is Alloy CDA 385 (Copper Alloy No. C38500), Architectural Bronze.

Stainless steel gasketing is Type 304; known for its excellent corrosion resistance, high tensile strength and resistance to oxidation.

NICP utilizes a variety of gasketing materials including Vinyl, Neoprene, Silicone, Nylon Brush, Thermo Plastic Elastomers (TPE), Thermo-Plastic Vulcanizates (TPV), Polypropylene Pile, Ethylene-Propylene-Diene-Monomer (EPDM), Polyurethane, and Intumescent Fire Seals. Product Illustrations indicate the Gasketing material. Properties of many primary gasket materials are listed on the perimeter seal catalog pages.

напезіче тіратьа дазкетну атісез а ргеззаге зепзітіче тіратеа астуте апезіче ріотестеа ду а тегезі liner. Once installed it provides a permanent bond in exterior or interior locations. End use temperature range is -30°F up to 250°F. Shelf life of adhesive prior to installation is one year when stored at 75°F and 50% relative humidity or less.

Gasketing Finishes

				NGP Suffix:
Aluminum:	Mill Finish	ANSI/BHMA 719	US27	None
	Anodized Aluminum	ANSI/BHMA 628	US28	Α
	Dark Bronze			DKB
	Gold Powder Coat			В
	Polished	ANSI/BHMA 717		POL
	Powder Coated Colors –	See Page L2 for detail	İs	
Architectural Bronze:	Satin Finish	ANSI/BHMA 728	US4	BR
	Dark Bronze Oil Rubbed	ANSI/BHMA 722	US10B	BR-DKB
	Polished	ANSI/BHMA 721	US3	BR-POL
Stainless Steel:	Brushed (#4)	ANSI/BHMA 630	U\$32Đ	None
Gaskel Malerials:	Neoprene is Black			N
	NGP-TPV is Black			N
	Polyurethane is Black			U
	 Vinyl is Gray, except who 	V		
	Silicone colors: Black, Br	S		
	Thermoplastic is Brown			T, T6
	Nylon Brush colors: Black, Gray			
	TPF colors: Brown, Charcoal, Clear, White			
	Polypropylene Pile is Gra	ау		
	EPDM is Gray			

Powder Coat Finish

Powder Coat finish is available on most metal gasketing retainers upon request. Refer to page L2 for standard color options. Consult factory for custom color matching.



Self-Adhesive Silicone Gasketing



5050B Brown 5050C Charcoal 5050W White 5050T Tan 5050CL Clear

Available in 17', 20', 21", 25' and 300' rolls

*Clear not available in 21'

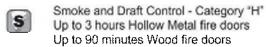




Edge Sealing System - Category "G" for 20 minute rated category B wood doors perimeter application up to:

4'0 x 8'0 single swing 8'0 x 8'0 pairs

use 9550 at the meeting edge of pairs





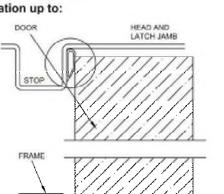






Meets requirements of RoHS Directive

See adhesive specifications on page G9



HINGE JAMB

Phone: 800-647-7874

Fax: 800-255-7874

STOP



ANTI-LIG 5050B Brown ANTI-LIG 5050C Charcoal ANTI-LIG 5050W White ANTI-LIG 5050CL Clear

Available per foot (bulk) or in stock length 300° rolls.

Anti-ligature Silicone Bulb Fire and Smoke Seal

Anti-ligature feature has serrations every 8" designed to break apart preventing it from being used to hang or strangle.

Applications include psychiatric facilities, prisons and other treatment facilities.

Installs as a continuous length providing the same sealing properties for light, sound, air and smoke as our original 5050.



Edge Sealing System - Category "G" for 20 minute rated category B wood doors perimeter application up to:

single swing 4'0 x 8'0 pairs 8'0 x 8'0

use 9550 at the meeting edge of pairs



Smoke and Draft Control - Category "H" Up to 3 hours Hollow Metal fire doors Up to 90 minutes Wood fire doors











Meets requirements of RoHS Directive

See adhesive specifications on page G9

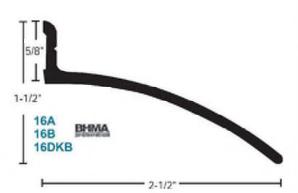


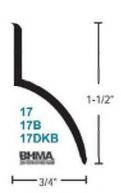
Rain Drip Guards

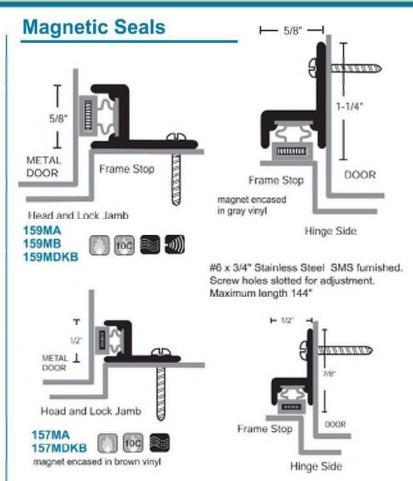
#6 x 3/4" Stainless Steel SMS furnished

A - anodized aluminum B - gold DKB - dark bronze

No Suffix - mll aluminum

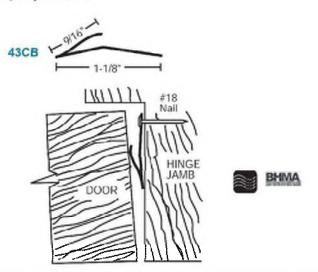






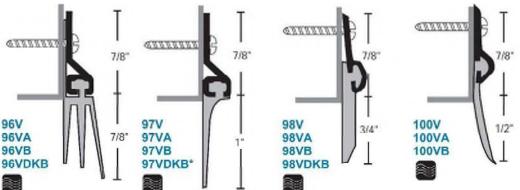
Cushion Bronze Weatherstrip

Cushion material will not coil. Specify lengths required (36", 48", 72" 86", and 96".) Nails not included. Normal installation requires 3/4 lb. of nails per 100 ft. of weatherstrip; install 2" o.c. Zinc plated bronze finish nails available in 1 lb. bags. Wafer head pilot point drive nails make excellent applications for metal jambs, normal installation requires 6 per foot. Install using #41 drill bit. Available with Fast Attach Tape - Specify x "FATT".



Vinyl Sweeps

#6 x 3/4" Stainless Steel SMS furnished. Screw holes slotted for adjustment.



All products this page







A - anodized aluminum B - gold

DKB - dark bronze no suffix - mill aluminum

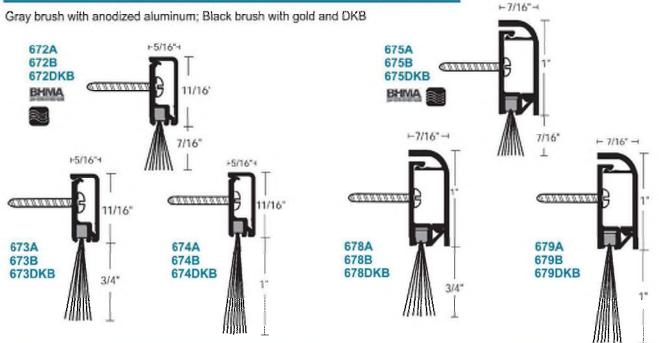
vinyl is gray

Exceptions: •vinyl is black



Concealed Fastener Nylon Brush Sweeps

NATIONAL GUARD PRODUCTS, INC. |



Materials

Thresholds are Aluminum Alloy 6063, T5 temper, unless noted. Cover Plates 818, 814 and 828 are Aluminum Alloy 3003, H14 hardness. Cover Plate 838 is Aluminum Alloy 5052, H32 hardness.

Architectural Bronze Thresholds are Alloy CDA 385 (Copper Alloy No. C38500), Architectural Bronze. Brass Cover Plate 818BR is Alloy CDA 260 (Copper Alloy No. C26000) cold formed Cartridge Brass.

Stainless Steel Thresholds and Cover Plates are Type 304; known for its excellent corrosion resistance, high tensile strength and resistance to oxidation.

Threshold Finishes

				NGP Suffix:
Aluminum:	Mill Finish	ANSI/BHMA 719	U\$27	None
	Dark Bronze			DKB
	Polished	ANSI/BHMA 717		POL
	Slip Resistant			SIA
Architectural Bronze:	Satin Finish	ANSI/BHMA 728	US4	BR
	Dark Bronze Oil Rubbed	ANSI/BHMA 722	US10B	BR-DKB
	Polished	ANSI/BHMA 721	US3	BR-POL
	Slip Resistant			BR-SIA
Stainless Steel:	Mill Finish			SS
	Brushed (#4)	ANSI/BHMA 630	US32D	SS-Brushed
	Polished	ANSI/BHMA 629	US32	SS-POL
	Slip Resistant			SS-SIA

Slip Resistant Finish



SIA (Slick It Ain't) finish is our slip resistant textured surface, available on all thresholds up to 24" wide and on 818 aluminum and brass cover plates up to 10" wide.



Our SIA technology embeds bits of hot nickel and titanium into the surface of the threshold using a high pressure thermo-electrostatic process. It was originally developed for use on aircraft carrier decks. SIA finish is very durable and will not wear off.

This results in a slip resistant surface that is similar to high grit sandpaper.

Aluminum and Stainless Steel SIA finish thresholds are a pewter color. Architectural Bronze SIA finish thresholds are a brass color.

Fax: 800-255-7874

Saddle Thresholds

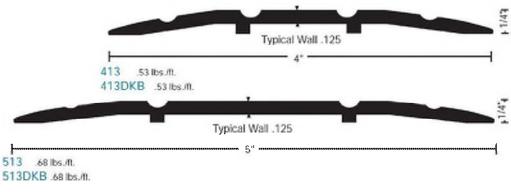
All thresholds this page



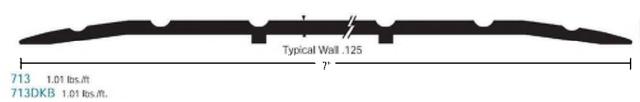


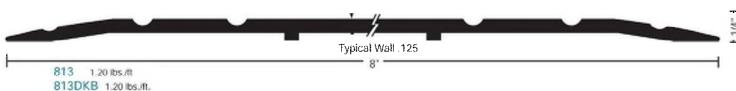


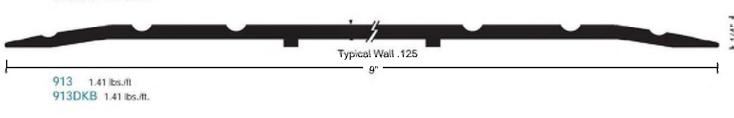


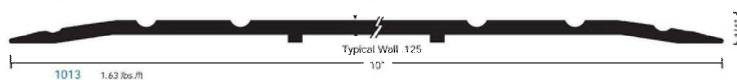


Typical Wall .125 6. . 613 .88 lbs./ft. 613DKB .88 lbs./ft.









1013DKB 1.63 lbs./fl.

MATERIALS & FINISHES

- · Aluminum mill finish
- DKB Aluminum dark bronze finish



· Optional: Slip Resistant SIA Finish

FASTENERS

#10 x 1-1/2" FH zinc plated wood screws furnished. Dark bronze supplied with DKB thresholds.